MASSACHUSETTS INSTITUTE OF TECHNOLOGY

REPORT ON THE AUDIT OF FEDERAL FINANCIAL ASSISTANCE PROGRAMS IN ACCORDANCE WITH THE Uniform Guidance

FOR THE YEAR ENDED JUNE 30, 2017

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Report on the Audit of Federal Financial Assistance Programs in Accordance with the Uniform Guidance For the Year Ended June 30, 2017

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SECTION I

FINANCIAL REPORTS

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Report of Independent Auditors

To the Members of the Corporation of the
Massachusetts Institute of Technology:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of the Massachusetts Institute of Technology (the "Institute") which comprise the consolidated statements of financial position as of June 30, 2017 and 2016, and the related consolidated statement of activities for the year ended June 30, 2017, and of cash flows for the years ended June 30, 2017 and 2016, and the related notes to the financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Institute's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of the Massachusetts Institute of Technology as of June 30, 2017 and 2016, and the changes in its net assets for the year ended June 30, 2017 and its cash flows for the

years ended June 30, 2017 and 2016 in accordance with accounting principles generally accepted in the United States of America.

Other Matters

We previously audited the consolidated statement of financial position as of June 30, 2016, and the related consolidated statement of activities, and cash flows for the year then ended (not presented herein), and in our report dated September 9, 2016, we expressed an unmodified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying summarized financial information as of June 30, 2016 and for the year then ended is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

Other Information

Our audit was conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The accompanying schedule of expenditures of federal awards for the year ended June 30, 2017 is presented for purposes of additional analysis as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance) and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditures of federal awards is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated September 8, 2017 on our consideration the Institute's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters for the year ended June 30, 2017. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Institute's internal control over financial reporting and compliance.

PricewaterhouseCoopers LLP

Boston, Massachusetts
September 8, 2017

Massachusetts Institute of Technology

Consolidated Statements of Financial Position

at June 30, 2017 and 2016

(in thousands of dollars)	2017	2016
Assets		
Cash	$ 399,825	$ 449,008
Accounts receivable, net	225,648	201,012
Pledges receivable, net, at fair value	533,227	609,065
Contracts in progress, principally US government	82,334	80,803
Deferred charges, inventories, and other assets	155,754	136,065
Student notes receivable, net	37,021	42,137
Investments, at fair value	19,045,347	16,988,407
Net asset position – retiree welfare plan	52,986	-
Land, buildings, and equipment (at cost of $4,990,128 for June 2017; $4,572,257 for June 2016), net of accumulated depreciation	3,397,070	3,092,429
Total assets	**$ 23,929,212**	**$ 21,598,926**
Liabilities and Net Assets		
Liabilities:		
Accounts payable, accruals, and other liabilities	$ 457,514	$ 528,688
Liabilities due under life income fund agreements, at fair value	154,470	145,216
Deferred revenue and other credits	126,531	136,426
Advance payments	426,562	435,220
Borrowings, net of unamortized issuance costs	3,287,545	2,892,093
Government advances for student loans	30,015	36,173
Net liability position – defined benefit plan	321,517	463,101
Net liability position – retiree welfare plan	-	32,928
Total liabilities	**4,804,154**	**4,669,845**
Net Assets:		
Unrestricted	7,667,379	6,634,100
Temporarily restricted	8,037,426	7,210,822
Permanently restricted	3,420,253	3,084,159
Total net assets	**19,125,058**	**16,929,081**
Total liabilities and net assets	**$ 23,929,212**	**$ 21,598,926**

The accompanying notes are an integral part of the consolidated financial statements.

Massachusetts Institute of Technology

Consolidated Statement of Activities

for the year ended June 30, 2017

(with summarized financial information for the year ended June 30, 2016)

(in thousands of dollars)	2017 Unrestricted	2017 Temporarily Restricted	2017 Permanently Restricted	2017 Total	Total 2016
Operating Activities					
Operating Revenues					
Tuition and similar revenues, net of discount of $318,610 in 2017 and $295,419 in 2016	$ 361,476	$ -	$ -	$ 361,476	$ 340,005
Research revenues:					
Campus	706,939	-	-	706,939	701,417
Lincoln	969,257	-	-	969,257	955,994
SMART	33,284	-	-	33,284	32,818
Total research revenues	1,709,480	-	-	1,709,480	1,690,229
Gifts and bequests for current use	187,524	-	-	187,524	162,257
Fees and services	168,266	-	-	168,266	183,020
Other programs	82,141	-	-	82,141	98,837
Support from investments:					
Endowment	628,669	-	-	628,669	588,708
Other investments	158,358	-	-	158,358	142,720
Total support from investments	787,027	-	-	787,027	731,428
Auxiliary enterprises	127,720	-	-	127,720	117,460
Net asset reclassifications and transfers	128,154	-	-	128,154	103,601
Total operating revenues	$ 3,551,788	$ -	$ -	$ 3,551,788	$ 3,426,837
Operating Expenses					
Salaries and wages	$ 1,415,024	$ -	$ -	$ 1,415,024	$ 1,335,024
Employee benefits	337,030	-	-	337,030	311,557
Supplies and services	1,058,683	-	-	1,058,683	1,084,219
Subrecipient agreements	139,159	-	-	139,159	139,913
Utilities, rent, and repairs	213,978	-	-	213,978	204,265
Depreciation	168,809	-	-	168,809	158,443
Interest expense	131,341	-	-	131,341	116,478
Total operating expenses	3,464,024	-	-	3,464,024	3,349,899
Results of operations	$ 87,764	$ -	$ -	$ 87,764	$ 76,938
Non-Operating Activities					
Pledge revenue	$ -	$ 181,620	$ 105,625	$ 287,245	$ 197,822
Gifts and bequests	-	-	98,746	98,746	109,083
Investment income	-	1,157	2,586	3,743	4,765
Net gain on investments	875,361	1,201,170	109,389	2,185,920	254,303
Distribution of accumulated investment gains	(235,197)	(405,680)	-	(640,877)	(589,402)
Other changes	28,252	1,415	15,739	45,406	(23,668)
Postretirement plan changes other than net periodic benefit cost	256,184	-	-	256,184	(503,732)
Net asset reclassifications and transfers	20,915	(153,078)	4,009	(128,154)	(103,601)
Total non-operating activities	945,515	826,604	336,094	2,108,213	(654,430)
Increase (decrease) in net assets	1,033,279	826,604	336,094	2,195,977	(577,492)
Net assets at the beginning of the year	6,634,100	7,210,822	3,084,159	16,929,081	17,506,573
Net assets at the end of the year	**$ 7,667,379**	**$ 8,037,426**	**$ 3,420,253**	**$ 19,125,058**	**$ 16,929,081**

The accompanying notes are an integral part of the consolidated financial statements.

Massachusetts Institute of Technology

Consolidated Statements of Cash Flows

for the years ended June 30, 2017 and 2016

(in thousands of dollars)	2017	2016
Cash Flow from Operating Activities		
Increase (decrease) in net assets	$ 2,195,977	$ (577,492)
Adjustments to reconcile change in net assets to net cash used in operating activities:		
Net gain on investments	(2,185,920)	(254,303)
Change in retirement plans' net assets	(227,498)	442,796
Depreciation	168,809	158,443
Donated securities received	(39,281)	(37,893)
Proceeds from sale of donated securities	33,302	23,448
Net (loss) gain on life income funds	(29,824)	8,580
Amortization of bond premiums and discounts and other adjustments	13,294	21,351
Change in operating assets and liabilities:		
Pledges receivable	75,838	(50,970)
Accounts receivable	(24,636)	(28,490)
Contracts in progress	(1,531)	(14,363)
Deferred charges, inventories, and other assets	(19,689)	210
Accounts payable, accruals, and other liabilities, excluding building and equipment accruals	(83,509)	84,768
Liabilities due under life income fund agreements	9,254	3,270
Deferred revenue and other credits	(9,895)	(15,507)
Advance payments	(8,658)	12,545
Reclassify investment income	(3,743)	(4,765)
Reclassify contributions restricted for long-term investment	(92,767)	(94,638)
Net cash (used in) operating activities	(230,477)	(323,010)
Cash Flow from Investing Activities		
Purchase of land, buildings, and equipment	(473,134)	(424,543)
Purchases of investments	(32,028,007)	(22,221,841)
Proceeds from sale of investments	32,186,808	23,001,121
Student notes issued	(14,453)	(17,941)
Collections from student notes	11,838	12,665
Net cash (used in) provided by investing activities	(316,948)	349,461
Cash Flow from Financing Activities		
Contributions restricted for investment in endowment	92,767	94,638
Proceeds from sale of donated securities restricted for endowment	5,980	14,445
Increase in investment income for restricted purposes	3,743	4,765
Proceeds from borrowings	500,000	-
Repayment of borrowings	(98,090)	(9,585)
Increase in government advances for student loans	(6,158)	612
Net cash provided by financing activities	498,242	104,875
Net (decrease) increase in cash	(49,183)	131,326
Cash at the beginning of the year	449,008	317,682
Cash at the end of the year	**$ 399,825**	**$ 449,008**

The accompanying notes are an integral part of the consolidated financial statements.

Notes to Consolidated Financial Statements

A. Accounting Policies

Basis of Presentation

The accompanying financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) in the United States of America. The consolidated financial statements (financial statements) include MIT and its wholly owned subsidiaries.

Net assets, revenues, expenses, and gains and losses are classified into three categories based on the existence or absence of donor-imposed restrictions. The categories are permanently restricted, temporarily restricted, and unrestricted net assets. Unconditional promises to give (pledges) are recorded as receivables and revenues within the appropriate net asset category.

Permanently restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that are required by donors to be permanently retained. Pledges, trusts, and remainder interests are reported at their estimated fair values.

Temporarily restricted net assets include gifts, pledges, trusts and remainder interests, and income and gains that can be expended but for which restrictions have not yet been met. Such restrictions include purpose restrictions where donors have specified the purpose for which the net assets are to be spent, or time restrictions imposed by donors or implied by the nature of the gift (e.g., capital projects, pledges to be paid in the future, life income funds), or by interpretations of law (net gains on permanently restricted gifts that have not been appropriated for spending). Gifts specified for the acquisition or construction of long-lived assets are reported as temporarily restricted net assets until the monies are expended and the long-lived assets (i.e., buildings) are put into use, at which point they are reclassified to unrestricted net assets. Net unrealized losses on permanently restricted endowment funds for which the book value exceeds market value are recorded as a reduction to unrestricted net assets.

Unrestricted net assets are all the remaining net assets of MIT. Donor-restricted gifts and distributed restricted endowment income for which the restriction is met within the same year of gift or distribution is reported as unrestricted revenue. Gifts of long-lived assets are reported as unrestricted revenue.

Net asset reclassifications and transfers consist primarily of payments on unrestricted pledges and use of building funds in accordance with donor restrictions for buildings put into use during the year. Expirations of temporary restrictions on net assets, release of permanent restrictions by a donor, and change of restrictions imposed by donors are also reported as reclassifications of net assets among unrestricted, temporarily restricted, and permanently restricted net assets.

MIT administers its various funds, including endowments, funds functioning as endowments, school or departmental funds, and related accumulated gains in accordance with the principles of Fund Accounting. Gifts are recorded in fund accounts and investment income is distributed to funds annually. Income distributed to funds may be a combination of capital appreciation and yield pursuant to MIT's total return investment and spending policies. Each year, the Executive Committee of the Corporation approves the rates of distribution of investment return to funds from MIT's investment pools. (See Note J for further information on income distributed to funds.)

MIT's operations include tuition, research revenues, unrestricted gifts and bequests for current use, fees and services, other programs, support from investments, net asset reclassifications and transfers, and operating expenditures. Results of operations are displayed in the Consolidated Statement of Activities.

Tax Status

MIT is a nonprofit organization that is tax-exempt under Section 501(c)(3) of the Internal Revenue Code, originally recognized in October 1926, with the most recent affirmation letter dated July 2001.

US GAAP requires MIT to evaluate tax positions taken by the Institute and recognize a tax liability (or asset) if the Institute has taken an uncertain position that more likely than not would not be sustained upon examination by the IRS. MIT has analyzed the tax positions taken and has concluded that as of June 30, 2017, there are no significant uncertain positions taken or expected to be taken that would require recognition of a liability (or asset) or disclosure in the financial statements.

Cash

Certain cash balances, totaling $68.9 million and $122.3 million at June 30, 2017 and 2016, respectively, are restricted for use under certain sponsored research agreements or are held on behalf of a related party.

The Institute had approximately $390.2 million and $432.1 million at June 30, 2017 and 2016, respectively, of its cash accounts with a single institution. The Institute has not experienced any losses associated with deposits at this Institution.

Advance Payments

Amounts received by MIT from the US government, corporations, industrial sources, foundations, and other non-MIT sponsors under the terms of agreements that generally require the exchange of assets, rights, or privileges between MIT and the sponsor are recorded as advance payments. Revenue is recognized as MIT fulfills the terms of the agreements.

Land, Buildings, and Equipment

Land, buildings, and equipment are shown at cost when purchased, or at fair value as of the date of a gift when received as a gift, net of accumulated depreciation. When expended, costs associated with the construction of new facilities are shown as construction in progress until such projects are completed and put into use. Depreciation is computed on a straight-line basis over the estimated useful lives of 25 to 50 years for buildings, 3 to 25 years for equipment, and 4 to 6 years for software.

Fully depreciated assets were removed from the financial statements in the amount of $50.9 million and $39.4 million during 2017 and 2016, respectively. Land, buildings, and equipment at June 30, 2017 and 2016, are shown in Table 1 below.

Table 1. Land, Buildings, and Equipment

(in thousands of dollars)	2017	2016
Land	$ 93,407	$ 83,610
Land improvements	72,773	64,434
Educational buildings	3,986,375	3,772,199
Equipment	292,087	289,980
Software	61,730	56,021
Total	4,506,372	4,266,244
Less: accumulated depreciation	(1,593,058)	(1,479,828)
Construction in progress	479,865	301,326
Software projects in progress	3,891	4,687
Net land, buildings, and equipment	**$ 3,397,070**	**$ 3,092,429**

Depreciation expense was $168.8 million in 2017 and $158.4 million in 2016. Net interest expense of $10.6 million and $9.5 million was capitalized during 2017 and 2016, respectively, in connection with MIT's construction projects.

Tuition and Student Support

Tuition and similar revenues, shown in Table 2 below, include tuition and fees for degree programs as well as tuition and fees for executive and continuing education programs at MIT.

Table 2. Tuition and Similar Revenues

(in thousands of dollars)	2017	2016
Undergraduate and graduate programs	$ 617,368	$ 590,415
Executive and continuing education programs	62,718	45,009
Total	680,086	635,424
Less: tuition discount	(318,610)	(295,419)
Net tuition and similar revenues	**$ 361,476**	**$ 340,005**

Tuition support is awarded to undergraduate students by MIT based on need. Graduate students are provided with tuition support in connection with research assistance, teaching assistance, and fellowship appointments. Tuition support from MIT sources is displayed as tuition discount. Total student support granted to students was $555.3 million and $520.5 million in 2017 and 2016, respectively. Of that amount, $169.0 million in 2017 and $163.5 million in 2016 was aid from sponsors. Components of student support are detailed in Table 3 below.

Table 3. Student Support

	2017			2016		
(in thousands of dollars)	Institute Sources	External Sponsors	Total Student Support	Institute Sources	External Sponsors	Total Student Support
Undergraduate tuition support	$ 108,930	$ 18,002	$ 126,932	$ 97,262	$ 15,640	$ 112,902
Graduate tuition support	209,680	60,609	270,289	198,157	60,287	258,444
Fellow stipends	23,344	16,174	39,518	22,718	16,013	38,731
Student employment	44,301	74,227	118,528	38,876	71,516	110,392
Total	**$ 386,255**	**$ 169,012**	**$ 555,267**	**$ 357,013**	**$ 163,456**	**$ 520,469**

A. Accounting Policies (continued)

Sponsored Research

Direct and indirect categories of research revenues are shown in Table 4 below.

Table 4. Research Revenues

(in thousands of dollars)	2017	2016
Direct:		
Campus	$ 508,677	$ 513,991
Lincoln	926,871	908,506
SMART	32,981	32,416
Total direct	1,468,529	1,454,913
Indirect:		
Campus	$ 198,262	$ 187,426
Lincoln	42,386	47,488
SMART	303	402
Total indirect	240,951	235,316
Total research revenues	**$ 1,709,480**	**$ 1,690,229**

Revenue associated with contracts and grants is recognized as related costs are incurred. The capital costs of buildings and equipment are depreciated over their estimated life cycle, and the sponsored research recovery allowance for depreciation is treated as indirect research revenue. MIT has recorded reimbursement of indirect costs relating to sponsored research at negotiated fixed billing rates. The revenue generated by the negotiated rates is adjusted each fiscal year to reflect any variance between the negotiated fixed rates and rates based on actual cost. The actual cost rate is audited by the Defense Contract Audit Agency (DCAA) and a final fixed-rate agreement is signed by the US government and MIT. The variance between the negotiated fixed rate and the final audited rate results in a carryforward (over- or under-recovery). The carryforward is included in the calculation of negotiated fixed billing rates in future years. Any adjustment in the rate is charged or credited to unrestricted net assets.

Gifts and Pledges

Gifts and pledges are recognized when received. Gifts of securities are recorded at their fair value at the date of contribution. Donated securities received totaled $39.3 million and $37.9 million in 2017 and 2016, respectively, and are shown separately in the Consolidated Statements of Cash Flows. Gifts of equipment received from manufacturers and other donors are put into use and recorded by MIT at fair value. Gifts of equipment totaled less than $0.1 million in 2017 and $0.4 million in 2016. Pledges in the amount of $533.2 million and $609.1 million were recorded as receivables at June 30, 2017 and 2016, respectively, with the revenue assigned to the appropriate classification of restriction. Pledges consist of unconditional written promises to contribute to MIT in the future and are recorded after discounting the future cash flows to the present value.

MIT records items of collections as gifts at nominal value. They are received for educational purposes and most are displayed throughout MIT. In general, collections are not disposed of for financial gain or otherwise encumbered in any manner.

Life Income Funds

MIT's life income fund agreements with donors consist primarily of irrevocable charitable gift annuities, pooled income funds, and charitable remainder trusts for which MIT serves as trustee. Assets are invested and payments are made to donors and other beneficiaries in accordance with the respective agreements. MIT records the assets that are associated with each life income fund at fair value and records as liabilities the present value of the estimated future payments at current interest rates to be made to the donors and beneficiaries under these agreements. A rollforward of liabilities due under life income fund agreements is presented in Table 5 below.

Table 5. Liabilities Due Under Life Income Funds

(in thousands of dollars)	2017	2016
Balance at the beginning of the year	$ 145,216	$ 141,946
Addition for new gifts	8,122	8,592
Termination and payments to beneficiaries	(19,671)	(14,993)
Net investment and actuarial gain	20,803	9,671
Balance at end of the year	**$ 154,470**	**$ 145,216**

Accounts Payable, Accruals, and Other Liabilities

MIT's accounts payable, accruals, and other liabilities totaled $457.5 million and $528.7 million at June 30, 2017 and 2016, respectively. These totals included accrued vacation of $88.2 million at June 30, 2017, and $81.6 million at June 30, 2016.

Recently Adopted Accounting Standards

On July 1, 2016, the Institute early adopted new guidance related to how *Not-for-Profit Entities that are a General or Limited Partner Should Consolidate a For-Profit Limited Partnership or Similar Entity,* which impacts consolidation for not-for-profit entities. As a result of adopting this guidance, certain previously consolidated limited liability investment entities are no longer consolidated. The liabilities associated with these investment entities amounted to $490.0 million in the 2016 Statement of Financial Position and are now netted against investment assets for that year, rather than shown separately as liabilities. In addition, noncontrolling interests are no longer shown as assets, net assets, and changes in net assets in the Statements of Financial Position and in the Statement of Activities. Therefore, the change in net assets attributable to noncontrolling interests of $27.0 million for fiscal 2016, as well as the noncontrolling interest June 30, 2016 amount of $205.4 million are no longer shown in the related

A. Accounting Policies (continued)

2016 comparative statements. These changes have also been appropriately reflected in the investment notes.

On July 1, 2016, the Institute early adopted new guidance related to *Recognition and Measurement of Financial Assets and Financial Liabilities*. The guidance eliminates the requirement to disclose the fair value of our outstanding debt. The Institute has evaluated the impact of the guidance on the financial statements and accompanying notes and has removed the fair value reference previously included in Note F.

On July 1, 2015, MIT early-adopted new guidance related to *Presentation of Debt Issuance Costs*. This guidance requires MIT to present unamortized debt issuance costs as an offset to borrowings within the liabilities section of the balance sheet, rather than as other assets within the assets section of the balance sheet. The change in presentation has been appropriately reflected in the Statement of Financial Position and in the Net Borrowings table shown in Note F.

Non-Cash Items

Non-cash transactions excluded from the Consolidated Statements of Cash Flows include $12.3 million and $7.6 million of accrued liabilities related to plant and equipment purchases for 2017 and 2016, respectively.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications

Certain June 30, 2016, balances and amounts previously reported have been reclassified to conform to the June 30, 2017, presentation.

Subsequent Events

MIT has evaluated subsequent events through September 8, 2017, the date on which the financial statements were issued. There were no subsequent events that occurred after the balance sheet date that have a material impact on MIT's financial statements.

Summarized Information

The Consolidated Statements of Activities includes certain prior year summarized comparative information in total but not by net asset class. Such information does not include sufficient detail to constitute a presentation in conformity with accounting principles generally accepted in the United States of America. Accordingly, such information should be read in conjunction with MIT's financial statements for the year ended June 30, 2016, from which the summarized information was derived.

B. Investments

MIT performs ongoing due diligence to determine that investment fair value is reasonable as of June 30, 2017 and 2016. In particular, to ensure that the valuation techniques for investments that are categorized within the fair value hierarchy are fair, consistent, and verifiable, MIT has established a Valuation Committee (the "Committee") that oversees the valuation processes and procedures and ensures that the policies are fair and consistently applied. The Committee is responsible for conducting annual reviews of the valuation policies, evaluating the overall fairness and consistent application of the valuation policies, and performing specific reviews of certain reported valuations. The Committee performs due diligence over the external managers and, based on this review, substantiates Net Asset Value (NAV) as a practical expedient for estimates of fair value of its investments in external managers. The Committee is composed of senior personnel and contains members who are independent of investment functions. The Committee meets annually, or more frequently as needed. Members of the Valuation Committee report annually to MIT's Risk and Audit Committee. The methods described in this note may produce a fair value that may not be indicative of net realizable value or reflective of future fair values. While MIT believes its valuation methods are appropriate and consistent with those of other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Exchange and over-the-counter investment transactions are accounted for on the trade date. Dividend income is recorded on the ex-dividend date. Realized gains and losses are recorded by MIT using the average cost basis. For limited partnerships, the realized gain/loss is calculated once the entire cost basis is distributed back to MIT or using information provided by managers with respect to the character of a distribution as being a gain, loss, income, or return of capital.

MIT may enter into short sales whereby it sells securities that may or may not be owned by MIT in anticipation of a decline in the price of such securities or in order to hedge portfolio positions. Cash collateral and certain securities owned by MIT may be held at counterparty brokers to collateralize these positions and

are included in investments on the Consolidated Statements of Financial Position.

MIT values its investments in accordance with the principles of accounting standards which establish a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entity's own assumptions about how market participants would value an asset or liability based on the best information available. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. MIT follows a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last is unobservable.

The following describes the hierarchy of inputs used to measure fair value and the primary valuation methodologies used by MIT for financial instruments measured at fair value on a recurring basis. The three levels of inputs are as follows:

• Level 1 – Valuations based upon observable inputs that reflect quoted prices in active markets for identical assets and liabilities.

• Level 2 – Valuations based upon: (i) quoted market prices for similar assets or liabilities in active markets; (ii) quoted prices for identical or similar assets or liabilities in markets that are not active; or (iii) other significant market-based inputs, which are observable, either directly or indirectly.

• Level 3 – Valuations based upon unobservable inputs that are significant to the overall fair value measurements.

• N/A – Investments managed by external managers in fund structures are not readily marketable and are reported at Fair Value utilizing the most current information provided by the external manager, subject to assessments that the information is representative of fair value and in consideration of any factors deemed pertinent to the Fair Value measurement.

A financial instrument's categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Market information is considered when determining the proper categorization of the investment's fair value measurement within the fair valuation hierarchy.

Table 6 presents MIT's investments at fair value as of June 30, 2017 and 2016, respectively, grouped by the valuation hierarchy as defined earlier in this note.

Transfers between levels are recognized at the beginning of the reporting period. The 2017 transfers from Level 1 to Level 2 totaled $0.9 million, and transfers from Level 2 to Level 1 totaled $25.6 million. The 2016 transfers from Level 1 to Level 2 totaled $60.0 million, and transfers from Level 2 to Level 1 totaled $10.4 million.

Cash and cash equivalents include cash, money market funds, repurchase agreements, and negotiable certificates of deposit and are valued at cost, which approximates fair value. Instruments listed or traded on a securities exchange are valued at the last quoted price on the primary exchange where the securities are traded.

Investments in non-exchange-traded debt are primarily valued using independent pricing sources that use broker quotes or models using observable market inputs. Investments managed by external managers include investments in (i) absolute return; (ii) domestic, foreign, and private equity; (iii) real estate; and (iv) real asset commingled funds. The fair value of securities held in external investment funds that do not have readily determinable fair values are determined by the external managers based upon industry-standard valuation approaches that require varying degrees of judgment, taking into consideration, among other things, the cost of the securities, valuations and transactions of comparable public companies, the securities' estimated future cash flow streams, and the prices of recent significant placements of securities of the same issuer. Using these valuations, most of these external managers calculate MIT's capital account or NAV in accordance with, or in a manner consistent with, GAAP's fair value principles.

As a practical expedient, MIT is permitted under GAAP to estimate the fair value of its investments with external managers using the external managers' reported NAV without further adjustment unless MIT expects to sell the investment at a value other than NAV or the NAV is not calculated in accordance with GAAP.

Level 3 investments are valued by MIT based upon valuation information received from the relevant entity, which may include last trade information, third-party appraisals of real estate, or valuations prepared in connection with the administration of an employee stock ownership plan. MIT may also utilize industry standard valuation techniques, including discounted cash flow models. The significant unobservable inputs used in the fair value measurements of MIT's direct investments may include their cost of capital, and equity and industry risk premiums. Significant increases or decreases in these inputs in isolation may result in a significantly lower or higher fair value measurement, respectively. Split-interest agreements are generally valued at the present value of the future distributions expected to be received over the term of the agreement.

Over-the-counter positions, such as interest rate and total return swaps, credit default swaps, options, exchange agreements, and interest rate cap and floor agreements, are valued using broker quotes or models using market observable inputs. Because the swaps and other over-the-counter derivative instruments have inputs that can usually be corroborated by observable market data, they are generally classified within Level 2.

B. Investments (continued)

Table 6. Investments

(in thousands of dollars)	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as Practical Expedient (NAV)	Total Fair Value
Fiscal Year 2017					
Cash and cash equivalents	$ 1,289,440	$ -	$ -	$ -	$ 1,289,440
US Treasury	983,110	-	-	-	983,110
US government agency	-	68,972	-	-	68,972
Domestic bonds	11,085	827,798	112,325	-	951,208
Foreign bonds	21	218,676	-	-	218,697
Common equity:					
Long domestic	122,824	-	199,643	-	322,467
Long foreign	522,712	934	-	-	523,646
Equity:**					
Absolute return	-	-	-	1,948,414	1,948,414
Domestic	-	-	-	1,860,682	1,860,682
Foreign	-	-	-	3,939,887	3,939,887
Private	-	-	-	3,352,743	3,352,743
Real estate*	8,885	-	2,094,523	711,635	2,815,043
Real assets**	-	-	205	667,986	668,191
Split-interest agreements	-	-	142,499	-	142,499
Other	2,796	200	3,881	-	6,877
Derivatives	32	(46,561)	-	-	(46,529)
Investments, at fair value	**$ 2,940,905**	**$ 1,070,019**	**$ 2,553,076**	**$ 12,481,347**	**$ 19,045,347**
Fiscal Year 2016					
Cash and cash equivalents	$ 939,555	$ -	$ -	$ -	$ 939,555
US Treasury	890,588	-	-	-	890,588
US government agency	-	169,007	-	-	169,007
Domestic bonds	12,004	308,817	104,048	-	424,869
Foreign bonds	21	68,384	-	-	68,405
Common equity:					
Long domestic	221,868	-	95,120	-	316,988
Long foreign	423,747	60,044	-	-	483,791
Equity:**					
Absolute return	-	-	-	1,816,975	1,816,975
Domestic	-	-	-	1,561,519	1,561,519
Foreign	-	-	-	3,521,507	3,521,507
Private	-	-	-	3,190,794	3,190,794
Real estate*	6,446	-	2,005,145	840,443	2,852,034
Real assets**	-	-	275	680,566	680,841
Split-interest agreements	-	-	126,832	-	126,832
Other	4,925	-	2,809	-	7,734
Derivatives	33	(63,065)	-	-	(63,032)
Investments, at fair value	**$ 2,499,187**	**$ 543,187**	**$ 2,334,229**	**$ 11,611,804**	**$ 16,988,407**

** Real estate includes direct investments and investments held through commingled vehicles.*

*** Real assets and equity categories include commingled vehicles that invest in these types of investments.*

B. Investments (continued)

Table 7 below is a rollforward of the investments classified by MIT within Level 3 of the fair value hierarchy defined earlier in this note at June 30, 2017 and 2016.

Table 7. Rollforward of Level 3 Investments

(in thousands of dollars)	Fair Value Beginning	Realized Gains (Losses)	Unrealized Gains (Losses)	Purchases	Sales	Other Changes and Transfers*	Fair Value Ending
Fiscal Year 2017							
Domestic bonds	$ 104,048	$ -	$ -	$ 16,306	$ (8,029)	$ -	$ 112,325
Common equity:							
Long domestic	95,120	601	104,736	5,927	(6,741)	-	199,643
Short domestic	-	-	-	-	-	-	-
Real estate	2,005,145	14,320	244,061	170,833	(52,611)	(287,225)	2,094,523
Real assets	275	-	(70)	-	-	-	205
Split-interest agreements	126,832	1,120	7,135	11,308	(3,896)	-	142,499
Other	2,809	-	60	1,012	-	-	3,881
Investments, at fair value	**$ 2,334,229**	**$ 16,041**	**$ 355,922**	**$ 205,386**	**$ (71,277)**	**$ (287,225)**	**$ 2,553,076**
Fiscal Year 2016							
Domestic bonds	$ 101,763	$ -	$ -	$ 12,040	$ (9,755)	$ -	$ 104,048
Common equity:							-
Long domestic	67,096	-	28,024	7	(7)	-	95,120
Short domestic	-	-	-	119	(119)	-	-
Real estate	1,765,487	33,254	381,977	184,991	(90,924)	(269,640)	2,005,145
Real assets	1,260	(13,070)	12,085	-	-	-	275
Split-interest agreements	146,405	5,329	(10,750)	17,214	(31,366)	-	126,832
Other	3,956	179	32	-	(1,358)	-	2,809
Investments, at fair value	**$ 2,085,967**	**$ 25,692**	**$ 411,368**	**$ 214,371**	**$ (133,529)**	**$ (269,640)**	**$ 2,334,229**

**Other Changes and Transfers include cash received and paid related to the real estate financings described earlier in Note B. There were no transfers in or out of Level 3 for fiscal years 2017 and 2016.*

MIT, through some of its direct and indirect subsidiaries, leverages certain real estate investments to optimize the use of invested capital in support of the Institute's mission. The liabilities associated with these financings are presented, on a net basis, with the investment balances on the associated real estate asset found in Table 6. MIT's subsidiaries are separate legal entities, whose assets and credit are not available to satisfy the liabilities of MIT as a stand-alone entity. Also, the liabilities of MIT's subsidiaries do not constitute obligations of MIT as a stand-alone entity.

All net realized and unrealized gains and losses relating to financial instruments held by MIT shown in Table 6 are reflected in the Consolidated Statement of Activities. Cumulative unrealized gains related to Level 3 investments totaled $1,716.2 million and $1,360.3 million as of June 30, 2017 and 2016, respectively. The net change in unrealized gains (losses) related to Level 3 investments held by MIT at June 30, 2017, and June 30, 2016, are disclosed in Table 7.

B. Investments (continued)

Table 8 below sets forth a summary of valuation techniques and quantitative information utilized in determining the fair value of MIT's Level 3 investments as of June 30, 2017 and 2016.

Table 8. Level 3 Valuation Techniques

(in thousands of dollars)	Fair Value at June 30, 2017	Fair Value at June 30, 2016	Valuation Technique	Unobservable Input	2017 Rates	2016 Rates
Real estate	$ 2,094,523	$ 2,005,145	Discounted cash flow; capitalization rate	Discount rate; capitalization rate	4.5-8.5%; 4.5-7.0%	5-8.5%; 4.75-7.0%
Equity securities	180,654	78,727	Discounted cash flow	Discount rate	13.2%	13.5%
Split-interest agreements	105,581	81,268	Net present value	Discount rate	2.65-4.5%	2.05-4.5%
Real assets	205	275	Discounted cash flow	Discount	25.0%	25.0%
Other illiquid assets	882	505	Varies	Varies	Varies	Varies
Total assets	**$ 2,381,845**	**$ 2,165,920**				

** Certain Level 3 assets totaling $171,231 and $168,309 as of June 30, 2017 and June 30, 2016, respectively, have been valued using unadjusted third party quotations and thus have been excluded from this table.*

Certain investments in real estate, equities, and private investments may be subject to restrictions that (i) limit MIT's ability to withdraw capital after such investment; and (ii) may limit the amount that may be withdrawn as of a given redemption date. Most absolute return, domestic equity, and foreign equity commingled funds limit withdrawals to monthly, quarterly, or other periods, and may require notice periods. In addition, certain of these funds are able to designate a portion of the investments as illiquid in "side-pockets," and these funds may not be available for withdrawal until liquidated by the investing fund. Generally, MIT has no discretion as to withdrawal with respect to its investments in private equity and real estate funds. Distributions are made when sales of assets are made within these funds and the investment cycle for these funds can be as long as 15 to 20 years. These restrictions may limit MIT's ability to respond quickly to changes in market conditions. MIT does have various sources of liquidity at its disposal, including cash, cash equivalents, marketable debt and equity securities, and lines of credit.

Details on the current redemption terms and restrictions by asset class and type of investment are provided in Table 9 below.

Table 9. Unfunded Commitments

Asset Class *(in thousands of dollars)*	2017 Unfunded Commitments	2017 Fair Value	2016 Unfunded Commitments	2016 Fair Value	Redemption Terms	Redemption Restrictions
Equity:						
Absolute return	$ 153,487	$ 1,948,414	$ 125,866	$ 1,816,975	Redemption terms range from 45 days with 2 months' notice to closed-end funds not available for redemption	Lock-up provisions range from none to not available for redemption
Domestic	1,790	1,860,682	1,789	1,561,519	Redemption terms range from 2 months with 2 months' notice to 25 months with 3 months' notice and 2 closed-end funds not available for redemption	Lock-up provisions range from none to 33 months; 2 funds are not available for redemption
Foreign	36,200	3,939,887	36,200	3,521,507	Redemption terms range from daily with 1 day's notice to 38 months with 6 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 11 months; 1 fund is not available for redemption
Private	1,517,659	3,352,743	1,567,427	3,190,794	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate	563,739	711,635	574,443	840,443	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets	102,689	667,986	156,591	680,566	Redemption terms range from 1 month with 7 days' notice to closed-end funds not available for redemption	Lock-up provisions range from none to not available for redemption
Total	**$ 2,375,564**	**$ 12,481,347**	**$ 2,462,316**	**$ 11,611,804**		

C. Derivative Financial Instruments and Collateral

MIT maintains an interest rate swap agreement to manage the interest cost and risk associated with a portion of its variable rate debt, described in Note F. Under the agreement, MIT pays a fixed rate of 4.91 percent and receives a payment indexed to the Securities Industry and Financial Market Association (SIFMA) on a notional amount of $125.0 million. At June 30, 2017, the swap agreement had a total fair value of ($47.1) million and at June 30, 2016 had a fair value of ($63.4) million. This swap had a total net gain for 2017 of $16.3 million and a total net loss of $15.3 million for 2016. The notional amount of this derivative is not recorded on MIT's Consolidated Statements of Financial Position.

For its investment management, MIT uses a variety of financial instruments with off-balance sheet risk involving contractual or optional commitments for future settlement. MIT uses these instruments primarily to manage its exposure to extreme market events and fluctuations in asset classes or currencies. Instruments utilized include futures, total return and credit default swaps, and interest rate cap and swaption agreements. The futures are exchange-traded, and the swap, swaptions, and cap agreements are executed over the counter.

Total return swaps involve commitments to pay interest in exchange for a market-linked return based on notional amounts. To the extent the total return of the security or index underlying the transaction exceeds or falls short of the offsetting interest rate obligation, MIT will respectively receive a payment from or make a payment to the counterparty.

MIT's portfolio of interest rate caps and swaptions is designed for protection from significant increases in interest rates. An interest rate swaption is an option to enter into an interest rate swap agreement on pre-set terms at a future date. The purchaser and seller of the swaption agree on the expiration date, option type, exercise style, the terms of the underlying swap, and the type of settlement. As the expiration date approaches, the swaption holder can either notify the seller of its intention to exercise or let the option expire. An interest rate cap places a ceiling on a floating rate of interest on a specified notional principal amount for a specific term. The buyer of the cap uses the cap contract to limit its maximum interest rate exposure. If the buyer's floating rate rises above the cap strike, the cap contract provides for payments from the seller to the buyer of the cap for the difference between the floating rate and the cap strike. If the floating rate remains below the cap strike, no payments are required. The cap buyer is required to pay an upfront fee or premium for the cap. The cap premium charged by the seller depends upon the market's assessment of the probability that rates will move through the cap strike over the time horizon of the deal. The payoff is expected to occur in extreme market conditions that would negatively impact MIT's other assets.

Table 10 summarizes the notional exposure and net ending fair value relative to the financial instruments with off-balance sheet risk as of June 30, 2017 and 2016 related to MIT's investment management. Derivatives held by limited partnerships and commingled investment vehicles pose no off-balance sheet risk to MIT due to the limited liability structure of these investments. To manage the counterparty credit exposure of MIT's direct off-balance sheet financial instruments, MIT requires collateral to the maximum extent possible under normal trading practices. Collateral is moved on a daily basis as required by fluctuations in the market. The collateral is generally in the form of debt obligations issued by the US Treasury or cash. In the event of counterparty default, MIT has the right to use the collateral to offset the loss associated with the replacement of the agreements. MIT enters into arrangements only with counterparties believed to be creditworthy. On June 30, 2017, cash collateral and certain securities owned by MIT were held at counterparty brokers to collateralize these positions and are included in investments in the Consolidated Statements of Financial Position.

C. Derivative Financial Instruments and Collateral (continued)

Table 10. Derivative Financial Instruments

(in thousands of dollars)	Notional Exposure Long	Notional Exposure Short	Net Ending Fair Value *	Net Gain (Loss)**
Fiscal Year 2017				
Fixed income instruments:				
Fixed income futures	$ 1,900	$ (9,200)	$ 32	$ -
Options on interest rate exchange agreements	1,039,000	-	1,818	(139)
Equity options	134	-	11	-
Interest rate caps and floors	-	-	-	-
Total fixed income instruments	1,041,034	(9,200)	1,861	(139)
Commodity and index instruments:				
Equity index swaps	-	(79,332)	744	(32,183)
Total commodity and index instruments	-	(79,332)	744	(32,183)
Credit instruments	-	(76,119)	(2,032)	(973)
2017 Total	**$ 1,041,034**	**$ (164,651)**	**$ 573**	**$ (33,295)**
Fiscal Year 2016				
Fixed income instruments:				
Fixed income futures	$ 14,100	$ (3,100)	$ 33	$ -
Options on interest rate exchange agreements	1,532,000	-	1,956	(6,844)
Equity options	-	-	-	-
Interest rate caps and floors	1,000,000	-	-	(96)
Total fixed income instruments	2,546,100	(3,100)	1,989	(6,940)
Commodity and index instruments:				
Equity index swaps	-	(83,563)	351	44,083
Total commodity and index instruments	-	(83,563)	351	44,083
Credit instruments	-	(102,494)	(1,990)	126
2016 Total	**$ 2,546,100**	**$ (189,157)**	**$ 350**	**$ 37,269**

** The fair value of all derivative financial instruments is reflected in investments at fair value in the Consolidated Statements of Financial Position.*

*** Net gain (loss) from the derivative financial instruments is located in the non-operating section as net gain (loss) on investments in the Consolidated Statement of Activities.*

C. Derivative Financial Instruments and Collateral (continued)

Table 11 below provides further details related to MIT's credit instruments and summarizes the notional amounts and fair value of the purchased credit derivatives, classified by the expiration terms and the external credit ratings of the reference obligations at June 30, 2017 and 2016.

The act of entering into a credit default swap contract is often referred to as "buying protection" or "selling protection" on an underlying reference obligation. The buyer is obligated to make premium payments to the seller over the term of the contract in return for a contingent payment upon the occurrence of a credit event with respect to the underlying obligation. The seller bears the obligation to "protect" the buyer in the event of default of the underlying issuer. Upon this event, the cash payment that the buyer receives is equal to the clearing price established by an auction of credit default swap claims, which is designed to approximate the recovery value of an unsecured claim on the issuer in default. The swap will last for a predetermined amount of time, typically five years. Upon termination of the swap, the buyer is no longer obligated to make any premium payments, and there is no other exchange of capital.

Table 11. Credit Derivative Instruments

	Purchased Protection			
			Years to Maturity	
(in thousands of dollars)	Purchased Notional Amounts	Purchased Fair Value*	< 5 Years	5-10 Years
Fiscal Year 2017				
Credit rating on underlying or index:				
A- to AAA	$ 25,000	$ 474	$ 25,000	$ -
BBB- to BBB+	51,119	1,558	51,119	-
2017 Total	**$ 76,119**	**$ 2,032**	**$ 76,119**	**$ -**
Fiscal Year 2016				
Credit rating on underlying or index:				
A- to AAA	$ 37,499	$ 785	$ 37,499	$ -
BBB- to BBB+	64,995	1,205	64,995	-
2016 Total	**$ 102,494**	**$ 1,990**	**$ 102,494**	**$ -**

** The fair value of all credit derivative instruments is reflected in investments at fair value in the Consolidated Statements of Financial Position.*

C. Derivative Financial Instruments and Collateral (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement between MIT and each of its counterparties. The ISDA Master Agreement allows MIT to offset with the counterparty certain derivative instruments' payables and/or receivables with collateral held with each counterparty. To the extent amounts due from the counterparties are not fully collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2017, MIT has elected not to offset recognized assets and liabilities in the Statements of Financial Position. The following tables, 12 and 13, summarize the effect that offsetting of recognized assets and liabilities could have in the Statements of Financial Position.

Table 12. Offsetting of Financial and Derivative Assets and Liabilities

	2017			2016		
(in thousands of dollars)	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount
Assets						
Counterparty A	$ 720	$ (880)	$ (160)	$ 820	$ (726)	$ 94
Counterparty B	27,000	(27,663)	(663)	50,000	(51,052)	(1,052)
Counterparty C	-	-	-	-	-	-
Counterparty D	-	-	-	-	-	-
Counterparty E	-	-	-	-	-	-
Counterparty F	-	-	-	6	-	6
Counterparty G	18,528	(18,916)	(388)	18,753	(19,143)	(390)
Counterparty H	-	-	-	-	-	-
Counterparty I	-	-	-	-	-	-
Counterparty J	-	-	-	-	-	-
Counterparty K	1,843	7,183	9,026	1,488	(1,925)	(437)
Counterparty L	-	-	-	-	-	-
Total assets	48,091	(40,276)	7,815	71,067	(72,846)	(1,779)
Liabilities						
Counterparty A	(59)	60	1	(396)	410	14
Counterparty B	-	-	-	-	-	-
Counterparty C	(527)	550	23	(43)	70	27
Counterparty D	(1,052)	1,091	39	(533)	721	188
Counterparty E	-	-	-	(47)	-	(47)
Counterparty F	-	-	-	-	-	-
Counterparty G	(33)	60	27	-	-	-
Counterparty H	(47,103)	-	(47,103)	(63,382)	-	(63,382)
Counterparty I	(6)	-	(6)	(342)	420	78
Counterparty J	(355)	340	(15)	(448)	680	232
Counterparty K	-	-	-	-	-	-
Counterparty L	-	-	-	(189)	400	211
Total liabilities	(49,135)	2,101	(47,034)	(65,380)	2,701	(62,679)
Total assets and liabilities, net	**$ (1,044)**	**$ (38,175)**	**$ (39,219)**	**$ 5,687**	**$ (70,145)**	**$ (64,458)**

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow MIT or the counterparties to an over-the-counter derivative to terminate the contract prior to maturity in the event either party fails to meet the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if owed to the counterparty.

C. Derivative Financial Instruments and Collateral (continued)

Table 13 below reconciles the net recognized assets and liabilities, as shown in Table 12, to derivative financial instruments as shown in Table 6.

Table 13. Reconciliation of Financial and Derivative Assets and Liabilities

(in thousands of dollars)	2017	2016
Derivatives from Table 6	$ (46,529)	$ (63,032)
Repurchase agreements	45,528	68,752
Fixed income futures	(32)	(33)
Equity options	(11)	-
Total	**$ (1,044)**	**$ 5,687**

D. Pledges Receivable

Table 14 below shows the time periods in which pledges receivable at June 30, 2017 and 2016 are expected to be realized.

Table 14. Pledges Receivable

(in thousands of dollars)	2017	2016
In one year or less	$ 239,548	$ 239,245
Between one year and five years	266,586	407,825
More than five years	86,103	29,415
Less: allowance for unfulfilled pledges	(59,010)	(67,420)
Pledges receivable, net	**$ 533,227**	**$ 609,065**

A review of pledges is periodically made with regard to collectability. As a result, the allowance for unfulfilled pledges is adjusted, and some pledges have been cancelled and are no longer recorded in the financial statements.

Pledges are discounted in the amount of $64.6 million and $22.7 million in 2017 and 2016, respectively. MIT has gross conditional pledges, not recorded, for the promotion of education and research of $80.6 million and $82.8 million in 2017 and 2016, respectively.

Pledges receivable are classified as Level 3 under the valuation hierarchy described in Note B.

Table 15 below is a rollforward of the pledges receivable at June 30, 2017 and 2016.

Table 15. Rollforward of Pledges Receivable

(in thousands of dollars)	2017	2016
Balance at beginning of the year	$ 609,065	$ 558,095
New pledges	320,750	190,641
Pledge payments received	(363,083)	(146,852)
Change in pledge discount	(41,915)	12,811
Change in reserve for unfulfilled pledges	8,410	(5,630)
Balance at the end of the year	**$ 533,227**	**$ 609,065**

E. Student Notes Receivable

Table 16 below details the components of student notes receivable at June 30, 2017 and 2016.

Table 16. Student Notes Receivable

(in thousands of dollars)	2017	2016
Institute-funded student notes receivable	$ 12,540	$ 12,627
Perkins student notes receivable	27,481	32,510
Total student notes receivable	40,021	45,137
Less: allowance for doubtful accounts	(3,000)	(3,000)
Student notes receivable, net	**$ 37,021**	**$ 42,137**

Perkins student notes receivable are funded by the US government and by MIT. Those funds advanced by the US government for this program are ultimately refundable to the US government and are classified as liabilities in US government advances for student loans in the Consolidated Statements of Financial Position. Due to the nature and terms of the student loans, which are subject to significant restrictions, it is not feasible to determine the fair value of such loans.

Allowance for Credit Losses

Management regularly assesses the adequacy of the allowance for credit losses by performing ongoing evaluations of the student loan portfolio, including such factors as the differing economic risks associated with each loan category, the financial condition of specific borrowers, the economic environment in which the borrowers operate, the level of delinquent loans, the value of any collateral, and, where applicable, the existence of any guarantees or indemnifications. MIT's Perkins loans receivable represents the amounts due from current and former students under the Federal Perkins Loan Program. Loans disbursed under the Federal Perkins Loan Program are able to be assigned to the US government in certain non-repayment situations. In these situations, the federal portion of the loan balance is guaranteed.

Factors also considered by management when performing its assessment, in addition to general economic conditions and the other factors described above, included, but were not limited to, a detailed review of the aging of the student loan receivable and a review of the default rate by loan category in comparison to prior years. The level of the allowance is adjusted based on the results of management's analysis.

Loans less than 120 days delinquent are deemed to have a minimal delay in payment and are generally not written off but are reserved in accordance with the terms discussed above. Loans more than 120 days delinquent are subject to standard collection practices, including litigation. Only loans that are deemed uncollectible are written off and this only occurs after several years of unsuccessful collection, including placement at more than one external collection agency.

Considering the other factors already discussed herein, management considers the allowance for credit losses at June 30, 2017 and 2016 to be prudent and reasonable. Furthermore, MIT's allowance is general in nature and is available to absorb losses from any loan category. Management maintains an allowance of $3.0 million for credit losses and is confident that this is sufficient to absorb credit losses inherent in the portfolio as of that date.

F. Net Borrowings

MIT's outstanding borrowings at June 30, 2017 and 2016, are shown in Table 17 below.

Table 17. Net Borrowings

(in thousands of dollars / due dates are calendar based / par values as of 2017)	2017	2016
Educational plant		
Massachusetts Development Finance Agency (MassDevelopment)		
Series I, 5.20%, due 2028, par value $30,000	$ 30,606	$ 30,665
Series J-1, variable rate, due 2031, par value $125,000	125,000	125,000
Series J-2, variable rate, due 2031, par value $125,000	125,000	125,000
Series K, 5.375%-5.5%, due 2017-2032, par value $203,500	211,590	212,317
Series L, 5.0%-5.25%, due 2018-2033, par value $141,670	148,950	149,668
Series M, 5.25%, due 2019-2030, par value $102,325	108,866	119,750
Series O, 4.0%-5.0%, due 2017	-	88,000
Total MassDevelopment	750,012	850,400
Medium Term Notes Series A, 7.125%, due 2026, par value $17,415	17,379	17,375
Medium Term Notes Series A, 7.25%, due 2096, par value $45,604	45,459	45,455
Taxable Bonds, Series B, 5.60%, due 2111, par value $750,000*	747,082	747,050
Taxable Bonds, Series C, 4.68%, due 2114, par value $550,000*	550,000	550,000
Taxable Bonds, Series D, 2.051-3.959%, due 2019-2038, par value $522,410	522,410	522,410
Taxable Bonds, Series E, 3.885%, due 2116, par value $500,000*	500,000	-
Notes payable to bank, variable rate, due 2020	113,033	113,033
Total taxable.	2,495,363	1,995,323
Total educational plant	3,245,375	2,845,723
Other		
Notes payable to bank, variable rate, due 2020	63,476	63,476
Total borrowings	3,308,851	2,909,199
Unamortized bond issuance costs	(21,306)	(17,106)
Total borrowings net of unamortized debt issuance cost	**$ 3,287,545**	**$ 2,892,093**

** The proceeds of recent taxable bonds were in the process of being invested in physical assets in 2016 and 2017, with unused balances held as investments.*

F. Net Borrowings (continued)

The aggregate amounts of debt payments and sinking fund requirements for each of the next five fiscal years are shown in Table 18 below.

Table 18. Debt Principal Obligations

(in thousands of dollars)

2018	$ 26,500
2019	26,000
2020	77,030
2021	11,180
2022	11,765

MIT maintains a line of credit with a major financial institution for an aggregate commitment of $500.0 million. As of June 30, 2017, $323.5 million was available under this line of credit (see "Notes payable" on Table 17). The line of credit expires on March 31, 2020.

Cash paid for interest on long-term debt in 2017 and 2016 was $137.7 million and $131.0 million, respectively.

Variable interest rates at June 30, 2017 are shown in Table 19 below.

Table 19. Variable Interest Rates

(in thousands of dollars)	Amount	Rate
MassDevelopment Series J-1	$ 125,000	0.85%
MassDevelopment Series J-2	125,000	0.92%
Notes payable to bank	176,509	1.73%

In the event that MIT receives notice of any optional tender on its Series J-1 and Series J-2 variable-rate bonds, or if these bonds become subject to mandatory tender, the purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, MIT will be obligated to purchase the bonds tendered at 100 percent of par on the tender date.

G. Commitments and Contingencies

Federal Government Funding

MIT receives funding or reimbursement from federal agencies for sponsored research under government grants and contracts. These grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Office of Naval Research (ONR), MIT's cognizant federal agency. MIT's indirect cost reimbursements have been based on fixed rates with carryforward of under- or over-recoveries. At June 30, 2017 and 2016, MIT recorded a net over-recovery of $15.4 million and $24.7 million, respectively.

The DCAA is responsible for auditing indirect charges to grants and contracts in support of ONR's negotiating responsibility. MIT has final audited rates through 2009. MIT's 2017 research revenues of $1,709.5 million include reimbursement of indirect costs of $241.0 million, which includes the adjustment for the variance between the indirect cost income determined by the fixed rates and actual costs for 2017. In 2016, research revenues were $1,690.2 million, which included reimbursement of indirect costs of $235.3 million.

Leases

At June 30, 2017, there were no capital lease obligations. MIT has commitments under certain operating (rental) leases. Rent expense incurred under operating lease obligations was $44.0 million and $40.0 million in 2017 and 2016, respectively. Future minimum payments under operating leases are shown in Table 20 below.

Table 20. Lease Obligations

(in thousands of dollars)

2018	$ 46,786
2019	44,476
2020	42,995
2021	40,878
2022	32,685

Investments

As of June 30, 2017, $13.1 million of investments were pledged as collateral to various suppliers and government agencies.

Future Construction

At June 30, 2017, MIT had contractual obligations of approximately $316.0 million in connection with educational plant construction projects. It is expected that the resources to satisfy these commitments will be provided from unexpended plant funds, anticipated gifts, bond proceeds, and unrestricted funds.

MIT has also made commitments related to the development of its commercial real estate holdings in Kendall Square and to the enhancement of its east campus gateway. At June 30, 2017, these commitments included approximately $250.0 million of contractual obligations related to the Kendall Square Initiative. In addition, MIT and the federal government have entered into

G. Commitments and Contingencies (continued)

an agreement whereby MIT will construct a new transportation center on four of the fourteen acres of federally owned land located at the John Volpe National Transportation System Center site in Kendall Square in exchange for the fee, interest to, and the right to redevelop the adjacent ten acres of land. The exchange will be executed upon completion of the construction of the new facility. MIT is committed to investing $750.0 million in the exchange phase of the project.

Related Entities

MIT has entered into agreements, including collaborations with third-party not-for-profit and for-profit entities, for education, research, and technology transfers. Some of these agreements involve funding from foreign governments. These agreements subject MIT to greater financial risk than do its normal operations. In the opinion of management, the likelihood of realization of increased financial risks by MIT under these agreements is remote.

General

MIT is subject to certain other legal proceedings and claims that arise in the normal course of operations. In the opinion of management, the ultimate outcome of these actions will not have a material effect on MIT's financial position.

H. Functional Expense Classification

MIT's expenditures on a functional basis are shown in Table 21 below.

Table 21. Expenditures by Functional Classification

(in thousands of dollars)	2017	2016
General and administrative	$ 865,337	$ 858,441
Instruction and unsponsored research	928,448	854,595
Sponsored research	1,498,790	1,479,158
Auxiliary enterprises	154,289	141,437
Operation of Alumni Association	17,160	16,268
Total operating expenses	**$ 3,464,024**	**$ 3,349,899**

I. Retirement Benefits

MIT offers a defined benefit plan and a defined contribution plan to its employees. The plans cover substantially all MIT employees.

MIT also offers a postretirement welfare benefit plan (certain healthcare and life insurance benefits) for retired employees. Substantially all MIT employees may become eligible for those benefits if they reach a qualifying retirement age while working for MIT. The healthcare component of the welfare plan is paid for in part by retirees, their covered dependents, and beneficiaries. Benefits are provided through various insurance companies whose charges are based either on the claims and administrative expenses paid during the year or annual insured premiums. The life insurance component of the welfare plan includes basic life insurance and supplemental life insurance. The basic life insurance plan is non-contributory and covers the retiree only. The supplemental life insurance plan is paid for by the retiree. MIT maintains a trust to pay for postretirement welfare benefits.

MIT contributes to the defined benefit plan amounts that are actuarially determined to provide the retirement plan with sufficient assets to meet future benefit requirements. There were no designated contributions to the defined benefit plan for 2017. In 2016, there was a designated contribution of $83.0 million. MIT also designated contributions of $17.1 million and $13.9 million to the postretirement welfare benefit plan in 2017 and 2016 respectively. The current health care cost trend rate decreased from 6.0 percent in 2016 to 5.5 percent in 2017.

For the defined contribution plan, the amount contributed and expenses recognized during 2017 and 2016 were $58.6 million and $55.2 million, respectively.

For purposes of calculating net periodic benefit cost, plan amendments for the defined benefit plan are amortized on a straight-line basis over the average future service of active participants at the date of the amendment. Plan amendments to the postretirement welfare benefit plan are amortized on a straight-line basis over the average future service to full eligibility of active participants at the date of amendment.

I. Retirement Benefits (continued)

Cumulative gains and losses (including changes in assumptions) in excess of 10 percent of the greater of the projected benefit obligation or the market-related value of assets for both the defined benefit plan and the postretirement welfare benefit plan are amortized over the average future service of active participants. The annual amortization shall not be less than the total amount of unrecognized gains and losses up to $1.0 million.

Components of Net Periodic Benefit Cost

Table 22 below summarizes the components of net periodic benefit cost recognized in operating activity and other amounts recognized in non-operating activity in unrestricted net assets for the years ended June 30, 2017 and 2016.

Table 22. Components of Net Periodic Benefit Cost

	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
(in thousands of dollars)	2017	2016	2017	2016
Components of net periodic benefit cost recognized in operating activity:				
Service cost	$ 106,097	$ 85,464	$ 27,963	$ 25,097
Interest cost	155,368	158,983	24,060	25,478
Expected return on plan assets	(262,479)	(243,615)	(37,558)	(34,703)
Amortization of net actuarial loss (gain)	33,183	20,088	1,000	1,000
Amortization of prior service cost (credit)	953	953	(2,801)	(2,801)
Net periodic benefit cost recognized in operating activity	33,122	21,873	12,664	14,071
Other amounts recognized in non-operating activity in unrestricted net assets:				
Current year actuarial loss (gain)	(140,569)	492,083	(83,280)	30,889
Amortization of actuarial (loss) gain	(33,183)	(20,088)	(1,000)	(1,000)
Amortization of prior service (cost) credit	(953)	(953)	2,801	2,801
Total other amounts recognized in non-operating activity	(174,705)	471,042	(81,479)	32,690
Total recognized	**$ (141,583)**	**$ 492,915**	**$ (68,815)**	**$ 46,761**

The estimated net actuarial loss and prior service cost for the defined benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are $23.6 million and $0.3 million, respectively. The estimated net actuarial gain and prior service credit for the postretirement welfare benefit plan that will be amortized from unrestricted net assets into net periodic benefit cost during the next fiscal year are $1.0 million and $2.8 million, respectively.

I. Retirement Benefits (continued)

Cumulative amounts recognized as non-operating changes in unrestricted net assets are summarized in Table 23 below for the years ended June 30, 2017 and 2016.

Table 23. Cumulative Amounts Recognized in Unrestricted Net Assets

	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
(in thousands of dollars)	2017	2016	2017	2016
Amounts recognized in unrestricted net assets consist of:				
Net actuarial loss (gain)	$ 611,010	$ 787,874	$ (44,766)	$ 39,515
Prior service cost (credit)	3,132	973	(7,813)	(10,615)
Total cumulative amounts recognized in unrestricted net assets	**$ 614,142**	**$ 788,847**	**$ (52,579)**	**$ 28,900**

Benefit Obligations and Fair Value of Assets

Table 24 below summarizes the benefit obligations, plan assets, and amounts recognized in the Consolidated Statements of Financial Position for MIT's retirement benefit plans. MIT uses a June 30 measurement date for its defined benefit and postretirement welfare benefit plans.

Table 24. Projected Benefit Obligations and Fair Value of Assets

	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
(in thousands of dollars)	2017	2016	2017	2016
Change in projected benefit obligations:				
Projected benefit obligations at beginning of year	$ 3,795,334	$ 3,431,688	$ 582,084	$ 548,965
Service cost	106,097	85,464	27,963	25,097
Interest cost	155,368	158,983	24,060	25,478
Retiree contributions	-	-	6,192	5,543
Net benefit payments, transfers, and other expenses	(140,253)	(138,464)	(31,710)	(28,396)
Employer Group Waiver Plan (EGWP) reimbursement	-	-	5,701	5,053
Assumption changes and actuarial net loss (gain)	5,192	257,663	(43,778)	344
Projected benefit obligations at end of the year	3,921,738	3,795,334	570,512	582,084
Change in plan assets:				
Fair value of plan assets at beginning of the year	3,332,233	3,378,500	549,156	548,920
Actual return on plan assets	408,241	9,197	77,059	4,160
Employer contributions	-	83,000	17,100	13,876
Employer Group Waiver Plan (EGWP) reimbursement	-	-	5,701	5,053
Retiree contributions	-	-	6,192	5,543
Net benefit payments, transfers, and other expenses	(140,253)	(138,464)	(31,710)	(28,396)
Fair value of plan assets at end of the year	3,600,221	3,332,233	623,498	549,156
(Unfunded) funded status at end of the year	**(321,517)**	**(463,101)**	**52,986**	**(32,928)**
Amounts recognized in the Consolidated Statements of Financial Position consist of:				
Net (liabilities) assets	**$ (321,517)**	**$ (463,101)**	**$ 52,986**	**$ (32,928)**

I. Retirement Benefits (continued)

The accumulated benefit obligation for MIT's defined benefit plan was $3,740.2 million and $3,608.5 million at June 30, 2017 and 2016, respectively.

MIT provides retiree drug coverage through an Employer Group Waiver Plan (EGWP). Under EGWP, the cost of drug coverage is offset through direct federal subsidies, brand-name drug discounts, and reinsurance reimbursements.

Assumptions and Healthcare Trend Rates

Table 25 below summarizes assumptions and healthcare trend rates. The expected long-term rate of return assumption represents the expected average rate of earnings on the funds invested or to be invested to provide for the benefits included in the benefit obligation. The long-term rate of return assumption is determined based on a number of factors, including historical market index returns, the anticipated long-term asset allocation of the plans, historical plan return data, plan expenses, and the potential to outperform market index returns.

Table 25. Assumptions

	Defined Benefit Plan		Postretirement Welfare Benefit Plan	
(in thousands of dollars)	2017	2016	2017	2016
Assumptions used to determine benefit obligation as of June 30:				
Discount rate	4.12%	4.06%	4.14%	4.03%
Rate of compensation increase*	4.00%	4.00%		
Assumptions used to determine net periodic benefit cost for the year ended June 30:				
Discount rate	4.06%	4.62%	4.03%	4.54%
Expected long-term return on plan assets	8.00%	8.00%	7.00%	7.00%
Rate of compensation increase*	4.00%	4.00%		
Assumed health care cost trend rates:				
Healthcare cost trend rate assumed for next year			5.50%	6.00%
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)			4.75%	4.75%
Year the rate reaches the ultimate trend rate			2021	2021

* *The average rate of salary increase is assumed to be 4.00% for 2018 and thereafter.*

As an indicator of sensitivity, a one percentage point change in the assumed healthcare cost trend rate would affect 2017 as shown in Table 26 below.

Table 26. Healthcare Cost Trend Rate Sensitivity

(in thousands of dollars)	1% Point Increase	1% Point Decrease
Effect on 2017 postretirement service and interest cost	$ 9,939	$ (7,854)
Effect on postretirement benefit obligation as of June 30, 2017	83,563	(68,648)

Plan Investments

The investment objectives for the assets of the plans are to minimize expected funding contributions and to meet or exceed the rate of return assumed for plan funding purposes over the long term. The nature and duration of benefit obligations, along with assumptions concerning asset class returns and return correlations, are considered when determining an appropriate asset allocation to achieve the investment objectives.

Investment policies and strategies governing the assets of the plans are designed to achieve investment objectives within prudent risk parameters. Risk management practices include the use of external investment managers, the maintenance of a portfolio diversified by asset class, investment approach, security holdings, and the maintenance of sufficient liquidity to meet benefit obligations as they come due.

I. Retirement Benefits (continued)

Tables 27A and 27B present investments at fair value of MIT's defined benefit plan and postretirement welfare benefit plan, which are included in plan net assets as of June 30, 2017 and 2016, grouped by the valuation hierarchy detailed in Note B. The investment values in these tables exclude certain items included in the assets shown in Table 24. There were no transfers in and out of Level 1 and Level 2 fair value measurements in 2017. The 2016 transfers from Level 1 to Level 2 totaled $21.8 million and $3.5 million for the defined benefit plan and postretirement benefit plan, respectively. The 2016 transfers from Level 2 to Level 1 totaled $2.4 million and $0.3 million for the defined benefit plan and the postretirement benefit plan, respectively.

Table 27A. Defined Benefit Plan Investments

(in thousands of dollars)	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	NAV as Practical Expedient [NAV]	Total Fair Value
Fiscal Year 2017					
Cash and cash equivalents	$ 256,999	$ -	$ -	$ -	$ 256,999
US Treasury	352,736	-	-	-	352,736
US government agency	-	6,351	-	-	6,351
Domestic bonds	-	45,598	-	-	45,598
Foreign bonds	-	6,120	-	-	6,120
Common equity:					
Long domestic	1,769	-	74	-	1,843
Long foreign	88,625	-	-	-	88,625
Equity:*					
Absolute return	-	-	-	375,354	375,354
Domestic	-	-	-	494,196	494,196
Foreign	-	-	-	909,020	909,020
Private	-	-	-	719,867	719,867
Real estate*	2,037	-	-	220,914	222,951
Real assets*	-	-	-	106,646	106,646
Other	5,220	-	433	-	5,653
Derivatives	19	202	-	-	221
Total plan investments	**$ 707,405**	**$ 58,271**	**$ 507**	**$ 2,825,997**	**$ 3,592,180**
Fiscal Year 2016					
Cash and cash equivalents	$ 154,852	$ -	$ -	$ -	$ 154,852
US Treasury	304,281	-	-	-	304,281
US government agency	-	8,701	-	-	8,701
Domestic bonds	-	13	-	-	13
Foreign bonds	-	6,973	-	-	6,973
Common equity:					
Long domestic	42,147	-	53	-	42,200
Long foreign	80,573	21,844	-	-	102,417
Equity:*					
Absolute return	-	-	-	352,188	352,188
Domestic	-	-	-	407,180	407,180
Foreign	-	-	-	792,305	792,305
Private	-	-	-	661,125	661,125
Real estate*	1,492	-	-	277,671	279,163
Real assets*	-	-	-	119,031	119,031
Other	9,420	-	589	-	10,009
Derivatives	44	777	-	-	821
Total plan investments	**$ 592,809**	**$ 38,308**	**$ 642**	**$ 2,609,500**	**$ 3,241,259**

** Equity, real estate, and real assets categories include commingled vehicles that invest in these types of investments.*

I. Retirement Benefits (continued)

Table 27B. Postretirement Welfare Benefit Plan Investments

(in thousands of dollars)	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Measured at Net Asset Value [NAV]	Total Fair Value
Fiscal Year 2017					
Cash and cash equivalents	$ 73,779	$ -	$ -	$ -	$ 73,779
Domestic bonds	-	76,842	-	-	76,842
Foreign bonds	-	437	-	-	437
Common equity:					
Long domestic	275	-	-	-	275
Long foreign	10,783	-	-	-	10,783
Equity:*					
Absolute return	-	-	-	52,616	52,616
Domestic	-	-	-	93,018	93,018
Foreign	-	-	-	212,104	212,104
Private	-	-	-	73,644	73,644
Real estate*	278	-	-	21,381	21,659
Real assets*	-	-	-	7,211	7,211
Other	373	-	-	-	373
Derivatives	-	15	-	-	15
Total plan investments	**$ 85,488**	**$ 77,294**	**$ -**	**$ 459,974**	**$ 622,756**
Fiscal Year 2016					
Cash and cash equivalents	$ 29,733	$ -	$ -	$ -	$ 29,733
Domestic bonds	-	76,019	-	-	76,019
Foreign bonds	-	498	-	-	498
Common equity:					
Long domestic	15,771	-	-	-	15,771
Long foreign	10,356	3,524	-	-	13,880
Equity:*					
Absolute return	-	-	-	67,327	67,327
Domestic	-	-	-	75,578	75,578
Foreign	-	-	-	180,830	180,830
Private	-	-	-	60,008	60,008
Real estate*	204	-	-	22,968	23,172
Real assets*	-	-	-	4,574	4,574
Other	695	-	-	-	695
Derivatives	-	-	-	-	-
Total plan investments	**$ 56,759**	**$ 80,041**	**$ -**	**$ 411,285**	**$ 548,085**

* *Equity, real estate, and real assets categories include commingled vehicles that invest in these types of investments.*

I. Retirement Benefits (continued)

Table 28 below is a rollforward of the investments classified by MIT's defined benefit plan within Level 3 of the fair value hierarchy defined in Note B as of June 30, 2017 and 2016.

Table 28. Rollforward of Level 3 Investments

(in thousands of dollars)	Fair Value Beginning	Realized Gains (Losses)	Unrealized Gains (Losses)	Purchases	Sales	Transfers	Fair Value Ending
Defined Benefit Plan							
Fiscal Year 2017							
Common equity:							
Long domestic	$ 53	$ -	$ 21	$ -	$ -	$ -	$ 74
Real assets	-	-	-	-	-	-	-
Other	589	-	(156)	-	-	-	433
Total	**$ 642**	**$ -**	**$ (135)**	**$ -**	**$ -**	**$ -**	**$ 507**
Fiscal Year 2016							
Common equity:							
Long domestic	$ 74	$ -	$ (21)	$ -	$ -	$ -	$ 53
Real assets	261	(3,438)	3,177	-	-	-	-
Other	760	-	(171)	-	-	-	589
Total	**$ 1,095**	**$ (3,438)**	**$ 2,985**	**$ -**	**$ -**	**$ -**	**$ 642**

I. Retirement Benefits (continued)

The plans have made investments in various long-lived partnerships, and in other cases have entered into contractual arrangements that may limit their ability to initiate redemptions due to notice periods, lock-ups, and gates. Details on estimated remaining life and current redemption terms and restrictions by asset class and type of investment for both the defined benefit plan and postretirement welfare benefit plan are provided in Table 29 below as of June 30, 2017 and 2016.

Table 29. Unfunded Commitments

	2017		2016			
(in thousands of dollars)	Unfunded Commitments	Fair Value	Unfunded Commitments	Fair Value	Redemption Terms	Redemption Restrictions
Defined Benefit Plan						
Equity:						
Absolute return . .	$ 41,983	$ 375,354	$ 39,851	$ 352,188	Redemption terms range from 4 months with 30 days' notice to closed-end funds which are not available for redemption	Lock-up provisions range from none to not available for redemption
Domestic	403	494,196	403	407,180	Redemption terms range from 4 months with 60 days' notice to 25 months with 3 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 33 months; 1 fund is not available for redemption
Foreign.	54,781	909,020	54,781	792,305	Redemption terms range from 45 days with 10 days' notice to 2 years with 3 months' notice	Lock-up provisions range from none to 15 months
Private	289,447	719,867	318,779	661,125	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate	140,114	220,914	150,325	277,671	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets	25,265	106,646	38,282	119,031	Redemption terms range from 8 months with 45 days' notice for 1 fund with all other funds being closed-end not available for redemption	Closed-end funds not available for redemption except for 1 fund with no lock-up provisions
Total	**$ 551,993**	**$ 2,825,997**	**$ 602,421**	**$ 2,609,500**		
Postretirement Welfare Benefit Plan						
Equity:						
Absolute return . .	$ 4,589	$ 52,616	$ 3,852	$ 67,327	Redemption terms range from 4 months with 30 days' notice to closed-end funds which are not redeemable	Lock-up provisions range from none to not redeemable
Domestic	44	93,018	45	75,578	Redemption terms range from 4 months with 60 days' notice to 25 months with 3 months' notice and 1 closed-end fund not available for redemption	Lock-up provisions range from none to 33 months; 1 fund is not redeemable
Foreign.	8,269	212,104	8,269	180,830	Redemption terms range from 45 days' with 10 days' notice to 2 years with 3 months' notice	Lock-up provisions range from none to 15 months
Private	43,592	73,644	46,563	60,008	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real estate	18,182	21,381	19,460	22,968	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Real assets	3,721	7,211	5,586	4,574	Closed-end funds not available for redemption	Closed-end funds not available for redemption
Total	**$ 78,397**	**$ 459,974**	**$ 83,775**	**$ 411,285**		

I. Retirement Benefits (continued)

Target allocations and weighted-average asset allocations of the investment porfolio for MIT defined benefit plan and postretirement welfare benefit plan at June 30, 2017 and 2016 are shown in Table 30 below.

Table 30. Plan Investment Allocation

	Defined Benefit Plan			Postretirement Welfare Benefit Plan		
	2017 Target Allocation	2017	2016	2017 Target Allocation	2017	2016
Cash and cash equivalents	0-15%	7%	5%	0-15%	12%	6%
Fixed income	3-13%	11%	10%	10-20%	12%	14%
Equities	33.5-83.5%	62%	62%	37-87%	63%	63%
Marketable alternatives	7.5-17.5%	11%	11%	9.5-19.5%	9%	12%
Real assets	1-11%	3%	4%	0-5.5%	1%	1%
Real estate	5-15%	6%	8%	0-8%	3%	4%
Total		**100%**	**100%**		**100%**	**100%**

Table 31 below summarizes the notional exposure and net ending fair value of derivative financial instruments held by the MIT defined benefit plan at June 30, 2017 and 2016. Refer to Note C for a detailed discussion regarding derivative financial instruments.

Table 31. Derivative Financial Instruments for Defined Benefit Plan

	Notional Exposure			
(in thousands of dollars)	Long	Short	Net Ending Fair Value	Net Gain (Loss)
Fiscal Year 2017				
Equity instruments:				
Equity options	$ 75	$ -	$ 6	$ -
Total equity instruments	75	-	6	-
Fixed income instruments:				
Fixed income futures	600	(5,400)	19	-
Total fixed income instruments	600	(5,400)	19	-
Commodity and index instruments:				
Equity index swaps	-	(20,865)	196	(9,160)
Total commodity and index instruments	-	(20,865)	196	(9,160)
2017 Total	**$ 675**	**$ (26,265)**	**$ 221**	**$ (9,160)**
Fiscal Year 2016				
Equity instruments:				
Equity options	$ 24	$ -	$ 4	$ -
Total equity instruments	24	-	4	-
Fixed income instruments:				
Fixed income futures	5,900	(900)	44	-
Total fixed income instruments	5,900	(900)	44	-
Commodity and index instruments:				
Equity Index swaps	-	(28,043)	773	12,736
Total commodity and index instruments	-	(28,043)	773	12,736
2016 Total	**$ 5,924**	**$ (28,943)**	**$ 821**	**$ 12,736**

I. Retirement Benefits (continued)

Counterparty risk may be partially or completely mitigated through master netting agreements included within an International Swap and Derivatives Association, Inc. (ISDA) Master Agreement between the plan and each of its counterparties. The ISDA Master Agreement allows the plan to offset with the counterparty certain derivative instruments' payables and/or receivables with collateral held with each counterparty.

To the extent amounts due from the counterparties are not fully collateralized contractually or otherwise, there is the risk of loss from counterparty non-performance. As of June 30, 2017, the defined benefit plan has elected not to offset recognized assets and liabilities. The following tables, 32 and 33, summarize the effect that offsetting of recognized assets and liabilities could have on the investments held by the defined benefit plan.

Table 32. Offsetting of Financial and Derivative Assets and Liabilities

	2017			2016		
(in thousands of dollars)	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount	Gross Amount	Cash/Treasury Collateral Posted/ (Received)	Net Amount
Assets						
Counterparty A	$ 196	$ 2,116	$ 2,312	$ 773	$ (974)	$ (201)
Total assets	$ 196	$ 2,116	$ 2,312	$ 773	$ (974)	$ (201)
Liabilities						
Counterparty A	$ -	$ -	$ -	$ -	$ -	$ -
Total liabilities	-	-	-	-	-	-
Total assets and liabilities, net	**$ 196**	**$ 2,116**	**$ 2,312**	**$ 773**	**$ (974)**	**$ (201)**

Maximum risk of loss from counterparty credit risk on over-the-counter derivatives is generally the aggregate unrealized appreciation in excess of any collateral pledged by the counterparty. ISDA Master Agreements allow the plan or the counterparties to an over-the-counter derivative to terminate the contract prior to maturity in the event either party fails to meet the terms in the ISDA Master Agreements. This would cause an accelerated payment of net liability, if owed to the counterparty.

Table 33 below reconciles the net recognized assets and liabilities, as shown in Table 32, to derivative financial instruments as shown in Table 27A.

Table 33. Reconciliation of Financial and Derivative Assets and Liabilities

(in thousands of dollars)	2017	2016
Derivatives from Table 27A	$ 221	$ 821
Fixed income futures	(19)	(44)
Equity options	(6)	(4)
Total	**$ 196**	**$ 773**

I. Retirement Benefits (continued)

Expected Future Benefit Payments

In fiscal 2018, MIT expects to make contributions of $18.6 million and $6.5 million to its defined benefit pension plan and postretirement welfare benefit plan, respectively. These contributions have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2017.

Table 34 below reflects total expected benefit payments for the defined benefit and postretirement welfare benefit plans over the next ten years. These payments have been estimated based on the same assumptions used to measure MIT's benefit obligations at June 30, 2017.

Table 34. Expected Future Benefit Payments

(in thousands of dollars)	Pension Benefits	Other Benefits*
2018	$ 145,054	$ 25,470
2019	157,873	27,365
2020	165,925	29,004
2021	173,812	30,559
2022	182,000	32,083
2023-2027	1,030,883	182,805

** Other Benefits reflects the total net benefits expected to be paid from the plans (e.g., gross benefit reimbursement offset by retiree contributions).*

J. Components of Net Assets and Endowment

Table 35 below presents the total net assets composition as of June 30, 2017. The amounts listed in the unrestricted category under endowment funds are those gifts and other funds received over the years that MIT designated as funds functioning as endowment and invested with the endowment funds. A large component of temporarily restricted net assets in other invested funds is pledges, the majority of which will be reclassified to unrestricted net assets when cash is received.

Table 35. Total Net Asset Composition

	2017				
(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total	2016 Total
Endowment Funds					
General purpose	$ 961,101	$ 1,181,516	$ 244,321	$ 2,386,938	$ 2,171,701
Departments and research	670,010	1,183,944	854,243	2,708,197	2,276,200
Library	12,668	29,511	21,564	63,743	57,215
Salaries and wages	584,338	2,857,965	762,484	4,204,787	3,810,449
Graduate general	93,863	171,460	109,479	374,802	339,295
Graduate departments	163,780	407,997	310,321	882,098	766,634
Undergraduate	241,268	1,221,889	386,828	1,849,985	1,676,758
Prizes	9,162	35,196	20,838	65,196	59,597
Miscellaneous	1,223,700	228,987	448,491	1,901,178	1,660,840
Investment income held for distribution	395,559	-	-	395,559	362,826
Endowment funds before pledges	4,355,449	7,318,465	3,158,569	14,832,483	13,181,515
Pledges	-	-	135,500	135,500	251,521
Total endowment funds	4,355,449	7,318,465	3,294,069	14,967,983	13,433,036
Other Invested Funds					
Student loan funds	19,941	-	18,673	38,614	38,320
Building funds	57,563	39,306	-	96,869	111,983
Designated purposes:					
Departments and research	382,603	-	-	382,603	344,951
Other purposes	355,326	13,488	-	368,814	425,260
Life income funds	5,306	37,743	107,511	150,560	142,225
Pledges	-	397,727	-	397,727	357,544
Other funds available for current expenses	1,723,380	230,697	-	1,954,077	1,390,907
Funds expended for educational plant	767,811	-	-	767,811	684,855
Total other invested funds	3,311,930	718,961	126,184	4,157,075	3,496,045
Total net assets	**$ 7,667,379**	**$ 8,037,426**	**$ 3,420,253**	**$ 19,125,058**	**$ 16,929,081**

J. Components of Net Assets and Endowment (continued)

MIT's endowment consists of approximately 3,900 individual funds established for a variety of purposes and includes both donor-restricted endowment funds and funds that function as endowment, as shown in Table 36 below. As required by GAAP, net assets associated with endowment funds, including funds designated to function as endowments, are classified and reported based on the existence or absence of donor-imposed restrictions.

The Executive Committee has interpreted the Massachusetts-enacted version of the Uniform Prudent Management of Institutional Funds Act (UPMIFA) as allowing MIT to appropriate for expenditure or accumulate so much of an endowment fund as MIT determines is prudent for the uses, benefits, purposes, and duration for which the endowment fund is established, subject to the intent of the donor as expressed in the gift instrument. Unless stated otherwise in the gift instrument, the assets in an endowment fund shall be donor-restricted assets until appropriated for expenditure by the Executive Committee. As a result of this interpretation, MIT has not changed the way permanently restricted net assets are classified. (See Note A for further information on net asset classification.) The remaining portion of the donor-restricted endowment fund that is not classified in permanently restricted net assets is classified as temporarily restricted net assets until those amounts are appropriated for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA. In accordance with UPMIFA, the Executive Committee considers the following factors in making a determination to appropriate or accumulate endowment funds:

i. the duration and preservation of the fund
ii. the purposes of MIT and the endowment fund
iii. general economic conditions
iv. the possible effects of inflation and deflation
v. the expected total return from income and the appreciation of investments
vi. other resources of MIT
vii. the investment policies of MIT

Table 36. Endowment Net Asset Composition by Type of Fund

(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Fiscal Year 2017				
Donor-restricted endowment funds	$ 395	$ 7,318,465	$ 3,294,069	$ 10,612,929
Board-designated endowment funds	4,355,054	-	-	4,355,054
Total endowment funds	**$ 4,355,449**	**7,318,465**	**3,294,069**	**14,967,983**
Fiscal Year 2016				
Donor-restricted endowment funds	$ (395)	$ 6,511,079	$ 2,960,741	$ 9,471,425
Board-designated endowment funds	3,961,611	-	-	3,961,611
Total endowment funds	**$ 3,961,216**	**$ 6,511,079**	**$ 2,960,741**	**$ 13,433,036**

Underwater Endowment Funds

From time to time, the fair value of assets associated with individual donor-restricted endowment funds may fall below the value of the initial and subsequent donor gift amounts (underwater). When underwater endowment funds exist, they are classified as a reduction of unrestricted net assets. There were no underwater endowment funds reported in unrestricted net assets as of June 30, 2017. Total underwater endowment funds reported in unrestricted net assets were $0.4 million as of June 30, 2016.

J. Components of Net Assets and Endowment (continued)

Table 37 below reflects changes in unrestricted, temporarily restricted, and permanently restricted endowment net assets for fiscal year 2017 and 2016, respectively.

Table 37. Changes in Endowment Net Assets

(in thousands of dollars)	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Fiscal Year 2017				
Endowment net assets, July 1, 2016	$ 3,961,216	$ 6,511,079	$ 2,960,741	$ 13,433,036
Investment return:				
Investment income	15,522	32,678	17,275	65,475
Net appreciation (realized and unrealized)	525,183	1,199,048	109,389	1,833,620
Total investment return	540,705	1,231,726	126,664	1,899,095
Contributions	-	-	319,718	319,718
Appropriation of endowment assets for expenditure	(187,982)	(425,999)	(14,688)	(628,669)
Other changes:				
Underwater gain adjustment	395	(395)	-	-
Net asset reclassifications and transfers to create board-designated endowment funds	41,115	2,054	(98,366)	(55,197)
Endowment net assets, June 30, 2017	**$ 4,355,449**	**$ 7,318,465**	**$ 3,294,069**	**$ 14,967,983**
Fiscal Year 2016				
Endowment net assets, July 1, 2015	$ 4,043,530	$ 6,889,791	$ 2,754,618	$ 13,687,939
Investment return:				
Investment income	20,731	43,822	11,093	75,646
Net appreciation (realized and unrealized)	4,586	(22,820)	22,442	4,208
Total investment return	25,317	21,002	33,535	79,854
Contributions	-	-	140,012	140,012
Appropriation of endowment assets for expenditure	(178,367)	(402,378)	(7,963)	(588,708)
Other changes:				
Underwater gain adjustment	(395)	395	-	-
Net asset reclassifications and transfers to create board-designated endowment funds	71,131	2,269	40,539	113,939
Endowment net assets, June 30, 2016	**$ 3,961,216**	**$ 6,511,079**	**$ 2,960,741**	**$ 13,433,036**

J. Components of Net Assets and Endowment (continued)

Endowment Investment and Spending Policies

MIT's investment policy is based on the primary goal of maximizing return relative to appropriate risk such that performance exceeds appropriate benchmark returns at the total pool, asset class, and individual manager levels. To achieve its long-term rate-of-return objectives, MIT relies on a total return strategy in which investment returns are realized through both capital appreciation (realized and unrealized gains) and current yield (interest and dividends). MIT targets a diversified asset allocation that places greater emphasis on equity-based investments to achieve its long-term objectives within prudent risk constraints.

The Institute's primary investment pool, Pool A, is principally for endowment and funds functioning as endowment. Pool A operates as a mutual fund with units purchased and redeemed based on the previous month's unit market value. The total market value of Pool A was $16,115.3 million at June 30, 2017, and $14,448.3 million at June 30, 2016. Pool A included non-endowed operating and life income funds totaling $1,616.8 million at June 30, 2017, and $1,479.2 million at June 30, 2016. Certain endowed assets are also maintained in separately invested funds. These separately invested funds totaled $334.0 million and $214.5 million at June 30, 2017 and 2016, respectively.

MIT has adopted spending policies designed to provide a predictable stream of funding to programs supported by its investments while maintaining the purchasing power of assets. For pooled investments, the Executive Committee of the Corporation votes to distribute funds for operational support from general investments. In accordance with MIT's spending policy, these distributions are funded from both investment income and market appreciation. The distribution rates were $72.20 and $69.29 per Pool A unit as of June 30, 2017 and 2016, respectively. For separately invested endowment funds, only the annual investment income generated is distributed for spending.

SECTION II

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

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Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2017

Federal Grantor/ Pass Through Grantor/ Program Title	Federal CFDA Number	Total $ Amount Expended	$ Amount Passed to Subrecipients
Research and Development Cluster			
U.S. Department of Defense:	12		
Air Force		$ 309,212,666	$ 27,317,264
Army		77,636,892	7,539,891
Classified		153,810,343	17,817,350
Defense Advance Research Project Agency		58,732,898	7,277,546
Missile Defense Agency		79,053,061	4,773,855
National Security Agency		11,264,281	266,190
Navy		94,418,942	8,997,233
Other DOD		176,994,380	8,575,349
Passthrough		37,222,168	339,654
Total Department of Defense		$ 998,345,631	$ 82,904,332
U.S. Department of Commerce	11	$ 12,746,250	$ 1,998,151
U.S. Department of Commerce - Passthrough	11	51,440	-
U.S. Department of Energy	81	70,103,853	4,568,557
U.S. Department of Energy - Passthrough	81	15,412,648	271,423
U.S. Department of Health and Human Services	93	123,550,138	9,160,652
U.S. Department of Health and Human Services - Passthrough	93	19,631,129	-
U.S. Department of Transportation	20	34,827,680	2,681,410
U.S. Department of Transportation - Passthrough	20	433,389	-
Miscellaneous Federal Government	Various	8,290,634	767,535
Miscellaneous Federal Government - Passthrough	Various	1,519,996	-
National Aeronautics & Space Administration	43	57,643,692	9,833,303
National Aeronautics & Space Administration - Passthrough	43	8,619,785	104,466
National Science Foundation	47	80,917,026	8,863,247
National Science Foundation - Passthrough	47	14,464,209	120,373
Total Research and Development Cluster	Appendix A 1-3	$ 1,446,557,500	$ 121,273,449

The accompanying notes are an integral part of this schedule.

Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2017
Continued

Federal Grantor/ Pass Through Grantor/ Program Title	Federal CFDA Number	Total $ Amount Expended	$ Amount Passed to Subrecipients
Student Financial Assistance Cluster Expenditures			
U.S. Department of Education Cluster:			
Grants:			
Pell	84.063	$ 3,382,317	
Federal Supplemental Educational Opportunity	84.007	1,875,059	
Federal Work Study	84.033	1,790,159	
Federal Perkins Loan:	84.038		
New Loans		1,968,864	
Balance Outstanding From Prior Years		32,509,723	
Loan Administrative Cost Allowance		285,823	
William D. Ford Federal Direct Loan Program:	84.268		
Direct Subsidized and Unsubsidized Loans		10,472,581	
Direct Plus Loan for Parents and for Graduate or Professional Students		9,896,324	
Total Student Financial Assistance Cluster Expenditures		$ 62,180,850	
Highway Planning and Construction Cluster			
U.S. Department of Transportation - Passthrough	20.205	$ 187,585	
Total Highway Planning and Construction Cluster	Appendix A-4	$ 187,585	
Other Federal Expenditures:			
U.S. Department of Commerce	Appendix B	$ 22,857	$ -
U.S. Department of Defense	Appendix B	$ 143,613	$ -
U.S. Department of Defense - Passthrough	Appendix C	$ 4,646,993	$ -
U.S. Department of Energy	Appendix B	$ 412,690	$ -
U.S. Department of Energy - Passthrough	Appendix C	$ 95,551	$ -
U.S. Department of Health and Human Services - Passthrough	Appendix C	$ 138,274	$ -
U.S. Department of Transportation	Appendix B	$ 36,119	$ -
Miscellaneous Federal Government	Appendix B	$ 3,454,992	$ 570,798
Miscellaneous Federal Government - Passthrough	Appendix C	$ 330,154	$ -
National Aeronautics & Space Administration	Appendix B	$ 2,193,114	$ 18,493
National Aeronautics & Space Administration - Passthrough	Appendix C	896,981	$ -
Total Other Federal Expenditures		$ 12,371,338	$ 589,291
Total Federal Expenditures		$ 1,521,297,273	$ 121,862,740

The accompanying notes are an integral part of this schedule.

Massachusetts Institute of Technology
Notes to Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2017

1. Basis of Presentation

The accompanying schedule of expenditures of federal awards including appendices A, B and C (the "Schedule") summarize the expenditures of the Massachusetts Institute of Technology (the "Institute") under programs of the federal government for the year ended June 30, 2017. Because the Schedule presents only a selected portion of the activities of the Institute, it is not intended to and does not present the financial position, changes in net assets and cash flows of the Institute. The accompanying appendices A, B, and C provide detail on the federal awards expended by the Institute.

For purposes of the Schedule, federal awards include all grants, contracts and similar agreements entered into directly between the Institute and agencies and departments of the federal government and all subawards to the Institute by nonfederal organizations pursuant to federal grants, contracts and similar agreements. The information in this schedule is presented in accordance with the provisions of the Office of Management and Budget's *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Therefore, certain amounts presented in the Schedule may differ from amounts presented in, or used in preparation of, the consolidated financial statements. CFDA and pass-through numbers are provided when available. Negative amounts represent adjustments to amounts reported in prior years in the normal course of business.

2. Summary of Significant Accounting Policies for Federal Expenditures

Expenditures for direct costs are recognized as incurred using the accrual method of accounting and the cost accounting principles contained in OMB Circular A-21, *Cost Principles for Educational Institutions,* Federal Acquisition Regulation and OMB's Uniform Guidance. Under those cost principles, certain types of expenditures are not allowable or are limited as to reimbursement. Moreover, expenditures include a portion of costs associated with general Institute activities (facilities and administrative costs) which are allocated to awards under negotiated formulas commonly referred to as facilities and administrative rates.

The Institute applies its predetermined approved facilities and administrative rate when charging indirect costs to federal awards rather than the 10% de minimis cost rate as described in Section 200.414 of the Uniform Guidance.

The Institute receives funding from federal government agencies for sponsored research under government grants and contracts. These grants and contracts provide for reimbursement of indirect costs based on rates negotiated with the Office of Naval Research (ONR), the Institute's cognizant federal agency. The Institute's indirect cost reimbursements are based on fixed rates with carryforward of under or over recoveries.

The Defense Contract Audit Agency (DCAA) is responsible for auditing indirect charges to grants and contracts. The Institute has final audited rates through 2009 and negotiated fixed rates for indirect costs through the 2018 fiscal year.

3. Federal Student Loan Programs

The Federal Perkins Loan Program (CFDA #84.038) is administered directly by the Institute and balances and transactions relating to this program are included in the Institute's consolidated

3. Federal Student Loan Programs - Continued

financial statements. The balance of loans outstanding for this program at June 30, 2017 is $27,480,344.

The William D. Ford Federal Direct Loan Programs (CFDA #84.268) are not administered by the Institute and balances and transactions relating to these programs are not included in the Institute's consolidated financial statements.

Appendix A
Massachusetts Institute of Technology
Schedule of Expenditures of Federal Awards
Federal Research Support
FY 17 Expenditures

Sponsor	Campus Direct (Appendix A-1)	Lincoln Direct (Appendix A-2)	Lincoln Passthrough (Appendix A-2)	Campus Passthrough (Appendix A-3)	Total
Department of Defense:					
Air Force	$ 21,824,761	$ 287,387,905	$ (14)	$ 14,053,608	$ 323,266,260
Army	25,243,422	52,393,470	504,250	7,335,205	85,476,347
Classified	-	153,810,343	592,806	-	154,403,149
Defense Advanced Research Project Agency	19,216,173	39,516,725	-	6,058,004	64,790,902
Missile Defense Agency	-	79,053,061	7,167	-	79,060,228
National Security Agency	-	11,264,281	-	-	11,264,281
Navy	25,635,337	68,783,605	147,567	4,395,980	98,962,489
Other Department of Defense	5,171,029	171,823,351	-	4,127,595	181,121,975
Total Department of Defense	97,090,721	864,032,741	1,251,776	35,970,392	998,345,631
Department of Commerce	3,663,298	9,082,952	-	51,440	12,797,690
Department of Energy	66,761,058	3,342,795	16,822	15,395,826	85,516,501
Department of Health & Human Services	95,039,258	28,510,880	739,749	18,891,380	143,181,267
Department of Transportation	4,229,597	30,598,083	-	433,389	35,261,069
Miscellaneous Federal Government:					
Department of Agriculture	40,692	-	-	-	40,692
Department of Education	504,046	-	-	-	504,046
Department of Interior	368,242	-	-	431,365	799,607
Other	3,355,758	4,021,896		1,088,631	8,466,285
Total Miscellaneous Federal Government	4,268,738	4,021,896	-	1,519,996	9,810,630
Nat'l Aeronautics & Space Administration	31,409,747	26,233,945	220,994	8,398,791	66,263,477
National Science Foundation	80,917,026	-	635,177	13,829,032	95,381,235
Total Federal Sponsors	**$ 383,379,444**	**$ 965,823,292**	**$ 2,864,518**	**$ 94,490,246**	**$ 1,446,557,500**

Note for Appendices A-1, A-3, B and C details:
- Contracts without CFDA numbers were shown as ".RD" in the CFDA# column for Reseach & Development and ".U00" for Non-R&D.
- Amounts less than 50 cents appear as zero due to rounding.

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE					
Air Force					
Air Force	FA2386-17-1-4661	Development of tele-operated quadrupedal robotic platform for disaster response	12.630	36,652	-
Air Force	FA8650-14-C-2472	Computational Aircraft Prototype Syntheses (CAPS)	12.RD	645,854	222,506
Air Force	FA8650-15-C-7564	ClearScope: Transparent multi-level inter-process and intra-process information scoping	12.RD	1,773,801	624,746
Air Force	FA8650-16-1-7641	Integrated Magnetooptical Devices for On-Chip Photonic Systems	12.910	354,218	-
Air Force	FA8651-13-1-0002	Dynamic Decision-Making and Coordination of Humans and Autonomous Agents Under Communication and Information Uncertainty	12.800	51,930	-
Air Force	FA8750-12-1-0321	Assisted Perception, Planning and Control for Remote Mobility and Dexterous Manipulation	12.300	13,426	-
Air Force	FA8750-12-2-0110	Provably Safe Android Apps	12.800	202,818	152,997
Air Force	FA8750-14-2-0004	A General-Purpose Probabilistic Programming Platform with Effective Stochastic Interference	12.300	1,667,954	208,557
Air Force	FA8750-14-2-0120	Programmable Quantum Photonic Processor using Silicon Photonics	12.800	104,405	-
Air Force	FA8750-14-2-0242	CLIO: A Digital Code Assistant for Big Code Era	12.300	1,016,354	-
Air Force	FA8750-15-2-0272	Julia: A Fresh Approach to Technical Computing and Data Processing	12.910	448,626	-
Air Force	FA8750-16-2-0141	Development of a Wide-Bandgap Programmable Nanophotonic Processor	12.300	273,665	-
Air Force	FA8750-17-2-0019	Bayesian Nonparametric Models for Quantifying Uncertainty and Adapting Model Complexity	12.300	206,246	-
Air Force	FA8750-17-2-0126	Human Data Interaction Project	12.300	19,163	-
Air Force	FA9453-16-C-0018	Quantifying Uncertainty in Velocity Models and Travel-Time Predictions for Local and Regional Monitoring Networks	12.RD	216,273	15,039
Air Force	FA9550-11-1-0183	Stateless Networking: Principles, Architectures and Codes	12.800	30,024	-
Air Force	FA9550-11-1-0195	Plasma-Materials Interactions in Electric Propulsion	12.800	46,549	3,006
Air Force	FA9550-11-1-0199	Tu(r)ning Weakness to Strength: Mechanomutable Bioinspired Materials	12.800	82,082	-
Air Force	FA9550-11-1-0225	Quantum Transport and Optoelectronics in Gapped Graphene Nanodevices	12.800	4,800	-
Air Force	FA9550-11-1-0305	Statistical Models and Graph: Deconvolution via Incoherence	12.800	101,043	-

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Air Force	FA9550-12-1-0259	Thin Film Self-Assembly of Globular Protein-Polymer Diblock Copolymers for Nanostructured Biofunctional Materials	12.800	65,895	-
Air Force	FA9550-12-1-0313	Fluid SLAM and the Robotic Reconstruction of Localized Atmospheric Phenomena	12.800	212,774	-
Air Force	FA9550-12-1-0423	Efficient Algorithmic Frameworks via Structural Graph Theory	12.910	99,597	87,164
Air Force	FA9550-12-1-0499	Advanced Photonics: Science, Technologies and Applications	12.800	505,734	-
Air Force	FA9550-13-1-0042	A Comprehensive Theory of Algorithms for Wireless Networks and Mobile Systems	12.800	-1,076	-
Air Force	FA9550-13-1-0159	High-Energy, Multi-Octave-Spanning Mid-IR Sources via Adiabatic Difference Frequency Generation	12.800	99,766	97,246
Air Force	FA9550-13-1-0193	Quantum Optics in Diamond Nanophotonic Chips	12.800	150,730	-
Air Force	FA9550-14-1-0031	Categorical approach to agent interaction	12.800	161,065	-
Air Force	FA9550-14-1-0035	Advanced Quantum Material - A New Frontier for Ultracold Atoms	12.800	2,437,464	1,726,568
Air Force	FA9550-14-1-0052	Optimal Measurements for Scalable Quantum Technologies	12.800	2,140,199	850,222
Air Force	FA9550-14-1-0060	(BRI FY14) Theory-based Engineering of Biomolecular Circuits in Living Cells	12.800	723,564	220,858
Air Force	FA9550-14-1-0192	Constraining ICME Magnetic Field Orientations using Low Frequency Radio Polarimetric Observations	12.800	238,818	34,924
Air Force	FA9550-14-1-0226	Design and Synthesis of Polymers for Electrooptical Applications	12.800	147,301	-
Air Force	FA9550-14-1-0255	Isolated Soft-X-ray Attosecond Pulse Generation Using Synthesized Strong-Field Infrared Pulses	12.800	309,042	92,863
Air Force	FA9550-14-1-0292	Synthesis and Self-Assembly of Tri- and Tetra-block Bottlebrush Copolymers	12.800	169,922	-
Air Force	FA9550-14-1-0399	Dynamic Data-Driven Motion Planning and Control for Pervasive Situational Awareness Application Systems	12.800	190,367	22,616
Air Force	FA9550-14-1-0403	Network Coding for Strong Consistency Semantics in Distributed Shared Memory Networks	12.800	394,493	-
Air Force	FA9550-15-1-0038	(MURI 14)-A unified mathematical and algorithmic framework for managing multiple information sources of multi-physics systems	12.800	1,350,315	735,570
Air Force	FA9550-15-1-0046	Toward a Phenomenological Theory of Transport Phenomena in Molten Sulfide Systems	12.800	116,208	-
Air Force	FA9550-15-1-0058	VOLUME MODE TRAVELING WAVE TUBE AMPLIFIER	12.800	209,249	-
Air Force	FA9550-15-1-0072	Gradient based optimization and control of chaotic multidisciplinary systems via Least Squares Shadowing adjoint method	12.800	140,280	-
Air Force	FA9550-15-1-0078	Interferometric inversion for passive imaging and navigation	12.800	136,884	-
Air Force	FA9550-15-1-0135	Molecular Tuning of Interfacial Electrocatalysis	12.800	108,441	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Air Force	FA9550-15-1-0276	Topology Optimization, Fabrication Adaptivity, and Model-Data Assimilation of Novel Photonic Materials	12.800	229,530	-
Air Force	FA9550-15-1-0310	Phase-change on Nanoporous Graphene for Advanced Thermal Management	12.800	159,120	-
Air Force	FA9550-15-1-0359	Degenerate Fermi Gases of Stable Dipolar Molecules	12.800	96,724	-
Air Force	FA9550-15-1-0473	Novel optical techniques for investigating cellular and vascular biophysics	12.800	268,716	93,291
Air Force	FA9550-15-1-0514	FATE: Foldable and Adaptive Two-Dimensional Electronics	12.800	1,322,767	420,079
Air Force	FA9550-16-1-0012	Bayesian Program Learning and Concept Induction	12.800	206,496	-
Air Force	FA9550-16-1-0108	Dynamic Data Driven Methods for Self-aware Aerospace Vechicles	12.800	302,080	203,066
Air Force	FA9550-16-1-0208	Automated Discovery of Important Chemical Reactions	12.800	72,253	-
Air Force	FA9550-16-1-0214	(YIP) The Hybrid Discontinuous Galerkin Method for Implicit Large Eddy Simulations of Manetohydrodynamic Flows	12.800	33,046	-
Air Force	FA9550-16-1-0228	Energy-Efficient High-Performance Computer Vision Systems	12.800	113,372	-
Air Force	FA9550-16-1-0231	Complementing dynamical equations with data in adaptive reduced-order subspaces	12.800	100,995	-
Air Force	FA9550-16-1-0244	Instrumentation for Vacuum Nano-Electronic Devices High Current & Long Life Cathodes/Ion Sources	12.800	755	-
Air Force	FA9550-16-1-0273	Fluoro-Hydrogenated Ionic Liquids (FHIL) for High-Performance Electrospray Propulsion	12.800	161,137	-
Air Force	FA9550-16-1-0324	Quantum Gas Microscopy of Strongly Correlated Fermions	12.800	150,539	-
Air Force	FA9550-16-1-0382	Quantum Optoelectronics and Plasmonics with Novel Van der Waals Heterostructures	12.800	242,265	-
Air Force	FA9550-16-1-0391	High-Speed Quantum Communications using Silicon Photonics	12.800	151,902	-
Air Force	FA9550-16-1-0427	Uncovering and controlling the mechanisms of surface chemical and electrochemical stability on perovskite oxides	12.800	69,769	-
Air Force	FA9550-16-1-0497	The Marvin Minsky Institute for Society of Mind Theory	12.800	60,510	-
Air Force	FA9550-17-1-0058	Pixel matrices and other compositional analyses of interconnected systems	12.800	79,016	-
Air Force	FA9550-17-1-0081	The Marvin Minsky Institute for Society of Mind Theory	12.800	185,646	-
Air Force	FA9550-17-1-0114	The DDDAS Design of Programmable Mechanical Metamaterials	12.800	5,247	3,392
Air Force	FA9550-17-1-0136	Life-like Self-assembly through Dissipative Adaptation	12.800	52,542	-
Air Force	FA9550-17-1-0165	Learning to Plan in Hybrid Spaces	12.800	10,712	-
Air Force	FA9550-17-1-0192	Spontaneous Computation in Chemical Systems	12.800	16,698	-
Air Force	FA8650-17-C-9113	Nanoscale X-ray Tomosynthesis for Rapid Assessment of IC Dice (NXT-RAID)	12.RD	330,011	112,438

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
		Total for Air Force		**21,824,761**	**5,927,148**
Army					
Army	D13AP00050	Time, Energy and Momentum Resolved Probing of Ultrafast Dynamics in Quantum Materials	12.910	2,854	-
Army	W15QKN-15-1-0001	Environmentally Adaptive Off-Board Acoustic Sensing Concept for the Rapidly Changing Arctic Ocean	12.RD	373,527	169,832
Army	W31P4Q-13-1-0014	HERMES : Highly Efficient Robotic Mechanisms and Electromagnetic systems	12.910	-2,985	-
Army	W31P4Q-15-1-0005	Small-scale quantum processor for quantum networking	12.910	114,610	-
Army	W31P4Q-16-1-0001	Monolithic terahertz (THz) and long-wave infrared (LWIR) quantum cascade laser (QCL) frequency combs for threat detection	12.910	967,922	373,933
Army	W81XWH-11-2-0179	PT100120: Using Real-Time Functional Imaging to Speed Recovery from TBI	12.420	-3,367	-
Army	W81XWH-13-1-0151	Nano-siRNA Particles and Combination Therapies for Ovarian Tumor Targeting	12.420	599,692	-
Army	W81XWH-13-1-0272	PC121018P1 Targeted Encapsulation and Internal Focusing for Circulating Tumor Cell Isolation	12.420	50,233	-
Army	W81XWH-13-1-0323	Developing Novel Therapeutic Approaches in small cell lung cancinoma using genetically engineered mouse models and human circulating tumor cells.	12.420	19,872	-
Army	W81XWH-14-1-0240	Extracellular Matrix Biomarkers for Diagnosis, Prognosis, Imaging and Targeting	12.420	564,739	181,976
Army	W81XWH-14-1-0544	Cartilage-Penetrating Chondrogenic Nanoparticles for Early Post-Traumatic Osteoarthritis Therapy	12.420	282,223	-
Army	W81XWH-14-C-0111	Prosthetic Knee-Angle-Foot System with Biomechatronic Sensing, Control and Power Generation	12.RD	595,177	-
Army	W81XWH-15-1-0095	OC140365 Investigate the role of obesity in ovarian cancer initiation and progression	12.420	22,021	-
Army	W81XWH-15-1-0365	The Therapeutic Effect of the Antitumor Drug 11beta and Related Molecules on Polycystic Kidney Disease	12.420	262,470	-
Army	W81XWH-15-1-0623	JIT LC140625 Investigating the interplay of commensal microbiota, host immune system and genetic perturbations in non-small cell lung cancer	12.420	26,109	-
Army	W81XWH-16-1-0452	Tumor Immunotherapy by Gene-circuit Recruited Immunomodulatory Systems (TIGRIS) for Prostate Cancer	12.RD	118,380	-
Army	W81XWH-16-1-0565	Engineer Synthetic Tumor Recruited Immuno-Cellular Therapy (STRICT)	12.RD	42,255	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Army	W81XWH-16-1-0671	Targeting MCL-1 with Unique Peptide Inhibitors Delivered Intracellularly Using a Novel Nanoparticle Formulation	12.420	93,288	-
Army	W911NF-07-D-0004	Institute for Soldier Nanotechnologies	12.RD	-579	-579
Army	W911NF-07-D-0004, T.O. 9	Institute for Soldier Nanotechnologies	12.RD	579	579
Army	W911NF-10-1-0059	New Treatments for Stress-induced Dysregulation of Circuits Regulating Reward, Fear and Habit Learning	12.431	4,002	-
Army	W911NF-11-1-0202	Optical-Transition Clocks With Microfabricated Frequency Combs For Performance Beyond the Standard Quantum Limit	12.431	427,918	421,424
Army	W911NF-11-1-0281	Biologically Patterned Amyloid Scaffolds for Multifunctional and Multiscale Materials	12.431	160,418	-
Army	W911NF-11-1-0400	Multi-Qubit Enhanced Sensing and Metrology	12.431	469,882	234,745
Army	W911NF-11-2-0054	Multi-input, multimodal, mammalian information processing circuits	12.431	241,782	197,149
Army	W911NF-12-2-0039	Barrier□Immune□Organ: Microphysiology, Microenvironment Engineered Tissue Construct Systems (BIO□MIMETICS)	12.431	3,865,918	447,487
Army	W911NF-13-1-0063	Measurement and Analysis of Grandular Soil Beneath Lightweight Robotic Running Gear	12.431	35,308	-
Army	W911NF-13-1-0189	Strongly Correlated Quantum Gases of Atoms and Dipolar Molecules	12.431	163,550	-
Army	W911NF-13-1-0212	Fundamental Theory and Parallel Inference for Probabilistic Programming (10.3.1 Integrated Intelligence	12.431	137,591	-
Army	W911NF-13-1-0422	How does unit size affect collective intelligence in online groups?	12.431	46,956	-
Army	W911NF-13-D-0001, T.O. 1	ISN 3 FY'13 funding	12.431	719,983	-
Army	W911NF-13-D-0001, T.O. 2	ISN 3 FY'13 funding	12.431	1,313,852	89,988
Army	W911NF-13-D-0001, T.O. 3	ISN 3 FY'13 funding	12.431	1,930,881	-
Army	W911NF-13-D-0001, T.O. 4	ISN 3 FY'13 funding	12.431	844,315	-
Army	W911NF-13-D-0001, T.O. 5	ISN 3 FY'13 funding	12.431	939,099	-
Army	W911NF-13-D-0001, T.O. 6	ISN 3 FY'13 funding	12.431	0	-
Army	W911NF-13-D-0001, T.O. 8	ISN 3 FY'13 funding	12.431	771,060	28,916
Army	W911NF-13-D-0001, T.O. 9	ISN 3 FY'13 funding	12.431	1,647,933	1,289,049
Army	W911NF-14-1-0037	Probing the Effects of Topography on Bedrock Fracture in the Shallow Subsurface	12.431	102,684	18,530
Army	W911NF-14-1-0344	Novel states of light and matter mediated by collective Rydberg excitations	12.431	145,716	43,002
Army	W911NF-14-1-0433	A Belief-Space Approach to Integrated Intelligence- Research Area 10.3: Intelligent Networks	12.431	149,044	-
Army	W911NF-14-1-0539	Design of Stable Nanocrystalline Alloys in Compound-Forming Systems	12.431	149,908	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Army	W911NF-14-2-0071	Terahertz Nitride Sources (TNS)	12.431	112,075	-
Army	W911NF-14-2-0102	Hybrid Graphene - MoS2 Structures for Advanced Electronics	12.431	-7,739	-
Army	W911NF-15-1-0128	Realizing Novel Phases of Materials with Light-Matter Interaction	12.431	225,475	-
Army	W911NF-15-1-0164	11.2/1.3.2 A variational method for the extraction of intermittently unstable time-dependent modes directly from system observables	12.431	60,993	-
Army	W911NF-15-1-0166	Managing Uncertainty: Principles For Robust And Dexterous Continuum Mechanics	12.431	320,722	110,400
Army	W911NF-15-1-0183	MoD Molecules on Demand	12.431	264,151	-
Army	W911NF-15-1-0196	Explaining and Exploiting the Resistive Force Theory - Toward optimal, flexible, locomotor designs: Research Area 1.3.1	12.431	81,317	-
Army	W911NF-15-1-0249	Foundations of Statistical Methods for the Control of Far-from-equilibrium Driven Systems	12.431	32,774	-
Army	W911NF-15-1-0598	Toward Accurate Models of Wet Granular Media in Nature: Research Area 9.2	12.431	47,345	19,360
Army	W911NF-15-1-0639	Modeling Social Common Sense for Seamless Human-Machine Teaming: Inverting the ?Intuitive Game Engine? with Probabilistic Programming	12.431	241,206	113,100
Army	W911NF-16-1-0034	Coupled Synthesis, Transport, and Magnetization Studies to Detect New Topological Phases	12.431	128,958	-
Army	W911NF-16-1-0440	Research Area 2.1: Fluid-Driven Sediment Transport: A first-principles approach joining geological observations and granular-fluid physics	12.431	97,070	-
Army	W911NF-16-1-0551	Foundations of Scalable Statistical Learning	12.910	466,548	-
Army	W911NF-16-1-0568	Assembling Assemblers with Functional Digital Materials	12.431	736,250	-
Army	W911NF-16-2-0023	Automated System for Knowledge-based Continuous Organic Synthesis (ASKCOS)	12.910	2,767,155	400,596
Army	W911NF-16-2-0176	A Systems Approach for Managing the Health of Force	12.431	274,640	-
Army	W911NF-16-2-0192	Superdetectors: Unlocking the Potential of NonEquilibrium Superconductivity at the Nanoscale	12.RD	274,036	57,938
Army	W911NF-17-1-0068	Smooth Modeling of Flows on Graphs	12.431	60,586	-
Army	W911NF-17-1-0174	Physical Properties of Materials: Exotic Physical Properties of Electronically Coupled Two-Dimensional Metal-Organic Frameworks	12.431	10,657	-
Army	W911NF-17-1-0223	Improved Ceramic Manufacturability With Electric Field Assisted Sintering: Developing Underlying Principles	12.431	9,487	-
Army	W911NF-17-2-0043	An Osseointegrated Transfemoral Prosthesis Offering Long-Term Bi-Directional Efferent-Afferent Neural Transmission	12.910	95,825	-
Army	W912HQ-14-C-0028	Integrated Passive Sampler-Food Web Modeling Framework for Monitoring Remedy Effectiveness	12.RD	221,972	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Army	W912HQ-14-C-0034	Combining Mass Balance Modeling with Passive Sampling at Contaminated Sediment Sites to Evaluate Continuing Inputs and Food Web Responses to Remedial Actions	12.RD	325,098	-
		Total for Army		**25,243,422**	**4,197,425**
DARPA					
DARPA	HR0011-11-C-0100	Memory System with Monolithic CMOS Photonic Networks for High-Performance, Energy-efficient Embedded Manycore Machines	12.RD	161,607	109,219
DARPA	HR0011-12-2-0007	Ebrium Silicon Photonic Integrated Oscillator and RADAR (ESPIOR)	12.910	2,378,185	141,337
DARPA	HR0011-15-2-0012	MEMS Deuterium Ionizers for Compact Neutron Sources	12.910	352,224	-
DARPA	HR0011-15-2-0033	Technology to Genetically Engineer Otherwise Intractable Bacteria to Manipulate Microbiomes	12.910	891,381	96,082
DARPA	HR0011-15-2-0047	Computer-Synthesized Protocols for Resilient Networking	12.910	884,358	384,124
DARPA	HR0011-15-C-0056	Chip-Scale Electronic - Photonic Synthesizer (CS-EPS)	12.RD	2,431,376	280,311
DARPA	HR0011-15-C-0084	The MIT-Broad Foundry: TA2	12.RD	7,303,609	4,117,795
DARPA	HR0011-15-C-0091	ROBUST: Robust Operation of Bacterial Universes with Synthetic-biology Technologies	12.910	1,642,202	623,952
DARPA	HR0011-15-C-0155	MAGnetic Neural EXcitation (MAGNEX)	12.RD	562,113	195,424
DARPA	HR0011-16-2-0003	B-Codes	12.910	372,991	-
DARPA	HR0011-16-2-0041	Supporting DARPA Matrix Program via Ab Initio Simulation of Thermoelectric Transport	12.910	252,939	-
DARPA	HR0011-16-C-0030	Principles, Limits, and Methods for Computational Periscopy	12.RD	1,053,658	16,570
DARPA	HR00111720029	Large-scale, Reconfigurable and Multifunctional 2.5-D Conformal Optics	12.910	21,250	-
DARPA	N66001-16-C-4007	Demonstration of On-Demand Continuous Flow Manufacturing of Pharmaceuticals	12.910	879,273	-
DARPA	W911NF-17-2-0077	Programming seed cells to grow and differentiate into defined patterns	12.431	29,006	-
		Total for DARPA		**19,216,173**	**5,964,813**
Other DOD					
NSA	H98230-14-C-1424	Supercloud: a Unified Approach to Compute, Big Data, Database and Enterprise Clouds	12.RD	1,237,189	-
Other DOD	2015-15061000003	Automating Statistical Model Discovery	12.RD	85,109	-
Other DOD	HDTRA1-12-1-0008	Blast Wave Manipulation Using Hierarchical Metamaterial Stuctures	12.351	0	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Other DOD	HDTRA1-13-1-0001	Evaluation of Radiation-Induced Photonic Defects in Si, Ge, Chalcogenides and Polymers	12.351	209,994	72,352
Other DOD	HDTRA1-13-1-0038	Nucleopore Membrane Mimics As Selective Filters for Biological Agents	12.351	600,285	-
Other DOD	HDTRA1-14-1-0007	Engineered Autonomous Distributed Circuits for Adaptive Threat Elimination	12.351	491,825	-
Other DOD	HDTRA1-14-1-0057	Radiation Effects in III-V MOSFETs for sub-10 nm CMOS	12.351	319,841	193,290
Other DOD	HDTRA1-15-1-0040	Development of Synthetic Probiotics to Detect and Eliminate Biothreat Agents	12.351	651,459	-
Other DOD	HDTRA1-15-1-0050	Deciphering Novel Mechanisms of Antimicrobial Resistance with Massively Parallel Combinatorial Genetics	12.351	849,596	-
Other DOD	HDTRA1-15-1-0051	Gene Duplication and Amplification in the Evolution of Antimicrobial Resistance: Clinical Significance and Diagnostic Potential	12.351	361,887	-
Other DOD	HDTRA1-15-1-0060	Understanding radiation damage mechanisms in MEMS/NEMS through combined optomechanical interrogation and micro-analysis (PerD-Topic 8)	12.351	246,295	100,263
Other DOD	HDTRA1-16-1-0038	Using Coacervates to Maximize Enzymatic Activity at Interfaces for Heavy Metal Detection	12.351	106,334	-
Other DOD	NRO000-13C0309	Electrical, thermal and environmental reliability of GaN HEMTs for V- and W-band Space Applications	12.RD	11,216	-
		Total for Other DOD		**5,171,029**	**365,905**
Navy					
Navy	N00014-09-1-0625	Integrating Global and Local Situational Awareness in Distributed Unmanned and Manned Ground Operations	12.300	-972	11,636
Navy	N00014-09-1-1051	SMart Adaptive Reliable Teams for Persustent Surveillance (SMARTS)	12.300	310,582	23,231
Navy	N00014-10-1-0758	Recruiting the Next Generation of Naval Architects	12.300	0	-
Navy	N00014-10-1-0951	Provably-Stable Vision-Based Control of High-Speed Flight through Forest and Urban Environments	12.300	336,732	313,902
Navy	N00014-11-1-0657	A New Enviornmentally Sound Technology for Metals Extraction: a Technical Feasibility Study of Rare-Earth Metal Production by Molten Oxide Electrolysis	12.300	65,978	-
Navy	N00014-11-1-0688	Nonparametric Bayesian Models to Represent Knowledge and Uncertainty for Decentralized Planning	12.300	840,897	554,334
Navy	N00014-12-1-0071	Prospective Human-Guided Teleautonomy for Agile Mobility and Dexterous Manipulation	12.300	310,199	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00014-12-1-0521	A New Technology for Metals Extraction: High-temperature electrolysis of Molten Sulfide/Oxide Electrolysis for Molybdenum and Rhenium Extraction	12.300	22,677	-
Navy	N00014-12-1-0665	Characterizing Surface Transport Barriers in the East Sea of Vietnam	12.300	26,181	-
Navy	N00014-12-1-0915	Ultra-High Performance ADCs in GaN	12.300	131,252	-
Navy	N00014-12-1-0959	Low Dimensionality Transistors for High Performance Electronics	12.300	1,860	-
Navy	N00014-12-1-0999	Decentralized online optimization in multi-agent systems in dynamic and uncertain environments	12.300	77,168	-
Navy	N00014-12-1-1000	persistent Decentralized Online Tasks (pDOT): An Online Optimization Approach to Multi-Agent Persistent Monitoring in Uncertain Environments	12.300	201,620	92,537
Navy	N00014-13-1-0074	Next-generation Genetic Devices: Model-guided Discovery and Optimization of Navy-relevant Cell-based Sensors	12.300	2,599	8,827
Navy	N00014-13-1-0213	Nanostitched Composites with Improved Interlaminar and Intralaminar Strengths for Advanced Airframes in Sea-based Aviation	12.300	45,998	-
Navy	N00014-13-1-0332	Hybrid Planing Hulls for Reduced Powering Demand and Increased Seakeeping Performance	12.300	11,925	-
Navy	N00014-13-1-0333	Probabilistic Programming and Computational Cognitive Science	12.300	490	-
Navy	N00014-13-1-0424	Ultra-High-Throughput Design and Optimization of Sense-and-Actuate Circuits in Marine and Soil Bacteria	12.300	15,601	-
Navy	N00014-13-1-0487	Continuation of Oceanographic Variability and the Performance of Passive and Active Sonars in the Philippine Sea Signatures	12.300	2,085	-
Navy	N00014-13-1-0509	Terahertz-Driven Energetic Material Decomposition	12.300	-822	-
Navy	N00014-13-1-0610	Quantum Transport and Optoelectronics in Atomically Layered Materials	12.300	-230	-
Navy	N00014-13-1-0623	VAMPIRE II: Accessing a life-blood of information for acoustic signature assessment and condition-based maintenance	12.300	27,510	-
Navy	N00014-13-1-0647	Biologically Inspired Engineering of Underwater Adhesives with Synthetic Biology	12.300	57,213	-
Navy	N00014-13-1-0774	Quantum-Secured Communication for the Maritime Environment	12.300	29,742	-
Navy	N00014-13-1-0834	Adjoint Equations Methods for Full Parametric Optimization of Ship Hull Forms with Free Surface BEMs and Gradient-Accelerated Optimization Algorithms	12.300	1,974	-
Navy	N00014-13-1-0878	METANORM- A Multidisciplinary Approach to the Analysis and Evaluation of Norms and Models of Governance for Cyberspace	12.300	276,568	159,365
Navy	N00014-14-1-0006	Defeating Code Resue Attacks Using Minimal Hardware Modifications	12.300	39,602	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00014-14-1-0062	Hurricane Outflow Criticality: Observational Tests and Effect on Hurricane Structure and Intensity	12.300	59,868	-
Navy	N00014-14-1-0072	Optimization over combinatorial optimization polytopes	12.300	80,501	-
Navy	N00014-14-1-0073	Practical, Fast, and Approximate Algorithms for Discrete Optimization Problems	12.300	139,024	-
Navy	N00014-14-1-0135	Mechanistic Study and Modeling of Air Entrainment and Bubbly Flow in Ship Wakes	12.300	51,771	-
Navy	N00014-14-1-0138	Fundamental Mechanics of Joints and Assemblies of Long Aligned Carbon Nanotubes	12.300	-9,401	-
Navy	N00014-14-1-0166	ESRDC - DESIGNING AND POWERING THE FUTURE FLEET	12.300	212,601	-
Navy	N00014-14-1-0191	A Unified Approach to Passive and Active Ocean Acoustic Waveguide Remote Sensing	12.300	457,275	-
Navy	N00014-14-1-0214	GOATS '14: Adaptive and Collaborative Exploitation of 3-Dimentional Environmental Acoustics in Distributed Undersea Networks	12.300	-12,297	-
Navy	N00014-14-1-0349	Hybrid Graphene-Silicon Photonic Devices for Signal Processing and Imaging	12.300	70,225	-
Navy	N00014-14-1-0476	Long-duration Environmentally-adaptive Autonomous Rigorous Naval Systems (LEARNS)	12.300	139,523	-
Navy	N00014-14-1-0486	Active Perception, Representation and Estimation for Large-Scale Long-Horizon Domains	12.300	337,790	-
Navy	N00014-14-1-0609	Computer-Aided Engineering for Nucleic Acid-Based Nanotechnology	12.300	-44,698	-
Navy	N00014-14-1-0619	Harnessing Extraordinary Surface and Bulk Properties of Graphene-Polymer Nanocomposite for Advanced Naval Coating	12.300	217,244	-
Navy	N00014-14-1-0696	ESRDC - DESIGNING AND POWERING THE FUTURE FLEET	12.300	40,253	-
Navy	N00014-14-1-0725	Bayesian Nonlinear Assimilation of Eulerian and Lagrangian Coastal Flow Data	12.300	84,590	-
Navy	N00014-14-1-0804	Quantum Spin Gyroscope	12.300	-17,393	-
Navy	N00014-15-1-0034	Synthetic Biology for Advanced Functional Materials	12.300	-116,289	-
Navy	N00014-15-1-2083	Online Optimization and Learning under Uncertainty	12.300	52,584	-
Navy	N00014-15-1-2213	Multi-Objective COLREGS-Based Collision Avoidance for Unmanned Marine Vehicles	12.300	34,528	-
Navy	N00014-15-1-2227	Multi-objective Optimization and Mixed-Horizon Decision-Making for Autonomous Vehicles	12.300	76,234	-
Navy	N00014-15-1-2342	Rigorous Modeling and Computation for Sparse Multivariate Statistical Problems	12.300	103,410	-
Navy	N00014-15-1-2381	A probalistic framework for the reduced-order modeling of rare events in water waves and mechanical systems	12.300	149,466	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00014-15-1-2429	Terahertz Transmission Over Dielectric Waveguide for High Speed Communication	12.300	6,349	-
Navy	N00014-15-1-2460	Computational Wave Hydromechanics in Support of Model Tests in The MASK Wave Basin	12.300	379,209	-
Navy	N00014-15-1-2483	Surface Structure Enhanced Microchannels for Two-Phase Thermal Management	12.300	233,870	-
Navy	N00014-15-1-2597	Seamless Multi-scale Forecasting: Hybridizable Unstructured-mesh Modeling and Conservative Two-Way Nesting	12.300	84,849	-
Navy	N00014-15-1-2616	Northern Arabian Sea Circulation - autonomous research: Optimal Planning Systems (NASCar-OPS)	12.300	108,709	-
Navy	N00014-15-1-2622	Investigating flow features near abrupt topography in the Mariana Basin	12.300	259,379	148,686
Navy	N00014-15-1-2626	High-Order Multi-Resolution Multi-Dynamics Modeling for FLEAT	12.300	87,625	-
Navy	N00014-15-1-2694	Direct Measurement and Modeling of Glass Under Shock Loading	12.300	266,652	-
Navy	N00014-15-1-2695	Flow Structure Interaction of a Dam-Break Wave Impinging on Flexible Plate	12.300	33,192	-
Navy	N00014-15-1-2751	Design and Metrology Support for Evaluation of High Power Fault Protection Apparatus	12.300	34,441	-
Navy	N00014-15-1-2763	USING BIO-INSPIRED MATERIAL CROSSLINK DYNAMICS TO ENGINEER ENERGY-DISSIPATIVE POLYMER MECHANICS	12.300	171,051	-
Navy	N00014-15-1-2805	An automated colony picking system for DNA assembly for synthetic biology	12.300	-1,800	-
Navy	N00014-15-1-2830	High Performance Computing for Nucleic Acid Nanotechnology	12.300	9,025	-
Navy	N00014-16-1-2081	Rapid Assessment of the Acoustic Environment in the Changing Arctic	12.300	153,561	-
Navy	N00014-16-1-2090	Time-Resolved Measurement of Physical and Chemical Evolution of Energetic Materials Under Dynamic Shock Loading	12.300	205,792	-
Navy	N00014-16-1-2122	THIS GRANT IS BEING CONTINUED UNDER N00014-16-1-2122, Inversion, uncertainties, and multiple scattering in synthetic aperture radar/sonar	12.300	120,063	-
Navy	N00014-16-1-2124	A Physics-Constrained Order-Reduction Framework for the Dynamical Description of Subspaces-of-Interest in Turbulent Dynamical Systems	12.300	52,265	-
Navy	N00014-16-1-2141	Design and Operation of Efficient and Secure Navigation Networks	12.300	549,229	-
Navy	N00014-16-1-2144	NEPTUNE Pilot Proposal	12.300	752,592	-
Navy	N00014-16-1-2181	Computer-Aided Engineering for Nucleic Acid-Based Nanotechnology	12.300	254,021	-
Navy	N00014-16-1-2200	4D Modeling of Underwater Acoustics in the Estuarine Environment Using Direct Simulations on HPC Platforms	12.300	152,948	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00014-16-1-2226	Quantum Spin Gyroscope	12.300	186,724	-
Navy	N00014-16-1-2230	Low Dimensionality Transistors for High Performance Electronics	12.300	219,158	-
Navy	N00014-16-1-2235	Stepped, Cambered, Planing Hulls with Hydrofoils-SCPH2 optimizing their Reduced Powering Demand and Seakeeping Performance	12.300	23,045	-
Navy	N00014-16-1-2285	Global Vulnerability Markets: Using Dynamic Simulations to Change the Discovery, Supply, Demand, and Use of Vulnerabilitie	12.300	56,100	14,010
Navy	N00014-16-1-2322	Terahertz Transmission Over Dielectric Waveguide for High Speed Communication	12.300	29,400	-
Navy	N00014-16-1-2333	Merger of Structure and Material for Materials By Design: Comparative Bottom-up Analysis and Manufacturing of Hierarchical Materials	12.300	145,621	-
Navy	N00014-16-1-2388	Next-generation Genetic Devices: Model-guided Discovery and Optimization of Navy-relevant Cell-based Sensors	12.300	1,737,350	1,004,445
Navy	N00014-16-1-2432	Synthesis Genome for Novel Oxides: accelerating realization of advanced materials	12.300	48,409	-
Navy	N00014-16-1-2450	Long-term monitoring of deep-ocean Near Inertial Wave activity and surface sea-ice cover in the Arctic Ocean using PDS-CPIES	12.300	184,090	-
Navy	N00014-16-1-2506	High-throughput Assembly and Characterization Tools for Structural DNA Nanotechnology	12.300	160,252	-
Navy	N00014-16-1-2509	Synthetic Biology for Advanced Functional Materials	12.300	514,663	-
Navy	N00014-16-1-2587	An array of Pop-up Data Shuttle, Current and Pressure recording Inverted Echo Sounders (PDS-CPIES) for monitoring deep-sea, near-inertial currents and surface-ice cover in the Artic Ocean	12.300	487,585	-
Navy	N00014-16-1-2628	Resource Constrained Cooperative Underwater Localization and Mapping	12.300	189,795	-
Navy	N00014-16-1-2657	Investigation of Emerging Quantum Materials and Topological Order	12.300	234,417	-
Navy	N00014-16-1-2783	Ultra-High-Throughput Design and Optimization of Sense-and-Actuate Circuits in Marine and Soil Bacteria	12.300	277,784	-
Navy	N00014-16-1-2786	Decentralized online optimization in multi-agent systems in dynamic and uncertain environments	12.300	330,657	-
Navy	N00014-16-1-2815	Quantum simulators with ultracold atoms - mapping out possibilities for new materials	12.300	554,467	-
Navy	N00014-16-1-2945	Incorporating Distributed Systems in Early-Stage Set-Based Design of Navy Ships	12.300	74,964	-
Navy	N00014-16-1-2953	DNA Origami Scaffolds for Single-particle Cryo-Electron Microscopy of Viral RNA	12.300	163,886	26,872
Navy	N00014-16-1-2998	Lagrangian-based analysis of Kuroshio flow induced transport in the South-China Sea	12.300	2,735	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00014-16-1-3031	Stability of Floating Bodies in a Stochastic Seastate	12.300	102,757	-
Navy	N00014-16-1-3105	Understanding Dynamic Stability of Advanced Ships in Steep Waves by Direct Fully-Nonlinear Computations	12.300	110,966	-
Navy	N00014-16-1-3116	Mapping the spatio-temporal dynamics of perception in the human brain	12.300	481,201	-
Navy	N00014-16-1-3141	Laser systems for ultracold atoms and molecules	12.300	305,121	-
Navy	N00014-16-1-3163	A New Paradigm for Analysis of Complex, Networked, Social and Engineering Systems	12.300	25,374	-
Navy	N00014-16-1-3181	Smart Sea Skin: Flexible Multi-sensing System to Probe Marine Organism-Surface Interactions	12.300	27,174	-
Navy	N00014-17-1-2072	Context and Task-aware Active Perception for Multiagent Systems	12.300	113,350	-
Navy	N00014-17-1-2077	Simulation-Based Classification for Structural Health Monitoring; A Parametrized Component Model-Order-Reduction Approach	12.300	28,190	-
Navy	N00014-17-1-2089	Structures, Mechanisms & Statistics of Air-Entraining Free-Surface Turbulent Flows	12.300	95,530	-
Navy	N00014-17-1-2139	Nanostitched Composites with Improved Interlaminar and Intralaminar Strengths for Advanced Airframes in Sea-based Aviation - Bridge Proposal	12.300	83,389	-
Navy	N00014-17-1-2147	Statistical Learning Theory of Complex Causal Models	12.300	101,992	-
Navy	N00014-17-1-2177	Optimization Over Combinatorial Optimization Polytopes	12.300	62,556	-
Navy	N00014-17-1-2186	Observational Benchmarks for BSION project	12.300	11,068	-
Navy	N00014-17-1-2197	A Unified Approach to Passive and Active Ocean Acoustic Waveguide Remote Sensing	12.300	50,589	-
Navy	N00014-17-1-2236	Tera-Scale, Energy-Efficient Wireline Communication Using Dielectric Waveguide	12.300	115,794	-
Navy	N00014-17-1-2254	Optical-transition atomic clock beyond the standard quantum limit	12.300	39,575	-
Navy	N00014-17-1-2257	Topologically Protected Quantum States in Superfluid Fermi Gases	12.300	28,516	-
Navy	N00014-17-1-2363	A Micro-Raman Thermography System for High Spatial Resolution Thermal Characterization of Microelectronic Devices and their Thermal Management Solutions	12.300	92,330	-
Navy	N00014-17-1-2379	A System for Efficient and Accurate Network Navigation	12.300	827	-
Navy	N00167-16-P-0001	Validation and Refinement of Probabilistic Model for Navy Shaft Life Calculations	12.RD	34,326	-
Navy	N00173-13-2-C009	Stochastic Forcing for Environmental Error and Probabilistic Estimation	12.300	30,321	-
Navy	N00189-14-C-Z082	Engineering Support for the Interagency Correlator	12.RD	110,366	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Navy	N00244-15-1-0064	Acquisition Program Teamwork and Performance Seen Anew: Exposing the Interplay of Architecture and Behaviors in Complex Defense Projects	12.300	32,700	-
Navy	N00244-17-1-0011	Assessing Vulnerabilities in Model-Centric Acquisition Programs Using Cause-Effect Mapping	12.300	57,312	-
Navy	N66001-11-C-4147	Compact, On-Demand Continuous Flow Manufacturing of Pharmaceuticals	12.910	364,162	-
Navy	N66001-12-1-4212	Field Emission Arrays for Dynamic Pattern Generation	12.910	100,848	-
Navy	N66001-12-C-0082	Accountable Information Usage in Distributed Information Sharing Environments	12.RD	-71,178	-
Navy	N66001-13-C-4025	INSCyT 2: Phase II Parent	12.RD	5,876,638	1,349,900
Navy	N66001-14-1-4039	Energy-Efficient Embedded Vision Systems	12.910	17,613	-
Navy	N66001-14-2-4058	Synthetic polymer xenoproteins	12.910	773,847	-
Navy	N66001-15-1-4022	Field Emission Arrays for Dynamic Pattern Generation	12.910	145,712	-
Navy	N66001-15-C-4030	Multi-Scale Representation and Translation for Complex, Heterogeneous Materials	12.RD	489,714	-
Navy	N66001-16-1-4038	Enhancing Lifetime and Performance of Field Emitter Array Cathodes	12.910	235,423	-
Navy	N66001-16-C-4005	Pharmacy on Demand Phase III: Compact, On-Demand Continuous Flow Manufacturing of Pharmaceuticals	12.910	659,021	-
Navy	N66001-16-C-4039	Novel Millimeter Wave Klystron Amplifier	12.RD	386,956	74,479
Navy	N68936-16-P-0688	Human-Automation Interaction to Support Multiple Platform Mission Planning	12.RD	39,898	-
		Total for Navy		**25,635,337**	**3,782,226**
		TOTAL for Department of Defense		**97,090,721**	**20,237,516**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF COMMERCE					
DOC	60NANB15D361	Focusing mirrors for novel neutron imaging instruments	11.609	34,904	-
DOC	70NANB16H164	Measurement Standards to Enable Predictive Synthetic Biology	11.609	244,212	-
DOC	70NANB16H227N	Smart Grid in a Room (SGRS)	11.619	75,164	-
DOC	NA12OAR4310064	Sources and Impacts of Ammonia on PM loading during CalNex	11.431	60,748	-
DOC	NA130AR4310135	Identifying Mechanisms of AMOC variability in ECCO State Estimates and CMIP5 Models	11.427	26,465	-
DOC	NA13OAR4310072	Organic Nitrogen in Atmospheric Aerosols: Concentrations, Chemical Composition, and Properties	11.417	4,998	-
DOC	NA13OAR4310084	Assessing the Terrestrial and Atmospheric Nitrogen Cycle	11.431	6,476	-
DOC	NA14OAR4170077	2014 Parent Account: Sea Grant College Program	11.417	2,739,894	774,436
DOC	NA14OAR4310132	Deposition of Atmosphereic Organic Carbon: New Constraints on the Reactive Carbon Budget	11.431	243,691	-
DOC	NA16OAR4310112	Influence of atmospheric ageing on fire-derived carbonaceous particles: laboratory studies and modeling in support of FIREX	11.431	161,543	-
DOC	NA16OAR4310177	Exploring linkages between AMOC and ITCZ variability	11.431	65,205	-
		Total for Department of Commerce		**3,663,298**	**774,436**
		TOTAL for Department of Commerce		**3,663,298**	**774,436**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF ENERGY					
DOE	4F-30121	Technologies and Concepts to Reduce the US Dependence on Imported Petroleum and Emission of Greenhouse Warming Pollutannts	81.RD	30,956	-
DOE	6F-30461	Simulation of Flow-induced Vibration Using STAR-CCM+ for the NuScale SG Design	81.RD	56,854	-
DOE	DE-AR0000185	Advanced Thermo-Adsorptive Battery Climate Control System (ATB)	81.135	132,856	78,838
DOE	DE-AR0000433	Engineering high yield pathways for methane activation and conversion to liquid fuels	81.135	1,134,589	525,215
DOE	DE-AR0000471	Full Spectrum Stacked Solar-Thermal and PV Receiver	81.135	773,070	6,500
DOE	DE-AR0000611	Sustainable Travel Incentives with Prediction, Optimization, and Personalization(TRIPOD)	81.135	1,434,256	205,501
DOE	DE-AR0000625	INTEGRATED MICRO-OPTICAL CONCENTRATOR PHOTOVOLTAICS WITH LATERAL MULTIJUNCTION CELLS	81.135	1,404,118	170,835
DOE	DE-AR0000632	Wafer-Level Integrated Concentrating Photovoltaics	81.135	356,778	-
DOE	DE-AR0000713	Generating Realistic Information for Development of Distribution and Transmission Algorithms	81.135	166,258	-
DOE	DE-EE0006131	Evaluating the causes of photovoltaics cost reduction: Why is PV different?	81.087	13,408	-
DOE	DE-EE0007531	Improving Tolerance of Yeast to Lignocellulose-Derived Feedstocks and Products	81.087	194,862	-
DOE	DE-EE0007535	Low Cost (CAPEX and variable): Tool design for cell and module fabrication with thin, free-standing silicon wafers	81.087	299,859	-
DOE	DE-EE0007662	Modeling Photovoltaics Innovation and Deployment Dynamics	81.117	117,510	-
DOE	DE-EE0007810	Self-assembling rechargeable Li batteries from alkali and alkaline-earth halides	81.086	41,839	1,771
DOE	DE-EI0001908	Understanding Energy Demand in China's Future Transportation System	81.089	4,651	-
DOE	DE-EI0003030	Dynamics of Energy Use in China	81.089	108,898	-
DOE	DE-EM0004484	NRI: Extra Robotic Limbs for Body Support in Kneeling and Crouching Works	81.104	134,588	-
DOE	DE-FC02-01ER54648	Center for Simulation of Wave Plasma Interactions	81.049	137,278	-13,219
DOE	DE-FC02-04ER54802	Center for Extended Magnetohydrodynamic Modeling	81.049	7,730	-
DOE	DE-FC02-08ER54966	Center for the Study of Microturbulence	81.049	106	-
DOE	DE-FC02-08ER54969	Center for Extended Magnetohydrodynamics Modeling	81.049	50,421	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DOE	DE-FC02-93ER54186	D&T Parent	81.049	1,584,106	-
DOE	DE-FC02-99ER54512	Alcator C-Mod	81.049	9,435,659	81,899
DOE	DE-FE0009738	Enhanced Simulation Tools to Improve Predictions and Performance of Geologic Storage: Coupled Modeling of Fault Poromechanics, and High-Resolution Simulation of CO2 Migration and Trapping	81.RD	-7,739	-
DOE	DE-FE0013999	Fate of Methane emitted from dissociating marine hydrates: Modeling, Laboratory and Field constraints	81.RD	113,498	47,085
DOE	DE-FE0026109	Self-Regulating Surface Chemistry for More Robust Highly Durable Solid Oxide Fuel Cell Cathodes	81.089	22,394	-
DOE	DE-FG02-00ER15087	Revealing Nanoscale Energy Flow Using Ultrafast Terahertz to X-Ray Beams	81.049	133,079	-
DOE	DE-FG02-02ER45977	Spectrally-tunable far-field thermal radiation extraction	81.049	153,136	-
DOE	DE-FG02-03ER46076	Strongly Correlated Electronic Systems: Local Moments and Conduction Electrons (Renewal)	81.049	226,138	-
DOE	DE-FG02-03ER54700	Physics of High Enery Plasmas	81.049	315,291	-
DOE	DE-FG02-07ER46454	PROBING EXCITONS IN CONFINED ENVIRONMENTS USING PHOTON-RESOLVED METHODS	81.049	277,287	-
DOE	DE-FG02-07ER46474	Bimolecular Interactions in Organic Semiconductors: Hot charge, Hot excitons, Efficiency Droop, and Instability	81.049	366,835	-
DOE	DE-FG02-07ER46474	High Efficiency Biomimetric Organic Solar Cells	81.049	-69,001	-
DOE	DE-FG02-08ER46488	Self Assembly and Self-Repair of Novel Photovoltaic Complexes: Synthetic Analogs of Natural Processes	81.049	314,171	-
DOE	DE-FG02-08ER46514	Novel Temperature Limited Tunneling Spectroscopy of Quantum Hall Systems	81.049	182,019	-
DOE	DE-FG02-08ER46521	Ultrafast Electronic and Structural Dyamics in Complex Materials	81.049	263,345	-
DOE	DE-FG02-86ER13564	Metathesis Polymerization by Well-defined Molybdenum and Tungsten Alkylidene Complexes	81.049	186,255	-
DOE	DE-FG02-87ER13671	Spectroscopic and Dynamical Studies of Highly Energized Small Polyatomic Molecules	81.049	189,150	-
DOE	DE-FG02-90ER45429	Neutron and X-Ray Scattering Studies of Kinetic Glass Transition in Colloidal Systems	81.049	103,292	-
DOE	DE-FG02-91ER54109	THEORETICAL RESEARCH IN ADVANCED PHYSICS AND TECHNOLOGY	81.049	1,910,038	-
DOE	DE-FG02-94ER40818	Laboratory for Nuclear Science (Nuclear Physics)	81.049	3,933,078	-
DOE	DE-FG02-94ER54235	APTE Parent	81.049	339,047	-
DOE	DE-FG02-94ER61937	An Integrated Framework for Climate Change Assesment	81.049	820,487	31,784
DOE	DE-FG02-94ER61937	An Integrated Framework for Climate Change Assessment	81.049	855,247	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DOE	DE-FG02-96ER45571	First Principles Determination of Structure, Thermodynamics, and Transport in Metals and Oxides	81.049	78,850	-
DOE	DE-FG02-97ER14760	COLLABORATIVE RESEARCH: EVOLUTION OF PORE STRUCTURE AND PERMEABILITY OF ROCKS UNDER HYDROTHERMAL CONDITIONS	81.049	282,760	-
DOE	DE-FG02-97ER14760	Evolution of Pore Structure and Permeability of Rocks Under Hydrothermal Conditions	81.049	4,810	-
DOE	DE-FG02-99ER15004	Physics of Channelization: Theory, Experiment, and Observation	81.049	191,090	-
DOE	DE-FG02-99ER54525	PROPAGATION AND DAMPING OF HIGH HARMONIC FAST WAVES AND ELECTRON CYCLOTRON WAVES IN THE NSTX-U-DEVICE	81.049	137,084	-
DOE	DE-FG02-99ER54563	Fast Particle Wave Interaction and Alfven Eigenmodes in the JET Tokamak Plasma	81.049	171,984	-
DOE	DE-NA0001857	HEDLP Studies of Fields, Matter, Transport, Nuclear Physics, and ICF with New Diagnostics at the NIF and Omega/Omega-EOP	81.112	2,402	-
DOE	DE-NA0002726	Explorations of Inertial-Confinement Fusion, High-Energy-Density Physics, and Laboratory Astrophysics	81.112	74,715	-
DOE	DE-NA0002788	Uncooled Chipscale Mid-infrared Photothermal Sensor for Ultra-sensitive Chemical Detection	81.113	252,464	89,266
DOE	DE-NA0002949	STUDYING HYDRODYNAMICS, KINETIC/MULTI-ION EFFECTS, AND CHARGED-PARTICLE STOPPING IN HED PLASMAS AND ICF IMPLOSIONS AT OMEGA, OMEGA-EP AND AT THE NIF	81.112	353,019	-
DOE	DE-NE0008268	Extraction of Uranium from Seawater: Design and Testing of a Symbiotic System	81.121	215,088	17,887
DOE	DE-NE0008270	Integral Full Core Multi-Physics PWR Benchmark with Measured Data	81.121	200,166	-
DOE	DE-NE0008285	Integrated FHR Technology Development: Tritium Management, Materials Testing, Salt Chemistry Control, Thermal-Hydraulics and Neutronics with Associated Benchmarking	81.121	1,011,756	694,330
DOE	DE-NE0008285-001	Integrated FHR Technology Development: Tritium Management, Materials Testing, Salt Chemistry Control, Thermal-Hydraulics and Neutronics with Associated Benchmarking	81.121	654,248	328,959
DOE	DE-NE0008413	Multilayer Composite Fuel Cladding for LWR Performance Enhancement and Severe Accident Tolerance	81.121	300,014	93,360
DOE	DE-NE0008416	Development of Accident Tolerant Fuel Options for Near Term Applications	81.121	961,696	339,160
DOE	DE-NE0008502	FY 2016 Scientific Infrastructure Support for Consolidated Innovative Nuclear Research	81.121	165,339	-
DOE	DE-NE0008509	University Reactor Upgrades Infrastructure Support for the MITR Research Reactor's Nuclear Instrumentation	81.121	161,840	-

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DOE	DE-NE0008578	MULTI-GROUP TRANSPORT CROSS SECTION & DIFFUSION COEFFICIENT GENERATION FOR DETERMINISTIC REACTOR MODELS USING MONTE CAROL CALCULATIONS.	81.121	112,787	-
DOE	DE-SC0001088	Center for Excitonics - Main Operating Account for Deposits & Distributions	81.049	3,806,040	374,694
DOE	DE-SC0001299	Solid-State Solar-Thermal Energy Conversion Center (S3TEC)	81.049	2,749,134	545,569
DOE	DE-SC0002626	Electrochemically-Driven Phase Transitions in Battery Storage Compounds	81.049	209,461	-
DOE	DE-SC0002633	SISGR: Chemomechanics of Far-From Equilibrium Interfaces	81.049	628,681	-
DOE	DE-SC0006389	Interpreting New Data from the High Energy Frontier	81.049	2,733	-
DOE	DE-SC0006418	Quantum Transport in Topological Insulator Nanoelectronic Devices	81.049	-5,571	-
DOE	DE-SC0006419	Electron Temperature Fluctuation Measurements and Transport Model Validation at Alcator C-Mod	81.049	437,634	168,383
DOE	DE-SC0006423	Optical Manipulation and Detection of Emergent Phenomena in Topological Insulators	81.049	47,329	-
DOE	DE-SC0006937	Electronic and Ionic Conductors from Ordered Microporous Materials	81.049	62,334	-
DOE	DE-SC0007099	Quantification of Uncertainty in Extreme Scale Computations (QUEST)	81.049	50,475	-
DOE	DE-SC0007106	Thermodynamics of Self-Assembly in Globular Protein-Polymer Conjugates	81.049	212,219	-
DOE	DE-SC0007883	Nonlinear and 3D MHD	81.049	139,102	-
DOE	DE-SC0008059	Graphene Membranes with Tunable Nanometer-Scale Pores	81.049	79,196	-
DOE	DE-SC0008736	Automated Metadata, Provenance Cataloging and Navigable Interfaces: Ensuring the Usefulness of Extreme-Scale Data	81.049	19,139	-
DOE	DE-SC0008737	Partnership for Edge Physics Simulation	81.049	84,041	-
DOE	DE-SC0008739	Unconventional Metals in Strongly Correlated Systems	81.049	114,923	-
DOE	DE-SC0008740	Development of a Polarized 3He Ion Source for RHIC	81.049	79,958	-
DOE	DE-SC0008741	High Intensity Polarized Electron Gun	81.049	205,374	-
DOE	DE-SC0008743	Assembling Resuable Genetic Modules for Efficient Biofuel Production from Marine Macroalgae	81.049	1,022,150	554,352
DOE	DE-SC0008744	Optimizing oil production in oleaginous yeast by cell-wide measurements and genome-based models.	81.049	746,202	8,753
DOE	DE-SC0008766	Computing Properties of Hadrons, Nuclei and Nuclear Matter from Quantum Chromodynamics	81.049	284,706	-
DOE	DE-SC0008923	CAP3: A Computer Aided Performance Programming Platform	81.049	686,661	60,488

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DOE	DE-SC0008926	Inferring grain boundary properties from measurements on grain boundary networks	81.049	-11,725	-
DOE	DE-SC0009297	DiaMonD: An Integrated Multifaceted Approach to Mathematics at the Interfaces of Data, Models, and Decisions	81.049	663,609	-
DOE	DE-SC0009833	Development of an accelerator-based diagnostic for plasma-facing surfaces in magnetic confinement devices	81.049	144,552	-
DOE	DE-SC0010428	Biomimetic Templated Self-Assembly of Light Harvesting Nanostructures	81.049	248,254	-
DOE	DE-SC0010491	Interaction of Flowing Plasma with Collecting Objects	81.049	20,623	-
DOE	DE-SC0010492	Control and Extension of High Performance Scenarios to Long Pulse	81.049	570,645	-
DOE	DE-SC0010492	Control and Extension of ITER and Advanced Scenarios to Long Pulse in EAST and KSTAR	81.049	104,206	-
DOE	DE-SC0010495	From Quarks to the Cosmos: Ab initio studies in nuclear physics	81.049	151,335	-
DOE	DE-SC0010497	Gluonic Excitations in Mesons	81.049	176,138	-
DOE	DE-SC0010526	Predictive Theory of Topological States of Matter	81.049	135,563	-
DOE	DE-SC0010538	Imaging Interfacial Electric Fields on Ultrafast Timescales	81.049	144,917	-
DOE	DE-SC0010720	Development of long-pulse heating and current drive actuators and operational techniques compatible with a high-Z divertor and first wall	81.049	272,837	-
DOE	DE-SC0010795	Mesoscale Mechanochemistry of 2D Crystal Growth	81.049	152,071	-
DOE	DE-SC0011088	MIT Relativistic Heavy Ion Group	81.049	1,565,889	-
DOE	DE-SC0011089	Active Subspace Methods for Data-Intensive Inverse Problems	81.049	85,170	-
DOE	DE-SC0011090	FY2014 - 2016 Task R - Theoretical Nuclear Physics	81.049	431,364	-
DOE	DE-SC0011090	FY2017-2019 Task R-Theoretical Nuclear	81.049	625,374	-
DOE	DE-SC0011091	Neutrino Physics – Task W	81.049	223,564	-
DOE	DE-SC0011091	Neutrino Physics Task W	81.049	86,345	-
DOE	DE-SC0011755	AMS Operations	81.049	2,624,345	-
DOE	DE-SC0011848	AMS Research	81.049	1,377,155	-
DOE	DE-SC0011939	Task A: Particle Physics Collaboration	81.049	1,121,881	-
DOE	DE-SC0011970	LEPTON QUARK STUDIES, TASK F SUMMARY, FY 2015-17	81.049	258,440	-
DOE	DE-SC0012071	Support of US Burning Plasma Organization	81.049	31,101	-
DOE	DE-SC0012071	USBPO Support	81.049	165,857	-
DOE	DE-SC0012371	Interface-Driven Chiral Magnetism in Ultrathin Metallic Ferromagnets: Towards Skyrmion Spintronics	81.049	283,864	-
DOE	DE-SC0012469	Preservation of Alcator C-Mod data and support of ITER research through ITPA participation	81.049	526,535	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DOE	DE-SC0012470	MDSplus Development and Support	81.049	631,415	-
DOE	DE-SC0012555	Systems Biology Towards a Continuous Platform for Biofuels Production	81.049	453,370	157,147
DOE	DE-SC0012567	Theoretical High Energy Physics	81.049	602,447	-
DOE	DE-SC0013307	The Catalytic Reduction of Dinitrogen Under Mild Conditions	81.049	154,075	-
DOE	DE-SC0013499	Compact, low-cost, light-weight, superconducting, ironless cyclotrons for hadron radiotherapy	81.049	218,644	-
DOE	DE-SC0013905	Study of Heavy Flavor Mesons and Flavor-Tagged Jets with the CMS Detector	81.049	229,519	-
DOE	DE-SC0013999	Confronting Dark Matter with the Multiwavelength Sky	81.049	156,611	-
DOE	DE-SC0014176	Tunable Oxygen Reduction Electrocatalysis by Phenazine-Modified Carbons	81.049	209,662	-
DOE	DE-SC0014204	Whole-program Adaptive Error Detection and Mitigation	81.049	204,438	-
DOE	DE-SC0014229	Phase Contrast Imaging for Wendelstein 7-X	81.049	417,681	-
DOE	DE-SC0014251	Gas-Puff-Imaging for Diagnosis of Boundary and SOL Physics in W7-X	81.049	213,450	-
DOE	DE-SC0014264	MIT Plasma Science and Fusion Center Magnetic Confinement Fusion Experiment Research and Related Activities	81.049	1,826,197	-
DOE	DE-SC0014901	Computer-Aided Construction of Chemical Kinetic Models	81.049	178,502	-
DOE	DE-SC0015476	Boosting the Search for New Physics at the Frontiers	81.049	120,000	-
DOE	DE-SC0015566	High Frequency, High Gradient Accelerator Research	81.049	263,216	-
DOE	DE-SC0016154	Measurement of Helicons and Parametric Decay Waves in DIII-D with Phase Contrast Imaging	81.049	156,669	-
DOE	DE-SC0016214	Molecular Understanding of Bifunctional Solid Lewis Acid Zeolites for the C-C Coupling of Alpha Keto Acids	81.049	128,183	-
DOE	DE-SC0016215	Magnetic Reconnection in Strongly-Magnetized, Weakly-Collisional Plasmas: Onset, Turbulence, and Energy-Partition in 3D, Plasmoid-Dominated Regimes	81.049	164,611	-
DOE	DE-SC0016285	AMS THERMAL COOLING SYSTEM	81.049	1,444,247	-
DOE	DE-SC0016408	Control of the Plasma-Material Interface for Long Pulse Optimization in EAST and KSTAR	81.049	40,952	-
DOE	DE-SC0016409	Disruption Prediction and Avoidance in High Beta Long Pulse KSTAR Plasmas	81.049	37,051	-
DOE	DE-SC0017381	Electron Temperature Fluctuation and n-T Phase Angle Measurements for Validation of Gyrokinetic Transport Models at ASDEX Upgrade	81.049	99,575	-
DOE	IF-32302	Methods Development for Exascale Simulation of SMRs	81.RD	99,792	-
DOE	PO #629387	Deep Underground Neutrino Experiment (DUNE)	81.RD	11,806	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DOE	PO #629763	US CMS Common Operations	81.RD	133,470	-
DOE	PO 101633	Investigation of Nucleate Boiling Suppression in Annular Flow using Advanced Imaging Diagnostics and CFD Simulations	81.RD	158,417	-
DOE	PO 563385-REVISION 9	US CMS DAQ Subsystem	81.RD	216,111	-
DOE	PO-606667	US CMS HCAL Subsystem	81.RD	86,398	-
DOE	TBD	Task L BATES	81.049	682,914	-
		Total for Department of Energy		**66,761,058**	**4,568,557**
		TOTAL for Department of Energy		**66,761,058**	**4,568,557**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF HEALTH & HUMAN SERVICES					
NIH					
NIH	1-DP1-HD091947-01	How Does the Functional Organization of the Human Brain Arise in Development?	93.865	354,225	57,603
NIH	1-DP2-AG044279-01	Early Warning Indicators of Tipping Points in Biological Systems	93.310	875,090	-
NIH	1-DP2-CA195769-01	Imaging Transcription with Single Molecule Resolution in Live Mammalian Cells	93.310	680,129	-
NIH	1-DP2-DK102256-01	A Novel Strategy for Combating Obesity: Reprogramming Neural Circuits	93.847	479,061	-
NIH	1DP2ES027992	Proteome-Driven Holistic Reconstruction of Organ-Wide Multi-Scale Networks	93.310	151,073	-
NIH	1-DP2-GM119162-01	Continuous Directed Evolution of Biomolecules in Human Cells for Medical Research	93.310	622,213	-
NIH	1DP2GM119419	"Bottom-up" Profiling of Interacting Cellular Systems	93.310	134,291	-
NIH	1-DP2-OD008435-01	Director's New Innovator Award: High-Throughput Nanoscale Approaches to Studying and Inhibiting Amyloid Toxicity	93.310	-8,566	-
NIH	1-F31-GM121093-01A1	Elucidating the mechanism of leucine sensing by Sestrin2 upstream of mTORC1	93.859	1,948	-
NIH	1-F32-CA213810-01	Understanding metabolic pathways that support redox homeostasis in cancer	93.398	22,826	-
NIH	1-F32-CA213821-01	Systematic analysis of RNA binding proteins in modulating drug response	93.398	25,346	-
NIH	1-F32-DC015163-01A1	Mechanisms of adaptation in (healthy and aphasic) noisy-channel comprehension	93.173	44,944	-
NIH	1-F32-DK111116-01	Dynamic Gene Circuit Mapping of Unfolded Protein Response in Type 2 Diabetes	93.847	39,060	-
NIH	1-F32-EB022416-01A1	Fluorescence-based molecular imaging of in vivo release kinetics (PDF: K. McHugh)	93.286	17,689	-
NIH	1-F32-EB023101-01A1	Sequence- and Stereocontrolled Triazolium-containing Precise Polymers for siRNA Complexation and Delivery	93.286	27,196	-
NIH	1-F32-EY028028-01	Contributions of glial neurotransmitter transport in balancing excitation and inhibition in visual cortex	93.867	16,817	-
NIH	1-F32-GM123596-01	Solving the E. coli Class Ia Ribonucleotide Reductase a/b Interface Structure by Magnetic Resonance	93.859	11,290	-
NIH	1-F32-HD090833-01	Identification and Functional Dissection of Long Non-Coding RNAs in Genomic Imprinting	93.865	25,436	-
NIH	1-F32-HL134244-01	The Coagulopathy-Inflammation Interface: Integration of Coagulopathy and Complement Activation as a Mechanism for Neutrophil Priming and Tissue Damage	93.859	46,432	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	1-F32-NS100356-01	Revealing the Functional Role of Theta and Gamma Rhythms in Encoding and Retrieval of Spatial Memory	93.853	29,234	-
NIH	1-F32-NS100424-01	Noradrenergic modulation of the hippocampal network	93.853	24,576	-
NIH	1-K99-CA207866-01	Investigating the role of the extracellular matrix in metastasis and chemo-resistance	93.398	104,193	-
NIH	1-K99-GM118907-01	Effects of Host Metabolic Variation on Antibiotic Susceptibility	93.859	74,790	-
NIH	1-P01-HD061315-01A1	Maternal and Child Health in Poor Countries: Evidence from Randomized Evaluations	93.865	15,867	15,867
NIH	1-R01-AR071443-01	Defining and Modulating Mechanisms of Collagen Proteostasis	93.RD	51,830	-
NIH	1-R01-CA178636-01	Intraoperative real time breast cancer margin assessment with nonlinear microscopy	93.394	44,285	43,787
NIH	1-R01-CA206218-01A1	Reprogramming the tumor microenvironment via self-amplified RNA (SafeR) circuits	93.396	367,327	-
NIH	1-R01-CA207029-01A1	RNA circuits for cell state determination in mammalian cells in vitro and in vivo	93.394	431,434	425,539
NIH	1-R01-CA211184-01	Dietary control of stem cells in physiology and cancer	93.396	215,680	-
NIH	1-R01-DA038642-01A1	Molecular imaging of dopaminergic signaling in rodent brain	93.279	67,985	-
NIH	1-R01-DC011339-01A1	Brain Bases of Language Deficits in SLI and ASD	93.173	2,058	-
NIH	1-R01-DC014739-01A1	Auditory Scene Analysis with Complex Sounds	93.173	196,337	-
NIH	1-R01-DE024747-01A1	Tunable Nanolayer-Polymer Composite Patches for Cell-Free CMF Repair	93.121	93,020	-
NIH	1-R01-EB016101-01A1	A New Device for Electrical & Chemical Modulation of Pathological Neural Activity	93.286	-489	-
NIH	1-R01-EB017755-01	Mechanistic analysis of transport through the mucus barrier	93.286	-1,256	-
NIH	1-R01-EB022062-01A1	Tabletop liquid-helium-free, persistent-mode 1.5-T/70-mm osteoporosis MRI magnet	93.286	51,677	-
NIH	1-R01-GM104948-01	Redesigning General Anesthesia	93.310	149,787	-
NIH	1-R01-HD067312-01	Using Cognitive Neuroscience to Predict Dyslexia among Kindergarden Children	93.865	7,727	-
NIH	1-R01-HG008754-01A1	High-Throughput Native Context Mapping and Modeling of Regulatory DNA	93.172	349,157	131,683
NIH	1R01HL121386-01A1 REVISED	Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay	93.839	109,851	-
NIH	1-R01-HL121386-01A1 REVISED	Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay	93.839	155,763	155,763
NIH	1-R01-MH111872-01	Multi-Site Non-Invasive Magnetothermal Excitation and Inhibition of Deep Brain Structures	93.242	471,398	156,313

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	1-R01-MH112694-01	Simultaneous multiplexed in situ fluorescence imaging of neuronal proteins and messenger RNAs	93.242	26,045	-
NIH	1-R01-NS089076-01A1	Epigenetic pathology and therapy in Huntington's disease	93.853	244,348	118,237
NIH	1-R01-NS098505-01	Dissecting the role of thalamic inhibition in neurodevelopmental diseases	93.853	287,311	-
NIH	1-R21-AI112711-01	Sulfur DNA modifications in gut microbes confer resistance to oxidative stress	93.855	3,356	-
NIH	1-R21-AI126465-01	Siderophore-based antibiotics: consequences for the microbiota and bacterial pathogens	93.855	39,777	25,777
NIH	1-R21-AI130776-01	Development and application of glycan readers for the detection and analysis of bacterial glycoconjugates	93.855	30,338	-
NIH	1-R21-EB018529-01A1	PEG-Branch-Nitroxide Nanostructured Organic MRI Contrast Agents	93.286	16,546	16,546
NIH	1-R21-EB018924-01A1	Liquid-helium-free persistent-mode HTS magnets for NMR and MRI applications	93.286	5,927	-
NIH	1-R21-EB022729-01A1	Multifunctional fibers for high-throughput microfluidics	93.286	5,338	-
NIH	1-R21-EY025863-01A1	Post-natal development of high-level visual representation in primates	93.867	6,853	-
NIH	1-R21-TW010245-01	Low Cost Mobile Platform for Pulmonary Disease Screening	93.989	3,897	-
NIH	1-R24-MH106075-01	Vascular Interfaces for Brain Imaging and Stimulation	93.242	345,901	-
NIH	1-R24-MH109081-01	Toward functional molecular neuroimaging using vasoactive probes in human subjects.	93.242	133,708	-
NIH	1-R33-CA191143-01	Single cell growth assay for residual cells in acute lymphoblastic leukemia	93.394	-160	-
NIH	1-R34-HL125859-01A1	Entrainment-based mechanical ventilation to improve patient-ventilator synchrony	93.837	105,576	6,997
NIH	1-R35-GM122538-01	Mechanisms and regulation of replication, the cell cycle, gene expression, and horizontal gene transfer in prokaryotes, focusing on Bacillus subtilis	93.859	12,730	-
NIH	1-R56-HL127258-01	Central mechanisms of respiratory adaptation to mechanical ventilation	93.837	38,851	-
NIH	1-RF1-AG047661-01	Examination of neural circuits underlying mood disorders in Alzheimer's disease	93.866	328,605	-
NIH	1-RF1-AG048029-01	Alzheimers Disease Risk Genes in Human Microglia and Neurons Derived from iPSCs	93.866	521,290	184,735
NIH	1-RF1-AG054012-01	Cell type specific epigenetic analysis to understand complex mechanisms underlying Alzheimer's disease phenotypes	93.866	666,086	-
NIH	1-RF1-AG054321-01	Demystifying Microglia in Aging and Alzheimer's Disease	93.866	374,744	525
NIH	1S10OD021569-01	Upgrade to 3 Tesla MRI scanner for brain imaging at MIT	93.351	562,763	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	1T32EB019940	Neurobiological Engineering Training Program	93.286	3,820	-
NIH	1-U01-CA184897-01	Dynamics of Gene and Isoform Regulation during EMT and tumor progression	93.396	57,822	22,717
NIH	1-U01CA202177-01	Quantitative analyses of tumor cell extravasation	93.396	242,416	213,608
NIH	1-U01CA202177-02	Quantitative analyses of tumor cell extravasation	93.396	561,516	255,114
NIH	1-U01-EB018813-01A1	Low-cost microelectronic ultrasound system for unobtrusive ABP measurement	93.286	124,847	-
NIH	1-U01-MH108168-01	Connectomes Related to Anxiety and Depression in Adolescents	93.242	84,780	87,509
NIH	1-U01-MH-109129-01	Anterograde monosynaptic tracing - Restricted Parent	93.242	28,658	68,571
NIH	1-U01-NS090473-01	Cortical circuits and information flow during memory-guided perceptual decisions	93.853	297,914	-
NIH	1U24TR001951-01	Translational Center of Tissue Chip Technologies for quantitative characterization of Microphysiological Systems	93.350	1,103,013	-
NIH	1-U54-CA210180	MIT/Mayo Physical Sciences Center for Drug Delivery and Efficacy in Brain Tumors	93.397	49,204	49,204
NIH	1-U54-CA210180-01	MIT/Mayo Physical Sciences Center for Drug Delivery and Efficacy in Brain Tumors	93.397	677,369	180,685
NIH	2-P01-CA026731-35A1	Endogenous Nitrite Carcinogenesis In Man	93.393	465,393	-
NIH	2-P01-CA042063-26	Characterization of Pathways Controlling Cancer at the Level of Gene Regulation	93.393	-81,227	-
NIH	2-P30-CA014051-44	Cancer Center Support (Core) Grant – (Parent)	93.397	-39,055	4,131
NIH	2-P30-CAA14051-44	Cancer Center Support (Core) Grant – (Parent)	93.397	-480	-
NIH	2-R01-CA080024-20	Intra and Extra-Chromosomal Probes for Mutagenesis by Carcinogens	93.393	370,228	-
NIH	2-R01-DC000238-32	Experimental - Theoretical Studies of Cochlear Mechanisms	93.173	169,560	-
NIH	2-R01-EB001965-10	High Magnetic Field, Time Domain Magnetic Resonance Spectrometers	93.286	7,370	-
NIH	2-R01-EB002804-27	High Field DNP and EPR in Biological Systems	93.286	35,860	-
NIH	2-R01-EB003151-35A1	Solid State NMR Studies of Peptides and Proteins	93.286	19,041	-
NIH	2-R01-EB004866-09	Novel Traveling Wave Tubes for CW and Pulsed DNP NMR	93.286	34,685	-
NIH	2-R01-EY011289-29A1	Novel Diagnostics With Optical Coherence Tomography	93.867	79,756	79,756
NIH	2-R01-EY014970-11A1	The role of inferior temporal cortex in core visual object recognition	93.867	298,343	-
NIH	2-R01-EY017656-06A1	In Vivo Imaging of Neuronal Plasticity in Visual Cortex	93.867	137,517	-
NIH	2-R01-GM024663-40	Genetic Analysis of Nematode Egg Laying and Co-regulated Behavioral Systems	93.859	9,540	-
NIH	2-R01-GM039334-29A1	Deciphering Membrane-Associated Glycan Assembly and Transfer	93.859	69,579	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	2-R01-GM052339-22	Initiation of DNA Replication of Yeast Chromosomes	93.859	205,098	-
NIH	2-R01-GM059426-17	Catalytic Stereoselective Olefin Metathesis Reactions	93.859	257,584	257,584
NIH	2-R01-GM074825-10A1	Synthesis and Study of Complex Natural Products	93.859	21,282	13,642
NIH	2-R01-GM077537-10	High Resolution Assembly Structure of the Nuclear Pore Complex	93.859	268,861	-
NIH	2-R01-GM082209-05A1	Computational Design of Inhibitor Specificity	93.859	52,278	52,278
NIH	2-R01-GM082899-10	Cell cycle regulation and chromosome organization in Caulobacter crescentus	93.859	14,857	-
NIH	2-R01-GM088204-07A1	Solid-state NMR of the influenza M2 protein in lipid bilayers	93.859	172,181	-
NIH	2-R01-GM101988-39	Sequence Determinants of Protein Structure and Stability	93.859	378,089	-
NIH	2-R01-GM108348-04A1	Compressive Genomics for Large Omics Data Sets: Algorithms, Applications and Tools	93.859	272,351	-
NIH	2-R56-AG015339-16A1	Function of Mammalian SIRT1 in Aging	93.866	179,990	-
NIH	2-T32-ES007020-41	Training Grant in Environmental Toxicology	93.113	2,368	-
NIH	2-T32-GM007287-41	Pre-Doctoral Training in Biological Sciences	93.859	-17,988	-
NIH	3-DP2-DK102256-01S1	A Novel Strategy for Combating Obesity: Reprogramming Neural Circuits	93.847	2,558	-
NIH	3-F32-AI109857-03S1_REVISED	Molecular determinants of N-linked glycosylation in Campylobacter jejuni	93.855	29,995	-
NIH	3-F32-EB019243-02S1	Targetable and Ratiometric Fluorescent Sensors For Probing Brain Mobile Zinc	93.286	33,904	-
NIH	3-F32-EB019262-02S1	Aligned Carbon Nanotube_Based Chemical Sensors with Highly Improved Sensitivity	93.286	55,727	-
NIH	3-F32-GM108092-03S1	Redox Controlled Reductive Elimination from Palladium II Complexes	93.859	45,871	-
NIH	3-F32-GM110897-02S1	Hybrid organometallic_carbon nanotube films for enhanced chemiresistive sensors	93.859	53,335	-
NIH	3-F32-GM112197-03S1	Direct Synthesis of 1_2_Benzisoxazoles Via Palladium Catalysis	93.859	57,323	-
NIH	3-F32-GM112218-03S1	Directed Arylation of Unprotected Anilines Enabled by Continuous Flow Technology	93.859	55,035	-
NIH	3-F32-GM113311-02S1	Asymmetric Construction of Benzylic Stereocenters via Reductive Copper Catalysis	93.859	50,819	-
NIH	3-F32-GM113425-02S1	Investigating the F-role of actin disassembly during Drosophila gastrulation	93.859	44,892	-
NIH	3-F32-GM114959-01A1S1	Identification of “exosite” contacts in TRAF6, a critical mediator of cancer (PDF: D.Whitney)	93.859	47,444	-
NIH	3-F32-GM117673-01A1S1	Pyridine Synthesis via Directed Aziridination of Phenols in Continuous Flow	93.859	44,540	-

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NIH	3-F32-GM117710-01S1	The Continuous Flow Total Synthesis of a Series of Analogs of the Cephalotaxus Esters for the Development of Novel Antileukemia Therapies	93.859	45,404	-
NIH	3-F32-GM120847-01S1	Dual Catalytic Asymmetric Photoredox Coupling of alpha-- Keto Radicals	93.859	48,196	-
NIH	3-F32-GM120852-01S1	The Continuous-Flow Synthesis of Ni-Precatalysts for High-Throughput Experimentation	93.859	47,757	-
NIH	3-F32-GM120963-01S1	Investigating Patterns of Cell Interactions During Epithelial Folding	93.859	55,124	-
NIH	3-F32-NS093897-02S1	Therapeutic devices for probing electrical and chemical activity in deep brain disorders_PDF: H. Schwerdt	93.853	53,863	-
NIH	3-P30-CA014051-45S1	Cancer Center Support (Core) Grant – (Parent)	93.397	79,793	-
NIH	3-R01-GM017151-41S1	Structure and Function of Transfer Ribonucleic Acids	93.859	47,565	-
NIH	3-R01-GM049039-20S1	Vascular Drug Delivery	93.859	155,334	-
NIH	3-R01-GM097241-05S1	Inhibition of Prokaryote-Specific Saccharide Biosynthesis in Microbial Pathogens	93.859	368,587	-
NIH	3-R01-MH106497-02S1	Delineating the Anatomical and Functional Circuitry Underlying Social Learning	93.242	33,860	-
NIH	3-R01-NS089076-01A1S1	Epigenetic pathology and therapy in Huntington's disease	93.853	4,470	-
NIH	3-R33-AI100190-04S1	MMDx: A rapid multiplexed matrix code diagnostic for real time epidemiology	93.855	194,409	-
NIH	3-U01-HG007037-03S1	Integrated Genome Discovery at Single Base Pair Resolution	93.172	2,997	-
NIH	3-U01-MH106018-02S1	Novel technologies for nontoxic transsynaptic tracing	93.242	-32,674	-
NIH	3-U01-MH106018-03-S1	Novel technologies for nontoxic transsynaptic tracing	93.242	175,499	-
NIH	3-U01-MH106018-03S2	Novel technologies for nontoxic transsynaptic tracing	93.242	0	-
NIH	3-U01-MH108168-01S1	Connectomes Related to Anxiety and Depression in Adolescents	93.242	46,923	-
NIH	3-UH3-TR000496-04S1	All-Human Microphysical Model of Metastasis Therapy	93.350	39,087	33,082
NIH	4-DP1-NS087724-04	Millisecond-Timescale Whole-Brain Neural Activity Mapping in Health and Disease	93.310	1,015,677	-
NIH	4-P01-CA042063-30	Characterization of Pathways Controlling Cancer at the Level of Gene Regulation	93.393	1,287,414	-
NIH	4-P30-EY002621-39	Core - Vision Processes	93.867	645,993	30,432
NIH	4-P41-EB015871-30	MIT Laser Biomedical Research Center (P41-RR02594)	93.286	1,045,430	-
NIH	4-P50-GM098792-04	MIT Center for Integrative Synthetic Biology	93.859	1,903,765	-
NIH	4-R01-AG011119-24	Function of SIRT1 in Growth and Reproduction	93.866	208,081	-
NIH	4-R01-AR060331-05	Cartilage Repair Using Self Assembling Peptide Scaffolds	93.846	127,671	112,642
NIH	4-R01-CA096504-14	Engineered Antibody EGFR Antagonist Cancer Therapeutics	93.395	183,492	83,887

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	4-R01-CA172164-04	Targeting immunosuppression blockade to T cells for cancer immunotherapy	93.395	130,031	-
NIH	4-R01-CA174795-04	Localizing Immunotherapy to Improve Therapeutic Index	93.395	120,421	-
NIH	4-R01-CA178636-04	Intraoperative real time breast cancer margin assessment with nonlinear microscopy	93.394	84,622	68,818
NIH	4-R01-DC000117-37	Hearing Aid Research	93.173	259,934	-
NIH	4-R01-DC000238-31 REVISED	Experimental - Theoretial Studies of Cochlear Mechanisms	93.173	53,689	-
NIH	4-R01-DC009183-09	Neuronal Mechanisms of Motor Exploration and the Emergence of Structured Behavior	93.173	233,216	-
NIH	4-R01-EB001965-13	High Magnetic Field, Time Domain Magnetic Resonance Spectrometers	93.286	79,033	-
NIH	4-R01-EB016101-04	A New Device for Electrical & Chemical Modulation of Pathological Neural Activity	93.286	505	-
NIH	4-R01-EB017755-04	Mechanistic analysis of transport through the mucus barrier	93.286	75,339	-
NIH	4-R01-ES015818-09	Mechanism of Eukaryotic Environmental Mutagenesis	93.113	308,656	-
NIH	4-R01-EY017921-09	Neural mechanisms mediating visual search	93.867	506,764	-
NIH	4-R01-EY020517-06	Project Prakash: Development of Object Perception After Late Sight Onset	93.867	407,629	-
NIH	4-R01-EY023037-04	Behavioral consequences and cellular substrates of plasticity in visual cortex	93.867	351,850	-
NIH	4-R01-EY023173-05	High-throughput robotic analysis of integrated neuronal phenotypes	93.867	361,617	156,741
NIH	4-R01-GM024663-39	Genetic Analysis of Nematode Egg Laying and Co-regulated Behavioral Systems	93.859	416,510	-
NIH	4-R01-GM081393-08	MEIII2_Y_Me_Fe_Mn_Cluster Assembly and Maintenance in Ribonucleotide Reductase	93.859	261,078	-
NIH	4-R01-GM082899-09	Cell Cycle Regulation in Caulobacter Crescentus	93.859	120,956	-
NIH	4-R01-GM084477-09	Molecular Genetics of Innate Immunity in C. elegans	93.859	379,109	-
NIH	4-R01-GM094303-05	Functional Consequences of Ribosome Heterogeneity	93.859	222,225	-
NIH	4-R01-GM101420-04	High throughput microfluidic intracellular delivery platform	93.859	173,622	-
NIH	4-R01-GM102311-04	Cooperation and Cheating in the Evolution of Antibiotic Resistance in Bacteria	93.859	298,827	-
NIH	4-R01-GM104948-05	Redesigning General Anesthesia	93.310	308,575	208,172
NIH	4-R01-MH060379-15	Ensemble activity in rat corticostriatal circuits during habit learning	93.242	392,865	-
NIH	4-R01-MH065252-15	Neural Basis of Categories	93.242	177,679	-
NIH	4-R01-MH096914-05	Impairments of Theory of Mind disrupt patterns of brain activity	93.242	293,305	-
NIH	4-R01-MH097104-05	Shank3 in Synaptic Function and Autism	93.242	374,322	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	4-R01-MH103160-04	Hypermagnetic engineered proteins for functional neuroimaging	93.242	300,527	-
NIH	4-R37-EB000244-37	Controlled Release of Macromolecules	93.286	366,808	-
NIH	4-R37-MH087027-08	Cortical Circuits for Attention and Decisions	93.242	473,420	-
NIH	4-T32-GM007484-40	Integrative Neuronal Systems-Year 40	93.859	478,744	-
NIH	4-T32-OD010978-29	Biomedical Research Training for Veterinary Scientists	93.351	306,167	-
NIH	4-U01-CA164337-05	GI Tract Dysbiosis and Breast Cancer	93.396	207,462	33,519
NIH	5 P01 HD061315-05	Maternal and Child Health in Poor Countries: Evidence from Randomized Evaluations	93.865	66,137	34,938
NIH	5_R01-DE013023-15R	Novel Polymers for Tissue Engineering	93.121	137	-
NIH	5-DP1-ES022576-05 REVISED	Developing novel methods to measure DNA repair capacity in human populations	93.113	3,974	-
NIH	5-DP1-NS082101-05	Generating Transplantable Neurons by in Vivo Combinatorial Screening of Transcription Regulator RNAs	93.310	44,364	-
NIH	5-DP1-NS087724-03	Millisecond-Timescale Whole-Brain Neural Activity Mapping in Health and Disease	93.310	-724,519	-
NIH	5-DP5-OD019815-03	Adapter-Layer RTK Signaling: Basic Understanding & Targeted Drug Resistance	93.310	469,931	-
NIH	5-F30-CA189333-02	Characterization of GATOR1 signaling to mTORC1 and its role in cancer	93.398	42,732	-
NIH	5-F31-AR067615-03	A Novel Approach to Osteogenesis Imperfecta_ The Collagen Protein Folding Problem	93.846	45,165	-
NIH	5-F31-CA180271-03	Characterization of MWS/DEN, a novel regulator of amino acid signaling to mTORC1	93.398	3,820	-
NIH	5-F31-CA189437-03	Improving targeted therapies through functional genomic approaches	93.398	39,743	-
NIH	5-F31-GM115068-02	Structural and Biochemical Characterization of the Nuclear Pore Complex Scaffold	93.859	30,737	-
NIH	5-F32-AG052284-02	The Role of Aging in the Progression of Tendon Degeneration Due to Compressive Mechanical Overload: A Multiscale Approach	93.866	53,079	-
NIH	5-F32-AI112359-03 REVISED	Longitudinal analysis of antibody responses to HIV-1:mapping function to genotype	93.855	34,088	-
NIH	5-F32-CA165484-02	Wavefront Corrected Multimodal optical coherence and two-photon microscopy for rapid breast tumor margin assessment - PDF for Y. Tao	93.398	-1,295	-
NIH	5-F32-CA183400-3	Two-Photon Fluorescence Lifetime Microscopy for Breast Cancer Margin Assessment	93.398	42,048	-
NIH	5-F32-CA196149-02 REVISED	Multiscale Analysis of Cancer Cell Mechanics	93.398	28,837	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-F32-CA200351-02S1	Polymeric Nanoparticles for siRNA Delivery to Bone Marrow Endothelium to Disrupt Tumor Cell Adhesion and Bone Metastasis Formation In Vivo - PDF: M. Mitchell	93.398	54,825	-
NIH	5-F32-CA210421-02	Understanding cell intrinsic and context dependent metabolic adaptations of cancer cell - PDF: L. Danai	93.398	58,037	-
NIH	5-F32-DC013703-03	Auditory processing of reverberation: perceptual and computational investigations	93.173	48,503	-
NIH	5-F32-DK101335-03	Array development of anti-inflammatory peptoid-graft polymers for islet delivery	93.847	9,991	-
NIH	5-F32-EY024483-03	Anatomical constraints on cognition and how they develop	93.867	44,382	-
NIH	5-F32-EY024857-03	Dopaminergic modulation of visual cortical circuits	93.867	52,229	-
NIH	5-F32-GM106550-03 REVISED	A Conjugated Polymer Fluorogenic Probe for Inorganic Polyphosphate - PDF for J. Kalow	93.859	-335	-
NIH	5-F32-GM108189-02	Structural Investigation of Enzymes that Utilize Cobalamin and AdoMet Cofactors	93.859	8,032	-
NIH	5-F32-GM108294-03	Development of New Metal_Catalyzed Hydroacylation and Hydroarylation Processes - PDF D. Cohen	93.859	7,724	-
NIH	5-F32-GM109516-03	Multicolor Fluorescent Sensors for Imaging Zinc Dynamics in Cells	93.859	53,010	-
NIH	5-F32-GM109562-03	Genome-wide identification of mRNA localization motifs and factors	93.859	34,206	-
NIH	5-F32-GM112272-03 REVISED	Synthetic Optimization of Organic Radicals for Dynamic Nuclear Polarization	93.859	845	-
NIH	5-F32-GM114976-02 REVISED	Determining the Molecular Mechanism of a Caulobacter DNA Replication Checkpoint	93.859	15,049	-
NIH	5-F32-GM116241-02	Quality Control of Membrane Proteins	93.859	57,275	-
NIH	5-F32-HD079169-03 REVISED	How connectivity determines function in the mature and developing human brain	93.865	23,852	-
NIH	5-F32-HL122009-03	Local delivery of TGF-beta inhibitors to treat mitral valve disease	93.837	52,297	-
NIH	5-F32-MH107086-03	Revealing the causal role of hippocampal dopamine signaling in spatial learning	93.242	60,691	-
NIH	5-F32-MH111216-02	Elucidating the role of basolateral amygdala projections to the lateral hypothalamus in associative learning PDF: Siciliano	93.242	47,356	-
NIH	5-K99-CA187317-02 REVISED	Investigating Wnt and Lgr5 signaling as regulators of lung cancer heterogeneity	93.398	15,852	-
NIH	5-K99-HL125727-02 REVISED	Investigation of alternative splicing in response to low and disturbed flow	93.837	34,852	-
NIH	5-P01-CA042063-29	Characterization of Pathways Controlling Cancer at the Level of Gene Regulation	93.393	3,612	-
NIH	5-P30-CA014051-45	Cancer Center Support (Core) Grant – (Parent)	93.397	2,858,385	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-P30-CA014051-46	Cancer Center Support (Core) Grant – (Parent)	93.397	516,615	-
NIH	5P30ES002109-37	MIT Center for Environmental Health Sciences (YR 36-40)	93.113	214,783	-
NIH	5-P30-EY002621-38	Core - Vision Processes	93.867	-70,619	3,518
NIH	5-P41-EB002026-42	MIT/Harvard Center for Magnetic Resonance	93.286	1,370,859	-
NIH	5-P41-EB015871-29	MIT Laser Biomedical Research Center (P41-RR02594)	93.286	-44,406	-
NIH	5-P50-GM098792-03	MIT Center for Integrative Synthetic Biology	93.859	16,505	-
NIH	5-R00-AG045144-05	Regulation of the Intestinal Stem Cell Niche in Aging	93.866	211,372	-
NIH	5-R00-DK102669-04	Sculpting the Enteric Microbiota with CRISPR-Cas Systems	93.847	251,945	-
NIH	5-R00-GM105913-05	Probing the function of translational pausing in bacterial protein synthesis	93.859	282,629	-
NIH	5-R01 EB 016101-5	A New Device for Electrical & Chemical Modulation of Pathological Neural Activity	93.286	1,050,917	-
NIH	5-R01-AG049897-02	A Randomized Controlled Trial of Health Care Hotspotting	93.866	621,022	-
NIH	5-R01-AI016892-38	Proteolytic and chaperone machines implicated in virulence and disease	93.855	472,701	-
NIH	5-R01-AI111395-03	Characterization and Development of a Cross Spectrum Anti-Dengue Antibody	93.855	708,015	-
NIH	5-R01-AI111860-04	T-cell-mediated targeting of therapeutics to HIV reservoirs	93.855	72,232	-
NIH	5-R01-AR060331-04	Cartilage Repair Using Self Assembling Peptide Scaffolds	93.846	47,124	57,354
NIH	5-R01-AR065484-03	Structure-Function of the Nuclear Envelope Bridge and its Role in Laminopathies	93.846	406,609	-
NIH	5-R01-AT008764-03	Antimicrobial discovery from metabolomics of nematode pathogen interactions	93.213	556,166	259,840
NIH	5-R01-CA021615-40	Mutagenesis and Repair of DNA	93.393	314,326	-
NIH	5-R01-CA034992-35 REVISED	Understanding and Improving Platinum Anticancer Drugs	93.395	611,249	-
NIH	5-R01-CA075289-19	Optical Biopsy Using Coherence Tomography	93.394	72,633	72,633
NIH	5-R01-CA075289-20	Optical Biopsy Using Coherence Tomography	93.394	165,897	-
NIH	5-R01-CA096504-13	Engineered Antibody EGFR Antagonist Cancer Therapeutics	93.395	-3,158	-
NIH	5-R01-CA096504-15 REVISED	Engineered Antibody EGFR Antagonist Cancer Therapeutics	93.395	198,877	-
NIH	5-R01-CA133404-10	Stress and Proliferation States Impact MicroRNA-Mediated Regulation in Cancer	93.393	358,664	-
NIH	5-R01-CA160860-04	Developing Direct Small-Molecule Probes of Myc-Dependent Transcription	93.393	69,112	-
NIH	5-R01-CA168653-05	Regulation of glucose metabolism to allow tumor initiation and growth	93.396	210,501	-
NIH	5-R01-CA173712-05	Genetic circuits for high-throughput, multi-sensory, live cell microRNA profiling	93.396	1,093	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-R01-CA174795-05	Localizing Immunotherapy to Improve Therapeutic Index	93.395	151,784	-
NIH	5-R01-CA178636-03	Intraoperative real time breast cancer margin assessment with nonlinear microscopy	93.394	4,005	-
NIH	5-R01-CA178636-05	Intraoperative real time breast cancer margin assessment with nonlinear microscopy	93.394	142,394	-
NIH	5-R01-CA184956-02	(PQB6)Elucidating metastasis by real-time monitoring and tagging of CTCs in GEMMs	93.396	298,636	-
NIH	5-R01-CA184956-03	(PQB6)Elucidating metastasis by real-time monitoring and tagging of CTCs in GEMMs	93.396	393,301	-
NIH	5-R01-CA185020-04 REVISED	(PQB3) Investigating innate immunosurveillance of oncogene-induced danger signals	93.396	394,684	-
NIH	5-R01-CA186568-03	Spatially-resolved proteomic mapping of living cells	93.310	173,821	-
NIH	5-R01-CA206157-22	Regulation of MITOSIS by Proteolysis in Yeast	93.393	370,384	-
NIH	5-R01-CA206218-02	Reprogramming the tumor microenvironment via self-amplified RNA (SafeR) circuits	93.396	323,644	-
NIH	5-R01-CA207029-02	RNA circuits for cell state determination in mammalian cells in vitro and in vivo	93.394	319,622	-
NIH	5-R01-DA029639-07	Novel Platforms for Systematic Optical Control of Complex Neural Circuits In Vivo	93.279	406,572	-
NIH	5-R01-DA038642-03	Molecular imaging of dopaminergic signaling in rodent brain	93.279	615,242	-
NIH	5-R01-DC000117-37	Hearing Aid Research	93.173	14,602	-
NIH	5-R01-DC009183-08	Neuronal Mechanisms of Motor Exploration and the Emergence of Structured Behavior	93.173	-46,272	-
NIH	5-R01-DC011339-05	Brain Bases of Language Deficits in SLI and ASD	93.173	59,586	48,079
NIH	5-R01-DE013023-18 REVISED	Novel Polymers for Tissue Engineering	93.121	361,584	-
NIH	5-R01-DK087984-07	HRI-eIF2a Phosphorylation Signaling in Oxidative Stress and Erythropoiesis	93.847	340,427	-
NIH	5-R01-EB001960-40	Solid State NMR Studies of Membrane Proteins	93.286	432,343	-
NIH	5-R01-EB001965-13	High Magnetic Field, Time Domain Magnetic Resonance Spectrometers	93.286	-375	-
NIH	5-R01-EB002804-29_REVISED	High Field DNP and EPR in Biological Systems	93.286	587,274	-
NIH	5-R01-EB003151-38	Solid State NMR Studies of Peptides and Proteins	93.286	88,979	-
NIH	5-R01-EB004866-11	Novel Traveling Wave Tubes for CW and Pulsed DNP NMR	93.286	250,551	-
NIH	5-R01-EB016101-05	A New Device for Electrical & Chemical Modulation of Pathological Neural Activity	93.286	1,524	-
NIH	5-R01-EB016101-5	A New Device for Electrical & Chemical Modulation of Pathological Neural Activity	93.286	119,098	-
NIH	5-R01-EB017205-03	Critical Care Informatics	93.286	662,961	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-R01-EB017755-03	Mechanistic analysis of transport through the mucus barrier	93.286	37,128	-
NIH	5-R01-EB020740-02 REVISED	Nipype: Dataflows for Reproducible Biomedical Research	93.286	583,626	211,900
NIH	5-R01-EB022433-02	Lymph node-targeted molecular vaccines	93.286	337,091	-
NIH	5-R01-ES015339-08	Protein Kinase Signaling and Cell Cycle Control	93.113	-41,354	-
NIH	5-R01-ES015339-10	Protein Kinase Signaling and Cell Cycle Control	93.113	584,714	-
NIH	5-R01-ES015818-08	Mechanism of Eukaryotic Environmental Mutagenesis	93.113	99,245	-
NIH	5-R01-ES016313-08	The Environment as a Variable to Calibrate Mouse Models of Human Disease	93.113	163,417	-
NIH	5-R01-ES022872-25	Eukaryotic DNA Alkylation Repair	93.113	385,302	-
NIH	5-R01-EY007023-27	Cell-specific circuits and contextual modulation in visual cortex	93.867	482,021	-
NIH	5-R01-EY011289-31	Novel Diagnostics With Optical Coherence Tomography	93.867	152,308	-
NIH	5-R01-EY011894-18 REVISED	A Molecular Genetic Analysis of Cortical Plasticity	93.867	156,097	-
NIH	5-R01-EY014074-20	Developmental Regulation of Glutamate Receptor Function	93.867	407,311	-
NIH	5-R01-EY015834-10	Compounds blocking crystallin aggregation in vitro; path to anti-cataract agents	93.867	-667	-
NIH	5-R01-EY017292-10	Neural Mechanisms of Selective Attention	93.867	179,156	-
NIH	5-R01-EY017921-08	Neural mechanisms mediating visual search	93.867	62,739	-
NIH	5-R01-EY019271-05	Haptic Vitrual Environments to Enhance Navigation and Mobility of Blind People	93.867	34,937	-
NIH	5-R01-EY020484-05 REVISED	The gist of the space: A space centered approach to visual scene perception	93.867	18,496	-
NIH	5-R01-EY020517-05	Project Prakash: Development of Object Perception After Late Sight Onset	93.867	-8,484	-
NIH	5-R01-EY021473-03	Making Sense of Visual Search	93.867	2,969	-
NIH	5-R01-EY023037-03	Behavioral consequences and cellular substrates of plasticity in visual cortex	93.867	56,084	-
NIH	5-R01-EY023173-04	High-throughput robotic analysis of integrated neuronal phenotypes	93.867	146,000	110,965
NIH	5-R01-EY023322-05 REVISED	Neural mechanisms of color	93.867	385,626	-
NIH	5-R01-EY025437-03	in vivo imaging of inhibitory circuit remodeling in mouse visual cortex	93.867	484,354	-
NIH	5-R01-GM017151-41 REVISED	Structure and Function of Transfer Ribonucleic Acids	93.859	-11,163	-
NIH	5-R01-GM029595-38	Ribonucleotide Reductase: Structure and Function	93.859	345,583	-
NIH	5-R01-GM031030-35	Molecular Genetics of Rhizobium Nodulation Plasmids	93.859	504,211	-
NIH	5-R01-GM034277-32	Regulation of mRNA Processing	93.859	542,157	-
NIH	5-R01-GM039334-28	N-linked Protein Glycosylation: Pathways and Processes	93.859	45,436	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-R01-GM046059-25	Catalytic Methods for Organic Synthesis	93.859	682,301	-
NIH	5-R01-GM049039-22	Endovascular Devices and Vascular Repair	93.859	416,250	-
NIH	5-R01-GM050895-20	Cell-Cell Signaling, Gene Expression, and Horizontal Gene Transfer in Bacillus	93.859	492,209	-
NIH	5-R01-GM052339-21 REVISED	Initiation of DNA Replication of Yeast Chromosomes	93.859	33,634	-
NIH	5-R01-GM058160-19	Late Transition Metal Catalysts for Organic Synthesis	93.859	567,988	-
NIH	5-R01-GM059426-18 REVISED	Catalytic Stereoselective Olefin Metathesis Reactions	93.859	254,288	-
NIH	5-R01-GM062207-15 REVISED	Regulation of the meiotic cell cycle	93.859	12,687	-
NIH	5-R01-GM065519-16 REVISED	Imaging Mobile Zinc Biology	93.859	311,477	-
NIH	5-R01-GM066976-13	Structures and lipid interactions of curvature-inducing membrane peptides by NMR	93.859	477,725	-
NIH	5-R01-GM068957-11 REVISED	Controlling gene expression fluctuations during development and stem cell differentiation	93.859	-322	-
NIH	5-R01-GM069857-12	Complex Metallocluster Structure and Assembly	93.859	352,247	-
NIH	5-R01-GM072566-12 REVISED	Synthetic Strategies based on expoxide coupling reactions	93.859	214,305	-
NIH	5-R01-GM074825-11 REVISED	Synthesis and Study of Complex Natural Products	93.859	424,342	-
NIH	5-R01-GM077537-09	High Resolution Assembly Structure of The Nuclear Pore Complex	93.859	-106,468	-
NIH	5-R01-GM081393-07 REVISED	MEIII2_Y_Me_Fe_Mn_Cluster Assembly and Maintenance in Ribonucleotide Reductase	93.859	-405	-
NIH	5-R01-GM081871-08	Structure based prediction of the interactome	93.859	34,929	-
NIH	5-R01-GM082209-08	Computational Design of Inhibitor Specificity	93.859	207,945	-
NIH	5-R01-GM085319-08	Function of Sequence-Specific Regulators of RNA Splicing	93.859	294,157	-
NIH	5-R01-GM088204-06	Solid-state NMR of the influenza M2 protein in lipid bilayers	93.859	333,785	-
NIH	5-R01-GM089732-08 REVISED	Synthesis and Study of Dimeric Diketopiperazine Alkaloids Years 5 to 8	93.859	359,916	-
NIH	5-R01-GM095733-04 REVISED	Probing the real-time kinetics and steady-state dynamics of gene expression	93.859	-2,928	-
NIH	5-R01-GM095843-07	Molecules for Dynamic Nuclear Polarization and NMR Structure Determination	93.859	244,927	-
NIH	5-R01-GM096466-05 REVISED	Very large datasets and new models to predict and design protein interactions	93.310	120,418	-
NIH	5-R01-GM101316-03	Regulation and Function of snoRNA Genes	93.859	380,781	-
NIH	5-R01-GM101420-03	High throughput microfluidic intracellular delivery platform	93.859	141,684	183,967
NIH	5-R01-GM102311-03	Cooperation and Cheating in the Evolution of Antibiotic Resistance in Bacteria	93.859	-17,095	-
NIH	5-R01-GM104948-04	Redesigning General Anesthesia	93.310	60,453	62,590

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-R01-GM105984-05	Investigating the generation of mechanical forces during tissue invagination	93.859	203,740	-
NIH	5-R01-GM108348-03	BIGDATA: Small: DA: DCM: Compressive genomics for large sequence datasets: Algorithms, applications, and software	93.859	-7,576	-
NIH	5-R01-GM110048-04	Computationally guided design of helical peptide interaction reagents	93.859	505,281	-
NIH	5-R01-GM110535-04	Cysteine Arylation	93.859	237,458	-
NIH	5-R01-GM113708-03 REVISED	Comparative analysis and regulatory architecture of epigenomics datasets	93.859	315,134	-
NIH	5-R01-GM114190-03	Polymer models of mitotic and interphase chromosomes	93.859	294,320	-
NIH	5-R01-GM114547-04 REVISED	Synthetic Methods based on Biphilic Phosphorus Catalysts	93.859	156,035	-
NIH	5-R01-GM114834-12	Modified Phase 3B of a 3-phase 1.3-GHz LTS/HTS NMR magnet	93.859	782,270	-
NIH	5-R01-HD046943-10	Mechanisms and Functions of FMRP in Neuronal Development	93.865	6,947	-
NIH	5-R01-HD067312-05	Using Cognitive Neuroscience to Predict Dyslexia among Kindergarden Children	93.865	93,160	103,991
NIH	5-R01-HD085866-03REVISED	Mitotic exit control	93.865	388,049	-
NIH	5-R01-HD086899-02	NRI: An autonomous curious social robot with a mindset for long-term interaction with children	93.865	193,815	95,722
NIH	5-R01-HG002439-15	Regulation and Function of Alternative mRNA Isoform Expression in Mammals	93.172	319,091	-
NIH	5-R01-HG008363-03	High-throughput methods for elucidating the control of chromatin accessibility	93.172	878,799	276,042
NIH	5-R01-HL107503-05 REVISED	Scalable Units for Building Vascularized Cardiac Graft	93.837	104,272	33,903
NIH	5-R01-HL121386-03	Characterizing Mechanisms of Sickle Cell Crisis via Dynamic Optical Assay	93.839	236,100	-
NIH	5-R01-HL127174-02	Canonical & non-canonical regulation of the HDL receptor by PDZK1's PDZ domains	93.837	423,429	17,491
NIH	5-R01-MH085802-08	MicroRNA mechanisms of Rett Syndrome	93.242	441,658	-
NIH	5-R01-MH091174-05	Capacity Limitations in the Cortex	93.242	172,891	-
NIH	5-R01-MH096914-04	Impairments of Theory of Mind disrupt patterns of brain activity	93.242	-2,404	-
NIH	5-R01-MH097104-04	Shank3 in Synaptic Function and Autism	93.242	-11,447	-
NIH	5-R01-MH102441-04	Dissecting the Neural Circuits Encoding Positive and Negative Valence	93.242	462,199	-
NIH	5-R01-MH103160-03	Hypermagnetic engineered proteins for functional neuroimaging	93.242	-186,536	-
NIH	5-R01-MH104536-04	Imaging Synaptic Transmission of Individual Active Zones	93.242	408,067	-
NIH	5-R01-MH106469-03	Synaptic pathophysiology of the 16p11.2 microdeletion mouse model	93.242	573,578	-

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NIH	5-R01-MH106497-03	Delineating the Anatomical and Functional Circuitry Underlying Social Learning	93.242	402,833	-
NIH	5-R01-MH111503-02	A platform for high-throughput production of targeting systems for cell-type-specific transgene expression in wild-type animals	93.242	776,003	-
NIH	5-R01-NS025529-26	Extrapyramidal Systems	93.853	-1,967	-
NIH	5-R01-NS025529-28	Extrapyramidal Systems	93.853	378,141	-
NIH	5-R01-NS040296-15	Characterization of the Drosophila Synaptotagmin Family	93.853	570,988	-
NIH	5-R01-NS051874-20 REVISED	The Cdk5/p35 Kinase	93.853	-3,608	-
NIH	5-R01-NS076462-05	Noninvasive imaging-based electrophysiology using microelectronic devices	93.310	-5,688	-
NIH	5-R01-NS078127-04 REVISED	Neural mechanisms of timing in the oculomotor system	93.853	365,289	-
NIH	5-R01-NS078839-05	The Epigenetics of Alzheimer's Disease	93.853	184,014	27,250
NIH	5-R01-NS086804-03	Fiber Inspired Neural Probes for the Multifunctional Dynamic Brain Mapping	93.853	327,073	-
NIH	5-R01-NS089076-03	Epigenetic pathology and therapy in Huntington's disease	93.853	340,745	-
NIH	5-R01-NS094178-02	Brainstem mechanism underlying recurrent laryngospasm in Rett syndrome	93.853	334,991	-
NIH	5-R01-OD011141-04	Diagnosis and Pathobiology of Emerging Enterohepatic Helicobacter spp. in Mice	93.351	-643	-
NIH	5-R03-AR067503-03	Unveiling the Proteostasis Network of Normal and Disease_Causing Collagen_I	93.846	107,882	-
NIH	5-R21-AG054961-02 REVISED	Aggregate Proximity-Induced, Proteostasis Network-Modulated Destabilization of the Proteome	93.866	179,355	-
NIH	5-R21-AI110787-02 REVISED	Multigenerational lineage heterogeneity and metabolic plasticity of CD8 T cells	93.855	80,891	-
NIH	5-R21-AI112711-02	Sulfur DNA modifications in gut microbes confer resistance to oxidative stress	93.855	24,801	-
NIH	5-R21-AI121613-02	MITOPlas_Scalable characterization of the malaria parasite mitochondrial proteome	93.855	136,340	-
NIH	5-R21-AI121669-02	Engineering Phagebody Antimicrobials for Carbapenem-Resistant Enterobacteriaceae	93.855	104,885	-
NIH	5-R21-AI126465-02	Siderophore-based antibiotics: consequences for the microbiota and bacterial pathogens	93.855	107,041	-
NIH	5-R21-AR068477-02	A C. elegans drug discovery platform for dysferlin-based Muscular Dystrophies	93.846	220,183	-
NIH	5-R21-CA177391-03	Implantable device for high-throughput in vivo drug sensitivity testing	93.394	151,810	-
NIH	5-R21-CA187236-02	Characterizing functional targets of a non-coding RNA oncogene, SNORA42	93.396	193,329	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NIH	5-R21-CA198028-02	Understanding the role of serine metabolism in cancer	93.396	12,745	-
NIH	5-R21-EB018529-02	PEG-Branch-Nitroxide Nanostructured Organic MRI Contrast Agents	93.286	-6,576	-
NIH	5-R21-EB018924-02	Liquid-helium-free persistent-mode HTS magnets for NMR and MRI applications	93.286	199,997	58,953
NIH	5-R21-ES020466-02	Phospho-Binding Ligands and Substrates of BRCA1	93.113	-251	-
NIH	5-R21-NS084264-02	Noninvasive Determination of Intracranial Pressure in Pediatric Patients	93.853	64,287	17,025
NIH	5-R21-NS087225-02	Validating a novel target for correction of pathophysiology in fragile X and TSC	93.853	47,178	-
NIH	5-R21-NS088412-02	SnapTag: Tagging active ensembles using a Strong Neuronal Activity Promoter	93.853	-149	-
NIH	5-R21-NS091982-02	New technologies for in vivo spectral resolved high speed multiphoton microscopsy	93.853	78,839	-
NIH	5-R24-MH109081-03	Toward functional molecular neuroimaging using vasoactive probes in human subjects.	93.242	474,751	-
NIH	5-R25-GM116705-02	IMPACT Program for Biomedical Researcher Career Development	93.859	611,756	182,299
NIH	5-R33-AI100190-04	MMDx: A rapid multiplexed matrix code diagnostic for real time epidemiology	93.855	354,703	-
NIH	5-R33-CA174550-03 REVISED	Microfluidic 3D Assays for Metastatic Cancer	93.396	22,583	23,034
NIH	5-R33-CA191143-02	Single cell growth assay for residual cells in acute lymphoblastic leukemia	93.394	4,767	-
NIH	5-R33-CA191143-03REVISED	Single cell growth assay for residual cells in acute lymphoblastic leukemia	93.394	401,796	-
NIH	5-R35-GM118066-02	Causes and consequences of aneuploidy	93.859	193,077	-
NIH	5-R37-CA080024-18 REVISED	Intra and Extra-Chromosomal Probes for Mutagenesis by Carcinogens	93.393	1,712	-
NIH	5-R37-EB000244-36	Controlled Release of Macromolecules	93.286	-43,460	-
NIH	5-R37-GM041934-26	Cell Cycle and Sporulation in Bacillis Subtillis	93.859	517,419	-
NIH	5-R37-GM057073-19	Structure-Function Relationship of Glycosaminoglycans	93.859	348,879	-
NIH	5-R37-NS051874-22	The Cdk5/35 Kinase	93.853	463,737	-
NIH	5-T32-EB001680-11	Neuroimaging Training Program	93.286	19,213	-
NIH	5-T32-EB001680-12	Neuroimaging Training Program	93.286	156,128	-
NIH	5-T32-EB019940-02	Neurobiological Engineering Training Program	93.286	85,927	-
NIH	5T32ES007020-42	Training Grant in Environmental Toxicology	93.113	751	-
NIH	5T32ES007020-42-REVISED	Training Grant in Environmental Toxicology	93.113	538,238	-
NIH	5-T32-GM007287-42	Pre-Doctoral Training in Biological Sciences	93.859	1,788,272	-

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NIH	5-T32-GM007484-39	Integrative Neuronal Systems-Year 40	93.859	1,956	-
NIH	5-T32-GM008334-27	Interdepartmental Biotechnology Training Program	93.859	13,238	-
NIH	5-T32-GM008334-28	Interdepartmental Biotechnology Training Program	93.859	713,465	-
NIH	5-T32-GM087237-07	Graduate Training in Computational and Systems Biology	93.859	6,257	-
NIH	5-T32-GM087237-08	Graduate Training in Computational and Systems Biology	93.859	259,649	-
NIH	5-T32-MH074249-09	Training Program in the Neurobiology of Learning and Memory	93.242	3,958	-
NIH	5-T32-MH074249-10	Training Program in the Neurobiology of Learning and Memory	93.282	174,321	-
NIH	5-T32-OD010978-28	Biomedical Research Training for Veterinary Scientists	93.351	6,270	-
NIH	5-U01-CA164337-04	GI Tract Dysbiosis and Breast Cancer	93.396	-46,698	20,680
NIH	5-U01-CA184897-03	Dynamics of Gene and Isoform Regulation during EMT and tumor progression	93.396	605,890	292,911
NIH	5-U01-CA184897-04	Dynamics of Gene and Isoform Regulation during EMT and tumor progression	93.396	17,700	-
NIH	5-U01-CA184898-02	Embryonal Brain Tumor Networks	93.396	31,932	23,580
NIH	5-U01-CA184898-03	Embryonal Brain Tumor Networks	93.396	810,966	277,893
NIH	5-U01CA202177-02	Quantitative analyses of tumor cell extravasation	93.396	33,973	-
NIH	5-U01-EB018813-02	Low-cost microelectronic ultrasound system for unobtrusive ABP measurement	93.286	283,456	-
NIH	5-U01-HG007037-03	Integrated Genome Discovery at Single Base Pair Resolution	93.172	-14,038	-
NIH	5-U01-HG007610-03	Epigenomic variation atlas across human tissues and individuals in GTEx	93.172	853,662	677,550
NIH	5-U01-MH106011-02	Ultra-Multiplexed Nanoscale In Situ Proteomics for Understanding Synapse Types	93.242	-14,024	5,257
NIH	5-U01-MH106011-03	Ultra-Multiplexed Nanoscale In Situ Proteomics for Understanding Synapse Types	93.242	406,027	211,966
NIH	5-U01-MH106018-02	Novel technologies for nontoxic transsynaptic tracing	93.242	603	-
NIH	5U01MH106018-02 REVISED	Novel technologies for nontoxic transsynaptic tracing	93.242	-2,811	-
NIH	5-U01-MH106018-03	Novel technologies for nontoxic transsynaptic tracing	93.242	581,854	-
NIH	5-U01-MH108168-02	Connectomes Related to Anxiety and Depression in Adolescents	93.242	842,805	578,284
NIH	5-U01-MH-109129-02	Anterograde monosynaptic tracing - Restricted Parent	93.242	416,611	160,769
NIH	5-U01-NS090438-02 REVISED	Next generation high-throughput random access imaging, in vivo	93.853	79,645	-
NIH	5-U01-NS090438-03	Next generation high-throughput random access imaging, in vivo	93.853	241,452	-
NIH	5-U01-NS090451-02	Calcium sensors for molecular fMRI	93.853	-10,743	-
NIH	5-U01-NS090451-03	Calcium sensors for molecular fMRI	93.853	376,408	-
NIH	5-U01-NS090473-03	Cortical circuits and information flow during memory-guided perceptual decisions	93.853	315,351	-

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NIH	5-U54-CA143874-05	Administration	93.397	311,014	-
NIH	5-U54-CA151884-05	Administration	93.397	137,503	64,872
NIH	5-U54-CA163109-02	Impact of Cellular and Extracellular Host Components on Tumor Progression	93.397	107,191	48,329
NIH	5-UH3-TR000496-04	All-Human Microphysical Model of Metastasis Therapy	93.350	54,460	38,920
NIH	5-UH3-TR000496-04 REVISED	All-Human Microphysical Model of Metastasis Therapy	93.350	84,667	-
NIH	5-UH3-TR000496-05	All-Human Microphysical Model of Metastasis Therapy	93.350	755,556	408,233
NIH	5-UH3-TR000496-05S1	All-Human Microphysical Model of Metastasis Therapy	93.350	38,506	32,285
NIH	7-F30-CA210373-02	Determining the mechanism of aspartate sensing by the mTOR pathway	93.398	43,276	-
NIH	7-R01-CA160860-03	Developing Direct Small-Molecule Probes of Myc-Dependent Transcription	93.393	43,353	43,353
NIH	8-DP1-NS082101-02	Generating Transplantable Neurons by in Vivo Combinatorial Screening of Transcription Regulator RNAs	93.310	0	-
NIH	9-R01-GM114834-11	Modified Phase 3B of a 3-phase 1.3-GHz LTS/HTS NMR magnet	93.859	412,202	-
NIH	PENDING P30ES002109 YEAR 36	MIT Center for Environmental Health Sciences (YR 36-40)	93.113	751,134	-
NIH	R01 AI111860-03	T-cell-mediated targeting of therapeutics to HIV reservoirs	93.855	135,592	122,562
NIH	R01 CA173712-04REVISED	Genetic circuits for high-throughput, multi-sensory, live cell microRNA profiling	93.396	227,535	-
NIH	T32-EB019940-03	Neurobiological Engineering Training Program	93.286	19,479	-
		Total for NIH		**93,488,832**	**8,240,399**
Other HHS					
HHS	5-U01-FD005291-02	Integrated approach to determine equivalence in complex drug mixtures	93.103	227,102	-
HHS	5-U01-FD005291-03	Integrated approach to determine equivalence in complex drug mixtures	93.103	160,866	-
HHS	HHSF223201310210C	A Systematic Approach to Addressing Intentional Adulteration of FDA-regulated Food and Drug Products and Ingredients Emanating from the Global Supply Chain	93.103	665,838	-
HHS	HHSP233201500054C	Web Accessibility Initiative (WAI) Core	93.RD	496,621	-
		Total for Other HHS		**1,550,426**	**-**
		TOTAL for Department of Health & Human Services		**95,039,258**	**8,240,399**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF TRANSPORTATION					
DOT	11-G-016	FAA Joint University Program for Air Transportation Proposal for Activities by the Massachusetts Institute of Technology	20.108	38,423	-
DOT	13-C-AJFE-010	Center of Excellence for Alternative Jet Fuels and Environment	20.109	21,352	-
DOT	13-C-AJFE-022	Center of Excellence for Alternative Jet Fuels and Environment	20.109	119,691	-
DOT	13-C-AJFE-023	Center of Excellence for Alternative Jet Fuels and Environment	20.109	282,224	-
DOT	13-C-AJFE-024	Center of Excellence for Alternative Jet Fuels and Environment	20.109	135,905	-
DOT	13-C-AJFE-025	Center of Excellence for Alternative Jet Fuels and Environment	20.109	248,897	-
DOT	13-C-AJFE-028	Center of Excellence for Alternative Jet Fuels and Environment	20.109	382,529	-
DOT	13-C-AJFE-MIT-021	Center of Excellence for Alternative Jet Fuels and Environment	20.109	56,152	-
DOT	13-C-AJFE-MIT-026	Center of Excellence for Alternative Jet Fuels and Environment	20.109	147,496	-
DOT	13-C-AJFE-MIT-027	Center of Excellence for Alternative Jet Fuels and Environment	20.109	87,981	-
DOT	13-C-AJFE-MIT-029	Center of Excellence for Alternative Jet Fuels and Environment	20.109	35,971	-
DOT	16-G-011	FAA Joint University Program for Air Transportation Activities	20.108	50,480	-
DOT	DTFH6115C00033	Future freight and logistics survey: integrated data collection using mobile sensing, wireless communication and machine learning algorithms	20.RD	446,101	-
DOT	DTFR5316P00052	Design and Implementation of a Head-up Display for the Cab Technology Integration Laboratory	20.RD	31,063	-
DOT	DTRT12-G-UTC01	UTC Research Center (Parent)	20.701	-6,013	-6,013
DOT	DTRT13-G-UTC31	Region 1 University Transportation Center	20.701	1,985,167	1,452,371
DOT	DTRT57-12-C-10029	Library Services for DOT	20.RD	51,602	-
DOT	DTRT5717C10121	Library Services for DOT	20.RD	17,277	-
DOT	PO # DTRT5716P80015	Ductile Fracture in Rail Equipment	20.RD	97,268	-
DOT	PO #DTRT5716P80007	Environmental Analysis of a Commercial Aircraft CO2 Standard	20.RD	32	-
		Total for Department of Transportation		**4,229,597**	**1,446,358**
		TOTAL for Department of Transportation		**4,229,597**	**1,446,358**

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MISCELLANEOUS FEDERAL GOVT					
Department of Interior					
DOI	D15PC00219	WCAG 2.0 Technical Assistance	12.RD	68,467	-
DOI	D15PC00242	Quantum Algorithms for Partial Differential Equations	12.RD	159,252	154,413
DOI	G16AP00011	Slip and stress rates on crustal faults in the Puget-Williamette Urban Corridor: Collaborative research with Portland State University and Massachusetts Institute of Technology	15.807	8,224	-
DOI	R16AC00122	System-level cost and performance optimization for photovoltaic-powered electrodialysis reversal desalination	15.506	132,299	-
		Total for Department of Interior		**368,242**	**154,413**
Department of Education					
ED	P116F150045	Towards Scalable Differentiated Instruction Using Technology-enabled Competency-based Dynamic Scaffolding	84.116F	504,046	144,665
		Total for Department of Education		**504,046**	**144,665**
Department of Agriculture					
USDA	59-8042-7-007	Fluid Dynamics of Impact and Mixing for Improved Washing of Fresh and Fresh-cut Produce	10.001	40,692	-
		Total for Department of Agriculture		**40,692**	**-**
Other Agencies					
Misc.	2011-IJ-CX-K016	Divert and Alert: Mitigating and Warning of Traffic Threats to Police Stopped Along the Roadside	16.560	70,240	77,346
Misc.	2014-DN-077-ARI080-02	ARI-LA: Rapid, Low-Dose Detection of Shielded Special Nuclear Material	97.077	137,539	-
Misc.	2014-DN-077-ARI080-04	ARI-LA: Rapid, Low-Dose Detection of Shielded Special Nuclear Material	97.077	267,413	-
Misc.	523C48267/VA241-13-D-0053	VA IDIQ FY13: Task Order	64.RD	15,206	-
Misc.	523C58269/VA241-13-D-0053	VA IDIQ FY13: Task Order	64.RD	38,010	-
Misc.	83522801	Using advanced statistical techniques to identify the drivers and occurrence of historical and future extreme air quality events in the United States from observations and models	66.509	55,756	38,906
Misc.	83618301	The Hawaii Island Volcanic Smog Sensor Network (HI-Vog)	66.509	60,049	11,756
Misc.	8369901	Integrated Assessment of Climate Change Mitigation, Impacts and Adaptation	66.034	24,352	-
Misc.	AID-OAA-A-12-00095	CITE and IDIN	98.001	1,989,522	123,609
Misc.	AID-OAA-A-16-00058	Ultra-Low Energy Drip Irrigation for MENA Countries	98.RD	515,754	185,133

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Misc.	CDI-G-015	USAID Desal Prize: Phase 2 Pilot of PV-EDR in Mehabubnagar, India	98.RD	101,992	-
Misc.	VA245-16-P-0574 P00001; PO#688-D60007	FORCE-MEASURING ULTRASOUND PROVE FOR DETECTION AND TREATMENT OF SARCOPENIA AND MYOSTEATOSIS IN OLDER AFRICAN AMERICANS	64.RD	19,856	-
Misc.	XA-83600001	Integrated Assessment of Greenhouse Gases	66.034	60,067	31,708
		Total for Other Agencies		**3,355,758**	**468,457**
		TOTAL for Miscellaneous Federal Govt		**4,268,737**	**767,535**

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					
NASA	NNA13AA90A	Foundations of Complex Life: Evolution, Preservation & Detection on Earth & Beyond	43.001	1,391,545	697,362
NASA	NNG12FD70C	Regolith X-ray Imaging Spectrometer (REXIS) - Phase B	43.RD	57,396	-
NASA	NNG14FC03C	Transiting Exoplanet Survey Satellite	43.RD	14,459,353	4,985,835
NASA	NNG14PJ13C	Neutron Star Composition ExploreR (NICER) Project Detector Subsystem	43.RD	230,554	16,031
NASA	NNG15HZ35C	NASA Mark IV/VLBI Follow-On	43.RD	1,677,182	-
NASA	NNH13CJ23C	InSPIRE 2	43.RD	167,339	167,339
NASA	NNH17CH01C	The Mars Oxygen Isru Experiment (MOXIE) Continuation	43.RD	626,438	32,042
NASA	NNM08AA18C	GRAIL	43.RD	463,237	276,619
NASA	NNM13AA03G	A New Modeling Approach for Rotating Cavitation Instabilities in Rocket Engine Turbopumps	43.007	33,290	2,744
NASA	NNM16AA08A	Dual Mode Green Propulsion Proof of Concept: Providing Both Innovative Green Propulsion and Micro Propulsion for Small Spacecraft	43.001	19,978	-
NASA	NNX10AB27G	Exploring the Outer Solar System with Stellar Occultations	43.RD	27,744	-
NASA	NNX10AE50G	High Performance Three-Dimensionally Integrated Active Pixel X-Ray Sensors	43.RD	191,080	-
NASA	NNX10AG27G	SMASS-Next: Next Generation Neo Spectroscopic Survey	43.RD	70,449	-
NASA	NNX11AF17G	Advanced Global Atmospheric Gases Experiment (AGAGE) Collaborative Research Project	43.001	31,667	-
NASA	NNX11AL79G	Quantifying rates of heat and carbon uptake in ocean models and its implication for climate change	43.001	2,341	-
NASA	NNX11AQ12G	Estimating the Circulation and Climate of the Ocean, Phase III (ECCO3): Improved Representation of Ocean-Ice Interactions in Earth System Models	43.001	9,896	-
NASA	NNX12AE37G	Leveraging High Resolution Spectra to Understand the Disk and Relativistic Iron Line of Cygnus X-1	43.001	13,352	-
NASA	NNX12AF22G	Directly-Deposited Blocking Filters for Imaging X-ray Detectors: Technology Development for the International X-ray Observatory	43.001	75,130	-
NASA	NNX12AH80G	Phase Equilibrium Investigation of Planetary Materials	43.001	2,287	-
NASA	NNX12AJ93G	Gravity data for ocean circulation and climate studies	43.001	138,796	-
NASA	NNX12AL26G	Identifying Disrupted Differentiated Bodies in the Main Asteroid Belt	43.001	40,398	-

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NASA	NNX12AM16G	NRI-Small: A Novel Powered Leg Prosthesis Simulator for Sensing and Control Development	43.009	14,346	-
NASA	NNX13AC34G	Interpreting Ecological Variability Using Remotely Observed Optical Properties and Ocean Models	43.001	45,307	42,711
NASA	NNX13AF80G	Communication of solar variability to the Earth's surface via the stratosphere	43.001	1,352	-
NASA	NNX13AH91A	Research on the Natural Variability of Climate and the Impact on Anthropogenic Forcing on Climate	43.001	193,763	-
NASA	NNX13AI40G	Ensemble Downscaling of Soil Moisture: Merging Remotely Sensed Precipitation and High Resolution Land Surface Information	43.001	46,699	-
NASA	NNX13AI62G	Characterization of the Stratospheric, Lower Thermospheric, and Ionospheric Variability Related to the Sudden Stratospheric Warmings	43.001	130,064	-
NASA	NNX13AJ86G	Mars Reconnaissance Orbiter (MRO) Gravity Field Analysis	43.001	121,009	-
NASA	NNX13AK16G	Geometry and Meshing Control for Design through Analysis	43.001	69	-
NASA	NNX13AK88G	Linking Greenland ice sheet mass loss to decadal circulation changes in the ocean	43.001	36,874	36,055
NASA	NNX13AK98G	Rheological behavior of icy mixtures with application to the outer planets	43.001	64,356	-
NASA	NNX13AO15G	Assessment of the Impact of Aerosol Composition of Cirrus Clouds Using Data from the MACPEX Field Study	43.001	23,034	-
NASA	NNX14AB40G	Tidal Evolution of Coalescing Compact Binaries, Short Period Exoplanets, and Rotating Stars	43.001	192,780	66,846
NASA	NNX14AC75G	Microwave Radiometer Technology Acceleration (MiRaTA) CubeSat	43.001	144,007	11,554
NASA	NNX14AE76G	Thin Mirror Shaping Technology for High-Throughput X-ray Telescopes	43.001	584,457	-
NASA	NNX14AG47A	Active Wing Shaping Control Concept Using Composite Lattice-based Cellular Materials	43.001	130,623	-
NASA	NNX14AH11A	Ubiquitous 2-Dimensional Smart Sensing (UDS2) Initiative	43.001	175,318	-
NASA	NNX14AI58A	Field Investigations to Enable Solar System Science and Exploration	43.003	3,643	-
NASA	NNX14AJ51G	Data and forcing integration for improved estimation of spatial sea level patterns and their uncertainties, with extended diagnostics for closed budget analysis	43.001	403,370	155,116
NASA	NNX14AK27G	PPhotochemistry and Spectroscopy of Sulfur Dioxide, Sulfur Monoxide and Elemental Sulfur as Source Reactions for Archean Sulfur Mass-Independent Isotope Fractionation	43.001	71,157	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NASA	NNX14AL95G	Data Retrieval and Analysis from Nanosatellite Microwave Radiometers	43.001	104,209	-
NASA	NNX14AP38G	How sensitive are global climate forcing and surface air quality estimates to aerosol properties?	43.001	163,517	-
NASA	NNX14AQ03G	Geodetic Analysis Enhancements for Real-Time and Millimeter Accuracy Reference Frames	43.001	184,666	-
NASA	NNX14AT22A	Global Environmental Impact of Supersonic Cruise Aircraft in the Stratosphere	43.004	357,719	-
NASA	NNX15AC43G	NRA Research Opportunities in Space and Earth Sciences-2013 (ROSES-2013): Advanced Packaging for Critical Angle X-ray Transmission Gratings	43.001	356,761	-
NASA	NNX15AC76G	MIT Participation in Calibration and Ground Software Development for Astro-H	43.001	257,027	-
NASA	NNX15AF85G	The Search for Extra-Terrestrial Genomes (SETG)	43.001	924,196	326,852
NASA	NNX15AG84G	Computer-Aided Discovery of Earth Surface Deformation Phenomena	43.001	318,476	-
NASA	NNX15AH72G	Experimental and Theoretical Investigations of Solar Nebula Magnetic Fields	43.001	76,295	3,282
NASA	NNX15AJ36G	Cooling of the super-heated neutron star in MAXI J0556-332 (XMM 74487)	43.001	17,726	-
NASA	NNX15AK10G	Lunar Orbiter Laser Altimeter Investigation and Associated Science	43.001	106,440	-
NASA	NNX15AK23G	Probing the debris disk-planet connection with collisional cascades	43.001	113,738	-
NASA	NNX15AL14G	Continuing Progress in Soft X-ray Polarimetry	43.001	155,227	19,933
NASA	NNX15AL48G	ROSES: Cassini Data Analysis and Participating Scientists	43.001	201,459	62,605
NASA	NNX15AL62G	Investigating the Ancient Lunar Dynamo	43.001	83,139	1,282
NASA	NNX15AM35G	Investigating the history of destructive collisions in the asteroid and Kuiper belts	43.001	26,788	-
NASA	NNX15AM43G	Temporal Variations in the Particle Sizes of Martian Atmospheric Dust	43.001	62,177	-
NASA	NNX15AM91A	Aircraft and Technology Concepts for an N+3 Subsonic Transport-Phase 3	43.002	464,709	323,424
NASA	NNX15AQ50A	Search and Rescue under the Tree Canopy	43.002	170,762	-
NASA	NNX15AR20G	NRI: Exosuit System Design Parameters as Revealed by an Integrated, Human Musculoskeletal Computational Model	43.012	215,854	25,000
NASA	NNX15AR43G	Studying the Onset of Propeller Accretion in SAX J1808.4-3658 with NuSTAR and Swift	43.001	36,247	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NASA	NNX15AU41A	Rapid Viscous Aerodynamic Analysis/Design Methodology Utilizing Inviscid Coupling with a 3D Integral Boundary Layer	43.002	267,347	-
NASA	NNX15AU66A	Swept time-space domain decomposition rule for breaking the latency barrier	43.002	203,468	155,885
NASA	NNX15AU90G	Tradespace Analysis Tool for Designing Earth Science Distributed Missions	43.001	132,564	-
NASA	NNX15AV35G	THE SUPER-EDDINGTON ACCRETION FLOW IN GX 5-1	43.001	11,481	-
NASA	NNX15AW03A	BASALT: Biologic Analog Science Associated with Lava Terrains	43.001	133,169	-
NASA	NNX15AW35G	Design and Evaluation of Automated Electronic Checklists for Robotics Operations	43.003	218,261	-
NASA	NNX15AW94G	MIT Participation in Scientific Analysis and Interpretation Astro-H Data	43.001	8,898	-
NASA	NNX16AC49A	Robust Autonomy for Extreme Space Environments: Hosting R5 at MIT	43.012	47,241	-
NASA	NNX16AC98G	Advanced Global Atmospheric Gases Experiment [AGAGE] Collaborative Project: MIT Component	43.001	1,047,283	395,818
NASA	NNX16AD01G	High Precision Assembly of Thin Mirror X-ray Telescopes	43.001	358,150	-
NASA	NNX16AD29G	Experimental and Petrologic Investigations of Chemical Differentiation on the Ureilite Parent Body	43.001	85,325	-
NASA	NNX16AE12G	Search for Thermal Emission from the Quiescent Neutron Star SAX J1810.8-2609 (XMM 76310)	43.001	18,316	-
NASA	NNX16AE93G	Raising the Technology Readiness Level of 4.7-THz local oscillators	43.001	379,642	-
NASA	NNX16AF61A	Autonomy- and Autonomicity-Enhanced Air Traffic Management	43.002	143,657	-
NASA	NNX16AG82G	Electron Hole Instabilities in the Plasma Wake of Moons, Asteroids and Comets	43.001	133,567	-
NASA	NNX16AH07G	Modeling and Simulation for Strategic Development of a Profitable In-Space Manufacturing Economy	43.012	87,434	-
NASA	NNX16AH25G	Cooling of the super-heated neutron star in MAXI J0556-332 (XMM 76275)	43.001	44,905	-
NASA	NNX16AK25A	Feasibility of Hybrid-Electric Propulsion for Ultra-Efficient Commercial Aircraft	43.002	354,217	110,833
NASA	NNX16AK97G	Applications Lead for the NASA ISRO Synthetic Aperture Radar Mission Science Definition Team	43.001	116,369	-
NASA	NNX16AN15G	Use of Soil-Moisture Retrievals to Refine Global Land Trace Gases Emissions and their Climate Feedbacks	43.001	96,442	-
NASA	NNX16AP66G	MOJO-Micro: Multi-Orthogonal Jaunting rObot in Microgravity	43.012	272,148	-
NASA	NNX16AR06G	Europa Comm-Orbiter Altimeter Accommodation Study (GSFC)	43.001	35,005	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NASA	NNX16AR47G	Assessing Ecosystem Vulnerability to Climate Change through Optics, Imagery and Models	43.001	107,413	43,068
NASA	NNX16AT66A	Smoothing-Based Relative Navigation & Coded Aperture Imaging	43.012	82,047	-
NASA	NNX17AB11G	Quantifying and Preventing EVA Injury in Exploration Environments	43.003	24,911	-
NASA	NNX17AC25G	REVEALING THE COMPACT OBJECT IN NGC 300 X-1 (XMM 2279)	43.001	18,176	-
NASA	NNX17AD07G	Laser Guide Star for Large Aperture Segmented Space Telescopes	43.012	49,931	-
NASA	NNX17AD84G	Cooling of the super-heated neutron star in MAXI J0556-332 (XMM 78267)	43.001	4	-
NASA	NNX17AE11G	Rocket Experiment Demonstration of a Soft X-ray Polarimeter	43.001	37,959	-
NASA	NNX17AE47G	Development of High Resolution X-ray Telescope Optics	43.001	85,394	-
NASA	NNX17AG43G	Development of a Critical Angle Transmission Grating Spectrometer	43.001	288,888	-
NASA	NNX17AH71G	Solar eclipse-induced changes in the ionosphere over the continental US	43.001	3,838	-
NASA	NNX17AL45G	L3 Study Team / LISA Science Team participation	43.001	3,469	-
NASA	PENDING	Development of a Critical Angle Transmission Grating Spectrometer	43.001	4,015	-
		Total for National Aeronautics and Space Administration		**31,409,747**	**7,958,236**
		TOTAL for National Aeronautics and Space Administration		**31,409,747**	**7,958,236**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION					
NSF	ACI-1313789	EAGER: Demonstrating Decentralized Social Software using Linked Data (Crosscloud)	47.070	52,230	-
NSF	ACI-1322254	VOSS: Collaborative Research: Is Larger Smarter? Investigating the Effect of Group Size on Collective Intelligence	47.070	46,927	-
NSF	ACI-1442997	CIF21 DIBBs: An Infrastructure for Computer-Aided Discovery in Geoscience	47.070	311,723	-
NSF	ACI-1550172	Collaborative Research: SI2-SSI: Jet Energy-loss Tomography with a Statistically and Computationally Advanced Program Envelope (JETSCAPE)	47.070	109,785	-
NSF	ACI-1550487	Collaborative Research: SI2-SSI: Integrating Data with Complex Predictive Models under Uncertainty: An Extensible Software Framework for Large-Scale Bayesian Inversion	47.070	185,460	120,000
NSF	ACI-1640829	CIF21 DIBBs: PD: Metadata Toolkits for Building Multi-faceted Data-relationship Models	47.070	108,478	-
NSF	AGS-1005480	Collaborative Research: Dispersion of particles within and above plant canopies	47.050	13,685	-
NSF	AGS-1042569	Climate Change in the Upper Atmosphere	47.050	25,566	-
NSF	AGS-1053648	CAREER: Understanding Chemistry, Transport and Fate of Mercury and Persistent Organic Pollutants through Global Atmospheric Modeling	47.050	347	-
NSF	AGS-1132267	Ionospheric Disturbances Related to the Stratospheric Sudden Warnings	47.050	9,817	-
NSF	AGS-1148594	Improved Understanding of Moist Atmospheric circulations Through an Effective Static Stability Framework	47.050	5,828	-
NSF	AGS-1238109	Impacts of the Biosphere on Global Tropospheric Chemistry and Climate	47.050	61,119	-
NSF	AGS-1242204	The Millstone Hill Geospace Facility	47.050	2,275,531	117,205
NSF	AGS-1243058	Collaborative Research:CEDAR --Large-scale Characterizationof the Sub-Auroral Polarization Stream and its Impact on the Ionosphere-Thermosphere System	47.050	10,523	-
NSF	AGS-1339264	Tropospheric Anthropogenic Aerosols and Climate	47.050	108,187	-
NSF	AGS-1343045	Collaborative Research: CEDAR--Study of Storm-time Large Scale Structures in the Subauroral Ionosphere with Coupled First-principles Model and Multi-instrument Observations	47.050	55,745	-
NSF	AGS-1343056	Collaborative Research: CEDAR -- Understanding the High-to-Mid Latitude Ionospheric Response to Stratospheric Warmings	47.050	66,540	-
NSF	AGS-1343967	INSPIRE Track 1: Mahali: Space Weather Monitoring Everywhere	47.050	122,125	42,071

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	AGS-1418508	Collaborative Research: Self-Aggregation of Moist Convection, Radiative-Convective Instability, and the Regulation of Tropical Climate	47.050	160,763	-
NSF	AGS-1419667	Linkages of Changes in Ozone to Arctic Climate Change in the Stratosphere and Troposphere	47.050	109,554	-
NSF	AGS-1461347	International Workshop on Comparing Ice Nucleation Measuring Systems 2014 (ICIS 2014) #3	47.050	22,986	-
NSF	AGS-1461517	Trends and Variability of Temperatures near the Tropical Tropopause Layer and Implications for Tropical Cyclones	47.050	133,045	-
NSF	AGS-1520825	Hazards SEES: Uncovering the hidden skeleton of environmental flows: advanced Langrangian methods for hazards prediction, mitigation and response	47.050	348,959	260,420
NSF	AGS-1523305	Collaborative Research: Lightning Studies in a Polluted Atmosphere	47.050	6,725	-
NSF	AGS-1536551	Collaborative Research: Laboratory Investigations of Particle-Organic Vapor Interactions: Effects on Particle Formation, Growth, and Properties	47.050	63,154	-
NSF	AGS-1539972	The Influence of Recent Volcanic Eruptions on Stratospheric Ozone Recovery: A Data Analysis and Modeling Study Including Estimated Uncertainties	47.050	102,465	-
NSF	AGS-1547733	Collaborative Research: Stratospheric Age in a Changing Climate: Connecting Theory, Models, and Observations	47.050	138,832	-
NSF	AGS-1552195	Improved understanding of the response of mean and extreme precipitation to climate change	47.050	56,332	-
NSF	AGS-1564495	Impacts of the biosphere on global tropospheric chemistry and climate	47.050	114,509	-
NSF	AGS-1623218	Collaborative Research: Using a hierarchy of models to constrain the temperature dependence of climate sensitivity	47.050	3,326	-
NSF	AGS-1638672	Collaborative Research: Comprehensive Characterization of Atmospheric Organic Carbon over Multiple Generations of Oxidation	47.050	114,981	-
NSF	ARC-1203526	Collaborative Research: Evaluating the Competing Impacts of Global Emissions Reductions and Climate Change on the Distribution and Retention of selected POPs in the Arctic Ocean	47.078	-1,216	-
NSF	AST-0907766	SMASS- Next: Next Generation Asteroid Spectroscopic Survey	47.049	169,495	-
NSF	AST-1156504	REU Site: Astronomy and Atmospheric Science at MIT Haystack Observatory	47.049	43,700	-
NSF	AST-1255160	CAREER: The origin of the metal-poor halo of the Milky Way	47.049	172,159	-
NSF	AST-1310930	The HI 21-cm Line as a Probe of Stellar Mass Loss and Evolution	47.049	18,435	-433
NSF	AST-1343336	Realtime GHz-Wide Spectrum Sensing and Acquisition Using the Sparse FFT	47.049	157,151	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	AST-1411622	Collaborative Research: Observing the Epoch of Reionization with the Murchison Widefield Array	47.049	69,987	-
NSF	AST-1516106	Imaging the Radio Photospheres of Long-Period Variable Stars	47.049	35,390	-
NSF	AST-1547265	Collaborative Research:Dynamic Exclusion Zones: Balancing Incumbent Protection and Spectrum Utilization Efficiency	47.049	98,091	-
NSF	AST-1547331	Collaborative Research: Enhancing Access to Radio Spectrum for Real-Time Monitoring and Control	47.049	37,749	-
NSF	AST-1609547	Collaborative Research: EDGES: Detecting First Light and Reionization through the Global 21 cm Signature	47.049	24,216	-
NSF	AST-1614868	Shaping the Narrow Jets of Material from Supermassive Black Holes	47.049	32,578	-
NSF	AST-1659420	REU Site: Astronomy and Informatics at the MIT Haystack Observatory	47.049	31,718	-
NSF	BCS-0955818	CAREER: Typical and atypical development of brain regions for Theory of Mind	47.075	-1,217	-
NSF	BCS-1258640	MOOCs and the Ethnography of Media Socialization	47.075	68,701	-
NSF	BCS-1429216	Lookit: Online interface for large-scale developmental studies	47.075	162,977	120,624
NSF	BCS-1445131	EAGER: Detection Of In Vivo Corticosterone In Mice Using Cophmore Engineering And Fluorescent Carbon Nanotube Sensors	47.075	-11,898	-
NSF	BCS-1451173	Doctoral Dissertation Research: Investigating cognitive and communicative pressures on natural language lexicons	47.075	2,097	-
NSF	BCS-1454094	Career: Understanding Real-World Auditory Scene Analysis	47.075	120,308	-
NSF	BCS-1534318	The role of noise in information-theoretic models of sentence comprehension and production	47.075	122,871	-
NSF	BCS-1551543	Doctoral Dissertation Research: A Communicative Perspective on Quantitative Syntax	47.075	5,501	-
NSF	BCS-1551866	CompCog: The edge of the lexicon: Productive knowledge and direct experience in the acquisition and processing of multiword expressions	47.075	60,270	-
NSF	BCS-1627068	Neural measures of social reward and information value in infants	47.075	122,322	-
NSF	BCS-1627861	Doctoral Dissertation Research: Designing Voice Analysis Technologies for Mental Health Applications in the United States	47.075	11,758	-
NSF	BCS-1629983	Workshop on Language Processing and Language Evolution: Special Session at the 2017 CUNY Conference on Human Sentence Processing	47.075	27,381	-
NSF	BCS-1634050	Computational neuroimaging of human auditory cortex	47.075	147,280	-
NSF	CBET-0939511	NSF Science and Technology Center: Emergent Behaviors of Integrated Cellular Systems	47.041	280,336	277,205

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CBET-0939511	Science and Technology Center: Emergent Behavior of Integrated Cellular Systems (EBICS)	47.041	4,603,629	2,800,288
NSF	CBET-1053233	CAREER: A Neurophotonic Platform for Causal Brain Analysis	47.041	-294	-
NSF	CBET-1150615	PECASE: Dielectric Phenotyping of Bacteria for Energy and Medicine	47.041	76,604	-
NSF	CBET-1253228	CAREER: Predicting granular flows: Amorphous continuum modeling with a length-scale	47.041	44,440	-
NSF	CBET-1253890	CAREER: Optoelectronic neural scaffolds: materials platform for investigation and control of neuronal activity and development	47.041	71,730	-
NSF	CBET-1258626	Collaborative Research: NSF/DOE Partnership on Advanced Combustion Engines: Advancing Low Temperature Combustion and Lean Burning Engines for Light- and Heavy-Duty Vehicles with Microwave Assisted Sp	47.041	42,130	-
NSF	CBET-1335938	Dynamics of self-entangled DNA molecules	47.041	138,213	-
NSF	CBET-1344219	INSPIRE Track 1: Nanotechnology for Adaptive Optics	47.041	1,333	-
NSF	CBET-1454299	CAREER: Molecular Catalysis for Waste Valorization	47.041	145,458	-
NSF	CBET-1507488	CDS&E: Collaborative Research: A Bayesian inference/prediction/control framework for optimal management of CO2 sequestration	47.041	11,906	-
NSF	CBET-1510768	Collaborative Research: Transport and Chemotaxis of Swimming Cells in Porous Media Flows	47.041	116,287	-
NSF	CBET-1511526	UNS: Modeling and Experimental Studies of the Interactions of 2D Materials with Solvents and Surfactants: Exfoliation, Self-Assembly of Composites, and Wetting.	47.041	37,369	-
NSF	CBET-1546990	EAGER: HOW DOES MUCOSALIVARY FLUID EVAPORATION SHAPE DISEASE TRANSMISSION FROM VIOLENT EXPIRATIONS?	47.041	84,887	-
NSF	CBET-1554398	CAREER: NANO-PARTICLE SELF-ASSEMBLY OUT OF EQUILIBRIUM	47.041	96,967	-
NSF	CBET-1602406	Polymer Dynamics of Knotted DNA	47.041	6,981	-
NSF	CBET-1605050	Collaborative Research: Dynamic simulation approaches to consequential life cycle assessment to evaluate recycling and substitution in metal and paper	47.041	91,696	-
NSF	CBET-1605406	NSF/CBET-BSF: Effect of Sunlight Intensity on Functional Inhomogeneity and Stability of Organic-Inorganic Perovskite Solar Cells	47.041	101,918	-
NSF	CBET-1605547	Collaborative Research: SusChEM: Air-stable, high-lifetime bismuth compounds as solar absorbers with perovskite-like band structures	47.041	57,866	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CBET-1605943	Collaborative Research: Understanding and Controlling Chemo-Mechanical Properties of Metal Coordinating Polymer and Inorganic Nanoparticle Composites	47.041	67,212	-
NSF	CBET-1645534	2016 Dielectrophoresis Meeting at MIT	47.041	8,542	-
NSF	CCF-1111109	AF: Large: Collaborative Research: Algebraic Graph Algorithms: The Laplacian and Beyond	47.070	189,137	-
NSF	CCF-1111337	AF:Large:Collaborative Research: Reliable Quantum Communication and Computation in the Presence of Noise	47.070	212,298	-
NSF	CCF-1116501	CIF: Small: Foundations for Intrinsically Secure Networks: the Role of Network Interference	47.070	4,458	-
NSF	CCF-1138967	Collaborative Research: An Expedition in Computing for Compiling Functional Physical Machines	47.070	987,722	124,226
NSF	CCF-1138986	Collaborative Research: Socially Assistive Robots	47.070	537,496	-
NSF	CCF-1139056	Collaborative Research: Expeditions in Computer Augmented Program Engineering (ExCAPE): Harnessing Synthesis for Software Design	47.070	-20,090	-
NSF	CCF-1161626	AF: Medium Collaborative Research General Frameworks for Approximation and Fixed Parameter Algorithms	47.070	214,347	-
NSF	CCF-1161775	SHF: Medium Collaborative Research Marrying Program Analysis and numerical Search	47.070	-26,055	-
NSF	CCF-1217501	SHF: Small: Capitalizing on First-Class SQL Support in the Ur/Web Programming Language	47.070	-36	-
NSF	CCF-1217506	AF: Small: Bounded-Contention Coding for Wireless Networks	47.070	198,816	-
NSF	CCF-1217921	SHF: Small: Multicore Data-Structures: Relaxed, Flat, and Randomized	47.070	12,506	-
NSF	CCF-1218176	AF: Small: Physics Based Approaches to Quantum Information Science	47.070	-24	-
NSF	CCF-1218547	AF: Small: Sliding Scale Problems in Probabilistic Checking of Proofs	47.070	37,831	-
NSF	CCF-1231216	A Center for Brains, Minds, and Machines: The Science and the Technology of Intelligence	47.070	5,921,207	1,906,117
NSF	CCF-1249349	2012 Waterman Award	47.070	54,831	-
NSF	CCF-1253205	CAREER: Information Theory Beyond Capacity	47.070	31,609	-
NSF	CCF-1253229	CAREER: A Formal Verification Platform Focused on Programmer Productivity	47.070	48,264	-
NSF	CCF-1301926	SHF: Medium: Collaborative Research: Transactional Software Infrastructures: Making the Most of Hardware Transactions	47.070	13,422	-
NSF	CCF-1314547	SHF: AF: Large: Collaborative Research: Parallelism without Concurrency	47.070	129,162	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CCF-1317348	Collaborative Research: Visual Cortex on Silicon	47.070	113,795	-
NSF	CCF-1318384	SHF:Small: Scalable Memory Hierarchies with Fine-Grained QoS Guarantees	47.070	191,303	-
NSF	CCF-1318620	CIF: Small: Collaborative Research: Combinatorial Joint Source-Channel Coding	47.070	125,317	-
NSF	CCF-1319828	CIF:Small: Theory, Algorithms, and Applications of Super-Nyquist Coding	47.070	151,482	-
NSF	CCF-1409228	CIF: Medium: Collaborative Research: Content Delivery over Heterogeneous Networks:Fundamental Limits and Distributed Algorithms	47.070	23,662	-
NSF	CCF-1420692	AF: Small: New directions in the design of local computation algorithms	47.070	133,284	-
NSF	CCF-1438967	XPS: FULL: DSD: Collaborative Research: Moving the Abyss: Database Management on Future 1000-core Processor	47.070	99,741	-
NSF	CCF-1438969	XPS: FULL: FP: Collaborative Research: Model-based, Event Driven Scalable Programming for the Mobile Cloud	47.070	48,032	-
NSF	CCF-1442887	CyberSEES:Type 2: Collaborative Research: Combining Experts and Crowds to Address Challenging Societal Problems	47.070	108,520	-
NSF	CCF-1452616	[Revised Budget] CAREER: Applications of Quantum Information Theory	47.070	80,002	-
NSF	CCF-1452994	CAREER: A Hardware and Software Architecture for Data-Centric Parallel Computing	47.070	51,068	-
NSF	CCF-1453261	CAREER: Algorithmic Aspects of Machine Learning	47.070	32,064	-
NSF	CCF-1461559	AF: Medium: Distributed Algorithms for Resource-Constrained and Dynamic Settings	47.070	142,819	-
NSF	CCF-1512611	SHF: Medium: Fiat: Correct-by-Construction and Mostly Automated Derivation of Programs with an Interactive Theorem Prover	47.070	245,022	-
NSF	CCF-1521584	Collaborative Research: Expeditions in Computing: The Science of Deep Specification	47.070	225,900	-
NSF	CCF-1521925	Collaborative Research: Evolable Living Computing: Understanding and Quantifying Synthetic Biological Systems' Applicability, Performance and Limits	47.070	837,951	-
NSF	CCF-1525130	AF: Small: Quantum Algorithms Arising from Ideas in Physics	47.070	96,210	-
NSF	CCF-1525705	CIF:Small: Cooperative Interference Engineering for Network Secrecy	47.070	14,900	-
NSF	CCF-1527270	CIF: Small: Collaborative Research:Towards more Secure Systems: Uniformization for Secrecy	47.070	106,704	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CCF-1533644	XPS: FULL: FP: A profile-centric IDE for science-based performance engineering in the cloud	47.070	95,711	-
NSF	CCF-1533753	XPS: FULL: DSD: Scalable High Performance with Halide and Simit Domain Specific Languages	47.070	149,889	-
NSF	CCF-1535851	AitF: FULL: Sparse Fourier Transform: From Theory to Practice	47.070	99,886	-
NSF	CCF-1547999	EAGER: Collaborative Research: Algorithmic design principles for programmed DNA nanocages	47.070	87,458	-
NSF	CCF-1551875	EAGER: Research in the Interface of Algorithmic Game Theory and Learning.	47.070	45,067	-
NSF	CCF-1553428	CAREER: Fast Graph Algorithms and Continuous Optimization	47.070	63,629	-
NSF	CCF-1563880	Title: SHF: Medium: Collaborative Research: Run-Time Support for Scalable Concurrent Programming	47.070	202,837	-
NSF	CCF-1564025	AF: Medium: Collaborative Research: Top-down algorithmic design of structured nucleic acid assemblies	47.070	100,942	-
NSF	CCF-1565235	AF:Large:Collaborative Research: Algebraic Proof Systems, Convexity, and Algorithms	47.070	447,495	-
NSF	CCF-1565516	CRII: CIF: Fast Algorithms for Learning Graphical Models from Scarce Data	47.070	108,089	-
NSF	CCF-1617730	AF: SMALL: Frontiers in Algorithmic Game Theory	47.070	278,285	-
NSF	CCF-1629809	AF: Large: Collaborative Research: Reliable Quantum Communication and Computation in the Presence of Noise	47.070	259,106	-
NSF	CCF-1640012	E2CDA: Type I: Collaborative Research: Energy Efficient Computing with Chip-Based Photonics	47.070	54,309	-
NSF	CCF-1650733	Testing Pseudorandom Distributions	47.070	246,346	-
NSF	CCF-1665252	AF: Small: Boolean Functions: Inequalities, Structure, Algorithms & Hardness	47.070	86,983	-
NSF	CCF-1665282	InTrans:TRI-MIT Collaboration on Formal Verification Meets Big Data Intelligence in the Trillion Miles Challange	47.070	6,980	-
NSF	CCF-1723344	AitF: Collaborative Research: Algorithms for Probabilistic Inference in the Real World	47.070	12,337	-
NSF	CCF-1740519	AF: Medium: Collaborative Research: Hardness in Polynomial Time	47.070	81,754	-
NSF	CCF-1741615	CAREER: Common Links in Algorithms and Complexity	47.070	13,811	-
NSF	CCF-1741638	AF: Small: Limitations on Algebraic Methods via Boolean Complexity Theory	47.070	67,139	-
NSF	CHE-1111557	Coherent spectroscopy and Coherent control of collective modes through shaped optical fields	47.049	-20,578	-
NSF	CHE-1112825	Theoretical studies of coherent energy transfer in photosynthetic systems	47.049	3,553	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CHE-1212527	Highly Convergent and Stereoselective Synthesis of Heterodimeric Polycyclic Alkaloids	47.049	-2,064	-
NSF	CHE-1306529	Collaborative Proposal: RUI:Functionalization of Single-Walled Carbon Nanotube Nanopores for Control of Molecular and Ionic Motion and Undergraduate Training in Nanopore Transport	47.049	-93	-
NSF	CHE-1307664	Collaborative Research: Effects of Atmospheric Aging on the Surface vs. Bulk Composition of Atmospheric Organic Aerosol	47.049	2,149	-
NSF	CHE-1308839	A bioanalytical platform for interrogating the systems biology of tRNA modifications: Application to defining translational control mechanisms in bacterial stress responses	47.049	-1,302	-
NSF	CHE-1334703	DMREF: Analysis and Optimization of Polymer Networks for Emerging Applications	47.049	85,985	-
NSF	CHE-1351646	CAREER: Stable Carbenes as Surface Anchoring Groups	47.049	107,249	-
NSF	CHE-1351807	CAREER: Using chemistry to probe anthrax toxin protein translocation	47.049	119,098	-
NSF	CHE-1352132	CAREER: Coordination Chemistry of Zinc-Chelating S100 Proteins and Biochemistry Partnership with a Regional University	47.049	187,026	-
NSF	CHE-1361865	Mechanisms for the Exchange of Energy between a Rydberg Electron and Its Ion-Core: Free Induction Decay Detected Pure Electronic Spectroscopy	47.049	186,033	-
NSF	CHE-1362118	Synthesis of d- and p-Block Element Molecules, Reagents, and Precursors (revised budget)	47.049	348,621	-
NSF	CHE-1452857	CAREER: Ligand-Mediated Photothermal Energy Dissipation in Semiconductor Nanocrystals	47.049	104,691	-
NSF	CHE-1454060	CAREER: Oxygen Reduction Catalysis at Tunable Metal Sulfide Nanofilms	47.049	130,437	-
NSF	CHE-1463707	Multiple Metal-Carbon Bonds, Metallacycles and Catalytic Olefin Metathesis Reactions	47.049	149,335	-
NSF	CHE-1464799	New Cycloaddition and Annulation Strategies for Organic Synthesis	47.049	20,156	-
NSF	CHE-1464804	Tools for Accurate Photoelectrochemistry in Complex Environments	47.049	212,840	-
NSF	CHE-1565649	Metal Coordination Compounds as Reporters for Biological NO, HNO, and S□Nitrosothiols	47.049	277,009	-
NSF	CHE-1629358	DMREF: Analysis and Optimization of Polymer Networks for Emerging Applications	47.049	145,834	-
NSF	CHE-1653289	CAREER: Nanocomposite Structure Control via Nanoparticle Self-Assembly	47.049	36,840	-
NSF	CHE-1654415	CAREER: Characterizing Water's Response to Hydrophilic Surfaces	47.049	68,633	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CHE-1724505	CAREER: Nonmetal Phosphorus Catalysts for Hydrogen Transfer Reactivity	47.049	172,788	-
NSF	CMMI-1063626	A chemo-thermo-mechanics theory: Application to high-termperature thermal barrier coatings	47.041	-426	-
NSF	CMMI-1120724	SNM:: Digital Optofluidic Self Assembly of Hetergeneous Metamaterials	47.041	-1,867	355
NSF	CMMI-1129894	Collaborative Research: Experimental and computational foundations for nonlinear pattern formation in the deposition of elastic rods	47.041	19,772	-
NSF	CMMI-1161893	GOALI:Hybrid Dynamic Feedback to Design Provably Correct Driving Support Systems for Safety and Efficiency	47.041	1,102	-
NSF	CMMI-1162034	Tractable Markdown Optimization for an E-tailer	47.041	35,398	-
NSF	CMMI-1234062	The Power Of Limited Flexibility And Resource Pooling	47.041	5,498	-
NSF	CMMI-1235109	DMREF-GOALI- Computational and Experimental Discovery and Development of Additives for Novel Polymer Morphology and Performance	47.041	50,791	-
NSF	CMMI-1246740	SNM: Inverse Design of Nanostructured Heterogeneous Materials	47.041	4,345	-
NSF	CMMI-1332789	Computation of grain boundary energy landscapes as a tool for grain boundary engineering	47.041	45,069	-
NSF	CMMI-1333242	Pilot-wave Hydrodynamics	47.041	112,495	-
NSF	CMMI-1334267	Collaborative Research: TheDesignExchange, an interactive portal for the design community of practice	47.041	112,831	-
NSF	CMMI-1334304	Efficient Calibration Techniques for Stochastic Traffic Simulators	47.041	37,059	-
NSF	CMMI-1344222	INSPIRE: Track 1: Programming Digital Materials: Additive Assembly of Integrated Electronics	47.041	81,698	-
NSF	CMMI-1351449	CAREER: Smart Morphable Surfaces for Aerodynamic Drag Control	47.041	56,182	-
NSF	CMMI-1351512	CAREER: Simulation-based optimization techniques for urban transportation problems	47.041	80,613	-
NSF	CMMI-1351619	CAREER: Advanced Mixed Integer Programming Formulations	47.041	165,043	-
NSF	CMMI-1363167	Collaborative Research: Increasing Solar Panel Adoption by Modeling the Interrelated Impacts of Design Decisions, Industry Incentives, Public Policies, and Market Response	47.041	95,855	-
NSF	CMMI-1363391	Control-Configured Underwater Robots for Precision Multi-Axis Maneuvering	47.041	72,035	-
NSF	CMMI-1426799	NRI: Collaborative Research: Models and Instruments for Integrating Effective Human-Robot Teams into Manufacturing	47.041	60,138	-
NSF	CMMI-1452875	CAREER: A Closed Loop Methodology for Investigating Trust, Culture, and Information Sharing in Global Supply Chains	47.041	45,690	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CMMI-1462158	Learning Graphical Models: Hardness and Tractability	47.041	29,654	-
NSF	CMMI-1463181	GOALI: Collaborative Research: Nanomanufacturing of Integrated Metal-Carbon Nanotube Contacts for High-Performance MEMS Switches	47.041	111,175	-
NSF	CMMI-1463732	Transformative Skin: Controlled Electromechanical Instability on Polymer Surfaces	47.041	171	-
NSF	CMMI-1532136	CAREER: Electroactive Graphene-Polymer System with Extreme Actuation and Tunable Properties	47.041	199,509	-
NSF	CMMI-1536233	The Role of Genetic Modifications, Age and Exercise on Cartilage Biomechanics using Genetically Engineered Mice	47.041	86,795	-
NSF	CMMI-1537536	An Innovative Optimization and Computational Framework for Assortment Problems Under Consider-Then-Rank Choice Models	47.041	110,524	-
NSF	CMMI-1547130	EAGER: Cybermanufacturing: A Cybermanufacturing System for the Design and Fabrication of Manufacturing Equipment	47.041	93,382	-
NSF	CMMI-1547154	EAGER: Cybermanufacturing: A WYSIWYG Middleware for Additive Manufacturing	47.041	38,862	-
NSF	CMMI-1548501	EAGER: Collaborative Research: Challenging the Cognitive-Control Divide	47.041	45,102	-
NSF	CMMI-1549815	EAGER/Collaborative Research:Bumpless Re-Engagement in Shared Control	47.041	85,942	-
NSF	CMMI-1549958	Symposium on Advances in Multidisciplinary Engineering; International Mechanical Engineering Congress and Expo; Houston, Texas; November 13-19, 2015	47.041	15,566	-
NSF	CMMI-1562567	Collaborative Research: Ultrasound, oxide, and oxygen: Microscale mechanisms for next-generation alloy casting	47.041	43,141	-
NSF	CMMI-1562912	Analytical probabilistic traffic models for large-scale network optimization	47.041	82,324	-
NSF	CMMI-1563343	A Data-Driven and Real-time Approach to Personalized Bundle Recommendation and Pricing; from Theory to Practice	47.041	31,145	-
NSF	CMMI-1634259	Revenue Management For Enterprise Users of Cloud Infrastructure	47.041	53,956	-
NSF	CMMI-1644558	CM/Collaborative Research: A Computational Approach to Customizing Design	47.041	200,125	-
NSF	CMMI-1661627	Designing Extremely Robust Soft Wet Adhesives by Exploiting Molecular-Scale Reversible Crosslinks and Macro-Scale Instabilities	47.041	7,449	-
NSF	CMMI-1700582	IFAC Conference on Cyber-Physical & Human-Systems-CPHS	47.041	19,443	-
NSF	CMMI-1702689	Collaborative Research: Multiscale modeling and measurement of clay aggregate behavior	47.041	18,181	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CMMII-1334109	DMREF: Computational Design Principles for Functional DNA-based Materials	47.041	377,615	232,653
NSF	CNS-1053143	CAREER: System-Wide Intrusion Recovery Using Selective Re-execution	47.070	42,431	-
NSF	CNS-1111383	NeTS:Large:Collaborative Research: HyperFlow: A Novel Hybrid IP/ Flow Architecture	47.070	137,052	-
NSF	CNS-1116209	Nets: Small: Protection and Restoration in Wireless Mesh Networks	47.070	19,307	-
NSF	CNS-1217048	NeTS: Small: Toward Reducing Control Overheads in Wireless Networks	47.070	148,303	-
NSF	CNS-1228687	TWC: Medium: Collaborative Research: Policy Compliant Integration of Linked Data	47.070	148,434	-
NSF	CNS-1239054	CPS: Frontiers: Collaborative Research: Foundations of Resillent Cyber-physical Systems (FORCES)	47.070	460,271	-
NSF	CNS-1239182	CPS: Synergy:Collaborative Research: Formal Design of Semi-autonomous Cyberphysical Transportation Systems	47.070	45,986	-
NSF	CNS-1258905	Workshop on Multi-spectrum Metrics for Cyber Defense	47.070	-1,763	-
NSF	CNS-1301934	CSR:Medium:Collaborative Research:The Commutativity Rule for Scalable Systems Software	47.070	11,608	-
NSF	CNS-1317763	TWC: Small: Ascend: Architecture for Secure Computation on Encrypted Data	47.070	296,099	-
NSF	CNS-1338976	Project MAC@50 Symposium	47.070	1,507	-
NSF	CNS-1345256	FIA-NP: Collaborative Research: The Next-Phase MobilityFirst Project - From Architecture and Protocol Design to Advanced Services and Trial Deployments	47.070	5,044	-
NSF	CNS-1347267	MIT VMS I-Corps Site	47.070	71,272	-
NSF	CNS-1347279	SATC: Collaborative Research: Holistic security for cloud computing: Oblivious computation	47.070	42,427	-
NSF	CNS-1350619	CAREER: Computing on Encrypted Data	47.070	54,085	-
NSF	CNS-1350685	CAREER: Practical Algorithms and Fundamental Limits for Complex Cyber-Physical Systems	47.070	39,715	-
NSF	CNS-1407470	NeTS:Medium:Collaborative Research:An App-Centric Transport Architecture for the Internet	47.070	202,941	-
NSF	CNS-1409238	CSR: Medium: Collaborative Research: FTFS: A Read/Write-optimized Fractal Tree File System	47.070	19,655	-
NSF	CNS-1413905	NeTS:Large:Collaborative Research:Mapping Interconnection in the Internet: Colocation, Connectivity and Congestion	47.070	135,628	-
NSF	CNS-1413920	TWC: TTP Option: Frontier: Collaborative: MACS: A Modular Approach to Cloud Security	47.070	811,207	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	CNS-1413973	NeTS Large: Collaborative Research: Location-Independent Networks: Evaluation Strategies and Studies	47.070	280,814	-
NSF	CNS-1446474	CPS: Frontier: Collaborative Research: BioCPS for Engineering Living Cells	47.070	473,674	-
NSF	CNS-1453126	CAREER: Resilient Design of Networked Infrastructure Systems: Models, Validation, and Synthesis	47.070	71,794	-
NSF	CNS-1513447	CSR: Medium: Collaborative Research: Fast and Simple Concurrency Through Data-Abstraction Transactions	47.070	129,018	-
NSF	CNS-1519135	EAGER:Self-Uncertainty in Mechanism Design	47.070	127,367	-
NSF	CNS-1523401	EAGER:Autonomy-enabled Shared Vehicles for Mobility on Demand and Urban Logistics	47.070	-2,699	-
NSF	CNS-1523546	NeTS:Small: Low Latency Scheduling for Data Centers	47.070	50,353	-
NSF	CNS-1523572	STARSS: SMALL: Trapdoor Computational Fuzzy Extractors	47.070	747	-
NSF	CNS-1523972	Workshop on low latency wireless networks	47.070	30,587	-
NSF	CNS-1524317	NeTS: Small: A Migration Approach to Optimal Control of Wireless Networks	47.070	32,346	-
NSF	CNS-1526791	NeTS: Small: A Programmable Network Data Plane for Resource Management in Datacenters	47.070	87,608	-
NSF	CNS-1526815	NSFSaTC-BSF: TWC: Small: Enabling Secure and Private Cloud Computing using Coresets	47.070	24,254	-
NSF	CNS-1542970	Track 2 EBP: Toward Using Virtual Identities in Computer Science Learning for Broadening Participation	47.070	193,212	-
NSF	CNS-1544413	CPS: Synergy: Collaborative Research: Design and Control of High-performance Provably-safe Autonomy-enabled Dynamic Transportation Networks	47.070	22,932	-
NSF	CNS-1544751	CPS: TTP Option: Synergy: Collaborative Research: Hardening Network Infrastructures for Fast, Resilient, and Cost-Optimal Wide-Area Control of Power S	47.070	132,070	-
NSF	CNS-1547509	Workshop: FIA Investigator meeting Spring 2015	47.070	-43	-
NSF	CNS-1549671	RAPID: MIT in Nashik: Creating a Model for Smart Citizens	47.070	124,065	-
NSF	CNS-1563763	CSR:Medium: A high-performance certified file system and applications	47.070	111,248	-
NSF	CNS-1563826	NeTS: Medium: Collaborative Research: Language and Hardware Primitives for Programming the Data Plane in High-Speed Networks	47.070	52,099	-
NSF	CNS-1608691	Future Internet Architecture Fall 2015 Investigator Workshop	47.070	31,016	-
NSF	CNS-1617091	NeTS: Small: Collaborative Research: Ultrascale WDM-based Datacenter Networks: Architecture Design and Control Algorithms	47.070	2,125	-

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NSF	CNS-1617487	CSR: Small: Operating Systems Kernels in High-Level Languages	47.070	68,413	-
NSF	CNS-1617702	NeTS:Small:Collaborative Research: A Fast and Flexible Transport Architecture for High Speed Networks	47.070	92,150	-
NSF	CNS-1639994	Transparency Bridges: Exploring Transparency Requirements in Smartphone Ecosystems	47.070	6,136	-
NSF	CNS-1650276	EAGER: Securing ICS Systems in the IIoT	47.070	63,944	-
NSF	CNS-1657303	CRII: CSR: End-to-End Approach to Ultra-Low Power IoT: From New Nanotechnologies to New System Architectures	47.070	3,805	-
NSF	CNS-1743605	Free space optical network Workshop	47.070	969	-
NSF	DBI-1356260	Collaborative Research: ABI Innovation: BCSP: Understanding the design and usage of distributed biological networks	47.074	202,597	-
NSF	DBI-1451125	BRAINS EAGER: Massive-scale multi-area single neuron recordings to reveal circuits underlying short-term memory	47.074	79,970	-
NSF	DGE-1122374	Graduate Research Fellowship Program	47.076	12,228,677	-
NSF	DGE-1544234	Collaborative Research: The Role of Instructor and Peer Feedback in Improving the Cognitive, Interpersonal, and Intrapersonal Competencies of Student	47.076	8,487	-
NSF	DMR-0819762	CMSE - Parent	47.049	-10,115	-
NSF	DMR-1054671	CAREER: Self-Healing Under Flow: From Single Molecule Dynamics to Regenerative Scaffold Formation	47.049	1,857	-
NSF	DMR-1055583	CAREER "Stretching" Oxides to Low Temperature Transport and Reactivity	47.049	5,487	-
NSF	DMR-1206323	Perturbed Fluctuations & Patterns	47.049	71,342	-
NSF	DMR-1207469	Investigating Two-Dimensional Systems and Surface States Under the Influence of an Internal Exchange Field and Spin-Filtering	47.049	102,480	-
NSF	DMR-1253306	CAREER: Self-Assembly of Fusion Proteins to Form Biofunctional Materials	47.049	107,398	-
NSF	DMR-1305741	Novel Phases of Electronic Mott insulators	47.049	14,052	-
NSF	DMR-1307064	Structured Rigid Rod Framework Gels from Clickable Synthetic Polypeptides	47.049	77,119	-
NSF	DMR-1405221	Quantum Transport in twisted van der Waals Heterostructures	47.049	71,739	-
NSF	DMR-1410636	Collaborative Research: Design of Low-Hysteresis High-Susceptibility Materials by Nanodomain Engineering	47.049	4,882	-
NSF	DMR-1410718	Shape Persistent, Dynamic, and Liquid Crystalline Materials for Sensor and Electronic Devices	47.049	145,160	-
NSF	DMR-1419807	NSF Materials Research Science and Engineering Centers (MRSEC) - Full Proposal	47.049	2,650,796	114,419

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NSF	DMR-1452612	CAREER: Small Molecule Redox Reactivity at MOF Secondary Building Units	47.049	124,539	-
NSF	DMR-1505947	Solid-State Dewetting of Metallic Thin Films	47.049	92,112	-
NSF	DMR-1506475	Entanglement and emergence in new quantum states of matter	47.049	227,374	-
NSF	DMR-1506605	Collaborative Research: Thin film chalcogenide glass materials for high-quality integrated photonics	47.049	135,671	-
NSF	DMR-1507047	BaSnO3 as a Transparent Mixed Ionic-Electronic Conducting Material - Utilizing Novel In Situ Methods to Advance Understanding of Structure-Processing-Property Relations	47.049	116,989	-
NSF	DMR-1507806	Spectroscopic Studies on Layered Materials	47.049	64,247	-
NSF	DMR-1508072	SusChEM: Material and Morphometric Control of Bacterial Cellulose via Genetic Engineering, Post-Processing and 3D-Printed Molding	47.049	96,219	-
NSF	DMR-1509197	Collaborative Research: Nanostructured Conductive Tin Oxide for High-Efficiency Light Trapping in Thin Films and Photonic Devices	47.049	83,313	-
NSF	DMR-1522575	Physics of Strong Disorder and Correlation	47.049	61,476	-
NSF	DMR-1534340	DMREF: Collaborative Research: The Synthesis Genome: Data Mining for Synthesis of New Materials	47.049	22,758	-
NSF	DMR-1554891	CAREER: Geometrical Frustration in Spin Orbit Systems	47.049	59,238	-
NSF	DMR-1606911	Directed Self Assembly of Triblock Terpolymer Films	47.049	58,377	-
NSF	DMR-1606914	"Accelerated Sintering in "Nano-Duplex" Dual Phase Nanostructured Alloys	47.049	32,551	-
NSF	DMR-1645232	2016 Alan T. Waterman Award	47.049	5,838	-
NSF	DMR-1651101	CAREER : Development of Fundamental Relationships Between Surface Structu re, Composition, Stability, and Activity of Oxide Electrocatalysts in Aqueou s Environments	47.049	8,372	-
NSF	DMR-1654548	CAREER: Quantifying Radiation Damage in Metals with Wigner Energy Spectral Fingerprints	47.049	9,800	-
NSF	DMS-1056390	Growth of Random Surfaces	47.049	13,021	-
NSF	DMS-1068625	Studies in Algebraic and Enumerative Combinatorics	47.049	88,518	-
NSF	DMS-1069236	Random maximal isotropic subspaces and Selmer groups	47.049	59	-
NSF	DMS-1102434	Categories of sheaves, canonical bases and harmonic analysis	47.049	-3,699	-
NSF	DMS-1104392	Mean Curvature Flow, Manifolds with Ricci curvature bounds, Representations of Isometry groups, and Eigenfunctions	47.049	-8	-
NSF	DMS-1209044	Liouville quantum gravity and conformal probability	47.049	215,650	-
NSF	DMS-1255203	CAREER: Super-Resolution and Subwavelength Imaging	47.049	106,835	-
NSF	DMS-1265196	FRG: Collaborative Research: Wall-crossings in Geometry and Physics	47.049	0	-

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NSF	DMS-1303060	Mathematical Sciences: Geometric methods in the representation theory of affine Hecke algebras, finite reductive groups and character sheaves	47.049	-5	-
NSF	DMS-1307704	Random matrices, free probability and the enumeration of maps	47.049	-55	-
NSF	DMS-1312831	Applied Free Probability Theory	47.049	143,769	-
NSF	DMS-1318942	Collaborative Research: Gradient-augmented level set methods and jet schemes	47.049	61,675	-
NSF	DMS-1350472	CAREER: Motives: Voevodsky versus Kontsevich	47.049	72,516	-
NSF	DMS-1362336	Algebraic Combinatorics and its Applications	47.049	79,254	-
NSF	DMS-1362509	Dispersive partial differential equations: between a deterministic and a probabilistic approach	47.049	65,149	-
NSF	DMS-1400967	Algebraic theory of integrable systems. Representations of affine superalgebras and mock theta functions	47.049	49,646	-
NSF	DMS-1404540	Generic flows, Ricci curvature; Heegaard splittings and nodal sets	47.049	156,713	-
NSF	DMS-1406337	Investigation on Differential Geometry and General Relativity	47.049	2,162	-
NSF	DMS-1406348	Instantons, low dimensional topology and knotted graphs	47.049	129,924	-
NSF	DMS-1406356	2014-2016 Talbot Workshops	47.049	7,218	-
NSF	DMS-1406411	Gaussian Free Field and Conformal Loop Ensemble	47.049	7,229	-
NSF	DMS-1407562	Integrable probability and random matrices: 2d structures, limit theorems	47.049	36,321	-
NSF	DMS-1408398	Mean curvature flow and geometric analysis	47.049	191,748	-
NSF	DMS-1454419	CAREER: Geometric Methods in Hyperbolic PDEs	47.049	21,117	-
NSF	DMS-1460466	Representation theory, Number theory and Invariant theory	47.049	2,867	-
NSF	DMS-1462401	FRG: Collaborative Research: Long-term dynamics of nonlinear dispersive and hyperbolic equations: deterministic and probabilistic methods	47.049	102,046	-
NSF	DMS-1500219	Extremal graph theory, graph limits, and algebraic invariants	47.049	8,186	-
NSF	DMS-1500771	Free boundaries and extremal inequalities	47.049	78,271	-
NSF	DMS-1500954	Lefschetz Fibrations, Mapping Tori, and Dynamics on Moduli Spaces of Objects	47.049	144,387	-
NSF	DMS-1502244	Tensor categories and representation theory	47.049	136,093	-
NSF	DMS-1508096	Equivariance and higher algebra in motivic homotopy theory	47.049	44,059	-
NSF	DMS-1510305	Flexibility in symplectic and contact geometry	47.049	24,787	-
NSF	DMS-1512925	Three-Dimensional Nonlinear Internal Wave Beams: Mathematical Models and Laboratory Experiments	47.049	74,041	-
NSF	DMS-1517842	Collaborative Research: From Biology to Mechanism: Harnessing Compliance in Locomoting Systems	47.049	102,381	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	DMS-1519580	PRIMES: Program for Research In Mathematics, Engineering, and Science for high school Students	47.049	109,340	-
NSF	DMS-1521765	Collaborative Research: Computational methods for ultra-high sensitivity magnetometry of geological samples	47.049	43,998	-
NSF	DMS-1522526	Computational methods in arithmetic geometry	47.049	36,424	-
NSF	DMS-1541099	CAREER: Large Scale Stochastic Optimization and Statistics	47.049	68,941	-
NSF	DMS-1541100	Statistical and Computational Tradeoffs in High Dimensional Learning	47.049	140,461	39,717
NSF	DMS-1564458	FRG: COLLABORATIVE RESEARCH: CROSSING THE WALLS IN ENUMERATIVE GEOMETRY	47.049	42,772	-
NSF	DMS-1566618	Mathematical Sciences: Geometric methods in the representation theory of affine Hecke algebras, finite reductive groups and character sheaves	47.049	102,921	-
NSF	DMS-1600375	Quantum algebras, quiver varieties and applications	47.049	55,940	-
NSF	DMS-1601282	Representations of Reductive Groups and Étale Hessenberg Varieties	47.049	40,690	-
NSF	DMS-1601946	Topics in arithmetic geometry	47.049	101,180	-
NSF	DMS-1601953	Wall-crossing and dualities in representation theory	47.049	144,057	-
NSF	DMS-1607901	Integrable probability	47.049	88,148	-
NSF	DMS-1608018	Constructions in higher-dimensional contact topology	47.049	40,598	-
NSF	DMS-1614043	Collaborative Research: Walking droplet interactions and stability	47.049	68,666	-
NSF	DMS-1619754	L3 Graduate Student Workshop in Symplectic/Contact Geometry	47.049	693	-
NSF	DMS-1623977	2017-2019 Talbot Workshops	47.049	15,189	-
NSF	DMS-1645082	Enumerative geometry of moduli spaces and applications	47.049	82,378	-
NSF	DMS-1664317	Geometry and representation theory	47.049	17,927	-
NSF	DMS-1664619	FRG: Collaborative Research: Integrable Probability	47.049	14,371	-
NSF	DMS-1700338	The Probabilistic Method in Combinatorics	47.049	17,678	-
NSF	DRL-1020152	Collaborative Research: INK-12: Teaching and Learning Using Interactive Ink Inscriptions in K-12	47.076	90,963	-
NSF	DRL-1223256	Collaborative Research: Broad Implementation of Science Festival Alliance	47.076	14,724	-
NSF	DRL-1322623	Full-Scale Development: Collaborative Research: NEXT: The Youth Radio Innovation Lab	47.076	118,221	-
NSF	DRL-1417952	Collaborative Research: New Pathways into Data Science: Extending the Scratch Programming Language to Enable Youth to Analyze and Visualize Their Own Learning	47.076	26,480	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	DRL-1418122	Collaborative Research: Revealing the Invisible: Data-Intensive Research Using Cognitive, Psychological, and Physiological Measures to Optimize STEM Learning	47.076	59,350	-
NSF	DRL-1508911	Collaborative Research: Building Enhanced Scientific Thinking through Modeling Ecosystems	47.076	124,347	-
NSF	DRL-1614548	Collaborative Research: WAVES: A STEM-Powered Youth News Network for the Nation	47.076	71,666	-
NSF	DRL-1639069	DRK-12 Teachers with GUTS (PI Irene Lee)	47.076	818,983	5,088
NSF	DRL-1644540	Neurocognitive underpinnings of dyslexia and dyscalculia	47.076	114,672	39,875
NSF	DUE-1122616	Development and evaluation of StarCellBio: a cell biology experiment simulator for science education	47.076	5,335	-
NSF	DUE-1503793	Discovery-Based Student Learning with the Haystack 37-m Radio Telescope	47.076	92,589	15,869
NSF	DUE-1505007	Collaborative Research: Liberal Studies in Engineering - Broadening the Path to the Profession: Feasibility Study	47.076	15,864	-
NSF	DUE-1644533	I-Corps L to discover a sustainable model that will support and scale BioBuilder's curriculum and teacher professional development activities	47.076	50,928	-
NSF	DUE-1646976	Collaborative Research: Framing Learning for MOOC Student Success	47.076	16,626	-
NSF	EAR-1140970	The Impact of Blade Motion on the Flux to a Blade Surface	47.050	50,323	-
NSF	EAR-1225865	Collaborative research: Laboratory and numerical experiments on the response of wave ripples to changes in oscillatory flow	47.050	-63	-
NSF	EAR-1321889	Influence of Titanium on Water Incorporation, Rheology and Seismic Properties of Olivine	47.050	6,369	4,750
NSF	EAR-1321952	Collaborative Research: Early earth evolution: Hf and Nd isotopic constraints from the ca 3.4--4.0 Ga Acasta Gneisses	47.050	57,001	-
NSF	EAR-1322032	A field study of the liquid line of descent of hydrous alkaline-rich magmas at elevated pressures (0.5-1.0 GPa): the Dariv alkaline intrusive complex	47.050	77,025	-
NSF	EAR-1361319	CSEDI Collaborative Research: Grand Challenge for Experimental Study of Plastic Deformation Under Deep Earth Conditions	47.050	44,933	-
NSF	EAR-1404414	Collaborative Research: Deep Drilling of Lake Junin, Peru: Continuous Tropical Records of Glaciation, Climate Change and Magnetic Field Variations Spanning the Late Quaternary	47.050	33,167	-
NSF	EAR-1411552	Collaborative Research: Toward a global timeline of biological and ocean geochemical change during the early Cambrian	47.050	119,349	-
NSF	EAR-1414499	Sediment Transport in Vegetated Channels: Evaluating the Roles of Mean Bed Stress and Turbulent Impulse	47.050	67,973	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	EAR-1415907	High-resolution attenuation structure from the ambient seismic field	47.050	49,374	-
NSF	EAR-1419822	Collaborative Research: Quantifying Laurentia's Motion, Advancing Paleogeography and Constraining Rifting with New Paired Dates and Paleomagnetic Data from the Midcontinent Rift	47.050	41,349	-
NSF	EAR-1419854	Active Tectonics of the Africa-Eurasia Zone of Plate Interaction in the W Mediterranean	47.050	-7,345	-
NSF	EAR-1424892	High-precision U-Pb zircon geochronology and intracontinental correlation of terrestrial ecosystems during the zenith of dinosaur diversity in the Late Campanian of North America	47.050	63,871	-
NSF	EAR-1434138	Collaborative Research: Reconstructing interactions between the East Asian Monsoon and Westerly Jet at multiple timescales via the flux and provenance of eolian and fluvial supply	47.050	71,323	-
NSF	EAR-1439559	Early Career: Technical support for a uranium-series isotope geochemistry laboratory focused on Earth's climate and surface processes	47.050	120,106	-
NSF	EAR-1450922	New GPS Constraints on Africa-Arabia-Eurasia Plate Kinematics	47.050	60,483	-
NSF	EAR-1451022	Evolution of Microstructure and Creep Strength of Marble	47.050	59,347	-
NSF	EAR-1464024	Colaborative Research: Anelastic properties of the Earth from seismic to tidal timescales	47.050	114,045	-
NSF	EAR-1520762	Collaborative Research: Changes in river-aquifer exchange induced by groundwater pumping, and their effect on arsenic contamination in the Red River Delta, Vietnam	47.050	22,997	-
NSF	EAR-1520825	Hazards SEES: Uncovering the hidden skeleton of environmental flows: advanced Langrangian methods for hazards prediction, mitigation and response	47.050	108,546	-
NSF	EAR-1521534	Robust earthquake source scaling and seismic efficiency for intermediate-depth and deep earthquakes at global and regional scales.	47.050	97,598	-
NSF	EAR-1523027	Comparison of the Melt Distribution in Natural Analogues to Experimentally Produced microstructures	47.050	28,654	-
NSF	EAR-1551321	ABR: Experimental Studies of Hydrous Mantle Melting	47.050	99,053	-
NSF	EAR-1551753	Collaborative Research: A Community Velocity Field for East Africa	47.050	53,944	-
NSF	EAR-1552202	Processes and Rates of Arc Crust Growth and Differentiation in the Southern Sierra Nevada Crustal Section	47.050	63,635	-
NSF	EAR-1615426	Collaborative Research: Integrating the geological and genomic records: time-calibrating Earth's dynamic biogeochemical history	47.050	155,970	-
NSF	EAR-1622560	Collaborative Research: GeoGONAF: Analysis of active deformation and strain transfer along the Izmit Bay-Marmara Sea segment of the North Anatolian Fault	47.050	60,932	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	EAR-1647504	INSPIRE: Search for Records of the Hadean Dynamo in Detrital Zircons	47.050	103,600	16,472
NSF	EAR-1659923	Predictive Models for Wave Damping by Flexible Aquatic Vegetation	47.050	25,541	-
NSF	ECCS-1027905	A New Paradigm for Understanding and Controlling Systemic Risks in Financial Markets	47.041	-3,757	-
NSF	ECCS-1135843	CPS:Medium:Collaborative Research:Smart Power Systems of the Future:Foundations for Understanding Volatility and Improving Operational Reliability	47.041	176,948	-
NSF	ECCS-1150878	CAREER: Toward robust, scalable, and non-intermittent solar power: Silicon-based multijunction devices with integrated photocatalysis	47.041	28,202	-
NSF	ECCS-1307699	Advanced Technologies for Ultra-Efficient Grid-Level Power Converters	47.041	65,282	38,636
NSF	ECCS-1408172	Spin-Orbitronics: Interfacial Design of Spintronic Materials and Devices	47.041	35,275	-
NSF	ECCS-1408495	Integrated Photonics for Trapped Ion Quantum Information Processing	47.041	182,912	-
NSF	ECCS-1449291	SNM: Knowledge-based Continuous and Scalable Manufacture of Quantum Dots	47.041	373,177	-
NSF	ECCS-1453218	CAREER: Glass-Based Fexible Integrated Photonic Devices	47.041	136,982	-
NSF	ECCS-1462254	EAGER-DynamicData: Collaborative Research: Dynamically Data-driven Morphing of Reduced Order Models and the Prediction of Transients	47.041	33,462	-
NSF	ECCS-1505733	Development of THz laser frequency combs	47.041	111,902	-
NSF	ECCS-1508666	Collaborative Research: Computational Methods for Stability Assessment of Renewable Integrated Power Systems	47.041	147,109	-
NSF	ECCS-1509486	Collaborative Research: Understanding and Engineering Timing Jitter of Superconducting-Nanowire Single Photon Detectors	47.041	134,785	-
NSF	ECCS-1532591	NCS-FO: Algorithmically explicit neural representation of visual memorability	47.041	283,008	-
NSF	ECCS-1550015	EAGER: Renewables: Market Designs for Distribution Systems with High Renewable Penetration	47.041	60,383	-
NSF	ECCS-1554171	CAREER: Computational toolbox for improved security of power systems	47.041	107,040	-
NSF	ECCS-1607865	Monolithic magneto-optical isolators for on-chip photonic integration	47.041	227,209	-
NSF	ECCS-1609240	Collaborative Research: Advances in High-Frequency Magnetics for High-Efficiency, High-Density Power Electronic Systems	47.041	84,507	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	ECCS-1610806	Collaborative Research: Electrochemically driven Mechanical Energy Harvesting	47.041	68,504	-
NSF	ECCS-1639921	E2CDA: Type II: Memory, Logic, and Logic in Memory Using Three Terminal Magnetic Tunnel Junctions	47.041	107,026	-
NSF	ECCS-1644588	EAGER: Theoretic Structures of High Dimensional Data Decomposition	47.041	81,234	-
NSF	ECCS-1653100	CAREER: On-Chip Terahertz Electronic Frequency Combs	47.041	44,184	-
NSF	ECCS-1742069	LIDS/IDSS Workshop on Smart URban Infrastructures (SURI)	47.041	14,622	-
NSF	EECS-1135815	CPS: Medium: Collaborative Research: Co-Design of Multimodal CPS Architectures and Adaptive Controllers	47.041	4,634	-
NSF	EF-1137306	Type 2: The Future of Ecosystems and Extremes: Using Diverse Environmental Data Sets in Support of Regional to Global Earth□System Models and Predictions	47.074	738,723	446,129
NSF	EFMA-1641064	EFRI ACQUIRE: Scalable Quantum Communications with Error-Corrected Semiconductor Qubits	47.041	223,852	84,816
NSF	EFRI-1240383	EFRI-ODISSEI: Programmable Origami for Integration of Self-Assembling Systems in Engineered Structures	47.041	268,528	48,208
NSF	EFRI-1441301	RIPS Type 2: Collaborative Research: Towards resilient computational models of electricity-gas ICI	47.041	565,647	-
NSF	IIP-1562925	Kytopen: Expanding the language of biology with pulsed electric fields	47.041	18,543	-
NSF	IIP-1611699	Solving Information-Integration Problems Using Category Theory	47.041	8,253	-
NSF	IIP-1640678	A Platform for High Throughput Genetic Transformation of Bacteria	47.041	133,682	-
NSF	IIP-1644771	Microfluidic device for investigation of mineral/liquid interactions	47.041	48,101	-
NSF	IIP-1646947	I-Corps: Improving Acoustophoretic-based Cell Sorting Technologies	47.041	20,703	-
NSF	IIP-1649058	Application Development for Graphene Oxide Nanofiltration Membranes	47.041	48,818	-
NSF	IIP-1654063	MIT Institute for Data, Systems, and Society Inaugural Workshop: Sociotechnical Systems, Cambridge, MA September 22-23, 2016	47.041	45,000	-
NSF	IIP-1661441	I-Corps: An Accurate and Accessible Indoor Positioning Technology	47.041	27,985	-
NSF	IIP-1738283	I-Corps: Mobile Augmented Reality	47.041	12,069	-
NSF	IIP-1741052	I-Corps : Point-of-Care Physiological Assessment via Exhaled Air Analysis	47.041	28,175	-
NSF	IIP-1741564	I-corps: An Objective Clinical Machine Learning Imaging Technology	47.041	19,705	-
NSF	IIS-1053398	CAREER Digital Privacy and Regulation	47.070	83,079	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	IIS-1065079	SHB: Collaborative Research:Medium:Novel Computational Techniques for Cardiovascular Risk Stratification	47.070	-10,282	-
NSF	IIS-1111415	RI:Large:Collaborative Research:Analyzing images through time	47.070	-86,352	-
NSF	IIS-1122886	DIP: Collaborative Research: Social Robots as Mechanisms for Language Instruction, Interaction, and Evaluation in Pre-School Children	47.070	3,921	-
NSF	IIS-1161731	CGV: Medium: Collaborative Research: Understanding Translucency: Physics, Perception, and Computation	47.070	18,642	-
NSF	IIS-1161909	RI: Medium: Collaborative Research: Hybrid Unmanned Aerial Vehicles that Interact with Surfaces	47.070	87,011	-
NSF	IIS-1212849	RI: Large: Collaborative Research: Reconstructive recognition: Uniting statistical scene understanding and physics-based visual reasoning	47.070	243,606	-
NSF	IIS-1226883	NRI-Large: Collaborative Research: Soft Compliant Robotic Augmentation for Human-Robot Teams	47.070	155,265	-
NSF	IIS-1227504	Collaborative Research: NRI-Large: Purposeful Prediction: Co-robot Interaction via Understanding Intent and Goals	47.070	54,748	-
NSF	IIS-1237136	SHB:Type II (INT): Collaborative Research: Algorithmic Approaches to Personalized Health Care	47.070	321,283	-
NSF	IIS-1248066	INSPIRE: Kreyol-based Cyberlearning for a New Perspective on the Teaching of STEM in local Languages	47.070	207,688	-
NSF	IIS-1250802	EAGER: Collaborative Research: Technology to Support | Mathematical Argumentation	47.070	1,624	-
NSF	IIS-1317445	NRI:Small:Collaborative Research: Adaptive Motion Planning and Decision-Making for Human-Robot Collaboration in Manufacturing	47.070	91,670	-
NSF	IIS-1318215	HCC:Small:Thermal Displays in Human Computer Interactions	47.070	140,378	-
NSF	IIS-1318392	RI: Small: Robust and Long-Term Visual Mapping and Localization	47.070	33,704	-
NSF	IIS-1348911	INDP: Collaborative Research: Coding for All: Interest-Driven Trajectories to Computational Fluency	47.070	272,769	-
NSF	IIS-1350160	CAREER: Human-Aware Autonomy for Team-Oriented Environments	47.070	10,670	-
NSF	IIS-1350879	CAREER: Gait Transition Principles in Quadruped Robots	47.070	258,047	-
NSF	IIS-1404494	SCH: EXP: Collaborative Research: THink - Inferring Cognitive State From Subtle Behaviors	47.070	57,006	19,346
NSF	IIS-1405259	NRI-Small: Improved safety and reliability of robotic systems by faults/anomalies detection from uninterpreted signals of computation graphs	47.070	115,370	-
NSF	IIS-1409310	CHS: Medium: Collaborative Research: Computational Design and 3D Printing of Textiles	47.070	141,955	-

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NSF	IIS-1420122	CHS: CGV: Small: Collaborative Research: Sampling and Reconstruction for Computer Graphics Rendering and Imaging	47.070	8,803	-
NSF	IIS-1420316	RI: Small: A Systematic Approach to Robot Task and Motion Planning in Belief Space	47.070	48,596	-
NSF	IIS-1421065	RI: Small: Enabling robust visual intelligence using propagators to model human competence	47.070	143,692	-
NSF	IIS-1427050	NRI: Collaborative: Efficient Algorithms for Contact-Aware State Estimation	47.070	123,291	7,068
NSF	IIS-1427547	NRI: Collaborative: Modeling and Verification of Language-based Interaction	47.070	129,995	84,084
NSF	IIS-1447476	BIGDATA: F: DKA: Collaborative Research: Structured Nearest Neighbor Search in High Dimensions	47.070	179,123	-
NSF	IIS-1447786	BIGDATA: IA: DKA: Collaborative Research: High-Thoughput Connectomics	47.070	185,174	-
NSF	IIS-1452019	EAGER: Compact Roadmaps for Planning Under Uncertainty	47.070	7,855	-
NSF	IIS-1453141	CAREER: Advances in Monitoring Human Performance: Moving Wearable Technology from the Expert to Nonexpert User	47.070	36,999	-
NSF	IIS-1513443	III: Medium: Collaborative Research:DataHub - A Collaborative Dataset Management Platform for Data Science	47.070	100,391	-
NSF	IIS-1523118	EXP: Collaborative Research: A Personalized Storyteller Companion to Promote Preschooler Language Skills	47.070	146,069	-
NSF	IIS-1523767	NRI: Learning to Plan for New Robot Manipulation Tasks	47.070	12,227	-
NSF	IIS-1524427	RI: Small: Theory and Algorithms for Learning Perturbation Models	47.050	99,839	-
NSF	IIS-1524817	RI: Small: Advancing Visual Recognition with Feature Visualizations	47.070	46,000	-
NSF	IIS-1527181	RI: Small: Time Resolved Imaging: New Methods for Capture, Analysis and Applications	47.070	231,934	-
NSF	IIS-1546290	BIGDATA: Collaborative Research: F: Making Big Data Accessible on Personal Computers: Big Network Algorithms and Data Streams	47.070	61,384	-
NSF	IIS-1546747	RSS 2015 Workshop on Women in Robotics	47.070	-269	-
NSF	IIS-1551535	EAGER: Inferring Mechanical Explanations from Manipulation Demonstrations	47.070	91,061	-
NSF	IIS-1553284	CAREER: Scalable learning with combinatorial structure	47.070	64,348	-
NSF	IIS-1607189	US-Israel Research Proposal: IIS: CRCNS: Collaborative: New Tools for Extracting Neuronal Phenotypes from a Volumetric Set of Cerebral Cortex Images	47.070	75,334	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	IIS-1607486	US-German Research Proposal: Neurocomputation in the Visual Periphery: Experiments and Models	47.070	7,817	-
NSF	IIS-1617403	CHS : Small: Creating versatile vibrotactile displays	47.070	120,759	-
NSF	IIS-1636766	BD Spokes: SPOKE: NORTHEAST: Collaborative: A Licensing Model and Ecosystem for Data Sharing	47.070	49,141	-
NSF	IIS-1637753	NRI: Collaborative Research: Accelerating Robotic Manipulation with Data-Enhanced Contact Mechanics	47.070	134,535	-
NSF	IIS-1637824	NRI: Collaborative Research: Towards Robots with Human Dexterity	47.070	59,145	-
NSF	IIS-1651190	EAGER: Linguistic Event Extraction and Integration (LEXI): A New Approach to Speech Analysis	47.070	81,594	-
NSF	IIS-1733809	Summer School on Cognitive Robotics	47.070	30,589	-
NSF	IOS-1451202	BRAIN EAGER: Cell-type-specific optogenetics in wild-type animals	47.074	81,032	-
NSF	IOS-1645061	IOS EDGE: Development of genetic tools for the dominant phototroph in the sea	47.074	23,062	-
NSF	MCB-1331195	Collaborative Research: Nitroplast: A Light-Driven, Synthetic Nitrogen-Fixing Organelle	47.074	-12,102	-
NSF	MCB-1350625	CAREER: Deciphering and Engineering Biological State Machines with Synthetic Biology	47.074	184,196	-
NSF	MCB-1408243	Systematic Mapping of the Sequence Space Criticial to Bacterial Signal Transduction	47.074	-16,059	-
NSF	MCB-1517913	Development and Analysis of Autonomous Metabolite Valves	47.074	148,495	-
NSF	MCB-1615252	Collaborative research: Development of a platform enabling analysis of membrane protein interactions	47.074	35,657	-
NSF	MCB-1652390	CAREER: Integrating Chem. Biology Methods & RNA Virus Models to Elucidate How the Metazoan Proteostasis Ntwk Modulates Protein Evolutionary Landscapes	47.074	195,268	-
NSF	OCE-1048926	Collaborative Research Type 2 - MOBY: Modeling Ocean Variability and Biogeochemical Cycles	47.050	649,171	-
NSF	OCE-1061160	Collaborative Research: Causes and Effects of Shelf-edge Internal Tide Variability	47.050	68,185	-
NSF	OCE-1129359	Linking single-cell growth rates and genomics of bacterioplankton	47.050	38,298	-
NSF	OCE-1153588	Nitrate assimilation and the ecology of Prochlorococcus: Features and implications of intraspecific diversity in a model marine phototroph	47.050	212,200	-
NSF	OCE-1155205	Collaborative Research: Forcing and the North Atlantic Spring Bloom	47.050	64,313	-
NSF	OCE-1233832	Collaborative Research: Diagnosing Eddy mixing in DIMES	47.050	107,601	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	OCE-1259388	Ocean carbon reservoirs and the air-sea flux of CO2 in a changing climate	47.050	137,968	-
NSF	OCE-1315201	Collaborative Research: Ocean Acidification: Impacts of Evolution on the Response of Phytoplankton Populations Rising CO2	47.050	114,340	-
NSF	OCE-1338814	FESD Type 1:The impact of the ozone hole on the climate of the Southern Hemisphere	47.050	859,569	555,278
NSF	OCE-1356460	Membrane vesicles produced by marine bacteria: origins, distributions, and functions	47.050	133,862	-
NSF	OCE-1357224	Filling Gaps in the Atlantic and Pacific Pb and Pb Isotope Spatial and Temporal Evolution	47.050	79,028	-
NSF	OCE-1357434	The vertical propagation of internal waves through the ocean	47.050	53,092	-
NSF	OCE-1434007	Size structure and function of phytoplankton communities in a changing ocean	47.050	181,727	-
NSF	OCE-1434149	Collaborative Research: Submarine Melting and Freshwater Export in Greenland's Glacial Fjords: The Role of Subglacial Discharge, Fjord Topography and Shelf Properties	47.050	0	-
NSF	OCE-1435993	Collaborative Research: How can bacterial viruses succeed in the marine environment?	47.050	87,725	-
NSF	OCE-1457916	Collaborative Research: Developing a New Model to Investigate the Dynamics of Melt Generation beneath Mid-Ocean Ridges	47.050	78,457	-
NSF	OCE-1459287	Collaborative Research: GEOTRACES Arctic section: Spatial variability of lead concentrations and isotopic compositions in the western Arctic basins	47.050	134,661	-
NSF	OCE-1459702	Theoretical studies of eddy mixing	47.050	32,068	-
NSF	OCE-1502985	Collaborative Research: Insights into North African climate variability over the last 1.1 million years from dust fluxes and leaf wax isotopes	47.050	88,895	-
NSF	OCE-1536515	Collaborative Research: An Ocean Tale of Two Climates: Modern and Last Glacial Maximum	47.050	79,046	-
NSF	OCE-1536521	Collaborative Research: Elucidating Algal Host-virus Dynamics in Different Nutrient Regimes-Mechanistic Interactions and Biogeochemical Impact	47.050	118,959	-
NSF	OCE-1558702	Collaborative Research: Predicting the Spatiotemporal Distribution of Metabolic Function in the Global Ocean	47.050	13,363	-
NSF	OCE-1658451	Microbial interactions on particulate organic matter: from community structure to function.	47.050	4,883	-
NSF	OCI-1147503	SI2-SSI Collaborative Research: A Computational Materials Data and Design Environment.	47.080	102,254	-
NSF	OCI-1152538	A Research Coordination Network Dedicated to Facilitating the Creation and Transfer of Knowledge	47.080	69,514	-

Appendix A1
Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	OIA-1231216	A Center for Brains, Minds, and Machines: The Science and the Technology of Intelligence	47.070	32,462	-
NSF	OISE-1258574	G8 Initiative: Structural Bamboo Products	47.079	56,745	-
NSF	PHY-1055154	CAREER: Exploration of Evolutionary Dynamics on Rugged Fitness Landscapes	47.049	16,300	-
NSF	PHY-1125846	Center for Ultracold Atoms	47.049	2,131,953	1,184,645
NSF	PHY-1201896	Collaborative Research: Understanding Turbulent Mixing in Laboratory Magnetospheres	47.049	21,181	-
NSF	PHY-1205554	Atomic Ensembles Entangled by Light for Measurements Below the Standard Quantum Limit	47.049	11,452	-
NSF	PHY-1305537	Inferring the Physics of Living Systems from Dynamic Light Microscopy Data	47.049	111,567	-
NSF	PHY-1306550	Flavor Physics at the LHC	47.049	31,230	-
NSF	PHY-1403261	Strong-gravity binary phenomenology and gravitational-wave astronomy	47.049	46,750	-
NSF	PHY-1404245	Quantum Optomechanics on Multiple Mass Scales	47.049	342,767	-
NSF	PHY-1415345	Spin Polarization and Transport at the Nanoscale	47.049	136,467	-
NSF	PHY-1415514	Dynamic Decoupling and Noise Characterization in Superconducting Qubits	47.049	84,148	-
NSF	PHY-1433156	Collaborative Research: Construction of the Upstream Tracker for the LHCb Upgrade	47.049	34,140	-
NSF	PHY-1437402	MRI Consortium: Collaborative Research: Development of the Phase-I DarkLight Experiment at Jefferson Laboratory	47.049	7,259	-
NSF	PHY-1454673	CAREER: SELECTIVE TRANSPORT IN BIOLOGICAL HYDROGELS - FROM DESIGN PRINCIPLES TO MECHANISMS	47.049	139,899	-
NSF	PHY-1504942	Physics of Chromosomes	47.049	143,400	-
NSF	PHY-1505678	New Experimental Techniques for Neutrino Experiments	47.049	229,985	-
NSF	PHY-1505855	The EPP-Supported Neutrino Program at MIT	47.049	343,485	-
NSF	PHY-1505858	The PA-Supported Neutrino Program at MIT	47.049	268,024	-
NSF	PHY-1505862	Entangled States of Light and Atoms for Measurements Below the Standard Quantum Limit	47.049	283,953	-
NSF	PHY-1506019	Strongly Interacting Fermi Gases of Ultracold Atoms	47.049	251,860	-
NSF	PHY-1506369	A Program in Ultralow-Temperature Atomic Physics	47.049	498,048	-
NSF	PHY-1541160	INSPIRE: Testing Bell's Inequality with Astrophysical Observations	47.049	284,959	73,083
NSF	PHY-1554875	Career: Next-Generation Liquid Scintillator Detectors: Picosecond Timing and Quantum-Dot-Doped Scintillator	47.049	238,283	85,031
NSF	PHY-1607225	Searching for physics beyond the Standard Model at the LHCb Experiment	47.049	104,088	-

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Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	PHY-1620045	Research in Theoretical Elementary Particle Physics	47.049	4,210	-
NSF	PHY-1626069	MRI: Development of the IsoDAR Front-End	47.049	3,852	-
NSF	PHY-1654168	CAREER: Magnetogenesis Revisited: The First Self-consistent Plasma Dynamo	47.049	4,775	-
NSF	PHY-1658693	EAGER: A Broadband Approach to Cosmic Axion Detection	47.049	51,637	-
NSF	PLR-1503966	Collaborative Research: The combined influence of sea ice and snow cover on Northern Hemisphere atmospheric climate variability	47.050	83,228	-
NSF	PLR-1542950	Development of an air-droppable geodetic-seismic ice penetrator for response studies of Antarctic ice shelves and icebergs to ocean forcings	47.050	130,351	-
NSF	PLR-1543366	Dynamics of the Antarctic Seasonal Ice Zone	47.050	136,716	-
NSF	PLR-1603557	Collaborative Research: Quantifying the Residual Circulation of the Arctic Ocean	47.050	65,164	-
NSF	PLR-1607968	Collaborative Research: Speleothem records of permafrost thaw and paleoclimate in the North American Arctic	47.050	90,819	-
NSF	SES-1155143	Collaborative Research: The American Mass Public in the Early Cold War Years	47.075	20,447	-
NSF	SES-1226924	Collaborative Proposal: Unintended Consequences of Behavior Change: An Examination of the Impacts on Child Health of Behavior Change in Response to Arsenic Mitigation in Bangladesh	47.075	-13,264	-
NSF	SES-1260744	Intermediation, Information, and Diversity In Networks	47.075	57,208	-
NSF	SES-1424484	Doctoral Dissertation Research: Ethical Issues in Animal Experimentation	47.075	5,392	-
NSF	SES-1427231	Demand Analysis for Matching Markets	47.075	101,253	-
NSF	SES-1528487	Collaborative Research: A New Design for Identifying Persuasion Effects and Selection in Media Exposure Experiments via Patient Preference Trials	47.075	47,513	-
NSF	SES-1555071	CAREER: Dynamic Games and Institutions	47.075	52,214	-
NSF	SES-1555448	Doctoral Dissertation Research: History of Aflatoxin and Liver Cancer	47.075	6,681	-
NSF	SES-1558205	Choice, Learning and Equillibrium	47.075	24,035	-
NSF	SES-1559172	Collaborative Research: Inference Methods for Machine Learning and High-Dimensional Data in Policy Evaluation and Structural Economic Models	47.075	133,465	-
NSF	SES-1643517	Dynamic Choice in an Uncertain World	47.075	80,994	-
NSF	SES-1655060	Doctoral Dissertation Research: Making a Digital Working Class: A Multi-Method Comparative Study of Uber Drivers	47.075	8,294	-

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Massachusetts Institute of Technology
Federal Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NSF	SES-1655089	Doctoral Dissertation Research: Mathematics, Aesthetics, and Modernism in America	47.075	10,536	-
NSF	SES-1655605	Doctoral Dissertation Research: A Portrayal of the Pedagogy and Practice of Field Schools in American Anthropology as Anthropological Laboratories	47.075	10,498	-
NSF	SMA-1262263	Collaborative Research: Technology, Collaboration, and Learning: Modeling Complex International Innovation Partnerships	47.075	2,223	-
NSF	SMA-1415129	SEES Fellowship - PDF - S. Pattinson	47.075	79,355	-
NSF	SMA-1740363	Science Policy Research Report: Employee Non-compete Agreements	47.075	38,110	-
NSF	SMMI-1346638	CAREER: High-Speed Continuous Assembly of Nanoparticle Monolayers and Discrete Cluster Arrays	47.041	61,824	-
		Total for National Science Foundation		**80,917,026**	**8,863,247**
		TOTAL for National Science Foundation		**80,917,026**	**8,863,247**
		TOTAL Federal Research Support - On Campus		**383,379,444**	**52,856,284**

Appendix A-2
Massachusetts Institue of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2017

Sponsor	Contract Number	Program Name	CFDA #	Total $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE					
AIR FORCE	FA8721-05-C-0002		12.RD	150,486,197	16,248,716
	FA8702-15-D-0001		12.RD	136,901,708	5,141,400
ARMY	FA8721-05-C-0002		12.RD	32,182,672	3,342,466
	FA8702-15-D-0001		12.RD	20,210,798	0
CLASSIFIED	F19628-00-C-0002		12.RD	-1	0
	FA8721-05-C-0002		12.RD	67,325,308	3,414,385
	FA8702-15-D-0001		12.RD	86,485,036	14,402,965
DEFENSE ADVANCED RESEARCH PROJECT AGENCY	F19628-00-C-0002		12.RD	-889	0
	FA8721-05-C-0002		12.RD	20,857,138	412,699
	FA8702-15-D-0001		12.RD	18,660,476	900,034
MISSILE DEFENSE AGENCY	F19628-00-C-0002		12.RD	-9,327	0
	FA8721-05-C-0002		12.RD	33,262,555	3,636,061
	FA8702-15-D-0001		12.RD	45,799,833	1,137,794
NATIONAL SECURITY AGENCY	FA8721-05-C-0002		12.RD	2,821,572	266,190
	FA8702-15-D-0001		12.RD	8,442,709	0
NAVY	F19628-00-C-0002		12.RD	-1	0
	FA8721-05-C-0002		12.RD	47,463,007	4,887,733
	FA8702-15-D-0001		12.RD	21,320,599	327,274
OTHER DEPARTMENT OF DEFENSE	F19628-00-C-0002		12.RD	-1,071	0
	FA8721-05-C-0002		12.RD	90,304,141	4,489,925
	FA8702-15-D-0001		12.RD	81,520,281	3,719,519
TOTAL DEPARTMENT OF DEFENSE				**864,032,741**	**62,327,161**
NON-DEPARTMENT OF DEFENSE					
U.S. DEPARTMENT OF COMMERCE	FA8721-05-C-0002		11.RD	6,781,006	1,178,715
	FA8702-15-D-0001		11.RD	2,301,946	45,000
U.S. DEPARTMENT OF ENERGY	FA8721-05-C-0002		81.RD	833,726	0
	FA8702-15-D-0001		81.RD	2,509,069	0
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES	FA8721-05-C-0002		93.RD	13,399,960	299,019
	FA8702-15-D-0001		93.RD	15,110,920	621,234
U.S. DEPARTMENT OF TRANSPORTATION	FA8721-05-C-0002		20.RD	17,624,375	1,113,877
	FA8702-15-D-0001		20.RD	12,973,708	121,175

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Massachusetts Institue of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2017 Continued

Sponsor	Contract Number	Program Name	CFDA #	Total $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	FA8721-05-C-0002		43.RD	17,857,150	1,506,394
	FA8702-15-D-0001		43.RD	8,376,795	368,673
OTHER NON-DEPARTMENT OF DEFENSE	FA8721-05-C-0002		99.RD	3,240,473	0
	FA8702-15-D-0001		99.RD	781,423	0
TOTAL NON-DEPARTMENT OF DEFENSE				**101,790,551**	**5,254,087**
TOTAL DIRECT AWARDS				**965,823,292**	**67,581,248**

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Massachusetts Institue of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2017 Continued

Prime Sponsor and Sponsor	Passthrough Program Number	Program Name	CFDA #	Total	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE					
AIR FORCE					
University of Hawaii	FA9451-06-2-0338	OTA Dev. & Device Processing	12.RD	-14	0
ARMY					
STTR	W909MY-13-C-0032	VLWIR SLS-DFPA for Imaging Spectroscopy	12.RD	159,278	0
Agiltron, Inc.	W911QY-16-P-0068	Ag Nanowire Grid on Amorphous Silicon	12.RD	19,760	0
Pendar Technologies	W911SR-16-C-0005	Tunable High Power Quantum Laser	12.RD	211,001	0
Advanced Functional Fabrics of America	W15QKN-16-3-0001	Controlled Reflectivity Fabrics	12.RD	114,211	0
CLASSIFIED					
MITRE Corporation	1514TS7A-LL	MITRE Collaborative	12.RD	-8,584	0
MITRE Corporation	1514TS7A-LL	MITRE Collaborative Task 3	12.RD	121,287	0
MITRE Corporation	1514TS7A-LL	MITRE Collaborative Tasks 4 and 5	12.RD	480,103	0
MISSILE DEFENSE AGENCY					
QmagiQ Inc.	HQ0147-12-C-7188	QmagiQ - DFPA	12.RD	3,129	0
TelAztec LLC	HQ0147-17-C-7308	AR Nano-Textures for Cool Running Optics in Multiple Bean kV	12.RD	4,038	
NAVY					
Freedom Photonics	N68335-13-C-0380	Advanced EO Modulators	12.RD	141,494	0
Twinleaf, LLC	N15A-004-0120	In-Air E-field Sensor for Airborne Applications	12.RD	6,073	0
		Total Department of Defense		**1,251,776**	**0**
DEPARTMENT OF ENERGY					
Argonne National Laboratory	DE-AC02-06CH11357	DOE Community Microgrid Technology	81.RD	16,822	0
		Total Department of Energy		**16,822**	**0**
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					
Jet Propulsion Laboratory	NNN12AA01C	High Performance Geiger Mode Arrays	43.RD	54,991	0
NASA	NNX15AE40A	Big Aviation Data Mining	43.RD	7,110	0
MIT Campus	MIT-300080	MiRa TA	43.001	130,618	0
MIT Campus	MIT-300087	REXIS X-ray Imaging Spectrometer	43.001	28,275	0
		Total National Aeronautics and Space Administration		**220,994**	**0**
NATIONAL INSTITUTES OF HEALTH					
MIT Campus	1-R01-CA173712-01	Microfluidics MicroRNA Sensors	93.859	246,297	0
MIT Campus	4-P50-GM098792-04	CIBS-Year 4-Project 4	93.859	232,556	0
MIT Campus	2-R01-DA029639-05	Optical Control of Neural Circuits	93.859	260,896	0
		Total National Institute of Health		**739,749**	**0**

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Massachusetts Institue of Technology
Schedule of Expenditures of Federal Awards - Lincoln Laboratory
By Sponsor & Contract - FY 2017 Continued

Prime Sponsor and Sponsor	Passthrough Program Number	Program Name	CFDA #	Total	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION					
University of Southern California	IIS-1514544	Understanding Individual Speech Variability	47.RD	111,102	0
MIT Campus	CCF-1124247	Nanoelectronics Beyond 2020	47.070	-396	0
MIT Campus	EFRI-1332250	Flexible Glucose Fuel Cell	47.070	272,235	0
MIT Campus	CCF-1521759	Evolvable Living Computing	47.070	252,236	0
		Total National Science Foundation		**635,177**	**0**
Total Passthrough Awards				**2,864,518**	**0**
Total Federal Awards				**968,687,810**	**67,581,248**

Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE						
Brown University						
DEPARTMENT OF DEFENSE	6926780	00000554	Quantum Metaphotonics and Metamaterials: from Single Emitters to Strongly Correlated Systems	12.800	93,012	-
DEPARTMENT OF DEFENSE	6931095	00000727	A New Mathematical Framework for Design Under Uncertainty	12.910	2,082	-
DEPARTMENT OF DEFENSE	6933009	00000827	Mathematical Framework for Design Under Uncertainty	12.910	334,545	-
DEPARTMENT OF DEFENSE	6934244	00000921	Mechanism-Driven Discovery of Efficient H2 Production Electrocatalysts	12.300	163,480	-
			Total for Brown University		**593,119**	**-**
Universal Technology Corporation						
DEPARTMENT OF DEFENSE	6932079	15-S2606-04-C19	Adaptive Flight Control for Hypersonic Vehicles with Integrated Loops	12.RD	-40	-
			Total for Universal Technology Corporation		**-40**	**-**
University of New Hampshire						
DEPARTMENT OF DEFENSE	6933544	16-054	Mechanics of Bio-inspired CNT - Modified Hierarchical/ Fractal Interfaces	12.800	50,021	-
			Total for University of New Hampshire		**50,021**	**-**
Old Dominion University						
DEPARTMENT OF DEFENSE	6933167	16-137-300345-010	Nanoelectropulse-induced electromechanical signaling and control of biological systems	12.800	214,741	-
			Total for Old Dominion University		**214,741**	**-**
Massachusetts General Hospital						
DEPARTMENT OF DEFENSE	6932393	223307	Letter of Agreement - SangYeon Cho	12.800	10,336	-
DEPARTMENT OF DEFENSE	6934486	223307	Letter of Agreement: Antoine Ramier	12.800	6,128	-
DEPARTMENT OF DEFENSE	6928220	221647	A Randomized, Controlled Trial of Intranasal Oxytocin as an Adjunct to Behavioral Therapy for Autism Spectrum Disorder	12.420	4,109	-
DEPARTMENT OF DEFENSE	6934251	AGREEMENT REF 223308	Stephanie Nam, Off-Campus RA	12.420	30,884	-
DEPARTMENT OF DEFENSE	6929391	222252	(ADVANCE) Rapid Immunity via Gene Transfer of Oligoclonal Fc-Enhanced mAbs	12.910	860,510	-
			Total for Massachusetts General Hospital		**911,968**	**-**

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Massachusetts Institute of Technology
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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
University of Texas at Arlington						
DEPARTMENT OF DEFENSE	6935077	26-0201-51-65	Next Generation Advances in Ionosphere Thermosphere Coupling at Multiple Scales for Environmental Specification and Prediction	12.800	97,200	-
			Total for University of Texas at Arlington		**97,200**	**-**
Vanderbilt University						
DEPARTMENT OF DEFENSE	6930785	2784-018400	Science of Secure and Resilient Cyber-Physical Systems	12.300	153	-
			Total for Vanderbilt University		**153**	**-**
University of Michigan						
DEPARTMENT OF DEFENSE	6936329	3004427924	Multi-Fidelity Modeling of Rocket Combustor Dynamics	12.800	36,763	-
DEPARTMENT OF DEFENSE	6933569	3003660082	AN AUTOMATED MEASUREMENT SYSTEM FOR WARFIGHTER PERFORMANCE QUANTIFICATION IN NATURALISTIC SETTINGS	12.RD	329,325	-
DEPARTMENT OF DEFENSE	6924853	SUBCONTRACT 3001996313	Value-centered Information Theory for Adaptive Learning, Interference, Tracking, and Exploitation (VITALITE)	12.431	28,591	-
DEPARTMENT OF DEFENSE	6932103	3002565045	The Center for Future Architectures Research (C-FAR)	12.RD	174,107	-
DEPARTMENT OF DEFENSE	6926853	3002453814	PASSIVE AND ACTIVE FRICTION DRAG REDUCTION OF TURBULENT FLOWS OVER SUPER-HYDROPHOBIC SURFACES	12.300	109,397	-
			Total for University of Michigan		**678,184**	**-**
University of Delaware						
DEPARTMENT OF DEFENSE	6929807	38805	Architecture and Planning Programming Models for High Performance Interactive Computation	12.800	-194	-
			Total for University of Delaware		**-194**	**-**
University of Maryland						
DEPARTMENT OF DEFENSE	6935254	43830-Z8183003	MURI: Photonic Quantum Matter	12.800	139,014	-
DEPARTMENT OF DEFENSE	6923071	Z841801	MURI: Atomtronics: Material and Device Physics of Quantum Gases	12.431	8,463	-
			Total for University of Maryland		**147,476**	**-**
Rutgers University						
DEPARTMENT OF DEFENSE	6931685	5562	Dynamic Integration of Motion and Neural Data to Capture Human Behavior	12.800	-23,142	-

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE	6935458	5562 / PO 467158	Dynamic Integration of Motion and Neural Data to Capture Human Behavior	12.800	150,961	-
DEPARTMENT OF DEFENSE	6930216	5298 (W81XWH-14-1-0100)	A theragnostic system solution for optimal nerve repair	12.420	230,610	-
			Total for Rutgers University		**358,429**	**-**
Boise State University						
DEPARTMENT OF DEFENSE	6933762	6858-A	Phase-Controlled Magnetron Development	12.800	32,924	-
			Total for Boise State University		**32,924**	**-**
Lincoln Laboratory						
DEPARTMENT OF DEFENSE	6920775	7000087748	Reliable Networking on Unreliable Substrates under Severe Stress	12.RD	6,116	-
DEPARTMENT OF DEFENSE	6923385	7000139390	High Power-Per-Weight Organic Solar Cell	12.RD	-29	-
DEPARTMENT OF DEFENSE	6927127	7000221325	High-Fidelity Dispersive Readout and Noise Characterization of Superconducting Qubits	12.RD	9,208	-
DEPARTMENT OF DEFENSE	6928933	7000243692	Innovation in Unmanned Air Vehicle Development	12.RD	100,485	-
DEPARTMENT OF DEFENSE	6930859	7000290592	Coherent Spin Qubits for Quantum-Enhanced Optimization	12.RD	1,098,747	-
DEPARTMENT OF DEFENSE	6930986	7000291604	Study of JCIDS Semantic Architecture Framework	12.RD	311,066	-
DEPARTMENT OF DEFENSE	6931035	7000293260	Secure Communications via Quantum Illumination	12.RD	31,196	-
DEPARTMENT OF DEFENSE	6931611	7000306158	Advanced GaN Transistor Technology (AGT2)	12.RD	130,639	-
DEPARTMENT OF DEFENSE	6931691	7000308296	LILYPADS/PUPS	12.RD	-822	-
DEPARTMENT OF DEFENSE	6932909	7000330949	Conductive, Biocompatible Hydrogel Development and Characterization	12.RD	20,020	-
DEPARTMENT OF DEFENSE	6933199	7000335585	Multimaterial Fiber Devices	12.RD	41,033	-
DEPARTMENT OF DEFENSE	6933332	7000337700	Power-Grid Resiliency Under Climate Change: Assessment and Options	12.RD	37,708	-
DEPARTMENT OF DEFENSE	6934511	7000337934	High Energy Density Portable Power Pack	12.RD	50,061	-
DEPARTMENT OF DEFENSE	6933696	7000345090	Synthetic Biology - Artificial Gut for Engineering Microbial Communities	12.RD	30,000	-
DEPARTMENT OF DEFENSE	6933725	7000345364	Demonstration of Quantum Enhanced Imaging with Trapped Ions	12.RD	58,388	-
DEPARTMENT OF DEFENSE	6933719	7000345926	HOW BUBBLES BURST? Effect of Contamination on Water-Air Material Transport and Dissemination	12.RD	71,835	-
DEPARTMENT OF DEFENSE	6934759	7000362193	Low Temperature Magnetic Memory for Superconducting Computation	12.RD	39,367	-
DEPARTMENT OF DEFENSE	6935139	7000367982	Cyber Adversarial SCenario modeling and Automated Decision Engine (CASCADE)	12.RD	73,489	-

Appendix A3
Massachusetts Institute of Technology
Federal Research Support - Passthrough - On Campus
FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE	6935357	7000371273	Integrated Planar Lens-Based Lidar	12.RD	126,204	-
DEPARTMENT OF DEFENSE	6935316	7000372082	Low SWaP Reaction Sphere for Precision CubeSat Attitude Control	12.RD	70,798	-
DEPARTMENT OF DEFENSE	6935553	7000374874	Graduate Student Research in FY17 in support of Verification and Validation of Autonomous Systems	12.RD	174,205	-
DEPARTMENT OF DEFENSE	6935578	7000375599	Image Analysis for Cellular-Resolution Brain Mapping	12.RD	1,386	-
DEPARTMENT OF DEFENSE	6935965	7000381569	Demonstration of Logical Qubits using 3D Integration	12.RD	30,936	-
DEPARTMENT OF DEFENSE	6936053	7000383023	III-V Semiconductor Epitaxy for Integrated Photonics	12.RD	966	-
DEPARTMENT OF DEFENSE	6936105	7000383604	Single- and Coupled-Qubit Randomized Benchmarking of Superconducting Qubits	12.RD	4,209	-
DEPARTMENT OF DEFENSE	6936395	7000387954	Integrated QC Collaboration	12.RD	18,022	-
DEPARTMENT OF DEFENSE	6935155	PO # 7000369210	RRTO Threat Network Detection and Tracking Project	12.RD	107,468	-
DEPARTMENT OF DEFENSE	6930951	PO #7000289543	MIT Haystack Observatory Engineering Support for the Lincoln Space Surveillance Complex (LSSC)	12.RD	2,390,565	-
DEPARTMENT OF DEFENSE	6931297	PO #7000299111	Autonomy for Autonomous Undersea Vehicles – Surface Ship Engagement	12.RD	57,054	-
DEPARTMENT OF DEFENSE	6933724	PO #7000346015	Statistics Without Affirmed Ground Truth (StatSWAG)	12.RD	55,826	-
DEPARTMENT OF DEFENSE	6934810	PO #7000364436	MIT Urban Risk Lab & Lincoln Lab (HADR)	12.RD	10,890	-
DEPARTMENT OF DEFENSE	6934997	PO #7000366576	Bulk Heterojunction Structural Batteries	12.RD	34,010	-
DEPARTMENT OF DEFENSE	6929045	PO 7000255976	New Directions in Computational Imaging	12.RD	55,550	-
DEPARTMENT OF DEFENSE	6933546	PO 7000259926	Graduate Student Research in FY14 in support of Data-driven Autonomy for Group Operations in Uncertain Scenarios	12.RD	113,825	-
DEPARTMENT OF DEFENSE	6929208	PO 7000261350	Low Power Embedded Analytics	12.RD	76,858	-
DEPARTMENT OF DEFENSE	6929210	PO 7000261956	LL/MIT Research Collaboration on Trusted and Secure Computing	12.RD	16,596	-
DEPARTMENT OF DEFENSE	6929506	PO 7000264837	Methods for Robust Automatic Speech Recognition from Video using Visual Grounding	12.RD	33,108	-
DEPARTMENT OF DEFENSE	6930855	PO 7000290454	Research on Advanced Algorithms for Speaker & Language Recognition	12.RD	4,774	-
DEPARTMENT OF DEFENSE	6931101	PO 7000294843	Coordinated Nanosatellite Imaging and Communications Systems	12.RD	12,363	-
DEPARTMENT OF DEFENSE	6931130	PO 7000295944	Integrated WDM Lasercomm Transceivers	12.RD	54,804	-
DEPARTMENT OF DEFENSE	6931695	PO 7000308473	Student Based Development of a Small-UAV Marine Surveillance System with a Semisubmersible Resupply Network	12.RD	41,612	-
DEPARTMENT OF DEFENSE	6931836	PO 7000311990	Vector Sensor for Radio Mapping	12.RD	26,292	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE	6932133	PO 7000313070	Big Aviation Data Mining for Robust Ultra-Efficient Air Transportation	12.RD	11,665	-
DEPARTMENT OF DEFENSE	6932138	PO 7000315536	Fabrication of High Density Electrospray Thrusters	12.RD	-468	-
DEPARTMENT OF DEFENSE	6932232	PO 7000319358	Aquaticus A Mixed Human-Machine Robotic Competition	12.RD	123,528	-
DEPARTMENT OF DEFENSE	6932283	PO 7000320786	Single-Cell Omni-Omic Profiling (SCOOP)	12.RD	2,869	-
DEPARTMENT OF DEFENSE	6932764	PO 7000326660	Platform Device for Non-Invasive Gastrointestinal Disease Monitoring	12.RD	13,584	-
DEPARTMENT OF DEFENSE	6932870	PO 7000330171	Measurement and Determination of Key Factors that Drive Effective Use of Design, Analysis, and Optimization Tools	12.RD	25,635	-
DEPARTMENT OF DEFENSE	6932975	PO 7000331617	Dynamic Deep Learning for High-Dimensional Data Analytics	12.RD	38,340	-
DEPARTMENT OF DEFENSE	6932987	PO 7000332718	Integration of Renewables with Desalination	12.RD	11,794	-
DEPARTMENT OF DEFENSE	6932991	PO 7000332744	Integration of Departure Metering Concepts into Surface Capabilities	12.RD	14,846	-
DEPARTMENT OF DEFENSE	6932993	PO 7000332838	ROBUST COMMUNICATION FOR AIRBORNE MULTI-AGENT ROBOTIC SYSTEMS	12.RD	-2,094	-
DEPARTMENT OF DEFENSE	6934698	PO 7000332975	3D Printing of Metal-Ceramic Microlattices	12.RD	125,349	-
DEPARTMENT OF DEFENSE	6933005	PO 7000333383	System Authentication for Wireless Power Transfer	12.RD	71,629	-
DEPARTMENT OF DEFENSE	6933018	PO 7000334071	Development of Penetrators for Planetary Exploration	12.RD	52,206	-
DEPARTMENT OF DEFENSE	6935245	PO 7000334320	Electro-AeroDynamic (EAD) Unmanned Aerial Vehicle (UAV) Prototype	12.RD	206,113	-
DEPARTMENT OF DEFENSE	6933385	PO 7000337977	Non-parametric Recommendation Systems	12.RD	26,512	-
DEPARTMENT OF DEFENSE	6933392	PO 7000338443	Integrated Magnetooptical Isolators for IR-Vis Wavelengths	12.RD	7,115	-
DEPARTMENT OF DEFENSE	6933423	PO 7000339130	Biomimetic Adaptive Forward-Looking Sonar for Object Recognition	12.RD	21,998	-
DEPARTMENT OF DEFENSE	6933541	PO 7000339337	Support of the Radio Communication Link Program Using the Westford Radio Telescope	12.RD	287,526	-
DEPARTMENT OF DEFENSE	6933513	PO 7000340812	Decentralized Multi-agent Coordination	12.RD	45,467	-
DEPARTMENT OF DEFENSE	6933722	PO 7000341743	STUDENT BASED DEVELOPMENT OF THE JUNGLE HAWK OWL LONG ENDURANCE UAV	12.RD	95,461	-
DEPARTMENT OF DEFENSE	6933700	PO 7000342060	Synthetic Biology - Artificial Gut for Engineering Microbial Communities	12.RD	73,946	-
DEPARTMENT OF DEFENSE	6933645	PO 7000344422	Development of Aluminum Fueled Electric Vehicle and Submersible Power Systems (Lilypads II)	12.RD	261,687	-
DEPARTMENT OF DEFENSE	6933706	PO 7000345331	Program-Analytic Cybersecurity Metrics via Exposure and Non-uniformity (PACMEN)	12.RD	39,026	-

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DEPARTMENT OF DEFENSE	6934036	PO 7000351384	Mid-Infrared Optical Phase Modulators	12.RD	29,928	-
DEPARTMENT OF DEFENSE	6934006	PO 7000351539	Tungsten Disulfide Valleytronic Material Characterization	12.RD	49,443	-
DEPARTMENT OF DEFENSE	6934430	PO 7000359526	Van Der Waals Epitaxy of Gan Hemt on Graphene/Transfer	12.RD	93,482	-
DEPARTMENT OF DEFENSE	6934951	PO 7000366547	Convection Enhanced Electrochemistry Energy Storage	12.RD	35,244	-
DEPARTMENT OF DEFENSE	6935040	PO 7000366923	Interpretable Neural Models	12.RD	35,950	-
DEPARTMENT OF DEFENSE	6935145	PO 7000368802	Stool Cell - Health Monitoring for the Human Gut	12.RD	50,949	-
DEPARTMENT OF DEFENSE	6935279	PO 7000369000	Microplasmas for Additive Materials Deposition	12.RD	124,025	-
DEPARTMENT OF DEFENSE	6935579	PO 7000374786	Student Based Development of the Jungle Hawk Owl Long Endurance UAV	12.RD	113,709	-
DEPARTMENT OF DEFENSE	6935644	PO 7000376241	Chip-Scale THz Spectrometer: Miniaturized Molecular Clock and Gas Sensor	12.RD	61,269	-
DEPARTMENT OF DEFENSE	6936327	PO 7000386845	Integration of Departure Metering Concepts into Surface Capabilities	12.RD	21,948	-
DEPARTMENT OF DEFENSE	6936545	PO 7000389700	WaferSat	12.RD	4,905	-
DEPARTMENT OF DEFENSE	6932866	PO#7000328711	Terahertz Computational Imager	12.RD	36,909	-
DEPARTMENT OF DEFENSE	6932872	PO#7000328712	Lincoln Laboratory Group 63 Program 370 (LAKATT) Support	12.RD	56,012	-
DEPARTMENT OF DEFENSE	6932795	PO#7000329421	Predictions using Time-Series Data	12.RD	-26	-
DEPARTMENT OF DEFENSE	6935235	PO#7000370657	Phase Change Metamaterials	12.RD	84,927	-
DEPARTMENT OF DEFENSE	6936237	PO#7000385831	Development of A Built-In, Metal-Air, Nano Battery (Lincoln Laboratory Program # TIO2-0126)	12.RD	35,161	-
DEPARTMENT OF DEFENSE	6932735	PURCHASE ORDER 7000328100	Imaging for NCLUS	12.RD	-58,343	-
DEPARTMENT OF DEFENSE	6933364	PURCHASE ORDER 7000337650	Functional Encryption Research	12.RD	50,203	-
DEPARTMENT OF DEFENSE	6931687	7000294429	Proposal for A Low-Torque Pan Tilt System for Directional Scanning in a Marine Environment	12.RD	33,409	-
DEPARTMENT OF DEFENSE	6931362	PO 7000300034	Robust Transportation Models and Algorithms for USTRANSCOM	12.RD	27,583	-
			Total for Lincoln Laboratory		**8,067,247**	**-**
Research Foundation S.U.N.Y.						
DEPARTMENT OF DEFENSE	6933046	AGMT. DTD. 3/22/2016	IP-IMI	12.800	2,644,664	273,330
			Total for Research Foundation S.U.N.Y.		**2,644,664**	**273,330**
College of Nanoscale Science and Engineering						
DEPARTMENT OF DEFENSE	6933048	AGMT. DTD. 3/22/2016	IP-IMI	12.800	231,888	-

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			Total for College of Nanoscale Science and Engineering		**231,888**	**-**
Research Foundation of SUNY-Albany						
DEPARTMENT OF DEFENSE	6936148	AGMT. DTD. 3/22/2016	IP-IMI	12.800	28,192	-
			Total for Research Foundation of SUNY-Albany		**28,192**	**-**
National ICT Australia Limited						
DEPARTMENT OF DEFENSE	6931992	AGREEMENT DATED 5/14/15	Negotiating Mission Plans uder Risk Bounds	12.800	34,906	-
			Total for National ICT Australia Limited		**34,906**	**-**
TIPD, LLC						
DEPARTMENT OF DEFENSE	6930803	AGREEMENT DATED 7/31/14	Holographic Video Display Using Novel Guided-wave Scanning System (HVD-GWSS) - SBIR Phase II	12.RD	67,908	-
			Total for TIPD, LLC		**67,908**	**-**
Diversified Technologies, Inc.						
DEPARTMENT OF DEFENSE	6935088	AGREEMENT DATED 9-1-2016	A Practical Incoherent Scatter Radar, SBIR Phase 2	12.RD	55,120	-
			Total for Diversified Technologies, Inc.		**55,120**	**-**
Utah State University Research Foundation						
DEPARTMENT OF DEFENSE	6934347	CP0039726	UNP CubeSat	12.RD	66,661	-
			Total for Utah State University Research Foundation		**66,661**	**-**
Defense Engineering Corporation						
DEPARTMENT OF DEFENSE	6932934	PO #10180	Fabrication of Conformal Electromagnetic Structures and Circuits	12.800	-141	-
			Total for Defense Engineering Corporation		**-141**	**-**
Lockheed Martin Advanced Technology Laboratories						
DEPARTMENT OF DEFENSE	6933872	PO #4102480017	Heterogeneous Embedded Processing for Autonomy (HEPA)	12.RD	89,787	-
			Total for Lockheed Martin Advanced Technology Laboratories		**89,787**	**-**
Lockheed Martin Missiles and Fire Control						

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DEPARTMENT OF DEFENSE	6935336	PO 4102738369	Algorithm Development and Experimentation In Support of Human Performance Sensing ? Biomarker/Metric Identification and Sensor Development Learning for Man-Machine Interoperation and Training	12.RD	51,941	-
			Total for Lockheed Martin Missiles and Fire Control		**51,941**	**-**
Leidos, Inc.						
DEPARTMENT OF DEFENSE	6934135	PO10193198	MEMS Mass Spectrometry Project	12.RD	151,992	-
			Total for Leidos, Inc.		**151,992**	**-**
Georgia Institute of Technology						
DEPARTMENT OF DEFENSE	6925152	RC413-G3	MURI: Multi-Functional Light-Matter Interfaces Based on Neutral Atoms and Solids	12.800	213,703	-
DEPARTMENT OF DEFENSE	6923520	RB492-G1	Neuro-Inspired Adaptive Perception and Control for Agile Mobility of Autonomous Vehicles in Uncertain and Hostile Environments	12.431	-7,846	-
DEPARTMENT OF DEFENSE	6935451	RC379-G1	BIOLOGICAL LOCOMOTION PRINCIPLES AND RHEOLOGICAL INTERACTION PHYSICS	12.431	36,226	-
DEPARTMENT OF DEFENSE	6935159	RH176-G1	Statistical Mechanics for Learning Algorithmic-Baed Controllers: The Role of Physics in New Computational Models for Real-Time Control	12.431	86,858	-
			Total for Georgia Institute of Technology		**328,941**	**-**
Northwestern University						
DEPARTMENT OF DEFENSE	6932465	SP0013487-PROJ0009454	[MURI] BioProgrammable One-, Two-, and Three-Dimensional Materials	12.800	10,062	-
			Total for Northwestern University		**10,062**	**-**
Busek Company, Incorporated						
DEPARTMENT OF DEFENSE	6930264	STTR RESEARCH AGREEMENT EFFECTIVE 12/16/2013	Ultra-High Density Ion Propulsion From Ionic Liquids Phase II	12.RD	-134	-
			Total for Busek Company, Incorporated		**-134**	**-**
Princeton University						
DEPARTMENT OF DEFENSE	6926616	SUBAWARD NO 00002068	CARS: A Platform for Scaling Formal Verification to Component-based Vehicular Software Stack	12.300	510,321	-
			Total for Princeton University		**510,321**	**-**
University of Colorado Boulder						

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DEPARTMENT OF DEFENSE	6934474	SUBAWARD NO. 1553954	Chemical Reactions of Cold Molecular Ions and Molecular Radicals	12.800	39,445	-
			Total for University of Colorado Boulder		**39,445**	**-**
Rice University						
DEPARTMENT OF DEFENSE	6934370	SUBAWARD NO. R19091	Proteus: Controlling Resource-Adaptive Embedded Softward	12.300	519,215	-
			Total for Rice University		**519,215**	**-**
BAE						
DEPARTMENT OF DEFENSE	6935282	SUBCONTRACT NUMBER: 921019	BAE DARPA BRASS	12.RD	154,474	-
			Total for BAE		**154,474**	**-**
University of New Mexico						
DEPARTMENT OF DEFENSE	6926768	SUBCONTRACT: 271387-875J	(MURI) Innovative use of Metamaterials in Confining, Controlling, and Radiating Intense Microwave Pulses	12.800	347,741	-
			Total for University of New Mexico		**347,741**	**-**
University of Texas - Austin						
DEPARTMENT OF DEFENSE	6936108	UTA17-000362	Bayesian Optimal Experimental Design for Inverse Scattering	12.800	21,730	-
DEPARTMENT OF DEFENSE	6933717	UTA15-001067	Inference, Simulation, and Optimization of Complex Systems Under Uncertainty: Theory, Algorithms, and Applications to Turbulent Combustion	12.431	257,097	7,550
DEPARTMENT OF DEFENSE	6934067	UTA16-000556	Phonon Hydrodynamics and Spectroscopy in High Thermal Conductivity Materials	12.300	225,119	-
DEPARTMENT OF DEFENSE	6934978	UTA16-000982	Paths to Quantum Supremacy	12.300	245,280	-
			Total for University of Texas - Austin		**749,226**	**7,550**
University of California - Berkeley						
DEPARTMENT OF DEFENSE	6931650	00008426 / BB00344334	Realization of High Fidelity, On-Chip Readout of Solid State Quantum Bits	12.431	541,239	-
DEPARTMENT OF DEFENSE	6934982	00009307	Fundamental Limits of the Action-Perception Loop	12.910	92,464	-
DEPARTMENT OF DEFENSE	6933761	00009042/PO#BB00650967	Helio: Program Synthesis for Efficient, Privacy-Preserving Distributed Computation	12.RD	171,749	-
			Total for University of California - Berkeley		**805,452**	**-**
University of Utah						

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DEPARTMENT OF DEFENSE	6932906	10037637-MIT	In Situ Visualization of Discontinuous Galerkin Based High-Order Methods	12.431	38,639	-
DEPARTMENT OF DEFENSE	6935768	10043028-MIT	Design Responding to Engineering Analysis in support of Manufacturing	12.910	32,448	-
DEPARTMENT OF DEFENSE	6935759	10043182-MIT	Augmented Design Through Analysis and Visualization Facilitating Better Designs and Enhanced Designers	12.910	29,949	-
			Total for University of Utah		**101,035**	**-**
Brigham & Women's Hospital						
DEPARTMENT OF DEFENSE	6933104	112729	Novel Strategies to improve immunomodulation and non-invasive clinical monitoring in VCA	12.420	105,460	-
			Total for Brigham & Women's Hospital		**105,460**	**-**
Carnegie-Mellon University						
DEPARTMENT OF DEFENSE	6929741	1130171-323817	OmniTrans: An Omnivorous Framework for the Translation of Low Density Languages	12.431	54,918	-
DEPARTMENT OF DEFENSE	6921196	1141207-236214	Decentralized Reasoning in Reduced Information Spaces	12.300	48,219	-
			Total for Carnegie-Mellon University		**103,137**	**-**
Harvard University						
DEPARTMENT OF DEFENSE	6934243	133668-5079809	Measuring, Understanding, and Responding to Covert Social Networks:Passive and Active Tomography	12.431	147,042	-
DEPARTMENT OF DEFENSE	6936171	134062-5093041	Imaging and Control of Biological Transduction using NV-Diamond	12.431	564,969	-
DEPARTMENT OF DEFENSE	6925058	133534-5044541	Development of a Diamond Nanoscale Magnetometer Using Quantum-Assisted Sensing and Readout	12.RD	-1,443	-
DEPARTMENT OF DEFENSE	6935489	167936.0001	Reverse Engineering Host Resilience	12.RD	13,713	-
DEPARTMENT OF DEFENSE	6931186	FUND# 123753	Letter Agreement: Oren Rippel	12.910	-21,356	-
DEPARTMENT OF DEFENSE	6935798	123950-5092634	Quantum Opto-Mechanics with Atoms and Nanostructured Diamond (QOMAND)	12.300	126,976	-
DEPARTMENT OF DEFENSE	6933356	123950-5092636	Quantum Opto-Mechanics with Atoms and Nanostructured Diamond (QOMAND)	12.300	52,498	-
DEPARTMENT OF DEFENSE	6934046	138076-5093553	Algorithms for Representation and Inference informed by the Acquisition of Data from Neuroscience Experiments (ARIADNE)	12.RD	390,181	-
DEPARTMENT OF DEFENSE	6934070	138076-5093555	MICrONS	12.RD	967,904	-
			Total for Harvard University		**2,240,484**	**-**

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Srico						
DEPARTMENT OF DEFENSE	6936086	16080MIT	Quantum Frequency Conversion for Quantum Communication	12.RD	6,733	-
			Total for Srico		**6,733**	**-**
Columbia University						
DEPARTMENT OF DEFENSE	6927216	2 (GG008784) / PO G10346	Imaging How a Neuron Computes	12.431	103,179	-
DEPARTMENT OF DEFENSE	6927546	1(GG007792)	Power Grid Vulnerability and Resilience to Geographically Correlated Failures	12.351	32,367	-
			Total for Columbia University		**135,546**	**-**
University of Maryland - College Park						
DEPARTMENT OF DEFENSE	6936017	28725-Z8401005	Center for Distributed Quantum Information	12.431	205,025	-
DEPARTMENT OF DEFENSE	6932890	2875-Z8401005	Center for Distributed Quantum Information	12.431	282,617	-
			Total for University of Maryland - College Park		**487,641**	**-**
Boston University						
DEPARTMENT OF DEFENSE	6924758	4500000571	Synthetic Mammalian Gene Regulatory Circuits for in Vivo Biomedical Applications	12.431	-14,240	-
DEPARTMENT OF DEFENSE	6923074	4500000228	MURI: Topic #2 Adaptive Cognitive maps for Autonomous Systems Project Title: Grid Cells and Cognitive maps for Autonomous Systems	12.300	0	-
DEPARTMENT OF DEFENSE	6924737	4500000552	MURI: Utilizing Synthetic Biology to Create Programmable Micro-Bio-Robots	12.300	141,926	-
DEPARTMENT OF DEFENSE	6935193	4500002204	NEURAL CIRCUITS UNDERLYING SYMBOLIC PROCESSING IN PRIMATE CORTEX AND BASAL GANGLIA	12.300	158,956	-
DEPARTMENT OF DEFENSE	6922340	450000228	MURI: Topic #2 Adaptive Cognitive maps for Autonomous Systems Project Title: Grid Cells and Cognitive maps for Autonomous Systems	12.300	44,360	-
			Total for Boston University		**331,002**	**-**
Boston University Medical Campus						
DEPARTMENT OF DEFENSE	6931794	4500001684	A Tool for Determining the Number of Contributors: Interpreting Complex, Compromised, Low-Template DNA	12.RD	21,214	-
			Total for Boston University Medical Campus		**21,214**	**-**
University of Pennsylvania						

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DEPARTMENT OF DEFENSE	6926839	560102	Evolution of Cultural Norms and Dynamics of Socio Political Change	12.431	447,900	-
DEPARTMENT OF DEFENSE	6927251	568770	New Paradigms for Scalable Online Decentralized Optimization	12.300	42,818	-
			Total for University of Pennsylvania		**490,718**	**-**
BAE Systems Info & Electronic Systems Integration, Inc						
DEPARTMENT OF DEFENSE	6923517	741274	Coverage by Teams of Autonomous Ground and Aerial Vehicles	12.RD	138,492	-
DEPARTMENT OF DEFENSE	6931694	892730	Ultra-high energy density TPV generator for small robotic platforms: First ever demonstration of fuel powered robot with extreme range	12.RD	134,284	-
DEPARTMENT OF DEFENSE	6936066	932658	Networked Estimation of Position using Tomography, Undersea-data, Nudging, and Exfiltration (NEPTUNE)	12.RD	125,371	-
			Total for BAE Systems Info & Electronic Systems Integration, Inc		**398,147**	**-**
The Fab Foundation						
DEPARTMENT OF DEFENSE	6931452	AGMT DATED 10/1/14	Distributed Technical Education: Bringing the campus to the student.	12.431	82,062	-
			Total for The Fab Foundation		**82,062**	**-**
University of Washington						
DEPARTMENT OF DEFENSE	6931394	BPO4415, SUB# UWSC7968	Muscle's Energetic Versatility Arises From Its Crystalline and Multi-Component Structure	12.431	139,376	-
			Total for University of Washington		**139,376**	**-**
Yale University						
DEPARTMENT OF DEFENSE	6926770	C13J11492(J00210)	High-Resolution Quantum Control of Chemical Reactions	12.431	293,072	-
			Total for Yale University		**293,072**	**-**
University of Chicago						
DEPARTMENT OF DEFENSE	6929146	FP054294-C	Fundamental Issues in Non-equilibrium Dynamics (MURI)	12.431	257,370	-
			Total for University of Chicago		**257,370**	**-**
University of Sydney						
DEPARTMENT OF DEFENSE	6933550	G174385 RESEARCH COLLABORATION AGREEMENT	Quantum Control Engineering	12.431	451,324	-

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			Total for University of Sydney		**451,324**	**-**
University of California-Santa Barbara						
DEPARTMENT OF DEFENSE	6932998	KK1622	QUANTA: Quantitative Network-based Models of Adaptive Team Behavior	12.431	221,414	-
DEPARTMENT OF DEFENSE	6935172	KK1713	Neural foundations of expertise based on optimal decision-making, physical control and responses to stress	12.431	217,889	-
DEPARTMENT OF DEFENSE	6934736	KK9151	Institute for Collaborative Biotechnology (ICB)	12.431	113,175	-
			Total for University of California-Santa Barbara		**552,477**	**-**
University of California						
DEPARTMENT OF DEFENSE	6933077	KK9151	Institute for Collaborative Biotechnology (ICB)	12.431	105,790	-
DEPARTMENT OF DEFENSE	6929256	KK9151-30	Institute for Collaborative Biotechnology (ICB)	12.431	27,552	-
DEPARTMENT OF DEFENSE	6929257	KK9151-31	Institute for Collaborative Biotechnology (ICB)	12.431	428,909	-
DEPARTMENT OF DEFENSE	6929262	KK9151-33	Institute for Collaborative Biotechnology (ICB)	12.431	198,394	-
DEPARTMENT OF DEFENSE	6929265	KK9151-35	Institute for Collaborative Biotechnology (ICB)	12.431	208,616	-
DEPARTMENT OF DEFENSE	6927669	0157GQA206	Tailoring the conformality and electronic property of thin films by atomic layer deposition	12.300	298,002	-
DEPARTMENT OF DEFENSE	6933105	1015 G TA243	Understanding Scenes and Events through Joint Parsing, Cognitive Reasoning and Lifelong Learning	12.300	200,201	-
			Total for University of California		**1,467,464**	**-**
General Dynamics						
DEPARTMENT OF DEFENSE	6933358	PO #40240163 LINE 001 - 1.1.1.4.1.4	M1-4 Design Optimization Method of Total Actuation System for Limbed Locomotion; 1.1.1.4.1.4	12.431	14,845	-
DEPARTMENT OF DEFENSE	6934440	PO #40240163 LINE 002 - 1.1.1.4.4.5	M1-4 Design Optimization Method of Total Actuation System for Limbed Locomotion; 1.1.1.4.1.4	12.431	100,000	-
DEPARTMENT OF DEFENSE	6935506	PO #40240163 LINE 003 - 1.1.1.4.1.4	M1-4 Design Optimization Method of Total Actuation System for Limbed Locomotion; 1.1.1.4.1.4	12.431	98,036	-
DEPARTMENT OF DEFENSE	6934356	PURCHASE ORDER #40228357	Robotics Collaborative Technology Alliance - RCTA	12.431	236,640	-
			Total for General Dynamics		**449,521**	**-**
BBN Technologies Corporation						
DEPARTMENT OF DEFENSE	6931118	PO 9500012484 : BBN REF ID #14400	Superconducting Nanowire Electronics	12.RD	291,587	-
DEPARTMENT OF DEFENSE	6934480	14603 / PO 9500013244	Precision Ocean Interrogation, Navigation and Timing (POINT)	12.RD	123,121	-

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DEPARTMENT OF DEFENSE	6932243	PO 9500012779	A Stochastic Network Optimization Approach to Providing Robust Communications Over an Unreliable Underlay Network (TA1)	12.RD	358,220	-
DEPARTMENT OF DEFENSE	6925497	PO #9500011262	Babelon	12.RD	51,638	-
			Total for BBN Technologies Corporation		**824,567**	**-**
Raytheon BBN Technologies Corp.						
DEPARTMENT OF DEFENSE	6932572	PO#9500012846	Scalable Engineering of Quantum Optical Information-Procession Architectures (SEQUOIA)	12.RD	-7,816	-
DEPARTMENT OF DEFENSE	6936196	BBN REF ID 14721	Generalized Network Assisted Transport (GNAT)	12.RD	21,628	-
DEPARTMENT OF DEFENSE	6936009	9500013359	(CONQUEST) Communications and Networking with Quantum Operationally-Secure Technology for Maritime Deployment	12.RD	127,890	-
DEPARTMENT OF DEFENSE	6935182	CONTRACT 14605, PO 9500013341	Scientific Advances to Continuous Insider Threat Evaluation Program	99.RD	72,194	-
			Total for Raytheon BBN Technologies Corp.		**213,896**	**-**
University of Innsbruck						
DEPARTMENT OF DEFENSE	6922724	SQUIP AGREEMENT UNDER W911NF-10-1-0284	Scalable Quantum Information Processing (SQIP) with Trapped Ions	12.431	-63,359	-
			Total for University of Innsbruck		**-63,359**	**-**
Securboration						
DEPARTMENT OF DEFENSE	6933150	SUB UNDER ARL CONTRACT W911QX-15-C-0015	Augmented Reality for Tactical Edge Analysis (ARTEA) II	12.RD	99,748	-
			Total for Securboration		**99,748**	**-**
Arizona State University						
DEPARTMENT OF DEFENSE	6926159	SUBAWARD NO. 13-950	Translating Biochemical Pathways to Non-Cellular Environment	12.431	143,975	-
			Total for Arizona State University		**143,975**	**-**
I.R.C.C.S. Istituto Ortopedico Galeazzi						
DEPARTMENT OF DEFENSE	6933716	SUBAWARD UNDER W81XWH-15-1-0092	Bone tropism of breast cancer metastases: dissecting the role of endothelial adhesion molecules through human organotypic vascularized microfluidic 3D models	12.420	22,098	-
			Total for I.R.C.C.S. Istituto Ortopedico Galeazzi		**22,098**	**-**
Sri International						

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DEPARTMENT OF DEFENSE	6931008	SUBCONTRACT 27-001441, REL 2	Mining and Understanding Software Enclaves (MUSE)	12.RD	133,386	-
			Total for Sri International		**133,386**	**-**
CREARE, Incorporated						
DEPARTMENT OF DEFENSE	6933527	SUBCONTRACT NO. 81523	Piezoelectric Nanofibers for Wearable Energy Scavenging	12.RD	-3,569	-
DEPARTMENT OF DEFENSE	6932855	SUBCONTRACT NO. 78380	Ship Airwake Measurement System	12.RD	51,340	-
			Total for CREARE, Incorporated		**47,772**	**-**
New Jersey Institute of Technology						
DEPARTMENT OF DEFENSE	6932677	(NP) 996402	PALISADE: Program obfuscation Advancement with Lattice Implementation for Scalable Application Demonstration of Efficiency	12.RD	299,965	-
			Total for New Jersey Institute of Technology		**299,965**	**-**
On Demand Pharmaceuticals Inc						
DEPARTMENT OF DEFENSE	6934747	001	Pharmacy on Demand Technology Transition	12.910	718,578	-
			Total for On Demand Pharmaceuticals Inc		**718,578**	**-**
Aptima, Inc.						
DEPARTMENT OF DEFENSE	6934543	1115-1959 SLIN 001	Congruence and Sybiosis in Complex Humans-Machines Teams	12.RD	87,000	-
			Total for Aptima, Inc.		**87,000**	**-**
United Technologies Research Center						
DEPARTMENT OF DEFENSE	6935230	1224171	Scalable Inference for Rare Events (SIRE).	12.RD	82,228	-
			Total for United Technologies Research Center		**82,228**	**-**
Smithsonian Inst. - Astrophysical Observatory						
DEPARTMENT OF DEFENSE	6936057	17-S_TO-400-0000370995	Development of Diamond Nanoscale Magnetometer using Quantum assisted Sensing and Readout	12.RD	28,140	-
			Total for Smithsonian Inst. - Astrophysical Observatory		**28,140**	**-**
University of California-San Diego						
DEPARTMENT OF DEFENSE	6927945	39244040	Porous Si-based Therapeutic Nanoplatforms	12.910	137,712	-
DEPARTMENT OF DEFENSE	6928757	PO #S9000381, SUB #43019208	The Information Content of Ocean Noise: Theory and Experiment - Imaging the Changing Arctic with Ice Noise	12.300	65,609	-

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			Total for University of California-San Diego		**203,322**	**-**
Stanford University						
DEPARTMENT OF DEFENSE	6936362	61468648-122860	Revolutionizing Data-Intensive Computing	12.910	100,000	-
DEPARTMENT OF DEFENSE	6931094	60744752-114407	Role of Bidirectional Computation in Visual Scene Analysis	12.300	352,759	-
			Total for Stanford University		**452,759**	**-**
Dynamic Object Language Labs, Inc.						
DEPARTMENT OF DEFENSE	6932241	AGMT DATED 2/25/15 UNDER D15PC00034	Context-driven Active-sensing for Repair Tasks (CART)	12.RD	3,484	-
			Total for Dynamic Object Language Labs, Inc.		**3,484**	**-**
nuTonomy						
DEPARTMENT OF DEFENSE	6934566	AGMT. DTD.	Temporal Logic Planning for Support by Fire Operations in Uncertain and Adversarial Environments	12.RD	86,991	-
			Total for nuTonomy		**86,991**	**-**
IBM Thomas J. Watson Research Center						
DEPARTMENT OF DEFENSE	6933545	AGREEMENT # 4915012803	IOPS: Improving Obfuscation Practicality and Security	12.RD	187,876	-
DEPARTMENT OF DEFENSE	6933416	AGREEMENT # 4915012803 / PO# 5004820179	IOPS: Improving Obfuscation Practicality and Security	12.RD	50,839	-
			Total for IBM Thomas J. Watson Research Center		**238,715**	**-**
Sandia National Laboratories						
DEPARTMENT OF DEFENSE	6934229	AGREEMENT 1340868 / PO 1685489	Uncertainty Quantification in LES Computations of Turbulent Multiphase Combustion in a SCRAMJET Engine	12.RD	209,458	-
			Total for Sandia National Laboratories		**209,458**	**-**
Mod-2 Systems, LLC						
DEPARTMENT OF DEFENSE	6928874	AGREEMENT DATED 10/15/13	Cyber Scope Project	12.RD	363	-
			Total for Mod-2 Systems, LLC		**363**	**-**
International Business Machine						
DEPARTMENT OF DEFENSE	6925544	AGREEMENT NUMBER 4911028171.0	Broad Operational Language Translation (BOLT): Activity C	12.RD	-24	-

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			Total for International Business Machine		**-24**	**-**
Aurora Flight Sciences RDC						
DEPARTMENT OF DEFENSE	6936333	AGRMT EFF. 9/27/16	ALASA CubeSat Deformable Mirror Demonstration Mission (DEMI)	12.RD	120,413	-
			Total for Aurora Flight Sciences RDC		**120,413**	**-**
Zymergen, Inc.						
DEPARTMENT OF DEFENSE	6932943	PO #4284	The Factory: Any Microbe. Any Molecule	12.910	1,432	-
			Total for Zymergen, Inc.		**1,432**	**-**
Ministry of Defense of Israel						
DEPARTMENT OF DEFENSE	6930221	PO 4440560793	Terahertz Quantum-Cascade Lasers and Imaging	12.RD	113,933	-
DEPARTMENT OF DEFENSE	6931680	PO 4440637448	Planning and Sensing Algorithms for Underwater Persistent Monitoring	12.RD	113,724	-
DEPARTMENT OF DEFENSE	6931844	PO 4440656472	Novel multimaterial fiber system for magnetic wave detection	12.RD	94,538	-
DEPARTMENT OF DEFENSE	6931907	PO 4440661300	Rapidly Exploring Random Trees for Pursuit-Evasion Games	12.RD	163,629	-
			Total for Ministry of Defense of Israel		**485,825**	**-**
Vencore Labs, Inc.dba Applied Communication Sciences						
DEPARTMENT OF DEFENSE	6932420	PO-0004102	Distributed Enclave Defense Using Configurable Edges (DEDUCE)	12.RD	307,464	-
DEPARTMENT OF DEFENSE	6934363	PO-0008492	SCATTERED	12.RD	331,003	-
			Total for Vencore Labs, Inc.dba Applied Communication Sciences		**638,467**	**-**
Draper Laboratory Incorporated						
DEPARTMENT OF DEFENSE	6932696	SC001-0000000918	Unifying Perception and Control via Fast Approximations for Fast Flight in Cultured Enviroments	12.RD	1,122,175	-
DEPARTMENT OF DEFENSE	6934674	SC001-0000001039	Positioning System for Deep Ocean Navigation (POSYDON)	12.RD	118,250	-
DEPARTMENT OF DEFENSE	6936067	SC001-0000001106	Anticipatory Complex Event Recognition Technology (ACERT)	12.RD	26,128	-
			Total for Draper Laboratory Incorporated		**1,266,554**	**-**
University of Massachusetts Medical Center						

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DEPARTMENT OF DEFENSE	6933701	WA00393758/OSP2016151	Vectored Delivery of Oligoclonal Antibodies for Protection Against Enterotoxin Mediated Diarrheal Diseases (EMDD)	12.910	126,437	-
			Total for University of Massachusetts Medical Center		**126,437**	**-**
American Lightweight Materials Manufacturing Innovation Institute						
DEPARTMENT OF DEFENSE	6931266	0001	Sub-Award Agreement 0001: Cross-Cut Pillar Lead - Cost Modeling v.2	12.RD	44,004	-
DEPARTMENT OF DEFENSE	6932706	0002B-11	Sub-Award Agreement 0001: Cross-Cut Pillar Lead - Cost Modeling v.2	12.RD	26,241	-
DEPARTMENT OF DEFENSE	6934653	SUB AWARD NUMBER 0006A-7	Sub-Award Agreement 0001: Cross-Cut Pillar Lead - Cost Modeling v.2	12.RD	48,820	-
			Total for American Lightweight Materials Manufacturing Innovation Institute		**119,065**	**-**
University of Southern California						
DEPARTMENT OF DEFENSE	6921645	138802	ANTIDOTE: Adaptive Networks for Threat and Intrusion Detection or Termination	12.300	0	-
DEPARTMENT OF DEFENSE	6920504	138802, P.O.#10058889	ANTIDOTE: Adaptive Networks for Threat and Intrusion Detection or Termination	12.300	72,292	-
			Total for University of Southern California		**72,292**	**-**
Duke University						
DEPARTMENT OF DEFENSE	6928294	13-ONR-1109	Expanding the Limits of Acoustic Metamaterials	12.300	170,923	-
			Total for Duke University		**170,923**	**-**
Cornell University						
DEPARTMENT OF DEFENSE	6933365	77497-10576	Dexterous Manipulation Specification Via Language and Context Constraints	12.300	47,651	-
			Total for Cornell University		**47,651**	**-**
Woods Hole Oceanographic Institution						
DEPARTMENT OF DEFENSE	6924238	A100847	Unified Four-dimensional Multi-resolution Oceanographic, Acoustic and Atmospheric Modeling and Dynamics	12.300	133,841	36,672
DEPARTMENT OF DEFENSE	6929292	A101085	Impacts of Changing Climate on Pacific Island-based Defense Installations	12.RD	8,986	-
			Total for Woods Hole Oceanographic Institution		**142,828**	**36,672**
Aurora Flight Sciences Corporation						

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DEPARTMENT OF DEFENSE	6926953	AFS12-1645	Autonomous Aeriel Cargo Utility System	12.RD	-70	-
			Total for Aurora Flight Sciences Corporation		**-70**	**-**
Mimosa Acoustics Inc.						
DEPARTMENT OF DEFENSE	6932239	AGMT EFF. DATE 7/29/15	Novel Methods to Monitor Health Status and Clinical Laboratory Data: Portable Acquisition, Assessment, and Reporting of Middle Ear Function and Hearing	12.RD	-19,789	-
			Total for Mimosa Acoustics Inc.		**-19,789**	**-**
Mide Technology						
DEPARTMENT OF DEFENSE	6931299	AGRMNT EFFECTIVE 12/16/2014	STTR Phase II: Light Weight Atmospheric Diving Suit	12.RD	82,722	-
			Total for Mide Technology		**82,722**	**-**
Applied Physical Sciences Corp.						
DEPARTMENT OF DEFENSE	6931085	APS-14-12 SLIN 0001, S.P 3470-167, TASK 4.12	DASH Phase 4: Ocean Sensing Concepts	12.RD	109,451	-
			Total for Applied Physical Sciences Corp.		**109,451**	**-**
Florida State University						
DEPARTMENT OF DEFENSE	6935158	R01849	ESRDC - FSU and MIT Sea Grant Collaboration	12.300	148,182	-
			Total for Florida State University		**148,182**	**-**
Battelle Memorial Institute						
DEPARTMENT OF DEFENSE	6935623	SUB NO. 550379/PO US001-0000550379	Passive Sampling Optimization at Apra Harbor and Orote Landfill, Guam	12.RD	21,124	-
			Total for Battelle Memorial Institute		**21,124**	**-**
Advanced Technology International						
DEPARTMENT OF DEFENSE	6931548	TASK ORDER 01: BASE TO AGREEMENT 2015-461	Base Task Order Agreement	12.RD	246,303	-
			Total for Advanced Technology International		**246,303**	**-**
Siemens Medical Solutions USA, Inc.						
DEPARTMENT OF DEFENSE	6929661	102-01	Knowledge Representation in Neural Systems	12.RD	744,523	22,102
			Total for Siemens Medical Solutions USA, Inc.		**744,523**	**22,102**
HRL Laboratories, LLC						

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DEPARTMENT OF DEFENSE	6933521	15026-503667-DS/BCX3.150.MIT000/1	Microwave Quantum Engineering for Semiconductor Quantum Dot Qubits	12.RD	194,152	-
DEPARTMENT OF DEFENSE	6935707	15026-503667-DS/BFX3.150.MIT000	Microwave Quantum Engineering for Semiconductor Quantum Dot Qubits	12.RD	10,434	-
			Total for HRL Laboratories, LLC		**204,586**	**-**
Stevens Institute of Technology						
DEPARTMENT OF DEFENSE	6934069	2102620-02	(SERC) Collaboration Agreement: Systems Engineering Research Center	12.RD	64,816	-
DEPARTMENT OF DEFENSE	6933776	AGMT DTD 03/02/2016	(SERC) Collaboration Agreement: Systems Engineering Research Center	12.RD	222,777	-
DEPARTMENT OF DEFENSE	6936008	HQ0034-13-D-0004/TO #0077	(SERC) Collaboration Agreement: Systems Engineering Research Center	12.RD	97,049	-
			Total for Stevens Institute of Technology		**384,641**	**-**
Ohio State University						
DEPARTMENT OF DEFENSE	6931042	60040869/RF01385268	Modeling, Analysis and Control for Robust Interdependent Networks	12.351	125,552	-
			Total for Ohio State University		**125,552**	**-**
ESPACE						
DEPARTMENT OF DEFENSE	6928454	AGMT. DTD. 8/14/13	IMPACT: Validation of iEPS in Space	12.RD	700,549	-
			Total for ESPACE		**700,549**	**-**
Children's Hospital Boston						
DEPARTMENT OF DEFENSE	6935620	GENFD0001191127	HealthMap Computational Epidemiology Group - Maimuna Majumder - IARPA	12.RD	44,999	-
			Total for Children's Hospital Boston		**44,999**	**-**
Pennsylvania State University						
DEPARTMENT OF DEFENSE	6923446	S11-07	High Intensity Superconducting Cyclotron Demonstration for Active Interrogation (Thrust Area 1- Science of WMD Sensing and Recognition)	12.RD	0	-
			Total for Pennsylvania State University		**0**	**-**
			TOTAL for Department of Defense		**35,970,391**	**339,654**

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DEPARTMENT OF COMMERCE						
North Pacific Research Board						
DEPARTMENT OF COMMERCE	6931400	1411	Influenza in synanthropic gulls: are congregation sites hotspots for viral evolution?	11.472	30,183	-
			Total for North Pacific Research Board		**30,183**	**-**
Northeastern University						
DEPARTMENT OF COMMERCE	6935162	599807-78050	Investigation of The Effects of Ocean Acidification & Warming	11.417	21,308	-
			Total for Northeastern University		**21,308**	**-**
International Electronics Manufacturing Initiative						
DEPARTMENT OF COMMERCE	6930571	70NANB14H053-0001	Integrated Photonics	11.609	-51	-
			Total for International Electronics Manufacturing Initiative		**-51**	**-**
			TOTAL for Department of Commerce		**51,440**	**-**

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DEPARTMENT OF ENERGY						
University of Illinois-Urbana Champaign						
DEPARTMENT OF ENERGY	6935555	078620-16205 (GRANT CODE: AC995)	Cyber Resilient Energy Delivery Consortium (CREDC)	81.122	787,894	-
			Total for University of Illinois-Urbana Champaign		**787,894**	**-**
Battelle Energy Alliance, LLC						
DEPARTMENT OF ENERGY	6926607	128728	Scholarship for Nuclear Communications and Methods for Evaluation of Nuclear Project Acceptability	81.RD	95,792	-
DEPARTMENT OF ENERGY	6933222	REL 009/CONTRACT 0112583	Neutron microscope to enable high-resolution neutron tomography at INL	81.RD	261,162	-
DEPARTMENT OF ENERGY	6933487	RELEASE 00003/CONTRACT 00112583	INL-NUC Collaboration Activities at Massachusetts Institute of Technology	81.RD	134,254	-
DEPARTMENT OF ENERGY	6933641	RELEASE 10 / CONTRACT 112583	Implementation and Validation of Radiation Defect Cluster Dynamics in MOOSE	81.RD	84,359	-
DEPARTMENT OF ENERGY	6933632	RELEASE 11/CONTRACT 00112583	Integration of Nuclear and Renewables in Competitive Electricity Markets: Joint U.S.-Japan Study Phase II	81.RD	202,660	-
DEPARTMENT OF ENERGY	6931188	RELEASE NO 004 / CONTRACT NO 0112583	Development of State of the Art Capabilities to Support TREAT Modeling and Simulation	81.RD	74,287	-
DEPARTMENT OF ENERGY	6931396	RELEASE NO. 005 / CONTRACT NO. 00112583	Cross Section Generation in High Fidelity Multi-Physics Simulations from High Fidelity Monte Carlo Calculations	81.RD	256,254	-
DEPARTMENT OF ENERGY	6925178	RELEASE49/CONTRACT63	3117 Life Prediction of Spent Fuel Storage Canister Material	81.RD	122,267	-
			Total for Battelle Energy Alliance, LLC		**1,231,035**	**-**
Jefferson Science Associates, LLC						
DEPARTMENT OF ENERGY	6926116	12-P2092	MOLLER Engineering	81.049	87,412	-
DEPARTMENT OF ENERGY	6930896	15-P0048	BaBar DIRC Focusing Study	81.RD	19,505	-
			Total for Jefferson Science Associates, LLC		**106,916**	**-**
Harvard University						
DEPARTMENT OF ENERGY	6920743	133512-5028381	Transport and Imaging of Mesoscopic Phenomena in Single and Bilayer Graphene	81.049	269,715	-
			Total for Harvard University		**269,715**	**-**
Sandia National Laboratories						
DEPARTMENT OF ENERGY	6933928	1670661 / CPA 1340868	Robust Heterogeneous Networks	81.RD	20,232	-
DEPARTMENT OF ENERGY	6933920	1678103 / CPA 1340868	Deformable Structures	81.RD	15,397	-

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DEPARTMENT OF ENERGY	6934858	1702501 / CPA 1340868	Time Dependent Thermal Model Of PETN Deposition Process	81.RD	20,000	-
DEPARTMENT OF ENERGY	6919233	611557	Bayesian Data Assimilation for Stochastic Multiscale Models of Transport in Porous Media	81.RD	-1,127	-
DEPARTMENT OF ENERGY	6933746	PO #1630435	Millimeter-wave Thermal Analysis for In-Process Assessment	81.RD	96,968	-
DEPARTMENT OF ENERGY	6933745	PO1619650/ CPA1340868	Utilization of CR39 on Z for DD yield, yield anisotropies, and neutron spectroscopy	81.RD	95,546	-
			Total for Sandia National Laboratories		**247,016**	**-**
Composite Technology Development, Inc.						
DEPARTMENT OF ENERGY	6934564	16779	Insulation of TSTC for fusion applications	81.049	44,939	-
			Total for Composite Technology Development, Inc.		**44,939**	**-**
Columbia University						
DEPARTMENT OF ENERGY	6930075	2(GG008553)	Device and Fabrication Technology for the Next Generation of Medium Voltage Vertical Transistors	81.135	324,333	-
			Total for Columbia University		**324,333**	**-**
Research Triangle Institute						
DEPARTMENT OF ENERGY	6931152	2-340-0214469-51895L	Engine fuel reformer for natural gas	81.135	-1,997	-
			Total for Research Triangle Institute		**-1,997**	**-**
University of Nebraska						
DEPARTMENT OF ENERGY	6932940	25-1217-0014-002	Radiation tolerance and mechanical properties of nanostructured amorphous-ceramic/metal composites	81.121	3,908	-
			Total for University of Nebraska		**3,908**	**-**
Brookhaven National Laboratory						
DEPARTMENT OF ENERGY	6930254	269362	Repair of the foward GEM Tracker for the STAR Experiment	81.RD	12,924	-
DEPARTMENT OF ENERGY	6934084	312673	Beam Energy Scan Theory Collaboration	81.RD	46,858	-
DEPARTMENT OF ENERGY	6934181	313021	Transverse Momentum Dependent Parton Structure Collaboration	81.RD	57,055	-
			Total for Brookhaven National Laboratory		**116,837**	**-**
University of Michigan						
DEPARTMENT OF ENERGY	6933233	3002219006	CERC-CV: U.S. -China Clean Energy Research Center for Clean Vehicles	81.087	39,979	-

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DEPARTMENT OF ENERGY	6931203	3003222367	Consortium for Verification Technology (CVT)	81.113	700,647	-
			Total for University of Michigan		**740,626**	**-**
Los Alamos National Security, L.L.C.						
DEPARTMENT OF ENERGY	6932544	334926	Charged Particle Stopping Power Models	81.RD	-3,164	-
DEPARTMENT OF ENERGY	6933394	SUBCONTRACT # 365489	Source-independent Converted Phase Imaging of MEQ Data to Provide Fracture Locations	81.RD	70,868	-
DEPARTMENT OF ENERGY	6931281	SUBCONTRACT #314311	Nanochannels 749674-001-10	81.RD	5,199	-
DEPARTMENT OF ENERGY	6934723	SUBCONTRACT #399489	Emergency Control of Power System Networks	81.RD	81,891	-
DEPARTMENT OF ENERGY	6928567	SUBCONTRACT 248341-1	Development of a New, Neutron, Time Correlated, Interrogation Method for Measurement of 235U Content in LWR Fuel Assemblies	81.RD	53,325	-
			Total for Los Alamos National Security, L.L.C		**208,119**	**-**
UT- Battelle LLC						
DEPARTMENT OF ENERGY	6923816	4000102892	Consortium for Advanced Simulation of LWRs (CASL)	81.RD	-1,107	-
DEPARTMENT OF ENERGY	6933205	4000102892	The Consortium for Advanced Simulation of Light Water Reactors (CASL)	81.RD	1,469,087	-
DEPARTMENT OF ENERGY	6925060	4000109825	Consortium for Advanced Simulation of LWRs (CASL)	81.RD	-2,877	-
DEPARTMENT OF ENERGY	6934834	4000149783	Development of Next Generation Slicing Software for Additive Manufacturing	81.RD	87,318	-
DEPARTMENT OF ENERGY	6923222	SUBCONTRACT NO. 4000100452	ITER ECH Transmission Line System: Research and Scientific Support	81.RD	60,100	-
			Total for UT- Battelle LLC		**1,612,521**	**-**
University of Rochester						
DEPARTMENT OF ENERGY	6928068	416107-G	Magnet PTOF	81.049	798,026	-
			Total for University of Rochester		**798,026**	**-**
Pennsylvania State University						
DEPARTMENT OF ENERGY	6931091	5023-MIT-DOE-2377	Ensemble cell-wide kinetic modeling of anaerobic organisms to support fuels and chemicals production	81.049	86,195	-
DEPARTMENT OF ENERGY	6930592	5028-MIT-DOE-1090	Center for Lignocellulose Structure and Formation (CLSF)	81.049	251,195	-
DEPARTMENT OF ENERGY	6935460	5555-MIT-DOE-6825	Grid Independence and Uncertainty Quantification in Gas-Solid Flow Simulations	81.089	23,686	-
			Total for Pennsylvania State University		**361,076**	**-**

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Bay Area Photovoltaic Consortium						
DEPARTMENT OF ENERGY	6927896	60212346-51077-J	Design Principles and Defect Tolerances of Silicon / III-V Multijunction Interfaces	81.087	61,610	-
DEPARTMENT OF ENERGY	6932020	60962268-51077	Defect Identification and Mitigation in High-Lifetime Silicon Materials: Growth, Processing, Reliability	81.087	2,872	-
			Total for Bay Area Photovoltaic Consortium		**64,482**	**-**
Plasma Processes, LLC						
DEPARTMENT OF ENERGY	6936177	6028-004-JF-102915REV2	Breakdown Resistant Refractory Metal Coatings for Field-Aligned ICRF Antennas	81.049	101,085	-
			Total for Plasma Processes, LLC		**101,085**	**-**
Stanford University						
DEPARTMENT OF ENERGY	6931109	60779061-115503	Perovskite Solar Cells for High Efficiency Tandems	81.087	149,336	-
			Total for Stanford University		**149,336**	**-**
State University of New York						
DEPARTMENT OF ENERGY	6931213	68799	EFRC:NorthEast Center for Chemical Energy Storage (NECCES)	81.049	169,564	-
			Total for State University of New York		**169,564**	**-**
UChicago Argonne, LLC						
DEPARTMENT OF ENERGY	6934180	6F-31461	Investigation of Cutting Physics for Ultra Microtome Brain Tissue Sectioning	81.RD	32,966	-
DEPARTMENT OF ENERGY	6927829	SUBCONTRACT NO. 3F-31144	Joint Center for Energy Storage Research (JCESR)	81.RD	1,098,831	-
DEPARTMENT OF ENERGY	6928492	WO 2J-30101-0005A	Draft Conversion SAR with Updated LEU Element Design for LEU Conversion of the MITR-II Research Reacto	81.RD	-1,406	-
DEPARTMENT OF ENERGY	6928779	WO 2J-30101-0007A	Task 7: LEU UZrH Feasibility Study in Support of LEU Conversion of the MITR-II Research Reactor	81.RD	-198	-
DEPARTMENT OF ENERGY	6934260	WO 2J-30101-0008A	Task 8: Preliminary SAR Review and Conversion Transition Planning for the MITR-II Research Reactor	81.RD	269,897	-
			Total for UChicago Argonne, LLC		**1,400,089**	**-**
University of Wisconsin						
DEPARTMENT OF ENERGY	6935633	704K303	Sodium cooled fast reactor key modeling and analysis for commercial deployment	81.121	44,149	-

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			Total for University of Wisconsin		**44,149**	**-**
Electroformed Nickel, Inc.						
DEPARTMENT OF ENERGY	6936346	AGREEMENT DATED 04/11/17	Demonstration of the technological capability for production of neutron-focusing nickel mirrors	81.049	6,648	-
			Total for Electroformed Nickel, Inc.		**6,648**	**-**
Philips Lumileds Lighting Company						
DEPARTMENT OF ENERGY	6932845	AGREEMENT DATED 9/1/2015	Improved InGaN LED System Efficacy and Cost via Droop Reduction	81.086	273,014	-
			Total for Philips Lumileds Lighting Company		**273,014**	**-**
Faraday Technology, Inc						
DEPARTMENT OF ENERGY	6934779	AGREEMENT EFF. 08/12/2016	Micro-electrocatalytic Upgrading of Carbon Dioxide to Hydrocarbons	81.049	60,987	-
DEPARTMENT OF ENERGY	6933715	AWD. DTD. 3/29/2016	Microfluidic system for CO2 reduction to hydrocarbons	81.049	44,195	-
			Total for Faraday Technology, Inc		**105,182**	**-**
Impact Technologies, LLC						
DEPARTMENT OF ENERGY	6932037	AMENDMENT 1	Deep Borehole Storage of Nuclear Waste Using MMW Technology	81.049	134,721	-
DEPARTMENT OF ENERGY	6932236	AMENDMENT 1 - PHASE II	Deep Borehole Storage of Nuclear Waste Using MMW Technology	81.049	143	-
DEPARTMENT OF ENERGY	6931028	STTR AGRMT DATED 07/28/2014	Deep Borehole Storage of Nuclear Waste Using MMW Technology	81.049	-2,433	-
			Total for Impact Technologies, LLC		**132,431**	**-**
Aerodyne Research Incorporated						
DEPARTMENT OF ENERGY	6930649	ARI 10665-1	Dual Quantum Cascade Laser System for Simultaneous Measurements of 13CH4 and CH3D Methane Isotopologues	81.RD	68,920	-
			Total for Aerodyne Research Incorporated		**68,920**	**-**
Dawn Research, Inc.						
DEPARTMENT OF ENERGY	6931946	AWD. DTD. 5/12/2015	SBIR Phase II: Development of low cost method for fabrication of metal neutron guides	81.049	81,151	-
			Total for Dawn Research, Inc.		**81,151**	**-**
Lawrence Livermore National Security, LLC						

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DEPARTMENT OF ENERGY	6926036	B600100	High Density Implosions on the National Ignition Facility	81.RD	-2,022	-
DEPARTMENT OF ENERGY	6926820	B602126	Chemical Threat Responsive Carbon Nanotube Membranes	81.RD	264,748	-
DEPARTMENT OF ENERGY	6930480	B609612	LDRD: Scalable Holographic and Hierarchical Micromanufacturing Techniques	81.RD	-3	-
DEPARTMENT OF ENERGY	6932165	B613027	High Density Implosions on OMEGA and the NIF	81.RD	487,997	-
DEPARTMENT OF ENERGY	6933555	B615534	Multi-Nuclear Burn Diagnostic Development	81.RD	696,633	-
DEPARTMENT OF ENERGY	6935266	NO. B620960	Guiding the design of vaccination strategies aimed toward generating broadly neutralizing antibodies against highly mutable pathogens: HIV and Influenza as case studie	81.RD	48,301	-
			Total for Lawrence Livermore National Security, LLC		**1,495,654**	**-**
Free Form Fibers LLC						
DEPARTMENT OF ENERGY	6933442	DE-SC0011954	SBIR: AN ADDITIVE MANUFACTURING TECHNOLOGY FOR THE FABRICATION AND CHARACTERIZATION OF NUCLEAR REACTOR FUEL	81.049	124,444	-
			Total for Free Form Fibers LLC		**124,444**	**-**
Filter Sensing Technologies, Inc.						
DEPARTMENT OF ENERGY	6932358	FST-MIT070115	SBIR Phase I: High Efficiency SI Engines by Generation of Multiple Fuels from Gasoline	81.049	26,320	-
			Total for Filter Sensing Technologies, Inc.		**26,320**	**-**
Oregon State University						
DEPARTMENT OF ENERGY	6932973	G0157A-B	Computational and Experimental Benchmarking for Transient Fuel Testing	81.121	125,015	-
			Total for Oregon State University		**125,015**	**-**
Honeywell						
DEPARTMENT OF ENERGY	6933853	N000189586	Additive Manufacturing of Porous Solids	81.RD	412,910	-
			Total for Honeywell		**412,910**	**-**
General Atomics						
DEPARTMENT OF ENERGY	6932860	PO #4500058260	MIT Collaboration for DIII-D Program	81.049	941,808	-
			Total for General Atomics		**941,808**	**-**
Ford Motor Company						

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DEPARTMENT OF ENERGY	6928693	PO 14164101_001 SUBAWARD RQ13-23R05	Rapid Freeform Sheet Metal Forming: Technology Development and System Verification	81.086	106,901	-
			Total for Ford Motor Company		**106,901**	**-**
ALSTOM Renewable US LLC						
DEPARTMENT OF ENERGY	6933094	PO 4101033513	Advanced Algorithms for the Forecasting of Free Surface Elevations in a Seastate	81.087	100,001	-
			Total for ALSTOM Renewable US LLC		**100,001**	**-**
Bettis Atomic Power						
DEPARTMENT OF ENERGY	6926212	PO#7009771	The Effect of Environment, Chemistry and Microstructure on the Corrosion Fatigue Behavior of Austenitic Stainless Steels	81.RD	-7,842	-
			Total for Bettis Atomic Power		**-7,842**	**-**
Princeton Plasma Physics Laboratory						
DEPARTMENT OF ENERGY	6933435	S014796-F	Transport and Turbulence Physics Studies and Data Analysis Collaboration on NSTX-U	81.RD	109,380	-
DEPARTMENT OF ENERGY	6933616	S-014906-W	Physics Support on ITER CIXS Diagnostic Development	81.049	77,038	-
DEPARTMENT OF ENERGY	6933815	S-014959-H	Conceptual Design of the NSTX-U Divertor Cryopump	81.RD	157,790	-
DEPARTMENT OF ENERGY	6934059	S-015054-W	Conceptual Design of the NSTX-U X-Ray Imaging Crystal Spectrometer	81.049	43,240	-
DEPARTMENT OF ENERGY	6936117	S015578-H	NSTX-U ROOT CAUSE ANALYSIS OF PF1-A COIL FAILURE SUPPORT	81.049	14,867	-
DEPARTMENT OF ENERGY	6936363	S015616-H	PF1 Coil Fabrication Support	81.049	17,498	-
			Total for Princeton Plasma Physics Laboratory		**419,812**	**-**
Texas A & M						
DEPARTMENT OF ENERGY	6933413	S162805	Advanced surface plasma nitriding for development of corrosion resistant and accident tolerant fuel cladding	81.121	108,469	-
			Total for Texas A & M		**108,469**	**-**
University of Arkansas						
DEPARTMENT OF ENERGY	6935475	SA1712153	Cybersecurity Center for Secure Evolvable Energy Delivery Systems (SEEDS)	81.112	75,023	-
			Total for University of Arkansas		**75,023**	**-**
AdvR, Inc.						

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DEPARTMENT OF ENERGY	6932147	STTR AGREEMENT 06/23/2015 UNDER DE-SC0011377	STTR PH II: Fiber-coupled Optical Waveguide Cross-Correlator for Attosecond Timing Synchronization	81.049	72,440	-
			Total for AdvR, Inc.		**72,440**	**-**
FuelCell Energy						
DEPARTMENT OF ENERGY	6931727	SUBAWARD 10001437	Dual Mode Intermediate Temperature Fuel Cell: Liquid Fuels and Electricity	81.135	51,329	-
			Total for FuelCell Energy		**51,329**	**-**
Arizona State University						
DEPARTMENT OF ENERGY	6929080	SUBAWARD 14-381	Thin Silicon Solar Cells: A Path to 35% Shockley-Queisser Limits	81.087	55,463	-
			Total for Arizona State University		**55,463**	**-**
SURA / Jefferson Lab						
DEPARTMENT OF ENERGY	6935157	SUBCONTRACT JSA-17-C0086	GlueX DIRC Optical Boxes	81.RD	54,486	-
			Total for SURA / Jefferson Lab		**54,486**	**-**
Lawrence Berkeley National Laboratory						
DEPARTMENT OF ENERGY	6923287	SUBCONTRACT NO. 6947174	Natural Ventilation for Cooling in Commercial and Residential Buildings and Data Centers	81.RD	9,370	-
DEPARTMENT OF ENERGY	6927680	SUBCONTRACT NO. 7056411	First Principles Calculations of Existing and Novel Electrode Materials	81.RD	10,115	-
DEPARTMENT OF ENERGY	6927681	SUBCONTRACT NO. 7056592	Design and Scalable Assembly of High Density Low Tortuosity Electrodes	81.RD	203,738	-
DEPARTMENT OF ENERGY	6928821	SUBCONTRACT NO. 7075314	High-throughput sorting of microbial cells with specific functional traits for single cell genomics by combining labeling with heavy water, Raman microspectroscopy, microfluidics and flow cytometry	81.RD	202,038	188,335
DEPARTMENT OF ENERGY	6931128	SUBCONTRACT NUMBER 7204982	Molecular Determinants of Community Activity, Stability and Ecology (MDCASE)	81.RD	105,656	-
			Total for Lawrence Berkeley National Laboratory		**530,917**	**188,335**
National Renewable Energy Laboratory						
DEPARTMENT OF ENERGY	6927932	UGA-0-41029-09	Sustainable Photovoltaics and Scalable Concentrating Solar Power (SERIIUS) - MIT	81.RD	189,236	83,088
DEPARTMENT OF ENERGY	6930867	UGA-0-41029-16/ER392000	Center for Next Generation of Materials by Design: Incorporating Metastablility	81.049	295,668	-

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DEPARTMENT OF ENERGY	6933524	UGA-0-41029-18/ST6P1510	Bulk Defect Mitigation in Czochralski and Novel Silicon	81.049	136,296	-
			Total for National Renewable Energy Laboratory		**621,201**	**83,088**
University of Texas - Austin						
DEPARTMENT OF ENERGY	6928873	UTA13-000874	Extreme-scale Bayesian inference for uncertainty quantification of complex simulations)	81.049	144,903	-
DEPARTMENT OF ENERGY	6931037	UTA14-000839	Physics and Engineering Design Support for ITER Electron Cyclotron Emission (ECE) Diagnostic Front-End and X-Mode Radiometer	81.RD	57,511	-
DEPARTMENT OF ENERGY	6931207	UTA14-001222	Nuclear Technology R&D Strategies in an Era of Energy Price Uncertainty	81.121	88,441	-
			Total for University of Texas - Austin		**290,854**	**-**
University of Washington						
DEPARTMENT OF ENERGY	6933774	UWSC8904	Ultrafast Control of Emerging Electronic Phenomena in 2D Quantum Materials	81.049	343,606	-
			Total for University of Washington		**343,606**	**-**
			TOTAL for Department of Energy		**15,395,826**	**271,423**

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DEPARTMENT OF HEALTH & HUMAN SERVICES						
University of Texas-MD Anderson Cancer Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931658	00002863	Project 3: Models for genetic assessment of tumor maitenance genes in PDAC	93.396	0	-
			Total for University of Texas-MD Anderson Cancer Center		**0**	**-**
University of Pittsburgh						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931040	0038320(124919-1)	Novel Glaucoma Diagnostics for Structure and Function	93.867	3,155	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932531	0046606(126214-1)	Enhancing neutrophil responses to counter MDR gram negative bacterial pneumonia	93.855	35,023	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933995	NO. 0048768 (127337-1)	Spatial Segregation of Cell Functioning During Motility	93.859	84,777	-
			Total for University of Pittsburgh		**122,955**	**-**
Beth Israel Deaconess Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933877	01026851	Validating Biomarkers for the Prodrome and Transition to Psychosis in Shanghai	93.242	20,963	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933956	01027119	Complex function of Hsf1 in breast cancer	93.393	38,733	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932892	01028330	Research, Resource for Complex Physiologic Signals	93.859	523,993	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935922	01029400	A Psychobiological Follow-up Study of Transition from Prodrome to Early Psychosis	93.242	20,947	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933417	1-U01-CA199252-01	A multi-faceted approach to identifying K-Ras synthetic lethal relationships	93.396	53,625	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932985	SUBAWARD NO. 01028471	A multi-faceted approach to identifying K-Ras synthetic lethal relationships	93.396	35	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935428	SUBAWARD NO. 01029424.	A multi-faceted approach to identifying K-Ras synthetic lethal relationships	93.396	64,000	-
			Total for Beth Israel Deaconess Medical Center		**722,296**	**-**
Icahn School of Medicine at Mount Sinai						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931854	0254-3164-4609	Epigenic Mechanisms of Depression	93.242	-583	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933899	0254-3165-4609	Epigenic Mechanisms of Depression	93.242	66,948	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6932952	HHSN272201400008C/ COA #15	NAIAD Centers of Excellence for Influenza Research and Surveillance	93.RD	19,808	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931820	ISMMS NO. 0258-0509/HHSN272201400008C	NAIAD Centers of Excellence for Influenza Research and Surveillance	93.RD	-1,901	-
			Total for Icahn School of Medicine at Mount Sinai		**84,272**	**-**
Mount Sinai Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932699	0258-0544-4609	NAIAD Centers of Excellence for Influenza Research and Surveillance	93.RD	-133	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933839	ISMMS NO. 0258-0509/HHSN272201400008C	NAIAD Centers of Excellence for Influenza Research and Surveillance	93.RD	369,225	-
			Total for Mount Sinai Medical Center		**369,092**	**-**
Oklahoma Medical Research Foundation						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933786	0280-04/MIT PO# S1704196-065	Analysis and Characterization of Trauma-Induced Coagulopathy	93.859	253,346	-
			Total for Oklahoma Medical Research Foundation		**253,346**	**-**
Columbia University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934095	1(GG011006-14)	Health effects of Geochemistry of arsenic and manganese	93.286	11,141	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934117	1(GG012140)	Analysis of Cancer Cell Metabolism in Diverse Environmental Conditions	93.396	343,878	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6929635	2(GG007617) - P O G04804	Mouse Models of Gastric Cancer	93.393	5,451	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932008	2(GG007699)	Regulation of the Ciliated Cell Program in Airway Progenitors	93.838	-1,593	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930471	3(GG007773-04)	Integrated Heart-Liver-Vascular Systems for Drug Testing in Human Health Disease	93.286	-1,568	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932412	3(GG012366-02) PO G10532	Integrated heart-liver-vascular systems for drug testing in human health and disease (Yr 5)	93.286	19,447	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934861	3(GG012366-07) / G11187	Integrated heart-liver-vascular systems for drug testing in human health and disease (Year 5)	93.286	437,959	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6927142	PO G11501 AWARD 1 (GG011803)	Motor Neuron Selector Genes and Mechanism of Their Action	93.853	26,065	-
			Total for Columbia University		**840,780**	**-**
Tufts Medical Center						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6936291	100107-00004	Embedded Peri-Clinical Research Platform for Accelerated Medical Sensor/Algorithm Evaluation & Translation	93.350	29,980	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935658	5014371-SERV/U24TR001609	Johns Hopkins-Tufts Trial Innovation Center	93.350	99,536	-
			Total for Tufts Medical Center		**129,516**	**-**
Dana Farber Cancer Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928787	1006718	Antigen Presentation and T Cell Programmimg in Human Autoimmune Diseases	93.855	336,737	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928903	1214501	Assaying GBM growth and therapy response in single cells and tumorspheres (PQ17)	93.394	0	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6926764	1214503	Assaying GBM growth and therapy response in single cells and tumorspheres (PQ17)	93.394	171,664	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6927451	1216401	Impact of MHC Genotype on Ex Vivo T cell Function in Type 1 Diabetes	93.847	327,117	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934184	1217704	The Dana-Farber Cancer Institute Cancer Target Discovery and Development Center	93.394	52,409	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932916	1225411	DFHCC SPORE in Prostate Cancer - Project 1	93.397	14,395	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932836	1238305	Eliciting B cells to produce anti-HIV gp41 MPER-specific neutralizing antibodies	93.855	14,478	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932882	1238405	Eliciting B cells to produce anti-HIV gp41 MPER-specific neutralizing antibodies (Supplement)	93.855	47,215	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934774	1282101	Targeting immunogenicity to the MPER hinge and C-helix for BNAb elicitation	93.855	22,456	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934749	1282601	Targeting immunogenicity to the MPER hinge and C-helix for BNAb elicitation-Project 2	93.855	224,726	-
			Total for Dana Farber Cancer Institute		**1,211,195**	**-**
Tufts University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933368	100892-00001	Development of Blood Pressure Imager	93.286	259,275	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934832	HH4976	Models to Predict Protein Biomaterial Performance	93.286	470,848	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6929499	HS311 SUBCONTRACT AGMT	Assessment of Food Intake Using Speech-Understanding Technology	93.837	-419	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932883	HS4976	Models to Predict Protein Biomaterial Performance	93.286	-83,698	-

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			Total for Tufts University		**646,007**	**-**
Baylor College of Medicine						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930717	101991083 PO NUMBER 5601049168	Restricted Parent: Center for Protein Folding Machinery	93.867	9,698	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930718	PRIME AWARD NO. 5-PN-2EY016525-08	Restricted Parent: Center for Protein Folding Machinery	93.867	4,151	-
			Total for Baylor College of Medicine		**13,849**	**-**
Stowers Institute for Medical Research						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932380	102108 NIH 0070	Integrated Approaches to Understanding Circuit Function in the Nervous System.	93.173	2,935	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934280	102108 NIH0070	Integrated Approaches to Understanding Circuit Function in the Nervous System.	93.173	85,529	-
			Total for Stowers Institute for Medical Research		**88,464**	**-**
Brigham & Women's Hospital						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6925790	107958	Development of FcRn-Targeted Nanoparticles for Efficient Oral Delivery of Insulin	93.286	982	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928415	109443	Neuroimaging Analysis Center (NAC) - Technology Research and Development Core	93.286	-297	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933980	111384	Detection of cell type specific effects of pathway manipulation in neural cells	93.866	108,066	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934215	112548	Monitoring peripheral blood leukocyte and immune responses in health and disease	93.855	262,384	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933473	113786	PARP9 and PARP14 in atherosclerosis	93.837	21,374	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928788	113856	Multi-Scale Modeling of Sleep Behaviors in Social Networks	93.859	203,565	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934372	114169	Neuroimaging Analysis Center (NAC)	93.286	202,387	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936193	114237	Mucins and immune cell interactions in ovarian cancer pathogenesis & progression	93.396	144,986	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936292	116900	Macrophage-derived microcalcificaitons	93.837	2,241	-
			Total for Brigham & Women's Hospital		**945,686**	**-**
St. Jude Medical						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6932794	111942030-7675542	Mechanisms to diversify repertoire and modify T cell activity after infection	93.855	9,920	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935135	11942040-7719177	Mechanisms to diversify repertoire and modify T cell activity after infection	93.855	20,307	-
			Total for St. Jude Medical		**30,227**	**-**
Harvard School of Public Health						
DEPARTMENT OF HEALTH & HUMAN SERVICES	2746118	112497-5069710	Safety and Health Management of Hazards Associated with Emerging Technologies	93.143	3,712	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935148	112545-5095784	Safety and Health Management of Hazards Associated with Emerging Technologies	93.143	3,369	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934628	113113-5096677	Engineered Nanomaterial Synthesis, Characterization and Method Development Center for Nano-safety Research	93.113	128,608	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934870	114506-5096447	Powering whole genome sequence-based genetic discovery for common human diseases	93.172	68,119	-
			Total for Harvard School of Public Health		**203,809**	**-**
Boston Biomedical Innovation Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935091	115622	Minimally invasive tissue engineered therapies for acute airway injury	93.837	5,465	-
			Total for Boston Biomedical Innovation Center		**5,465**	**-**
Seattle Children's Hospital						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936290	11607SUB	Novel Biologic Therapies for BMT: Mechanistic Evaluation in Rhesus Macaques	93.839	42,325	-
			Total for Seattle Children's Hospital		**42,325**	**-**
Dartmouth College						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930389	1474R653	Applying High-Performance Protein Engineering Tools to HIV Immunogen Design	93.855	12,240	-
			Total for Dartmouth College		**12,240**	**-**
Harvard Medical School						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934985	149855.5100033.0302	Glycan Biomarkers for Rapid and Inexpensive Point-of-Care Diagnosis of Latent and Active Tuberculosis	93.855	355,657	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928300	150737.5073859.0002	Real time fMRI feedback and auditory processing in schizophrenia	93.242	3,152	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932485	152297.5096012.0214	The Harvard Laboratory of Systems Pharmacology	93.859	-31	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934396	152297.5096012.0314	The Harvard Laboratory of Systems Pharmacology	93.859	31,200	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933807	152447.5074647.0207	Neuropsychiatric Genome-Scale and RDOC Individualized Domains (N-GRID)	93.242	28,897	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934412	152448.5079089.0308	Patient - Centered Information Commons	93.866	38,655	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936632	152448.5079089.0408	Patient - Centered Information Commons	93.866	12,540	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933667	152518.5097230.0006	Metabolic Exchange between Marine Bacteria	93.859	16,602	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931022	152754.5068079.0002	Targeting a Novel Regulator of Brain Aging and Alzheimer's Disease	93.866	292,721	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933269	153032.5091220.0102	4D Nucleome Network Data Coordination and Integration Center	93.393	36,023	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935049	153032.5091220.0202	4D Nucleome Network Data Coordination and Integration Center	93.393	106,985	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936336	153036	Billing Agreement- Training Grant Marzyeh Ghassemi	93.879	18,395	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934227	AGARWAL_2016_152774	Letter of Agreement: Radhika Agarwal	93.837	4,669	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935961	BERNHARDT_TOM_BA_152644	Letter Agreement: Michael Tom Spring 2017-Fall 2018	93.855	6,013	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934326	GEORGE_CHAO_152772	Letter of Agreement: George Chao	93.172	61,626	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932941	HMS FUND #152433	Training Grant - Lydia Letham - Boston-Area Research Training Program in Biomedical Informatics	93.879	8,262	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933916	HMS FUND# 152433	Boston-Area Research Training Program in Biomedical Informatics: Training Grant-Marzyeh Ghassemi	93.879	16,531	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934035	HMS FUND# 152433	Boston-Area Research Training Program in Biomedical Informatics: Training Grant-Tristan Naumann	93.879	24,793	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934228	JANG_2016_152767	Letter of Agreement: MinYoung Jang	93.837	9,338	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934416	SUBAWARD 152772.5096243.0205	Center for Genomically Engineered Organs	93.172	108,182	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933497	SUBAWARD 152772.5906243.0105	Center for Genomically Engineered Organs	93.172	498	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934425	SUBAWARD: 152448.5093967.0309	Patient-Centered Information Commons	93.172	81,535	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
			Total for Harvard Medical School		**1,262,244**	**-**
Research Foundation S.U.N.Y.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931096	15-01	Translational control of ROS management	93.113	170,832	-
			Total for Research Foundation S.U.N.Y.		**170,832**	**-**
New York University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933950	15-A1-00-002875-01/PO NO. 104698	Thalamic reticular nucleus-specific Cre mice for functional interrogation	93.242	81,507	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935163	17-A0-00-006701-01	Novel Diagnostics for Glaucoma Structure and Function	93.867	44,459	-
			Total for New York University		**125,966**	**-**
Louisiana State University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932453	16-22-126	Role of Neuropeptides in Stress-Induced Escalation of Alcohol Drinking	93.273	441	-
			Total for Louisiana State University		**441**	**-**
Leidos Biomedical Research Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933607	16X070Q	Malaria Antibody Function	93.RD	41,658	-
			Total for Leidos Biomedical Research Inc.		**41,658**	**-**
Research Foundation of SUNY Polytechnic Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934994	17-80	Translational regulation in exposure biology: Xenobiotic-induced reprograming of tRNA modifications and selection translation of codon-biased response genes in rat and human models	93.113	100,815	-
			Total for Research Foundation of SUNY Polytechnic Institute		**100,815**	**-**
LeafLabs, LLC						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931272	1R43MH101943-01A1	Electronics and computational hardware for ultra-high channel count electrophysiological recordings of neural activity	93.242	7,172	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934221	R43MH109332-01	High Speed, Multi-sensor Light Field Deconvolution Microscopy for Whole Brain Recording of Neuronal Activity	93.242	176,738	-
			Total for LeafLabs, LLC		**183,910**	**-**

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University of California						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934457	2016-3340	From structure to therapy: the TRiC Chaperonin network in Huntington's disease	93.855	220,859	-
			Total for University of California		**220,859**	**-**
The Wellcome Trust						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934170	2186-05	GENCODE: Comprehensive gene annotation for human and mouse	93.172	150,654	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932582	SUBAWARD 2186-05	GENCODE: Comprehensive gene annotation for human and mouse	93.172	-10,177	-
			Total for The Wellcome Trust		**140,477**	**-**
Massachusetts General Hospital						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933538	219396	Letter of Agreement: Emily Lindemer	93.279	4,521	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933539	219396	Letter of Agreement: Erica Mason	93.279	3,820	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935291	219396 - K. CHANG	Letter of Agreement: Ken Chang	93.279	35,100	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933179	219423	Letter of Agreement: Agata Wisniowska	93.279	2,305	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933215	219423	Letter of Agreement: Giorgia Grisot	93.279	4,451	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6924807	219658	Parallel Excitation Methods for High Field MRI	93.286	157	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932717	223253	SPORE: Targeted Therapies for Gliomas	93.397	19,829	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934226	223307	Letter of Agreement: Antoine Ramier	93.173	0	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930051	224256	Stable, High Relaxivity MRI Contrast Agents	93.286	118,559	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935552	224530	Bernhard Zimmermann-Billing Agreement MGH	93.286	52,452	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931354	225360	NIRF-OFDI of inflammation in atheroma progression and stent complications	93.837	14,952	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935610	225706	Letter of Agreement: Giorgia Grist 080116-053117	93.242	19,552	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932581	226025	MRI-GENetics Interface Exploration (MRI-GENIE) Study	93.286	24,739	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6932337	226205	An integrated Closed Loop Feedback System for Treatment of Cardio metabolic Disease	93.855	21,192	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934685	226277	Letter Agreement: Antoine Ramier	93.867	11,415	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932555	226789	Reversal of Liver Cirrhosis	93.847	0	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935873	226852	Letter Agreement: Justin Rice Spring 2017	93.855	4,688	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933014	227077	Genetic Determinants of Schizophrenia Intermediate Phenotypes	93.242	75,429	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934681	227085	Letter Agreement: Sheldon Kwok	93.395	8,631	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935740	227296	Optimizing human B and T cell vaccines against HIV using humanized BLT mice	93.855	55,800	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935875	227341	Letter Agreement: Ling-Ya "Monica" Chao Spring 2017-Fall 2018	93.853	6,013	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928119	227596	Stephanie Nam, Off-Campus RA – 1/13-1/15	93.394	1,554	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934687	228098	Letter of Agreement: Sheldon Kwok	93.855	6,490	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935177	228193	Injury-inducible Activation of Cardiomyocyte Proliferation	93.837	32,370	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934501	228314	Natural language processing for characterizing psychopathology	93.242	22,437	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934686	228599	Letter Agreement: Antoine Ramier	93.286	11,415	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935505	228599	Letter of Agreement: Antoine Ramier	93.286	22,956	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935094	229297	Letter of Agreement: SangYeon Cho	93.310	19,115	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935432	229297 - DANNENBERG	Letter of Agreement: Paul Dannenberg	93.310	41,416	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935377	229354	Improving Human fMRI through Modeling and Imaging Microvascular Dynamics	93.242	29,242	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935622	229428	Filtered point process inference framework for modeling neural data	93.286	53,745	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935992	229916	Interfering with the macrophage life cycle in atherosclerosis	93.837	8,191	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933460	AGREEMENT 227024	Development and testing of novel hydration sensors for use in pediatrics	93.286	3,903	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6936128	AGREEMENT 230327	Development and testing of novel hydration sensors for use in pediatrics	93.286	91,765	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6926604	SUBAWARD 227784	Hypoxia-induced Metabolic Changes in Cancer	93.866	46,956	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6925861	SUBAWARD NO. 220701	Ambulatory Monitoring of Vocal Function to Improve Voice Disorder Assessment	93.173	-15,088	-
			Total for Massachusetts General Hospital		**860,070**	**-**
Scintillon Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934824	22136-207-450	Novel Proteomics Approach to HIV-Associated Neurocognitive Disorder & Drug Abuse	93.279	17,539	-
			Total for Scintillon Institute		**17,539**	**-**
La Jolla Institute for Allergy and Immunology						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934303	22496-33-382	Maximizing germinal centers and somatic hypermutation to HIV Env immunogens	93.855	136,436	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935739	22497-33-382	Maximizing germinal centers and somatic hypermutation to HIV Env immunogens	93.855	23,727	-
			Total for La Jolla Institute for Allergy and Immunology		**160,163**	**-**
Albert Einstein College						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931783	31521R	Stem cell-based Therapies for Mitigation of Acute Radiation Syndromes	93.855	-802	-
			Total for Albert Einstein College		**-802**	**-**
Georgetown University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930175	410646-GR409880-MIT	Non-Invasive Evaluation of Transplant Kidney using OCT	93.847	96,360	-
			Total for Georgetown University		**96,360**	**-**
National Bureau of Economic Research, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934630	4117B.MIT	Determinants of Medical Spending for the Elderly: Insurance, Patents, Providers	93.866	262,531	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934165	4117B.MIT	The Design of Social Insurance for the Elderly: Public Pensions and Health Insurance	93.866	0	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6926614	JPAL-33-4135-08	Intervention to Fight Anemia & Improve Well-Being in a Very Low Income Setting	93.866	1,982	-
			Total for National Bureau of Economic Research, Inc.		**264,513**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
Boston University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6929218	4500001446	Causal Analysis of Electrically Connected Neural Networks	93.242	21,781	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932350	4500001788	Center for Innovation in Point of Care Technologies for the Future of Cancer Care	93.286	7,187	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932284	4500001791	Center for Innovation in Point of Care Technologies for the Future of Cancer Care	93.286	-801	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932552	4500001882	Prefrontal and Medial-Temporal Interactions in Memory	93.242	112,530	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933002	4500001922	Engineering Multicellular Tissue Structure, Function, and Vascularization	93.286	290,596	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933804	4500002031	Inflammation in human obesity and type 2 diabetes	93.847	34,285	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933944	4500002049	Modeling bi-directional signaling and cytoskeletal dynamics in 3D cell migration	93.393	246,899	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934967	4500002153	Center for Innovation in Point of Care Technologies for the Future of Cancer Care	93.286	67,422	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935452	4500002343	Modeling bi-directional signaling and cytoskeletal dynamics in 3D cell migration	93.393	39,369	-
			Total for Boston University		**819,268**	**-**
Trustees of Boston University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932065	4500001791	Center for Innovation in Point of Care Technologies for the Future of Cancer Care	93.286	0	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934682	55203805	Letter of Agreement: Hyun Ho Song	93.286	52,452	-
			Total for Trustees of Boston University		**52,452**	**-**
Northeastern University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933466	500449-78050	Predictability in Complex Object Control	93.865	112,203	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935020	500489-78051	GuMI: New In Vitro Platforms to Parse the Human Gut Epithelial-Microbiome-Immune Axis	93.286	244,457	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935732	500514-78051	Quantification of Predictive Motor Impairments in Individuals with ASD	93.865	10,588	-
			Total for Northeastern University		**367,247**	**-**
The Broad Institute, Inc.						

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933223	5310123-5500000519	High-throughput sequencing of chromatin regulatory elements	93.172	-378	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933198	5500000814-5000091	SYSTEMATIC IDENTIFICATION OF ONCOGENIC KRAS SYNTHETIC LETHAL INTERACTIONS	93.396	132,367	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934900	5500000814-5000092	SYSTEMATIC IDENTIFICATION OF ONCOGENIC KRAS SYNTHETIC LETHAL INTERACTIONS	93.396	270,207	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932661	5610222-5500000694	There and Back Again: Epigenetic	93.310	25,185	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934716	5610223-5500000694	There and Back Again: Epigenetic	93.310	331,752	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933531	5700172-5500000731	RNA based diagnostics for rapid pathogen identification and drug resistance	93.855	210,090	-
			Total for The Broad Institute, Inc.		**969,223**	**-**
The Scripps Research Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932263	5-52300	CHAVI-ID: Research Focus 2	93.855	18,895	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934343	5-52765	CHAVI-ID: Research Focus 2	93.855	275,671	-
			Total for The Scripps Research Institute		**294,566**	**-**
University of Pennsylvania						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933286	565369	A vascularized three-dimensional biomimetic for islet function and physiology	93.847	60,332	-
			Total for University of Pennsylvania		**60,332**	**-**
Mayo Clinic						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931353	5-U01-AI089859-05 REVISED	Novel Technologies to define functional attributes of T Cells in West Nile virus	93.855	5,699	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933902	PO 64653198	Mechanisms of prolonged initial disease-free survival in glioblastoma	93.396	66,723	-
			Total for Mayo Clinic		**72,422**	**-**
Northwestern University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934210	60039739 MIT	Spatio-temporal organization of chromatin and information transfer in cancer	93.397	53,036	-
			Total for Northwestern University		**53,036**	**-**
Ohio State University						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6935766	60043772-MIT; PO RF01392642	A model-based examination of behavioral and social science workforce: Improving health outcomes	93.859	73,792	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934494	60052953	A model-based examination of behavioral and social science workforce: Improving health outcomes	93.859	19,227	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933637	60052953; PO# RF01430493	A model-based examination of behavioral and social science workforce: Improving health outcomes	93.859	63,581	-
			Total for Ohio State University		**156,600**	**-**
Stanford University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934061	60391945-106845-A	Dynamic Imaging of EMT in the Breast Cancer Microenvironment	93.396	187,684	-
			Total for Stanford University		**187,684**	**-**
University of California - San Francisco						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6924455	6680SC	Deconstructing and Reconstructing the T Cell Signaling Network	93.855	-27,529	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6924456	6681SC	Deconstructing and Reconstructing the T Cell Signaling Network	93.855	18,830	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932939	8943SC	Balanced Signaling Cues to Guide Cell Transitions in the Blood Lineage Continuum	93.839	151,269	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934999	9574SC	PROJECT 1: Defining the unique properties of the distinct signaling machinery used by TCR	93.855	56,030	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935000	9583SC	PROJECT 2: Defining the unique properties of the distinct signaling machinery used by TCR	93.855	109,674	-
			Total for University of California - San Francisco		**308,273**	**-**
The Research Institute at Nationwide Children's Hospital						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932896	82114515	Role of stress-induced reduction in Lactobacillus reuteri on colonic inflammation	93.213	-13,045	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934118	82114516	Role of stress-induced reduction in Lactobacillus reuteri on colonic inflammation	93.213	35,115	-
			Total for The Research Institute at Nationwide Children's Hospital		**22,070**	**-**
Greenwood Genetic Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933107	82561-01	Apnea index as an outcome measure of IGF-1 treatment of Rett syndrome	93.865	13,835	-
			Total for Greenwood Genetic Center		**13,835**	**-**
University of California - Irvine						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6930461	A1101784/ SUBAWARD 2014 -3096	Targeting iron acquisition in Salmonella with siderophore-based immunization	93.855	-548	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932202	AI114625/SUBAWARD 2015-3206	Development of siderophore-based vaccines against non-typhoidal Salmonella infection	93.855	89,833	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933139	SUBAWARD NO. 2014-3129	Neuron and Glial cellular signatures from normal and diseased iPS cells	93.853	193,945	-
			Total for University of California - Irvine		**283,230**	**-**
Praevium Research Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928842	AGMT. DTD. 11/26/13	VCSEL technology for ultrahigh speed OCT retinal and anterior eye imaging	93.867	45,098	-
			Total for Praevium Research Inc.		**45,098**	**-**
Superconducting Systems, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932990	AGMT. DTD. 9/22/15	Compact light weight superconducting bending magnets for gantries	93.395	13,835	-
			Total for Superconducting Systems, Inc.		**13,835**	**-**
Boston Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934888	AGREEMENT 4292	Biomarkers and Mechanisms of Paucibacillary and Latent Tuberculosis	93.855	131,194	-
			Total for Boston Medical Center		**131,194**	**-**
Nectome						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935526	AGREEMENT DAETD 9/21/16	Systems for whole-brain nanoscale preservation/imaging	93.242	69,223	-
			Total for Nectome		**69,223**	**-**
Human Project Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935527	AGREEMENT DATED 2/1/17	Building a Low Cost High Density Data Gathering Platform For Studying High-functioning Elders	93.866	10,000	-
			Total for Human Project Inc.		**10,000**	**-**
Trevigen, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6929288	AGREEMENT DATED 5/30/12	SBIR: DNA Repair-on-a-Chip: Spatially Encoded Microwell Arrays	93.113	6,479	-
			Total for Trevigen, Inc.		**6,479**	**-**
Ferro Solutions, Inc.						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6928800	AGREEMENT DATED 8/1/13	Phase II SBIR: Closed Loop Wireless Optical Neuromodulation Systems	93.RD	5,500	-
			Total for Ferro Solutions, Inc.		**5,500**	**-**
Boulder Nonlinear Systems Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935482	AGREEMENT DATED 9/27/16	A Next-Generation Spatial Light Modulator for Mapping of Neural Networks	93.286	44,421	-
			Total for Boulder Nonlinear Systems Inc.		**44,421**	**-**
Umech Technologies						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935528	AGREEMENT DATED NOVEMBER 2016	3D Tessellation Imaging	93.242	21,995	-
			Total for Umech Technologies		**21,995**	**-**
Visterra, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935011	AGREEMENT EFF. 09/01/2016	A library of immunoaffinity reagents for RNA modifications	93.001	72,910	-
			Total for Visterra, Inc.		**72,910**	**-**
Ension, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935051	AGREEMENT EFFECTIVE 08/15/16	Magnetically-Levitated Motor/Impeller in a Blood Pump-Oxygenator for Extracorporeal Pediatric Life Support	93.837	45,816	-
			Total for Ension, Inc.		**45,816**	**-**
Integrated Laboratory Systems, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930834	AGREEMENT EFFECTIVE 9/26/14	SBIR CometChip: Development of a high throughput DNA damage assay in hepatocytes	93.113	297,752	-
			Total for Integrated Laboratory Systems, Inc.		**297,752**	**-**
Yale University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928682	C14A11716 (A09395)	High-throughput, multiplexed detection of miRNA biomarkers in single cancer cells	93.396	58,161	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930363	M12A11190(A08872)	Defining Signatures for Immune Responsiveness by Functional Systems Immunology	93.855	-1,658	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6928778	M14A11743(A09391)	Modeling human phosphorylation networks through kinome-wide profiling	93.859	289,867	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935083	M17A12554(A10673)	Dynamic Neuroimmune Profiling in Patients with Acute Intracerebral Hemorrhage.	93.853	100,290	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6936332	M17A12653(A10974)	Systems Immune Profiling of Divergent Responses to Infection	93.855	44,736	-
			Total for Yale University		**491,396**	**-**
Battelle-Pacific Northwest Laboratories						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931329	CONTRACT NUMBER 248143	Center for Application of Advanced Clinical Proteomic Technologies for Cancer	93.394	3,178	-
			Total for Battelle-Pacific Northwest Laboratories		**3,178**	**-**
Seacoast Science, Inc.						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934645	DC084/16-0816SC	Advanced Polymer-Based Micro-sensor for Radiation Detection and Measurement	93.113	104,777	-
			Total for Seacoast Science, Inc.		**104,777**	**-**
Burke Medical Research Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933362	DE3849-05C	Transcranial Direct Current Stimulation and Robotic Training in Chronic Stroke	93.865	84,128	-
			Total for Burke Medical Research Institute		**84,128**	**-**
Oregon Health and Science University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931472	GCAEI0303A_MIT	Guiding the Treatment of Anterior Eye Diseases with Optical Coherence Tomography	93.867	18,640	-
			Total for Oregon Health and Science University		**18,640**	**-**
Children's Hospital Boston						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935002	GENFD0001152559	Noninvasive Realtime Assessment of Placental Structure and Function with Novel MR Imaging Methods	93.865	205,291	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935721	GENFD0001210192	Letter Agreement: Claudio Macias Trevino Spring 2017	93.847	14,061	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936020	GENFD0001240500	Customized stem cells for clinical application in blood disorders	93.847	97,483	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936340	PENDING	Advanced Fetal Imaging	93.286	52,181	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932069	PO#0000635383	Gastrointestinal Microflora Changes in Children Treated with Proton Pump	93.847	4,242	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934415	PO#0000704243	Gastrointestinal Microflora Changes in Children Treated with Proton Pump	93.847	56,714	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932318	RSTFD0000641564	Advanced Fetal Imaging	93.286	-408	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6932913	RSTFD0000652459	Customized stem cells for clinical application in blood disorders	93.847	36,463	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933113	RSTFD0000659589	Generating Multiple Circuit and Neuron Type Specific AAV Vectors With Cross-Species Applicability	93.242	1,496	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933353	RSTFD0000667865	Noninvasive Realtime Assessment of Placental Structure and Function with Novel MR Imaging Methods	93.865	49,668	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933938	RSTFD0000687546	Developmental biology of human erythropoiesis (Project 4)	93.839	-1,549	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934060	RSTFD0000689449	Advanced Fetal Imaging	93.286	234,920	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934771	RSTFD0000705651	Regulation of RUX1 Multiprotein Complex Formatin during Hematopoiesis	93.847	79,873	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934720	RSTFD0000709815	Generating Multiple Circuit and Neuron Type Specific AAV Vectors With Cross-Species Applicability	93.242	154,344	-
			Total for Children's Hospital Boston		**984,777**	**-**
Case Western Reserve University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932670	GRISWOLD RES508442 INVOICE	Magnetic Resonance Fingerprinting (MRF) for Improved High Field MR	93.286	20,952	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935084	RES511404	Magnetic Resonance Fingerprinting (MRF) for Improved High Field MR	93.286	31,583	-
			Total for Case Western Reserve University		**52,535**	**-**
Texas Biomedical Research Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934813	PO 39803	Defense-in-depth against mucosal HIV clade C invasion	93.855	367,425	-
			Total for Texas Biomedical Research Institute		**367,425**	**-**
University of Massachusetts						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930349	PO WA00463637 / RFS2015003	Structural annotation of the human genome	93.172	74,896	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934314	WA00433490/OSP2016196	Center for Reproducible Neuroimaging Computation (CRNC) - Project 2	93.286	123,488	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934313	WA00434051/OSP2016201	Center for Reproducible Neuroimaging Computation (CRNC)	93.286	9,526	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936130	WA00536446 / OSP2016201	Center for Reproducible Neuroimaging Computation (CRNC)	93.286	6,900	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936131	WA00536449/OSP2016201	Center for Reproducible Neuroimaging Computation (CRNC) - Project 2	93.286	43,942	-

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			Total for University of Massachusetts		**258,753**	**-**
University of Colorado Boulder						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932230	PO#1000513987 SUBAWARD#1552654	Genetic Association Meta-Analyses of Smoking and Drinking for the Sequencing Age	93.279	89,426	-
			Total for University of Colorado Boulder		**89,426**	**-**
University of Florida						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933008	PRIME 00124227, SUB UFDSP00010950	Complex Modifications of tRNA: Regulatory Roles and Crosstalk with DNA Metabolism	93.859	181,052	-
			Total for University of Florida		**181,052**	**-**
Magee-Womens Research Institute & Foundation						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932950	RSA 3503	Extracellular vesicles and their ncRNAs cargo as markers of trophoblast injury	93.865	12,000	-
			Total for Magee-Womens Research Institute & Foundation		**12,000**	**-**
Brown University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932585	SUBAWARD 00000624	Multiscale Modeling of Sickle Cell Anemia: Methods and Validation	93.839	332,451	-
			Total for Brown University		**332,451**	**-**
Rehabilitation Institute of Chicago						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6930094	SUBAWARD AGREEMENT # 3024	Recording Neural Activities onto DNA	93.242	376,393	-
			Total for Rehabilitation Institute of Chicago		**376,393**	**-**
University of Michigan						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934493	SUBAWARD NO. 3004053346	An Accessible Toolbox for Comprehensive Analysis of Neural Tissue Architecture	93.242	271,031	-
			Total for University of Michigan		**271,031**	**-**
Forsyth Institute						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6931386	SUBCONTRACT NO. MIT024468-2495	Cultivation, Nature, Ecology & Pathogenicity of the Uncultivated Oral Microbiome	93.121	83,265	-
			Total for Forsyth Institute		**83,265**	**-**
University of Connecticut Health Center						

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6932499	UCHC6-64194473	Dynamics and Topology of Phosphotyrosine-SH2 Interaction Networks	93.396	-2,141	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932765	UCHC6-66263781	Comprehensive Analysis of Functional RNA Elements Encoded in the Human Genome	93.172	20,347	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933062	UCHC6-67937397	Comprehensive Analysis of Functional RNA Elements Encoded in the Human Genome	93.172	9,062	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6934876	UCHC6-79257861	Comprehensive Analysis of Functional RNA Elements Encoded in the Human Genome	93.172	200,540	-
			Total for University of Connecticut Health Center		**227,808**	**-**
Vanderbilt University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935285	UNIV 58783	Vanderbilt Proteome Characterization Center (Year 2-5)	93.394	71,776	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6924961	VUMC 38902	Rational Maturation of Beta Cells Based on in Depth Profiling (RatMat)	93.847	2,225	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6929181	VUMC38861	Vanderbilt Proteome Characterization Center (Year 2-5)	93.394	2,126	-
			Total for Vanderbilt University		**76,127**	**-**
University of Texas - Austin						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935645	UTA16-001174	NeuroScout: A cloud-based platform for flexible re-analysis of naturalistic fMRI datasets	93.242	26,377	-
			Total for University of Texas - Austin		**26,377**	**-**
Vanderbilt University Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933078	VUMC 36112	Etiologic Studies of Gastric Carcinoma	93.393	199,295	-
			Total for Vanderbilt University Medical Center		**199,295**	**-**
University of Massachusetts Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933151	WA00343851/RFS2016059	EDAC: Encode Data Analysis Center	93.172	-71,624	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933260	WA00363842/OSP2016100	Center for 3D Structure and Physics of the Genome	93.310	38,648	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933357	WA00363868/OSP2016102	Center for 3D Structure and Physics of the Genome	93.310	6,519	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935206	WA00474873/OSP2017050	Center for 3D Structure and Physics of the Genome	93.310	309,238	-

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DEPARTMENT OF HEALTH & HUMAN SERVICES	6935160	WA00474875/OSP2017051	Center for 3D Structure and Physics of the Genome	93.310	91,343	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6935473	WA00494076/OSP2017077	EDAC: ENCODE Data Analysis Center	93.172	243,730	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	6936250	WA00540618/OSP2017186	EDAC: ENCODE Data Analysis Center	93.172	157,296	-
			Total for University of Massachusetts Medical Center		**775,150**	**-**
Wayne State University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6932770	WSU15133	Computational and Functional Characterization of the Molecular Steps in Membran	93.242	57,357	-
			Total for Wayne State University		**57,357**	**-**
Washington University						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933457	WU-16-102	Cross-scale interactions between mineral and collagen for tendon-bone attachment	93.286	6,358	-
			Total for Washington University		**6,358**	**-**
Washington University in St. Louis-School of Medicine						
DEPARTMENT OF HEALTH & HUMAN SERVICES	6933957	WU-16-329	Role of IL-17 in Protective Vaccine-induced Immune Responses Against Tuberculosis	93.837	20,653	-
			Total for Washington University in St. Louis-School of Medicine		**20,653**	**-**
			TOTAL for Department of Health & Human Services		**18,891,380**	**-**

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DEPARTMENT OF TRANSPORTATION						
University of Illinois-Urbana Champaign						
DEPARTMENT OF TRANSPORTATION	6925791	2012-02061-03	Intercity Passenger Rail	20.701	13,543	-
DEPARTMENT OF TRANSPORTATION	6929700	2013-05178-01	Intercity Passenger Rail - Phase II	20.701	64,120	-
			Total for University of Illinois-Urbana Champaign		**77,663**	**-**
University of Maryland - College Park						
DEPARTMENT OF TRANSPORTATION	6933219	30567-Z9004101	Modeling of Secondary Benefits of PBN Procedures	20.RD	51,454	-
DEPARTMENT OF TRANSPORTATION	6935041	41629-Z9292101	Commercial Space Modeling and Analysis	20.RD	56,628	-
DEPARTMENT OF TRANSPORTATION	6934837	Z9234102	Wake Turbulence Research	20.RD	50,192	-
DEPARTMENT OF TRANSPORTATION	6930567	Z987701	Analysis and Modeling of Passenger Delay in the NAS	20.RD	74,577	-
			Total for University of Maryland - College Park		**232,851**	**-**
Lincoln Laboratory						
DEPARTMENT OF TRANSPORTATION	6926777	7000213564	En-Route and Terminal Speed & Altitude Optimization	20.RD	19,345	-
			Total for Lincoln Laboratory		**19,345**	**-**
Honeywell International Inc.						
DEPARTMENT OF TRANSPORTATION	6933626	AGREEMENT DTD 2/1/16 PO # 4206594602	Identify Safety Issues in Integration of Complex Digital Systems	20.RD	44,093	-
			Total for Honeywell International Inc.		**44,093**	**-**
GE Global Research						
DEPARTMENT OF TRANSPORTATION	6930428	PO 400203914	Investigation of New Roles for Humans and Automation in Next Generation Rail Systems	20.RD	59,438	-
			Total for GE Global Research		**59,438**	**-**
			TOTAL for Department of Transportation		**433,389**	**-**

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MISCELLANEOUS FEDERAL GOVT						
Harvard University						
MISCELLANEOUS FEDERAL GOVT	6933698	167937-5093336	Cortical Architecture and Algorithms for Machine Listening	15.RD	247,179	-
MISCELLANEOUS FEDERAL GOVT	6929123	105211-5064644	Testing the National Digital Stewardship Residency (NDSR) Model in Boston, MA	45.313	-14	-
			Total for Harvard University		**247,165**	**-**
University of Southern California						
MISCELLANEOUS FEDERAL GOVT	6934096	49245188	Contributions to the CGM and non-secular motion representation	15.808	41,385	-
			Total for University of Southern California		**41,385**	**-**
Dynamic Object Language Labs, Inc.						
MISCELLANEOUS FEDERAL GOVT	6934889	AGREEMENT EFF. 07/01/2016	Context-driven Active-Sensing for Repair Tasks (CART)	12.RD	131,200	-
			Total for Dynamic Object Language Labs, Inc.		**131,200**	**-**
Colorado State University						
MISCELLANEOUS FEDERAL GOVT	6928840	G-9870-1	Estimating the Effects of Changing Climate on Fires and Consequences for U.S. Air Quality, Using a Set of Global and Regional Climate Models	15.232	11,601	-
			Total for Colorado State University		**11,601**	**-**
Harvard School of Public Health						
MISCELLANEOUS FEDERAL GOVT	6934711	112544-5087396	Projecting and Quantifying Future Changes in Socioeconomic Drivers of Air Pollution and its Health-related Impacts	66.509	182,451	-
			Total for Harvard School of Public Health		**182,451**	**-**
University of Pennsylvania						
MISCELLANEOUS FEDERAL GOVT	6933436	562731	Enabling Citizens and Owners to Invest in Green Infrastructure in Philadelphia	66.509	112,605	-
			Total for University of Pennsylvania		**112,605**	**-**
Solar Sister, Inc.						
MISCELLANEOUS FEDERAL GOVT	6936133	AGREEMENT DATED 4/1/17	Solar Sister Advancing Women's Sustainable Energy Entrepreneurship and Climate Change Leadership	19.017	19,213	-

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			Total for Solar Sister, Inc.		**19,213**	**-**
Council on Library and Information Resources						
MISCELLANEOUS FEDERAL GOVT	6928937	CON-479	Closing the Gap: Identifying Needs in Continuing Education for Managing Cultural Heritage Data.	45.313	-6	-
			Total for Council on Library and Information Resources		**-6**	**-**
The QED Group LLC						
MISCELLANEOUS FEDERAL GOVT	6932640	KDAD-15-001	eLearning Assessment	98.RD	56,424	-
			Total for The QED Group LLC		**56,424**	**-**
University of Hawaii						
MISCELLANEOUS FEDERAL GOVT	6934636	MA1030	Disaster Management Early Warning and Decision Support Capacity Enhancement within Indonesia's BNPB and BPBD - PARENT	98.001	586,091	-
			Total for University of Hawaii		**586,091**	**-**
BBN Technologies Corporation						
MISCELLANEOUS FEDERAL GOVT	6934589	PO #9500013207	Privacy Preserving Federated Search and Searching (PPFS2)	12.RD	131,868	-
			Total for BBN Technologies Corporation		**131,868**	**-**
			TOTAL for Miscellaneous Federal Govt		**1,519,997**	**-**

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION						
Brown University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930189	00000677	SSERVI: Environment and Evolution of Exploration Destinations: Science and Engineering Synergism	43.001	219,164	21,365
			Total for Brown University		**219,164**	**21,365**
University of California - Berkeley						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935635	00009378	High-Order Methods for Fluid Structure Interaction	43.002	58,722	-
			Total for University of California - Berkeley		**58,722**	**-**
Columbia University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934478	1(GG008595)	MIT subaward on Columbia University Grant # NNX15AB30G-- Development of a Neural Network Scheme for SMAP Retrieval of Soil Moisture at the Global Scale and Assimilation into NWP Centers	43.001	17,081	-
			Total for Columbia University		**17,081**	**-**
Applied Physics Lab of Johns Hopkins						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6927060	111556	Are Saturn tori variable?	43.RD	31,213	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931748	126755	Research Opportunities in Space and Earth Sciences 2014	43.001	99,703	-
			Total for Applied Physics Lab of Johns Hopkins		**130,916**	**-**
CalTech - Jet Propulsion Lab						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6899758	1283622	Voyager Interstellar Mission (VIM) Plasma Science	43.RD	363,839	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932364	1532689	EUROPA - MISE Co-I Subcontract	43.RD	11,889	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932902	1538010	Wearable Interface for Natural Gesture Control and Tele-Operation of Robotic Systems	43.RD	28,437	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933469	1541064	The Eccentric Exoplanets: A Survey of Atmospheric Heating and Variability	43.RD	12,933	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933940	1542435	The Host Galaxies of High-Redshift MgII Absorbers: High-Fidelity Measurements of Early Circumgalactic Gas	43.RD	14,648	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934304	1552640	On the eclipsing binary nature of a nearby ultracool dwarf	43.RD	4,991	-

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934362	1553749	Recent sea-ice and ice-sheet changes and their relation to the coupled ocean-atmosphere system	43.RD	72,031	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934477	1554281	Europa Lander 2016 Science Definition Team Member Budget	43.RD	27,420	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932365	CREI 1532602	EUROPA - ICEMAG	43.RD	9,975	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6936100	CREI 1572041	ECCO: Understanding Sea Level, Ice, and Earth's Climate	43.RD	43,330	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6936482	CREI 1576768	Psyche - JPL	43.RD	28,974	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933007	RSA 1539320	Development of Wear Resistant Titanium Bearings for Joint Mobility Systems	43.RD	50,000	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933764	RSA 1544195	Exoplanet Radio Data Analysis	43.RD	5,764	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935586	RSA 1567573	Analyses of Radio Data from Exoplanets	43.RD	9,727	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935834	RSA 1569352	Red worlds: Spitzer exploration of a compact system of temperate terrestrial planets transiting a nearby Jupiter-sized star	43.RD	37,050	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929683	RSA NO. 1501658	Consortium on Ultracold Atoms in Space	43.RD	27,449	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931649	RSA NO. 1523679	Consortium on Ultracold Atoms in Space	43.RD	1,949	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932305	RSA NO. 1532007	A Proposal for an Extreme Precision Doppler Spectrometer Instrument for the WIYN Telescope: the WIYN Spectrograph for DOppler Monitoring (WISDOM)	43.RD	11	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934351	RSA NO. 1551431	Consortium on Ultracold Atoms in Space - Year 3	43.RD	144,635	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935474	RSA NO. 1564029	Novel Readout for Deep Space Optical Communication Receivers	43.001	25,489	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6923676	SUBCONTRACT 1428190	Estimating the Circulation and Climate of the Ocean for CLIVAR	43.RD	132,564	98,631
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925312	SUBCONTRACT 1449788	Benchmarking Thermolysis and Pyrolysis of Organic Matter on the SAM Instrument Suite	43.RD	6,912	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925531	SUBCONTRACT 1453629	Planning for MIT Comet Magnetization Investigations	43.RD	16,883	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930713	SUBCONTRACT NO. 1510842	Soil Moisture Science and Product Development	43.RD	289,999	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931399	SUBCONTRACT NO. 1517907	The Mars Oxygen ISRU Experiment (MOXIE)	43.RD	-122,456	-

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934038	SUBCONTRACT NO. 1546769	JPL Innovation Foundry	43.RD	18,232	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934039	SUBCONTRACT NO. 1547169	JPl/MIT Collaboration	43.RD	5,042	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933894	SUBCONTRACT NO. 1547496	MIT Support to SOXE Stack Post-Test Evaluation	43.RD	116,284	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932017	SUBCONTRACT NO. 517907	The Mars Oxygen ISRU Experiment (MOXIE)	43.RD	-23,189	-15,530
			Total for CalTech - Jet Propulsion Lab		**1,360,811**	**83,101**
University of Colorado Boulder						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932162	1552615	Rock Powered Life	43.001	79,465	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930573	PO# 1000381071	TST: Response of the Atmosphere to Impulsive Solar Events (RAISE)	43.001	33,502	-
			Total for University of Colorado Boulder		**112,966**	**-**
Scientific Systems Company, Incorporated						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931010	1601-MIT	Implementation & Flight Testing of IMPACT System for Autonomous ISR	43.RD	94,975	-
			Total for Scientific Systems Company, Incorporated		**94,975**	**-**
Lowell Observatory						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932482	2015-81520	Occultation Studies of Small Bodies in the Outer Solar System	43.RD	166,461	-
			Total for Lowell Observatory		**166,461**	**-**
Pratt & Whitney						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934365	2016100	Small Core Compressors	43.RD	119,467	-
			Total for Pratt & Whitney		**119,467**	**-**
Syracuse University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935422	28469-04461-S01	Distributed Multi-processor Geometry Environment to Support Design and Analysis on Extreme-scale Grids	43.002	35,293	-
			Total for Syracuse University		**35,293**	**-**
Southwest Research Institute						

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6893453	299433Q/SUB UNDER NASW-02008	New Horizon Science Team Member 05310-SOW-02 Rev O Chg O	43.RD	59,465	-
			Total for Southwest Research Institute		**59,465**	**-**
University of Michigan						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933514	3003768337	Scalable Multifidelity Design Optimization: Next Generation Aircraft and their Impact on the Air Transportation System--Phase II	43.002	75,950	-
			Total for University of Michigan		**75,950**	**-**
University of Southern California						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6927488	34714188	Land Information System for SMAP Tier-1 and AirMOSS Earth Venture-1 Decadal Survey Missions	43.001	88,593	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6926431	38686495/PO 10178888	Airborne Microwave Observatory of Subcanopy and Subsurface (AirMOSS)	43.RD	54,468	-
			Total for University of Southern California		**143,061**	**-**
Purdue University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929534	4103-60255	Regional and Global Climate and Societal Impacts of Land-Use and Land-Cover Change in Northern Eurasia: A Synthesis Study Using Remote Sensing Data and An Integrated Global System Model	43.001	85,875	-
			Total for Purdue University		**85,875**	**-**
California Institute of Technology						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6927547	44A-1093689	Analysis of NuSTAR Observations of Sgr A* and the Galactic Center	43.001	33,969	-
			Total for California Institute of Technology		**33,969**	**-**
Pennsylvania State University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6928017	4855-MIT-NASA-I80G	Carbon Biosignatures of Early Ecosystems: Picomolar Scale Compound-Specific Isotope Analyses (Pico-CSIA)	43.001	217	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931728	5190-MIT-NASA-C46G	Fast Event Recognition for the ATHENA Wide Field Imager	43.001	10,691	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935503	5586-MIT-NASA-B07G	MIT Participation in a U.S. Contribution to the ATHENA Wide-field Imager	43.001	5,606	-
			Total for Pennsylvania State University		**16,515**	**-**
University of Pennsylvania						

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932568	566962/10048151/14976/00	Laboratory Investigations of the Effects of Particulates on the Flow of Ice	43.001	2,671	-
			Total for University of Pennsylvania		**2,671**	**-**
Stanford University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931197	60777964-112312(MIT)	Spacecraft/Rover Hybrids for the Exploration of Small Solar System Bodies	43.001	3,424	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934882	61238711-122362	WFIRST - Exoplanet Coronagraphy Science Team	43.001	56,881	-
			Total for Stanford University		**60,305**	**-**
Baylor College of Medicine						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6936096	7000000324	Transitional Research Institute	43.003	3,627	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930332	HFP03801	Customized Refresher and Just-In-Time Training for Long-Duration Spaceflight Crews	43.002	177,951	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6928521	SA03401	Countermeasures to Reduce Sensorimotor Impairment and Space Motion Sickness Resulting from Altered Gravity Levels	43.RD	85,451	-
			Total for Baylor College of Medicine		**267,029**	**-**
Woods Hole Oceanographic Institution						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935447	A101331	Cooperative Exploration with Under-actuated Autonomous Vehicles in Hazardous Environments	43.001	39,908	-
			Total for Woods Hole Oceanographic Institution		**39,908**	**-**
Aerospace Corporation						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934403	AGREEMENT DATED 6-2-2016	Storm-time Dynamics of the Plasmapause and the Ionosphere/Magnetosphere System	43.001	34,051	-
			Total for Aerospace Corporation		**34,051**	**-**
Aerodyne Research Incorporated						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934836	AGREEMENT EFF. 06/10/2016	Real-time monitor of clumped CO2 isotopes in ambient air	43.RD	30,000	-
			Total for Aerodyne Research Incorporated		**30,000**	**-**
ProtoInnovations, LLC						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931960	AGRMNT EFFECTIVE 5-1-15	Advanced Algorithms and Controls for Superior Robotic All-Terrain Mobility (Phase 2)	43.RD	203,991	-

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			Total for ProtoInnovations, LLC		**203,991**	**-**
Aurora Flight Sciences Corporation						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932984	AMA-16-0001	D8 Conceptual Sizing Sensitivity Analysis	43.RD	157,026	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935098	AMA-16-0013	Coordination and Control of Swarms of Space Vehicles	43.RD	31,584	-
			Total for Aurora Flight Sciences Corporation		**188,609**	**-**
Smithsonian Inst. - Astrophysical Observatory						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931555	AR5-16003X	The Evolution of Disk Winds with X-ray Spectral States in Neutron Star Low Mass X-ray Binaries (Chandra 16400627)	43.001	5,653	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933781	AR6-17006X	A Survey of ISM Absorption and Scattering for Better Models of X-ray Binaries (Chandra 17400241)	43.011	6,733	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934205	DD5-16077X	The Dim State of RW Aur (Chandra 16208505)	43.001	7,636	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929558	G04-15007X	The eye of the hurricane. Exploring the innermost wind region of the massive star QV Nor	43.001	-5	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931105	G04-15027X	Investigating New Integral Sources with Chandra	43.001	16,467	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930578	G04-15037X	LETGS Spectroscopy of the Ultracompact Binary 4U 1626-67 (Chandra 15400308)	43.001	-4	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6924743	GO2-13006B	Cosmology and Cluster Evolution from the 80 Most Massive Clusters in 2000 deg 2 from the South Pole Telescope Survey (Chandra 13800883)	43.RD	-1,353	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925654	GO2-13034X	A Further Drop into Quiescence by the Neutron Star and Possible Hierarchical Triple 4U2129+47 (Chandra 13400103)	43.RD	10,223	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925445	GO2-13110A	Chandra HETG Ultra-deep Gratings Spectroscopy of Sgr A* (CHUGSS) (Chandra 13620807)	43.RD	63,900	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6926210	GO2-13131A	Variability and particle acceleration in the jet of Pictor A (Chandra 13700620)	43.RD	6,301	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6928578	GO3-14099X	Monitoring the Tidal Disruption of a Gas Cloud Approaching Sgr A* (Chandra 14620924)	43.RD	22,848	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6927467	GO3-14132X	To the Outer Limits of Clusters with Chandra and Suzaku (Chandra 14800401)	43.001	16,514	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931726	GO4-15008X	Wind Properties in a Very Young Pup (Chandra 15200426)	43.001	17,850	-

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933441	GO4-15009A	Can X-rays clear a circumstellar disk in 2 years? (Chandra 15200448)	43.001	10,755	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930733	GO4-15040A	SS433 Jet Formation	43.001	9,378	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934086	GO4-15051A	Confronting IC 10 X-1: Does the Most Massive Stellar Black Hole Also Have the Most Extreme Spin? (Chandra GO4-15051X transfer)	43.001	10,275	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929736	GO4-15091B	Monitoring the Tidal Disruption of the Gas Cloud G2 As It Encounters Sgr A* (Chandra 15620853)	43.001	9,016	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931768	GO5-16031B	Transient LMXBs in Globular Clusters (Proposal No.16400153)	43.001	8,548	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932414	GO5-16032B	Following a black hole candidate X-ray transient to quiescence (Chandra 16400196)	43.001	12,655	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932076	GO5-16040X	Crust Cooling of accretion heated neutron stars (Chandra 16400423)	43.001	13,484	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933019	GO5-16041X	Precise Localization of Transient Low-Mass X-ray Binaries (Chandra 16400444)	43.001	1,480	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933495	GO5-16044X	Filling the gap in understanding the wind structure of HDE 226868 /Cyg X-1 (Chandra 16400537)	43.001	3,528	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932416	GO5-16046X	An Integrated Approach to Winds, Jets, and State Transitions (Chandra 16400577)	43.001	36,648	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932077	GO5-16050A	Spying on millisecond pulsar paradise: Chandra+GBT monitoring of M28 (Chandra 16400865)	43.001	1,127	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933004	GO5-16051X	What is the Orbital Period of the Hierarchical Triple Candidate 4U 2129+47? (Chandra 16400867)	43.001	3,384	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931464	GO5-16080X	Galaxies in Collision (ARP 273)	43.001	15,161	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931765	GO5-16088X	S364 IN THE OLD OPEN CLUSTER M67: EXOPLANET HOST OR ACTIVE BINARY? (Chandra 16620871)	43.001	266	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932415	GO5-16141X	A MASS-LIMITED SURVEY OF GALAXY CLUSTERS AT 1.2 < z < 1.7: PROBING THE PHYSICS OF THE ICM DURING ITS ASSEMBLY (Chandra 16800690)	43.001	56,690	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931769	GO5-16143X	Distant Galaxy Clusters Hosting Extreme Central Galaxies	43.001	57,745	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933501	GO6-17013A	Using high resolution x-ray spectra to probe accretion, abundances, and coronal activity in the young cluster IC 348 (Chandra 17200344)	43.001	93,511	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933985	GO6-17028B	Transient LMXBs in Globular Clusters (Chandra 17400107)	43.001	14,417	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935006	GO6-17031B	Probing the physics of neutron stars using Terzan 5 (Chandra 17400144)	43.001	10,665	-

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934987	GO6-17033X	Crust cooling of accretion heated neutron stars (Chandra 17400173)	43.001	21,069	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935500	GO6-17037X	An Integrated Approach to Winds, Jets, and State Transitions (Chandra 17400281)	43.001	21,323	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934988	GO6-17048X	Late-time cooling of the neutron star crust in the super-Eddington accretor XTE J1701-462 (Chandra 17400704)	43.001	12,488	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933767	GO6-17109X	A Fossil Group in Formation (Chandra 17800155)	43.001	5,937	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935013	GO6-17112A	Deep X-ray Observations of 3 exceptional high-z clusters of galaxies (Chandra 17800222)	43.001	12,327	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935007	GO6-17136A	Understanding How a Black Hole Feeds: Sgr A* (Chandra 17620813)	43.001	792	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935779	GO7-18015X	What is the hottest cool star? (Chandra 18200423)	43.001	133	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935827	GO7-18031B	New progress in understanding the crusts of neutron stars (Chandra 18400330)	43.001	5,257	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925506	SV2-82011	Participation in the Stability Issues and Considerations for GGOS Core Sites Project	43.RD	-228	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6926645	SV2-82023	ACIS Science Support for the Chandra Program	43.RD	280,931	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6895251	SV3-73016	Support of the Chandra X-Ray Center (CXC)	43.RD	3,142,657	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935585	SV7-87005	Fabrication of x-ray reflecton gratings for the MAGIXS mission	43.RD	20,400	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933782	TM6-17010X	Modeling the Unique Dust Distribution in the Cyg X-3 and Cyg OB2 Sight Line (Chandra 17910568)	43.001	559	-
			Total for Smithsonian Inst. - Astrophysical Observatory		**4,065,144**	**-**
Space Telescope Science Institute						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6928929	HST-AR-13246.01-A	The nucleosynthetic origins and chemical evolution of phosphorus in the early universe (HST-AR-13246)	43.RD	28	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929647	HST-GO-12992.001-A	Are Young Stars Condensing Out of the Rapidly-Cooling Intracluster Medium? (HST-GO-12992)	43.RD	31,389	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929562	HST-GO-13180.007	Search for a Transit of Alpha Centauri Bb, the first Earth Mass	43.RD	7,812	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6928928	HST-GO-13303.01-A	The Structure of MgII Absorbing Galaxies at z=2-5: Linking CGM Physics and Stellar Morphology During Galaxy Assembly (HST-GO-13303)	43.RD	3,548	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6929020	HST-GO-13380.01-A	Probing Black Hole Disk Atmospheres with EPIC and RGS Observations of 4U 1957+11 (HST 13380)	43.RD	8,302	-

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930667	HST-GO-13456.002A	Searching for 300,000 Degree Gas in the Core of the Phoenix Cluster with HST-COS (HST 13456)	43.RD	2,278	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935587	HST-GO-13639.014-A	Resolving Lyman-alpha Emission On Physical Scales < 270 pc at z > 4 (HST-GO-13639)	43.001	29,332	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931429	HST-GO-13766.010-A	The nature of stationary components in jets from young stellar objects	43.RD	1,502	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934283	HST-GO14151.001-A	Constraining Pop III supernova energies and the formation of the first low-mass stars with the iron-poor star HE1327-2326 (with [Fe/H] = -5.4) (HST GO-14151)	43.RD	19,804	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933896	HST-GO-14352.009-A	Deep X-ray Observations of 3 exceptional high-z clusters of galaxies (HST GO-14352)	43.RD	8,164	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934598	HST-GO-14500.001-A	Two Birds One Stone: Simultaneous Atmospheric Pre-Screening of Two Temperate Earth-Sized Exoplanets During Their Double Transit	43.RD	31,971	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6936157	HST-GO-14896.002-A	Precise Photometric Redshifts For Two Bright z>8 Galaxies (HST-GO-14896)	43.001	16,173	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935833	HST-GO-14900.001-A	Confirming the Presence of an Hydrogen Exosphere around the Earth-sized Temperate Planet TRAPPIST-1c	43.RD	3,331	-
			Total for Space Telescope Science Institute		**163,634**	**-**
Honeywell						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6930862	NON11042 PO #4205965818	Category-theoretic Approaches for the Analysis of Distributed Systems	43.RD	82,214	-
			Total for Honeywell		**82,214**	**-**
University of Arizona						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935314	PO 363458	REXIS - REgolith X-ray Imaging Spectrometer Phase E Operations	43.RD	16,093	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6924918	PURCHASE ORDER 6473	OSIRIS-REx Near-Earth Asteroid Sample Return	43.RD	29,833	-
			Total for University of Arizona		**45,926**	**-**
Old Dominion University Research Foundation						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933006	RF PROJECT NO.: 16-134-100558-010	Extreme-Scale Parallel Mesh Generation: CFD 2030 Vision	43.002	71,868	-
			Total for Old Dominion University Research Foundation		**71,868**	**-**
LongWave Photonics LLC						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6932654	SBIR AGMT UNDER NNX15CP15C	SBIR Ph II: Terahertz quantum cascade laser local oscillator	43.RD	65,235	-

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			Total for LongWave Photonics LLC		**65,235**	**-**
Draper Laboratory Incorporated						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925106	SC001-592	Research Opportunities in Space and Earth Sciences (ROSES): Climate Extremes and Landscape Hazards: An interdisciplinary Study of Change	43.001	4,403	-
			Total for Draper Laboratory Incorporated		**4,403**	**-**
University Space Research Assoc.						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6931977	SOF 03-0028 PERSON	Monitoring Pluto's Atmosphere with Stellar Occultations During the New Horizons Flyby Epoch	43.RD	3,091	-
			Total for University Space Research Assoc.		**3,091**	**-**
Northwestern University						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935231	SP0037418-PROJ0010518	David Goldfinger - continued support on Micro-X	43.001	37,748	-
			Total for Northwestern University		**37,748**	**-**
University of Alabama in Huntsville						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6925492	SUB2012-055	Informal representation and team decision-making in complex engineering systems	43.008	897	-
			Total for University of Alabama in Huntsville		**897**	**-**
University of California						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6921633	SUBCONTRACT NO. 2090-S-MA838	DAWN A Journey to the Beginning of teh Solar System - Phase E	43.RD	63,396	-
			Total for University of California		**63,396**	**-**
National Institute of Aerospace						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6933720	SUBCONTRACT T13-6500-MIT/TASK ORDER 6565-MIT	On Demand Mobility Studies: Investigating Vehicle Platforms Able to Carry Small Packages to 9 Passengers, with Investigations of their Enabling Component Technologies	43.RD	120,137	-
			Total for National Institute of Aerospace		**120,137**	**-**
ATAC Corporation						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6935423	TBD	Assessment of the benefits and costs of integrating arrival, departure, and surface operations with ATD-2	43.RD	62,982	-
			Total for ATAC Corporation		**62,982**	**-**

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Federal Research Support - Passthrough - On Campus
FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
University of Texas - Austin						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6934349	UTA16-000512	Evolving global ocean state estimation to the SWOT era	43.001	41,110	-
			Total for University of Texas - Austin		**41,110**	**-**
University of Minnesota						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	6917008	X5336545105	Radiation Belt Storm Probe EFW Project	43.RD	13,752	-
			Total for University of Minnesota		**13,752**	**-**
			TOTAL for National Aeronautics and Space Administration		**8,398,791**	**104,466**

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION						
University of California - Berkeley						
NATIONAL SCIENCE FOUNDATION	6923300	00007444	Center for Energy Efficient Electronics Science (E3S)	47.041	983,028	-
NATIONAL SCIENCE FOUNDATION	6932473	00008648	HERA: Illuminating Our Early Universe	47.049	14,259	-
NATIONAL SCIENCE FOUNDATION	6935339	00009391	HERA: Illuminating Our Early Universe	47.049	665	-
NATIONAL SCIENCE FOUNDATION	6924793	SA5284-11210	SynBERC:Synthethic Biology Engineering Research Center	47.041	25,207	-
NATIONAL SCIENCE FOUNDATION	6930836	SUBAWARD 00008317/MCB-1330914	Synthetic biology of yeast	47.074	138,499	-
			Total for University of California - Berkeley		**1,161,658**	**-**
Columbia University						
NATIONAL SCIENCE FOUNDATION	6934758	1(GG008868)	Collaborative Research: Flow, Turbulence And Mixing In Mid-Ocean Ridge Fracture Zone Canyons	47.050	47,405	-
NATIONAL SCIENCE FOUNDATION	6931173	1(GG008891)	CNH: Competing Demands and Future Vulnerability of Groundwater: Drinking Water Quality and Food Security in Arsenic-Impacted South and Southeast Asia	47.050	42,444	-
NATIONAL SCIENCE FOUNDATION	6935295	46(GG009393)	Participation of David T. Wang on Expedition 370	47.050	5,830	-
			Total for Columbia University		**95,679**	**-**
Carnegie-Mellon University						
NATIONAL SCIENCE FOUNDATION	6932341	1122145-344388	CSR: Medium: Distributed Inference Algorithms for Machine Learning and Optimization	47.070	112,483	-
NATIONAL SCIENCE FOUNDATION	6933964	1122183-333057	CIF21: DIBBS: Building a Scalable Infrastructure for Data-Driven Discovery and Innovation in Education	47.070	160,700	-
			Total for Carnegie-Mellon University		**273,182**	**-**
SimBiotic Software						
NATIONAL SCIENCE FOUNDATION	6926892	1227245	DIP: Using Dynamic Models to Assess Higher-Order Thinking Skills in Biology	47.080	38,628	-
			Total for SimBiotic Software		**38,628**	**-**
Harvard University						
NATIONAL SCIENCE FOUNDATION	2746292	123826-5056263	Center for Integrated Quantum Materials	47.049	1,416,736	-
NATIONAL SCIENCE FOUNDATION	6932660	123937-5096527	Biologically Inspired Optimized Materials And Technologies Transformed by Evolutionary Rules (BIOMATTER)	47.049	88,350	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
			Total for Harvard University		**1,505,085**	**-**
Arizona State University						
NATIONAL SCIENCE FOUNDATION	6929035	14-374	FESD Type 1: The Dynamics of Earth System Oxygenation	47.050	170,516	-
NATIONAL SCIENCE FOUNDATION	6924664	SUBAWARD NO. 12-725	ERC for Quantum Energy and Sustainable Solar Technologies: QUESST	47.041	48,495	-
NATIONAL SCIENCE FOUNDATION	6926052	SUBAWARD NO. 12-920	EDGES-2: Detecting First Light and Reionization Through the Global 21cm Signature	47.041	17,276	-
NATIONAL SCIENCE FOUNDATION	6935478	SUBAWARD NO: 17-096	QESST: ERC for Quantum Energy and Sustainable Solar Technologies	47.041	228,888	-
			Total for Arizona State University		**465,175**	**-**
New York University Medical Center						
NATIONAL SCIENCE FOUNDATION	6934052	14-A0-00-003420-01	Interactions of Radiofrequency Electromagnetic Fields with Biological Tissue: New Tools to Address Challenges and Exploit Opportunities	47.041	12,730	-
			Total for New York University Medical Center		**12,730**	**-**
New York University School of Medicine						
NATIONAL SCIENCE FOUNDATION	6935153	14-AO-00-00315301: PROJECT 103733	CRCNS: Computational Approaches to Uncover Neural Representation of Population Codes in Rodent Hippocampal-Cortical Circuits.	47.070	56,953	-
			Total for New York University School of Medicine		**56,953**	**-**
George Washington University						
NATIONAL SCIENCE FOUNDATION	6935441	16-S08	PIRE: Promoting Urban Sustainability in the Arctic	47.083	3,120	-
			Total for George Washington University		**3,120**	**-**
University of Oregon						
NATIONAL SCIENCE FOUNDATION	6936309	2005H0A	Chasing Icebergs: Quantifying Iceberg Motion and Melt in Greenland's Outlet Glacial Fjord	47.050	17,482	-
			Total for University of Oregon		**17,482**	**-**
University of Illinois-Urbana Champaign						
NATIONAL SCIENCE FOUNDATION	6931375	2014-05135-01	Atomic Beam Source (ABS) Development	47.049	141,226	-
			Total for University of Illinois-Urbana Champaign		**141,226**	**-**
University of Illinois at Chicago						

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION	6933103	2015-04326-01-00	EFRI 2-DARE: Thermal Transport in 2D Materials for Next Generation Nanoelectronics- From Fundamentals to Devices	47.041	91,458	-
			Total for University of Illinois at Chicago		**91,458**	**-**
Massachusetts General Hospital						
NATIONAL SCIENCE FOUNDATION	6932786	223092	Imaging the elastic properties of cells in 3D environment	47.041	3,342	-
			Total for Massachusetts General Hospital		**3,342**	**-**
Drexel University						
NATIONAL SCIENCE FOUNDATION	6924175	235660	MRI-R2: Development of a Common Platform for Unifying Humanoids Research	47.082	-544	-
			Total for Drexel University		**-544**	**-**
University of Arizona						
NATIONAL SCIENCE FOUNDATION	6932242	272622	BCSP: The Emergence of Inactivity: adaptive task allocation in complex distributed systems, or why are there so many lazy ants?	47.074	127,551	-
			Total for University of Arizona		**127,551**	**-**
Concord Consortium						
NATIONAL SCIENCE FOUNDATION	6935372	303-01	DIP: Linking Complex Systems: Promoting reasoning within and across interconnected complex systems	47.070	35,895	-
			Total for Concord Consortium		**35,895**	**-**
Purdue University						
NATIONAL SCIENCE FOUNDATION	6927170	4101-51804	Network for Computational Nanotechnology (NCN)	47.041	231,930	-
NATIONAL SCIENCE FOUNDATION	6922876	SUBAWARD #4101-38045	Emerging Frontiers of Science of Information	47.070	438,587	-
			Total for Purdue University		**670,517**	**-**
University of Rochester						
NATIONAL SCIENCE FOUNDATION	6932946	416750G	PIRE: DUST stimulated drawn-down of atmospheric CO2 as a trigger for Northern Hemisphere Glaciation	47.083	29,702	-
NATIONAL SCIENCE FOUNDATION	6935164	416929G/GR510498	EFRI AQUIRE: A Scalable Integrated Quantum Photonic Interconnect	47.041	63,529	-
			Total for University of Rochester		**93,231**	**-**
Boston University						

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION	6922469	4500000225	EFRI-SEED Framework for advanced sustainable building design. Smart Micro-grid enabld buildings interacting with utility-side-of-the-meter electricity markets.	47.041	-196	-
NATIONAL SCIENCE FOUNDATION	6931832	4500001216	Cognitive Rhythms Collaborative: A Discovery Network	47.049	405	-
			Total for Boston University		**210**	**-**
Northeastern University						
NATIONAL SCIENCE FOUNDATION	6928496	502076-78050A	EFRI-ODISSEI: Origami and Assembly Techniques for Human-Tissue-Engineering (OATH)	47.041	48,633	-
NATIONAL SCIENCE FOUNDATION	6928471	502076-78050B	EFRI-ODISSEI: Origami and Assembly Techniques for Human-Tissue-Engineering (OATH)	47.041	39,349	-
			Total for Northeastern University		**87,982**	**-**
Villanova University						
NATIONAL SCIENCE FOUNDATION	6933407	525840-3	Partnerships for Innovation: Building Innovation Capacity in Smart Stormwater Green Infrastructure	47.041	37,238	-
			Total for Villanova University		**37,238**	**-**
University of Pennsylvania						
NATIONAL SCIENCE FOUNDATION	6928993	557757	Center of Excellence for Materials Research and Innovation (CEMRI)	47.049	-104,266	-
			Total for University of Pennsylvania		**-104,266**	**-**
Stanford University						
NATIONAL SCIENCE FOUNDATION	6935019	61315867-122957	CAREER: Novel designs for Kidney Exchange and Other Markets, in the Intersection of OR, Econ and CS	47.041	67,937	-
			Total for Stanford University		**67,937**	**-**
Cornell University						
NATIONAL SCIENCE FOUNDATION	6935448	63016-10794	Cornell: Graphene Folding	47.049	117,582	-
NATIONAL SCIENCE FOUNDATION	6934136	77123-10681	Pulsars, Magnetars, and Transients with Phased ALMA	47.049	78,786	-
			Total for Cornell University		**196,369**	**-**
California Institute of Technology						
NATIONAL SCIENCE FOUNDATION	6929096	68D-1094591	Powering the Planet: A Chemical Bonding Center in the Direct Conversion of Sunlight into Chemical Fuel	47.049	377,708	-
NATIONAL SCIENCE FOUNDATION	6933468	SUBAWARD NO. 75-1086390	LIGO Operations	47.049	3,928,706	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL SCIENCE FOUNDATION	6917535	SUBAWARD NO. 75ADV-1085563	Advanced LIGO	47.049	28,237	-
			Total for California Institute of Technology		**4,334,651**	**-**
University of Washington						
NATIONAL SCIENCE FOUNDATION	6925083	724454	NSF Engineering Research Center for Sensorimotor Neural Laboratory of Electronics	47.041	178,148	-
NATIONAL SCIENCE FOUNDATION	6926728	SUBCONTRACT NO. UWSC6730 / PO BPO4403	Center for Enabling New Technologies through Catalysis (CENTC) Phase II Renewal	47.049	117,264	-
NATIONAL SCIENCE FOUNDATION	6924726	UWSC6200 (BPO4405)	NSF Engineering Research Center for Sensorimotor Neural Laboratory of Electronics	47.041	453,262	-
NATIONAL SCIENCE FOUNDATION	2747529	UWSC8960	2016 National Nuclear Physics Summer School	47.049	54,495	-
			Total for University of Washington		**803,170**	**-**
University of California-San Diego						
NATIONAL SCIENCE FOUNDATION	2747697	74316134 / PO# S9001396	FRG: Collaborative Research: Birational Geometry and Singularities in Zero Characteristic	47.049	24,005	-
NATIONAL SCIENCE FOUNDATION	6935212	80302854	Energy-Efficient Computing: from Devices to Architectures (E2CDA) A Joint Initiative between NSF and SRC	47.041	107,562	-
			Total for University of California-San Diego		**131,567**	**-**
University of Minnesota						
NATIONAL SCIENCE FOUNDATION	6928796	A003385101	Protein-to-Tissue Model of Glomerular Mechanobiology	47.041	8,365	-
NATIONAL SCIENCE FOUNDATION	6926981	H002341903	Data Net Full Proposal: Terra Populus: A Global Population/Environment Data Network (Subcontract to MIT)	47.080	1,007	-
			Total for University of Minnesota		**9,372**	**-**
Johns Hopkins University						
NATIONAL SCIENCE FOUNDATION	2389144	AGREEMENT EFF. 09/01/2016	LHC-TI Postdoctoral Fellowship Program	47.049	2,330	-
NATIONAL SCIENCE FOUNDATION	6924816	SUBAWARD AGMT. NO.2001325344	EFRI-M3C: Robust Decoder-Compensator Architecture for Interactive Control of High-Speed and Loaded Movements	47.041	54,575	-
NATIONAL SCIENCE FOUNDATION	2389143	SUBAWARD NO. 2003129511	LHC-TI Postdoctoral Fellowship Program	47.049	57,995	-
			Total for Johns Hopkins University		**114,899**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NEROC						
NATIONAL SCIENCE FOUNDATION	6932736	AGS-1229036	MRI: Development of RAPID - Radio Array of Portable | Interferometric Detectors	47.050	192,968	-
NATIONAL SCIENCE FOUNDATION	6934751	AGS-1626041	MRI: Development of a redeployable spread spectrum MIMO meteor radar	47.050	38,701	-
NATIONAL SCIENCE FOUNDATION	6924648	AST-1126433	MRI: Development of an ALMA Beamformer for Ultra High Resolution VLBI and High Frequency Phased Array Science	47.049	144,869	-
NATIONAL SCIENCE FOUNDATION	6928633	AST-1310896	Building the Event Horizon Telescope: Observing Black Holes with Schwarzschild Radius Resolution	47.049	135,889	120,373
			Total for NEROC		**512,427**	**120,373**
Yale University						
NATIONAL SCIENCE FOUNDATION	6932587	C16D12238 (D02172)	EFRI 2-DARE: Few-layer and Thin-film Black Phosphorus for Photonic Applications	47.041	110,997	-
			Total for Yale University		**110,997**	**-**
University of Chicago						
NATIONAL SCIENCE FOUNDATION	6928942	FP055660	Scaling directed self-assembly of block copolymers for sub 10-nm manufacturing	47.049	36,625	-
			Total for University of Chicago		**36,625**	**-**
Montana State University						
NATIONAL SCIENCE FOUNDATION	6929216	G111-14-W4576	Engineering Synthetic Symbiosis between Plant and Bacteria to Deliver Nitrogen to Crops	47.074	69,403	-
			Total for Montana State University		**69,403**	**-**
Missouri Botanical Garden						
NATIONAL SCIENCE FOUNDATION	6927023	NSF05702MIT	A Full Scale Development Proposal Informal Community Science Investigators (iCSI): Next Generation Engagement for Informal Science Instruction	47.076	32,645	-
			Total for Missouri Botanical Garden		**32,645**	**-**
University of Hawaii						
NATIONAL SCIENCE FOUNDATION	6914549	PO Z792093-15 UNDER DBI-424599	Center for Microbial Oceanography: Research and Education (C-MORE)	47.074	-24	-
NATIONAL SCIENCE FOUNDATION	6914649	Z792093-11 UNDER PRIME AWARD DBI-424599	Center for Microbial Oceanography: Research and Education (C-MORE)	47.074	-16,598	-
			Total for University of Hawaii		**-16,622**	**-**

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
National Radio Astronomy Observatory						
NATIONAL SCIENCE FOUNDATION	6933699	PO# 352511	ALMA Study Project: Extensions and Enhancements to the ALMA Phasing System	47.049	132,603	-
NATIONAL SCIENCE FOUNDATION	6935136	PO# 354952	ALMA Study Project: Diversifying the Scientific Applications of the ALMA Phasing System	47.049	62,257	-
			Total for National Radio Astronomy Observatory		**194,860**	**-**
Dartmouth College						
NATIONAL SCIENCE FOUNDATION	6933152	R807	EFRI-BioFlex Preliminary Proposal: A Flexible Glucose Fuel Cell	47.041	50,237	-
			Total for Dartmouth College		**50,237**	**-**
Georgia Institute of Technology						
NATIONAL SCIENCE FOUNDATION	2746922	RF481-G1	Research Experience for Undergraduates	47.041	16,087	-
			Total for Georgia Institute of Technology		**16,087**	**-**
UNAVCO						
NATIONAL SCIENCE FOUNDATION	6929221	S13-EAR1261833-S4	GAGE Facility GPS Data Analysis and GAMIT/GLOBK Software Support	47.050	211,406	-
			Total for UNAVCO		**211,406**	**-**
Santa Fe Institute						
NATIONAL SCIENCE FOUNDATION	6935014	SFI20161003	INSPIRE: Thermodynamic tradeoffs in computation: the constraints confronting biochemical networks and post-Moore computers	47.049	93,467	-
			Total for Santa Fe Institute		**93,467**	**-**
Princeton University						
NATIONAL SCIENCE FOUNDATION	6933021	SUB0000092	Hazards SEES: Risk Assessment and Risk Management: An Integrated Approach for Responding to Multiple Hazards from Tropical Cyclones	47.050	140,323	-
NATIONAL SCIENCE FOUNDATION	6935980	SUB0000178	US CMS Software & Computing Subsystem (Year 2017)	47.049	188,677	-
NATIONAL SCIENCE FOUNDATION	6925294	SUBAWARD NO. 00002019	U.S. CMS Operations at the LHC	47.049	560,177	-
			Total for Princeton University		**889,176**	**-**
University of Michigan						
NATIONAL SCIENCE FOUNDATION	6934756	SUBAWARD 3002943298	EFRI-ODISSEI: Multi Scale Origami For Novel Photonics and Energy Conversion	47.041	45,953	-

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
			Total for University of Michigan		**45,953**	**-**
Research Foundation of CUNY						
NATIONAL SCIENCE FOUNDATION	6933811	SUBAWARD 40F23-A	EFRI 2-DARE - EXCITONICS AND POLARITONICS BASED ON 2D MATERIALS (EXPO-2D)	47.041	410,537	-
			Total for Research Foundation of CUNY		**410,537**	**-**
Michigan Technological University						
NATIONAL SCIENCE FOUNDATION	6928536	SUBAWD# 1211086Z1, PO# P0092165	CNH: Managing Impacts of Global Transport of Atmosphere-Surface Exchangeable Pollutants in the Context of Global Change	47.050	55,177	-
			Total for Michigan Technological University		**55,177**	**-**
Smithsonian Inst. - Astrophysical Observatory						
NATIONAL SCIENCE FOUNDATION	2747977	SV6-86002	The Event Horizon Telescope Experiment	47.049	467,242	-
			Total for Smithsonian Inst. - Astrophysical Observatory		**467,242**	**-**
Emory University						
NATIONAL SCIENCE FOUNDATION	6932561	T439011	CCI Center in Selective C-H Functionalization	47.049	19,242	-
NATIONAL SCIENCE FOUNDATION	6935075	T662139	CCI Center in Selective C-H Functionalization	47.049	95,959	-
			Total for Emory University		**115,201**	**-**
University of Florida						
NATIONAL SCIENCE FOUNDATION	6930998	UFDSP00010445	Role of Nucleoside Modifications in tRNA Surveillance in Prokaryotes	47.074	62,715	-
			Total for University of Florida		**62,715**	**-**
			TOTAL for National Science Foundation		**13,829,032**	**120,373**
			TOTAL Federal Research Support - Passthrough - On Campus		**$94,490,246**	**$835,915**

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Highway Planning and Construction Cluster - Passthrough
FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
U.S. Department of Transportation						
Massachusetts Department of Transportation						
U.S. Department of Transportation	6928559	CONTRACT #81074	Kendall Square Value Pricing Pilot Project	20.205	187,585	-
			Total for Massachusetts Department of Transportation		**187,585**	**-**
			TOTAL for U.S. Department of Transportation		**187,585**	**-**
			TOTAL Highway Planning and Construction Cluster - Passthrough		**$187,585**	**-**

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Federal Non-Research Support - On Campus
FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE					
Air Force					
12.800					
Air Force	FA9550-17-1-0289	The compositionally problem in synthetic biology: New directions for control theory	12.800	8,614	-
		Total for CFDA # 12.800		*8,614*	-
		Total for Air Force		**8,614**	**-**
Army					
12.420					
Army	W81XWH-13-1-0215	Development of magnetic nanovectors for treatment and imaging of breast cancer metastasis to the brain-BC122973 - PDF for O. Veiseh	12.420	69,905	-
		Total for CFDA # 12.420		*69,905*	-
12.431					
Army	W911NF-16-1-0578	MIT Institute for Data, Systems, and Society Launch Event	12.431	24,875	-
Army	W911NF-17-1-0227	LIDS/IDSS Workshop on Smart URban Infrastructures (SURI)	12.431	20,308	-
		Total for CFDA # 12.431		*45,183*	-
		Total for Army		**115,088**	**-**
Navy					
12.300					
Navy	SEAGLIDE 2016	2016 SeaGlide Summer Program at MIT	12.300	19,912	-
		Total for CFDA # 12.300		*19,912*	-
		Total for Navy		**19,912**	**-**
		TOTAL for Department of Defense		**143,613**	**-**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF COMMERCE					
11.417					
DOC	NA170AR4170038	Knauss Fellowship 2017 - McClure	11.417	19,785	-
		Total for CFDA # 11.417		*19,785*	-
11.U01					
DOC	YA1323-14-SE-0251	Big Data Workshop Conference	11.U01	3,071	-
		Total for CFDA # 11.U01		*3,071*	-
		Total for Department of Commerce		**22,857**	**-**
		TOTAL for Department of Commerce		**22,857**	**-**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF ENERGY					
81.049					
DOE	DE-SC0009297	DiaMonD: An Integrated Multifaceted Approach to Mathematics at the Interfaces of Data, Models, and Decisions	81.049	22,552	-
DOE	DE-SC0013914	Supplemental Funding for the US Transport Task Force April 2015 Meeting	81.049	1,236	-
DOE	DE-SC0014478	MIT Outreach for Plasma Science and Fusion	81.049	94,996	-
DOE	DE-SC0014487	International Workshop on Comparing Ice Nucleation Measuring Systems 2015 (ICIS 2015)	81.049	30,507	-
DOE	DE-SC0015874	Supplemental Funding for the US Transport Task Force March 2016 Meeting	81.049	919	-
DOE	DE-SC0017373	Student Research Awards - Sherwood Fusion Theory Conference	81.049	3,000	-
		Total for CFDA # 81.049		*153,210*	-
81.117					
DOE	DE-EE0007152	MIT Clean Energy Prize	81.117	70,146	-
		Total for CFDA # 81.117		*70,146*	-
81.121					
DOE	DE-NE0000102	MIT Nuclear Energy University Fellowship Program	81.121	189,334	-
		Total for CFDA # 81.121		*189,334*	-
		Total for Department of Energy		**412,690**	**-**
		TOTAL for Department of Energy		**412,690**	**-**

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF TRANSPORTATION					
20.215					
DOT	DTFH64-15-G-00014	Eisenhower Graduate Fellowship: J. Moody	20.215	1,700	-
DOT	DTFH6416G00008	Dwight David Eisenhower Transportation Fellowship - Montgomery	20.215	24,500	-
DOT	DTFH6416G00046	Eisenhower Grad Fellow Joanna Moody	20.215	5,000	-
DOT	DTFH6416G00067	Eisenhower Graduate Fellowship: Scott Middleton	20.215	4,919	-
		Total for CFDA # 20.215		*36,119*	-
		Total for Department of Transportation		**36,119**	**-**
		TOTAL for Department of Transportation		**36,119**	**-**

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FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
MISCELLANEOUS FEDERAL GOVT					
Department of Agriculture					
10.310					
USDA	2013-67012-21022	Engineering Chain-length Specificity in an Aldehyde/Alcohol Dehydrogenase - PDF for Chris Reisch	10.310	2,324	-
		Total for CFDA # 10.310		*2,324*	-
		Total for Department of Agriculture		**2,324**	**-**
Other Agencies					
19.021					
Misc.	S-TS800-15-GR-033/PDPR 03	MIT-AFRICA Educator Program: Life Sciences & Entrepreneurship	19.021	117,419	-
		Total for CFDA # 19.021		*117,419*	-
45.024					
Misc.	16-3400-7104	NEA GAP FY2016 Art Works II Application	45.024	40,000	-
Misc.	17-4200-7041	Design: To Support a Workshop and Toolkit called 'Listening to the City'	45.024	10,043	-
		Total for CFDA # 45.024		*50,044*	-
77.008					
Misc.	NRC-HQ-13-G-38-0043	U.S. Nuclear Regulatory Commmission Nuclear Education Faculty Development Program at MIT	77.008	114,743	-
Misc.	NRC-HQ-13-G-38-0045	U.S. NRC Nuclear Education Graduate Fellowship Program	77.008	171,976	-
Misc.	NRC-HQ-84-15-G-0045	MIT Nuclear Education Faculty Development Program	77.008	111,323	-
		Total for CFDA # 77.008		*398,042*	-
97.U01					
Misc.	LTR DATED JULY 29, 2015	Snowstorm recovery	97.U01	187,492	-
		Total for CFDA # 97.U01		*187,492*	-
98.001					
Misc.	AID-OAA-A-12-00095	CITE and IDIN	98.001	2,500,964	570,798
		Total for CFDA # 98.001		*2,500,964*	*570,798*

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Massachusetts Institute of Technology
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FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
98.U02					
Misc.	AID-OAA-C-16-00045	HESN Technical Conference	98.U02	198,708	-
		Total for CFDA # 98.U02		*198,708*	-
		Total for Other Agencies		**3,452,668**	**570,798**
		TOTAL for Miscellaneous Federal Govt		**3,454,992**	**570,798**

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FY 2017 Expenditures

Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION					
43.001					
NASA	NNA13AA90A	Foundations of Complex Life: Evolution, Preservation & Detection on Earth & Beyond	43.001	27,507	18,493
NASA	NNX13AN67H	Climatic and geodynamic influences on ocean island landscape evolution - PD K. Huppert	43.001	9,699	-
NASA	NNX14AK83H	The variability of chemical constituents in the tropical tropopause layer, their radiative impacts, and implications for tropical cyclones - PDF D. Gilford	43.001	33,433	-
NASA	NNX14AK84H	Understanding Atmospheric Particles Using Single Particle Mass Spectrometry - PDF M. Zawadowicz	43.001	30,610	-
NASA	NNX16AN92H	Investigating VOC Speciation Measured from Space	43.001	25,185	-
		Total for CFDA # 43.001		*126,435*	*18,493*
43.002					
NASA	NNX14AT13H	NASA Aeronautics Scholorship Program	43.002	0	-
NASA	NNX14AT14H	NASA Aeronautics Scholarship Program	43.002	0	-
		Total for CFDA # 43.002		*0*	-
43.003					
NASA	NNX15AW91G	NASA Participation in MIT Innovation Lab	43.003	11,446	-
NASA	NNX17AB13G	NASA Participation in MIT Innovation Lab	43.003	23,434	-
		Total for CFDA # 43.003		*34,880*	-
43.008					
NASA	NNX12AM29H	The Gravity Loading Countermeasure Skinsuit - GF for D. Kendrick	43.008	3,438	-
NASA	NNX12AM30H	CubeSat Deformable Mirror Demonstration - GF for A. Marinan	43.008	7,862	-
NASA	NNX14AR05A	National Space Grant College and Fellowship Program (Space Grant)	43.008	379,278	-
NASA	NNX16AT26H	NASA AS&ASTAR Application for Cory Frontin on small Modeling for LES	43.008	37,000	-
NASA	NNX17AB22H	Advanced Modeling and Control for Turbo-Electric and Hybrid Electric Propulsion - Fellowship for Aidan Dowdle	43.008	29,000	-
		Total for CFDA # 43.008		*456,577*	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
43.009					
NASA	NNX13AE13H	On-Chip quantum repeater in diamond for space-based quantum communication - GF for E. Chen	43.009	9,216	-
NASA	NNX13AE14H	Diamond Electron-Spin Clocks For Space Navigation and Communication - GF for H. Clevenson	43.009	13,115	-
NASA	NNX14AL47H	Hierarchical Composites with Nanostructured Reinforcement for Multifunctional Aerospace Structures - GF R. Li	43.009	54,362	-
NASA	NNX14AL48H	Superconducting Nanowire Single Photon Detectors for High-Data-Rate Deep-Space Optical Communication	43.009	76,302	-
NASA	NNX14AL57H	Evaluating the Impact of Design-Driven Requirements Using SysML (Mark Chodas)	43.009	55,665	-
NASA	NNX14AL61H	Two-Stage Approach to Path and Attitude Planning for Reconfigurable Spacecraft - GF K. Riesing	43.009	56,926	-
NASA	NNX14AL74H	Developing an Adaptive Robotic Assistant for Close-Proximity Human-Robot Interaction in Space Environments	43.009	65,454	-
NASA	NNX14AM40H	Topological Optimization and Automated Construction for Lightweight Structures - G.F. Benjamin Jenett	43.009	68,275	-
NASA	NNX14AM42H	Quantifying the Value of Resilience in Long-Duration Space Systems- G.F. A. Owens	43.009	39,898	-
NASA	NNX14AM57H	The Micro-X X-ray Imaging Spectrometer - G.F. D. Goldfinger	43.009	74,666	-
		Total for CFDA # 43.009		*513,878*	-
43.012					
NASA	NNX15AP50H	Advanced Propellants for Scalable, Multipurpose Electrospray Ion Thrusters	43.012	67,621	-
NASA	NNX15AP51H	Dynamic Human-Centered Suit Design: A Computational and Experimental Method	43.012	74,512	-
NASA	NNX16AM70H	Developing Quantum Dot Absorptive Filter Array based Miniaturized Spectrometer for Space Applications	43.012	56,767	-
NASA	NNX16AM72H	Development and Testing of Autonomous On-Orbit Assembly and Servicing Systems Using the SPHERES Testbed	43.012	60,790	-
NASA	NNX16AM73H	Cluster of CubeSats for Multi-Angle Measurements of Bidirectional Reflectance Distribution Function (BRDF)	43.012	52,182	-
NASA	NNX16AM74H	Autonomous Fault Identification and Handling Algorithms for Spacecraft	43.012	54,382	-
NASA	NNX16AM75H	Quantum Networking and Sensing using a Diamond Nanophotonic Circuit (Student: Eric Bersin)	43.012	54,107	-
NASA	NNX16AM76H	Evolvable Habitation Architectures for Long-duration Human Exploration Systems	43.012	51,000	-

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Federal Agency	Government Contract Number	Master Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
		Total for CFDA # 43.012		*471,361*	-
43.U07					
NASA	NNX10AT92H	Massachusetts Space Grant Consortium	43.U07	4,492	-
		Total for CFDA # 43.U07		*4,492*	-
43.U12					
NASA	NNX16AH49H	National Space Grant College and Fellowship Program (Space Grant)	43.U12	525,383	-
		Total for CFDA # 43.U12		*525,383*	-
43.U15					
NASA	NNX16AM71H	Human Performance Metrics for Spacesuit Evaluation	43.U15	60,106	-
		Total for CFDA # 43.U15		*60,106*	-
		Total for National Aeronautics and Space Administration		**2,193,114**	**18,493**
		TOTAL for National Aeronautics and Space Administration		**2,193,114**	**18,493**
		TOTAL Federal Non-Research Support - On Campus		**6,263,384**	**589,291**

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FY 2017 Expenditures by Prime Sponsor and Sponsor

Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE						
Lincoln Laboratory						
DEPARTMENT OF DEFENSE	2747526	PO#7000346400	2016 Support of the MIT Security Studies Program	12.U14	35,000	-
			Total for Lincoln Laboratory		**35,000**	**-**
American Society/Engineering Education						
DEPARTMENT OF DEFENSE	2291100	LETTER DATED 8/11/99	NDSEG Fellowship Program	12.300	3,126,158	-
			Total for American Society/Engineering Education		**3,126,158**	**-**
Draper Laboratory Incorporated						
DEPARTMENT OF DEFENSE	2747676	P0001-0001042109	Draper Fellow Reporting Parent FY 16/17	12.U40	47,558	-
DEPARTMENT OF DEFENSE	2747673	PO 0001 000101802	Draper Fellow Reporting Parent FY 16/17	12.U37	5,632	-
DEPARTMENT OF DEFENSE	2747654	PO 0001 0001039958	Draper Fellow Reporting Parent FY 16/17	12.U18	50,000	-
DEPARTMENT OF DEFENSE	2747669	PO 0001 0001040149	Draper Fellow Reporting Parent FY 16/17	12.U33	44,000	-
DEPARTMENT OF DEFENSE	2747674	PO 0001 000104039	Draper Fellow Reporting Parent FY 16/17	12.U38	39,160	-
DEPARTMENT OF DEFENSE	2747665	PO 0001 0001041126	Draper Fellow Reporting Parent FY 16/17	12.U29	50,000	-
DEPARTMENT OF DEFENSE	2747664	PO 0001 0001041130	Draper Fellow Reporting Parent FY 16/17	12.U28	50,000	-
DEPARTMENT OF DEFENSE	2747667	PO 0001 000104116	Draper Fellow Reporting Parent FY 16/17	12.U31	47,364	-
DEPARTMENT OF DEFENSE	2747671	PO 0001 0001041172	Draper Fellow Reporting Parent FY 16/17	12.U35	50,000	-
DEPARTMENT OF DEFENSE	2747684	PO 0001 0001043379	Draper Fellow Reporting Parent FY 16/17	12.U48	50,000	-
DEPARTMENT OF DEFENSE	2747662	PO 0001 001041125	Draper Fellow Reporting Parent FY 16/17	12.U26	48,884	-
DEPARTMENT OF DEFENSE	2746972	PO 0001-0001036741	Draper Fellow Reporting Parent FY 15/16	12.U06	965	-
DEPARTMENT OF DEFENSE	2746974	PO 0001-0001037409	Draper Fellow Reporting Parent FY 15/16	12.U07	3,725	-
DEPARTMENT OF DEFENSE	2747420	PO 0001-0001037561	Draper Fellow Reporting Parent FY 15/16	12.U13	-10,784	-
DEPARTMENT OF DEFENSE	2747661	PO 001 0001039813	Draper Fellow Reporting Parent FY 16/17	12.U25	11,784	-
DEPARTMENT OF DEFENSE	2747668	PO 001 0001039815	Draper Fellow Reporting Parent FY 16/17	12.U32	8,643	-
DEPARTMENT OF DEFENSE	2747663	PO 001 0001039818	Draper Fellow Reporting Parent FY 16/17	12.U27	61,912	-
DEPARTMENT OF DEFENSE	2747670	PO 001 0001039820	Draper Fellow Reporting Parent FY 16/17	12.U34	60,307	-
DEPARTMENT OF DEFENSE	2747657	PO 001 0001039865	Draper Fellow Reporting Parent FY 16/17	12.U21	60,416	-
DEPARTMENT OF DEFENSE	2747653	PO 001 0001039870	Draper Fellow Reporting Parent FY 16/17	12.U17	34,110	-
DEPARTMENT OF DEFENSE	2747660	PO 001 0001039872	Draper Fellow Reporting Parent FY 16/17	12.U24	58,643	-
DEPARTMENT OF DEFENSE	2747666	PO 001 0001040136	Draper Fellow Reporting Parent FY 16/17	12.U30	40,293	-
DEPARTMENT OF DEFENSE	2747658	PO 001 0001040279	Draper Fellow Reporting Parent FY 16/17	12.U22	8,622	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF DEFENSE	2747656	PO 001 0001040398	Draper Fellow Reporting Parent FY 16/17	12.U20	61,912	-
DEPARTMENT OF DEFENSE	2747651	PO 001 0001041115	Draper Fellow Reporting Parent FY 16/17	12.U15	38,658	-
DEPARTMENT OF DEFENSE	2747652	PO 001 0001041122	Draper Fellow Reporting Parent FY 16/17	12.U16	38,658	-
DEPARTMENT OF DEFENSE	2747659	PO 001 0001041563	Draper Fellow Reporting Parent FY 16/17	12.U23	30,836	-
DEPARTMENT OF DEFENSE	2747681	PO 001 0001043088	Draper Fellow Reporting Parent FY 16/17	12.U45	50,000	-
DEPARTMENT OF DEFENSE	2747682	PO 001 0001043096	Draper Fellow Reporting Parent FY 16/17	12.U46	41,356	-
DEPARTMENT OF DEFENSE	2747683	PO 001 0001043326	Draper Fellow Reporting Parent FY 16/17	12.U47	27,803	-
DEPARTMENT OF DEFENSE	2747685	PO 001 0001043677	Draper Fellow Reporting Parent FY 16/17	12.U49	23,559	-
DEPARTMENT OF DEFENSE	2746964	PO 001-0001035502	Draper Fellow Reporting Parent FY 15/16	12.U03	0	-
DEPARTMENT OF DEFENSE	2746963	PO 001-0001035526	Draper Fellow Reporting Parent FY 15/16	12.U02	0	-
DEPARTMENT OF DEFENSE	2746999	PO 001-0001035541	Draper Fellow Reporting Parent FY 15/16	12.U12	0	-
DEPARTMENT OF DEFENSE	2746966	PO 001-0001035550	Draper Fellow Reporting Parent FY 15/16	12.U04	0	-
DEPARTMENT OF DEFENSE	2746968	PO 001-0001035672	Draper Fellow Reporting Parent FY 15/16	12.U05	0	-
DEPARTMENT OF DEFENSE	2746985	PO 001-0001036617	Draper Fellow Reporting Parent FY 15/16	12.U10	-6,980	-
DEPARTMENT OF DEFENSE	2746986	PO 001-0001036635	Draper Fellow Reporting Parent FY 15/16	12.U11	-7,612	-
DEPARTMENT OF DEFENSE	2747655	PO 0010001040145	Draper Fellow Reporting Parent FY 16/17	12.U19	58,643	-
DEPARTMENT OF DEFENSE	2747687	PO 0010001045492	Draper Fellow Reporting Parent FY 17/18	12.U50	2,997	-
DEPARTMENT OF DEFENSE	2747688	PO 0010001045514	Draper Fellow Reporting Parent FY 17/18	12.U51	3,607	-
DEPARTMENT OF DEFENSE	2747690	PO 0010001045516	Draper Fellow Reporting Parent FY 17/18	12.U52	2,997	-
DEPARTMENT OF DEFENSE	2748059	PO 0010001045547	Draper Fellow Reporting Parent FY 17/18	12.U55	2,997	-
DEPARTMENT OF DEFENSE	2748061	PO 0010001045549	Draper Fellow Reporting Parent FY 17/18	12.U56	2,997	-
DEPARTMENT OF DEFENSE	2747691	PO 0010001045551	Draper Fellow Reporting Parent FY 17/18	12.U53	3,297	-
DEPARTMENT OF DEFENSE	2747693	PO 0010001045565	Draper Fellow Reporting Parent FY 17/18	12.U54	3,297	-
DEPARTMENT OF DEFENSE	2746984	PO 001036310	Draper Fellow Reporting Parent FY 15/16	12.U09	0	-
DEPARTMENT OF DEFENSE	2746983	PO 001036618	Draper Fellow Reporting Parent FY 15/16	12.U08	0	-
DEPARTMENT OF DEFENSE	2747672	PO001-0001040054	Draper Fellow Reporting Parent FY 16/17	12.U36	63,262	-
DEPARTMENT OF DEFENSE	2747677	PO001-0001042350	Draper Fellow Reporting Parent FY 16/17	12.U41	29,023	-
DEPARTMENT OF DEFENSE	2747679	PO001-0001042426	Draper Fellow Reporting Parent FY 16/17	12.U43	50,000	-
DEPARTMENT OF DEFENSE	2747678	PO001-0001042427	Draper Fellow Reporting Parent FY 16/17	12.U42	38,658	-
DEPARTMENT OF DEFENSE	2747680	PO001-0001042501	Draper Fellow Reporting Parent FY 16/17	12.U44	65,978	-
DEPARTMENT OF DEFENSE	2747675	PO001-0001043329	Draper Fellow Reporting Parent FY 16/17	12.U39	38,658	-
			Total for Draper Laboratory Incorporated		**1,485,835**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
			TOTAL for Department of Defense		**4,646,993**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF ENERGY						
Krell Institute						
DEPARTMENT OF ENERGY	2389147	AGREEMENT EFF. 09/01/2016	DOE NNSA SSGF fellowships	81.112	32,172	-
DEPARTMENT OF ENERGY	2225900	FELLOWSHIP COMMITMENT	DOE-CSGF Krell Institute	81.049	23,615	-
DEPARTMENT OF ENERGY	2389080	LTR. AGREEMENT	DOE NNSA SSG Fellowship - Charles Epstein	81.049	1,000	-
DEPARTMENT OF ENERGY	2388330	LTR. AGREEMENT	DOE NNSA Stewardship Science Graduate Fellowship Program - E. Davis	81.049	622	-
DEPARTMENT OF ENERGY	2388625	LTR. AGREEMENT	DOE NNSA Stewardship Science Graduate Fellowship Program - G.F. M. Robinson	81.049	1,308	-
DEPARTMENT OF ENERGY	2388618	LTR. AGREEMENT	DOE NNSA Stewardship Science Graduate Fellowship Program - H.Sio	81.049	938	-
			Total for Krell Institute		**59,654**	**-**
Battelle-Pacific Northwest Laboratories						
DEPARTMENT OF ENERGY	2747225	CONTRACT NO. 265163	Workshop on Alternative Technologies to High Activity Radioactive Sources Used in Medical Applications	81.U01	35,896	-
			Total for Battelle-Pacific Northwest Laboratories		**35,896**	**-**
			TOTAL for Department of Energy		**95,551**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
DEPARTMENT OF HEALTH & HUMAN SERVICES						
University of Massachusetts Medical Center						
DEPARTMENT OF HEALTH & HUMAN SERVICES	2747337	WA00354242/OSP2016076	Sustained Strengthening of Public Health Laboratory, Transfusion Services, and Health Care Worker Infection Control	93.318	30,596	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	2747936	WA00509205/OSP2017127	Outbreak and Epidemic Prevention Through Human Resource Training System Development for Infection Control in Liberia	93.318	98,609	-
DEPARTMENT OF HEALTH & HUMAN SERVICES	2747935	WA00525117/OSP2017177	Outbreak and Epidemic Prevention Through Human Resource Training System Development for Infection Control in Liberia (CarryForward)	93.318	9,069	-
			Total for University of Massachusetts Medical Center		**138,274**	**-**
			TOTAL for Department of Health & Human Services		**138,274**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
MISCELLANEOUS FEDERAL GOVT						
Commonwealth of Massachusetts - Miscellaneous						
MISCELLANEOUS FEDERAL GOVT	2747808	05260118	Enhancing the MIT Museum's Allan Forbes Whaling and Captain Arthur H. Clark Collections: Creating online access for teaching and research	15.925	44,698	-
			Total for Commonwealth of Massachusetts - Miscellaneous		**44,698**	**-**
Institute of International Education, Inc.						
MISCELLANEOUS FEDERAL GOVT	2388976	3067_MIT_S-ECAGD-15-CA-1017-07012015	Hubert H Humphrey Fellowship Program (SPURS) 2015 -2016	19.010	4,283	-
MISCELLANEOUS FEDERAL GOVT	2389131	3223_MIT_7.1.2016	Hubert H Humphrey Fellowship Program (SPURS) 2016 -2017	19.010	233,023	-
			Total for Institute of International Education, Inc.		**237,306**	**-**
Patrimonio Natural						
MISCELLANEOUS FEDERAL GOVT	2747358	AGMT DTD 12/1/15	Assessing Community Innovation Capacity in the Amazon Piedmont Region	98.U01	40,091	-
			Total for Patrimonio Natural		**40,091**	**-**
Michigan State University						
MISCELLANEOUS FEDERAL GOVT	2747409	AWARD DATED 1/1/2016	Avocado Press	98.001	8,060	-
			Total for Michigan State University		**8,060**	**-**
			TOTAL for Miscellaneous Federal Govt		**330,154**	**-**

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION						
Baylor College of Medicine						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2746798	EO00012	Encyclopedia of Bioastronautics	43.U08	19,951	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2747192	EO02002	Mentored Research Program in Space Life Sciences	43.U09	2,552	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2747766	SUB NCC9-58- 3 / PROJ EO02002	Mentored Research Program in Space Life Sciences	43.U13	204,546	-
			Total for Baylor College of Medicine		**227,049**	**-**
Space Telescope Science Institute						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2388897	HST-HF2-51343.001-A	Heart of Darkness: Weakly Accreting Black Holes and the Physics of Accretions and Ejection - PDF for J. Neilsen	43.U01	85,963	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2389016	HST-HF2-51354.001-A	A Comprehensive View of the CGM - Hubble, Bordoloi	43.U03	84,341	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2389125	HST-HF2-51372.001A	Characterizing Small Planets Around Bright Stars (Hubble Fellowship - Diana Dragomir)	43.U05	85,014	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2389135	HST-HF2-51384.001-A	A Hybrid Approach to Simulating Galaxy Formation (Hubble Fellowship - Paul Torrey)	43.001	71,615	-
			Total for Space Telescope Science Institute		**326,933**	**-**
Commonwealth of Massachusetts - Miscellaneous						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2732483	MASSACHUSETTS SPACE GRANT CONSORTUIM	Massachusetts Space Grant Consortium	43.U06	565	-
			Total for Commonwealth of Massachusetts - Miscellaneous		**565**	**-**
Center for Advancement of Science in Space						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2747238	OA-2015-211	Zero Robotics	43.U10	81,191	-
			Total for Center for Advancement of Science in Space		**81,191**	**-**
Smithsonian Inst. - Astrophysical Observatory						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2388862	PF4-150126	Modeling radiative accretion disks in general relativity - Post Doc - A. Sadowski	43.001	68,290	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2388982	PF5-160144	Einstein Postdctoral Fellowship for Dr. James Steiner, "The Nature of Black Holes"	43.U02	83,089	-

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Prime Sponsor Name	Project WBS id	Passthrough Number	WBS Project Name	CFDA #	TOTAL $ Amount Expended	$ Amount Passed to Subrecipients
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2389123	PF6-170156	Quest for the Elusive Intermediate-mass Black Holes (Einstein Fellow - Dheeraj Pasham - yr 1)	43.U04	94,296	-
			Total for Smithsonian Inst. - Astrophysical Observatory		**245,675**	**-**
CalTech - Jet Propulsion Lab						
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2747294	RSA 1539183	Space Systems Product Development: Educating the Next Generation of Space Systems Engineers	43.U11	3,242	-
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION	2747924	RSA NO. 1564538	Space Systems Product Development: Educating the Next Generation of Space Systems Engineers	43.U14	12,327	-
			Total for CalTech - Jet Propulsion Lab		**15,569**	**-**
			TOTAL for National Aeronautics and Space Administration		**896,981**	**-**
			TOTAL Federal Non-Research Support - Passthrough - On Campus		**$6,107,953**	**-**

SECTION III

REPORTS ON INTERNAL CONTROL AND COMPLIANCE AND SUMMARY OF AUDITORS' RESULTS

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Report of Independent Auditors on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Members of the Corporation of the
Massachusetts Institute of Technology:

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of the Massachusetts Institute of Technology (the "Institute"), which comprise the consolidated statement of financial position as of June 30, 2017, and the related consolidated statements of activities and of cash flows for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated September 8, 2017.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Institute's internal control over financial reporting ("internal control") to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Institute's internal control. Accordingly, we do not express an opinion on the effectiveness of the Institute's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Institute's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

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Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
September 8, 2017

Report of Independent Auditors on Compliance with Requirements That Could Have a Direct and Material Effect on Each Major Program and on Internal Control Over Compliance in Accordance with the Uniform Guidance

To the Members of the Corporation of the
Massachusetts Institute of Technology:

Report on Compliance for Each Major Federal Program

We have audited the Massachusetts Institute of Technology's (the "Institute") compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Institute's major federal programs for the year ended June 30, 2017. The Institute's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the Institute's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the Institute's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the Institute's compliance.

Opinion on Each Major Federal Program

In our opinion, the Massachusetts Institute of Technology complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2017.

Other Matters

The results of our auditing procedures disclosed instances of noncompliance, which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule

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of findings and questioned costs as items 2017-001 and 2017-002. Our opinion on each major federal program is not modified with respect to these matters.

The Institute's response to the noncompliance findings identified in our audit is described in the accompanying Management's Views and Corrective Action Plan. The Institute's response was not subjected to the auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

Report on Internal Control Over Compliance

Management of the Institute is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the Institute's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the Institute's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

PricewaterhouseCoopers LLP

Boston, Massachusetts
March 12, 2018

Massachusetts Institute of Technology
Schedule of Findings and Questioned Costs
Year Ended June 30, 2017

Section I Summary of Auditors' Results

Financial Statements

Type of auditors' report issued	Unmodified	
Internal control over financial reporting		
Material weakness(es) identified	___ Yes	_X_ No
Significant deficiency (ies) identified that are not considered to be material weaknesses	___ Yes	_X_ None Reported
Noncompliance material to financial statements noted?	___ Yes	_X_ No

Federal Awards

Internal control over major programs		
Material weakness (es) identified?	___ Yes	_X_ No
Significant deficiency (ies) identified that are not considered to be material weaknesses?	___ Yes	_X_ None Reported
Type of auditors' report issued on compliance for major programs	Unmodified	
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?	_X_ Yes	___No

Identification of major programs

CFDA Number	Name of Federal Program or Cluster
Various	Student Financial Assistance Cluster
Various	Research & Development Cluster

Dollar threshold used to distinguish between Type A and Type B programs	$4,563,892	
Auditee qualifies as a low-risk auditee?	_X_ Yes	___ No

Section II Financial Statement Findings

None noted.

Section III Federal Award Findings and Questioned Costs

Finding 2017-001
Compliance Requirement: Reporting (L)

Federal Program Involved	CFDA Number	Award Number	Award Year
Student Financial Assistance Cluster-			
Federal Supplemental Educational Opportunity Grant ("FSEOG")	84.007	N/A	Fiscal 2017
Federal Work Study ("FWS")	84.033	N/A	Fiscal 2017
Federal Perkins Loan	84.038	N/A	Fiscal 2017

Criteria
Title 34 Code of Federal Regulations §673.3(a) states that "to participate in the Federal Perkins Loan, FWS, or FSEOG programs, an institution shall file an application before the deadline date established annually by the Secretary through publication of a notice in the Federal Register. The application for the Federal Perkins Loan, FWS, and FSEOG programs must be on a form approved by the Secretary and must contain the information needed by the Secretary to determine the institution's allocation or reallocation of funds." This application is completed annually on ED Form 646-1, the Fiscal Operations Report and Application to Participate ("FISAP").

Condition
The initial submission of the FISAP contained incorrect amounts and the Institute did not plan to amend or review the amounts prior to the final filing deadline of December 15, 2017. We identified several balances that were not completely or accurately reported in the final submission to the Department of Education. In Part V, Section F, the number of students for whom jobs were located or developed (Line 22) and the total earnings of the students in Field 22 (Line 23) were reported as 89 students and $264,860, respectively. These totals were incomplete and should have been reported as 93 students and $277,020, respectively. In Part VI, Section A, the total FWS funds for less-than-full-time students (Line 25, column f) was incorrectly reported as $6,836. This should have been reported as $6,158. Also in Part VI, Section A, the totals for FWS recipients (Line 26, column e), funds (Line 26, column f), and unduplicated recipients (Line 26, column g) for total "automatic" zero EFC students were incorrectly reported as 5 recipients, $5,143, and 127 unduplicated recipients, respectively. These should have been reported as 9 recipients, $11,069, and 129 unduplicated recipients, respectively.

Cause
The Institute experienced turnover within the Student Financial Services department, which resulted in new personnel being responsible for the compilation of the FISAP. As a result, several balances were not completely or accurately included in the submitted report due to inexperience and mis-keyed data. In addition, there was no formal reconciliation or review process in place prior to the submission of the report.

Effect
The effect of this finding was that the Institute did not accurately report fiscal year 2017 program information to the Department of Education per the FISAP. The FISAP was subsequently corrected and re-submitted prior to the final deadline of December 15, 2017.

Questioned Costs
There are no questioned costs.

Recommendation
The Institute should consider implementing a formal reconciliation and review process prior to submitting the FISAP to the Department of Education to ensure that all reported information is complete and accurate.

Management's Views and Corrective Action Plan
Management's Views and Corrective Action Plan is included at the end of this report.

Finding 2017-002
Compliance Requirement: Reporting (L)

Federal Program Involved	CFDA Number	Award Number	Award Year
Research and Development Cluster:			
National Institutes of Health ("NIH")			
Common Fund Research Support	93.310	5-DP1-NS082101-05	9/30/2011-7/31/2016

Criteria
In accordance with the Title 2 of the Code of Federal Regulations §215.52, the Institute must complete certain financial reporting forms upon completion of a federal award agreement. The Institute must follow the approved instructions on Form SF-425 which state that entities receiving federal funds must "enter the cumulative amount of Federal fund disbursements (such as cash or checks) as of the reporting period end date. Disbursements are the sum of actual cash disbursements for direct charges for goods and services, the amount of indirect expenses charged to the award, and the amount of cash advances and payments made to subrecipients and contractors."

Condition
For one report out of 25 selected for testing, the final submission of the SF-425 Federal Financial Report ("FFR") reported the total cumulative federal share of expenditures as equal to the total federal shares authorized of $3,988,425. Total federal disbursements per the Institute's financial records and the Department of Health and Human Services' Payment Management System as of the period end date were $3,982,032.

Cause
The Institute was still in the process of internally reviewing charges related to the cost-sharing portion of this project at the time of our audit. The Institute was tracking this project in order to submit a revised final FFR with the corrected federal share of expenditures once the internal reviews were resolved within the fifteen-month window to submit revised FFRs in accordance with NIH policy.

Effect
The effect of this finding was that the Institute did not accurately report the federal share of cumulative expenditures made by the Institute for this federal award on the final FFR submitted to the NIH.

Questioned Cost
There were no questioned costs as a result of this finding.

Recommendation
The Institute should consider revising their policies and procedures to ensure that FFRs are submitted timely with accurate information. The policy should highlight the deadlines for submission and emphasize that all outstanding items must be resolved prior to the submission of the final FFR within the deadlines set by the applicable Federal awarding agency.

Management's Views and Corrective Action Plan
Management's Views and Corrective Action Plan is included at the end of this report.

Massachusetts Institute of Technology
Summary Schedule of Prior Audit Findings
Year Ended June 30, 2017

Finding 2016-001
Compliance Requirement: Subrecipient Monitoring (M)

Federal Program Involved	CFDA Number	Award Number	Award Year
Research and Development Cluster- Air Force Office of Scientific Research	12.800	FA8750-12-2-0110	2/10/12- 6/30/16
CITE and IDIN	98.001	AID-OAA-A-12-00095	10/1/12 - 9/30/17

Condition
The Institute has policies and procedures in place, which include an initial risk assessment and ongoing monitoring of all subrecipients. During the FY2016 audit, 65 subrecipients were selected for testing from a population that included both entities subject and not subject to Uniform Guidance reporting (UG). Of the 40 tested for MIT On Campus, there were two subrecipient selections that were coded by the Institute as non-UG entities for which the Institute did not have documentation to evidence its performance of its annual risk assessment monitoring procedures. It was also noted that one of these two subrecipients was incorrectly coded as not being subject to UG reporting.

Current Year Update:
The Institute has reviewed and revised its subrecipient monitoring policies and procedures to have more robust procedures over the monitoring and risk assessment of subrecipients which are not subject to UG reporting. As of June 30, 2017 the Institute has completed their revised procedures over the organizations it has identified as not being subject to UG reporting, including the consideration of several factors when making the 'low risk' determination related to these institutions.

Finding 2016-002
Compliance Requirement: Special Tests and Provisions- Key Personnel (N)

Federal Program Involved	CFDA Number	Award Number	Award Year
Research and Development Cluster:			
National Aeronautics & Space Administration (NASA) Mark IV/VLBI	43.RD	NNG15HZ35C	12/22/2014 - 12/31/2016

Condition
During the FY2016 audit, 25 key personnel were selected for testing. One of the awards selected included four key personnel. During FY2015, it was determined that one of the four individuals was no longer needed and therefore, that individual did not work on the grant and was not replaced. The communication to the respective sponsor (NASA) of this change in key personnel was not completed as of the end of FY2016. That communication occurred in January 2017.

Current Year Update:
The Institute has distributed materials to all relevant research units re-emphasizing the importance of notifying the Office of Sponsored Programs of changes in key personnel so that they can be reported timely to sponsoring agencies.

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Finding 2017-001
Compliance Requirement: Reporting (L)

Management's Viewsand Corrective Action Plan

We concur that we need to go back to implementing a formal reconciliation and review process prior to submitting the FISAP to the Department of Education to ensure that all reported information is complete and accurate.

In the past, two Student Financial Services employees were responsible for validating the work study FISAP data: the Senior Data Analyst and the Compliance Officer. The Senior Data Analyst ran the numbers and keyed the data into the FISAP, and the Compliance Officer would double check the accuracy of the calculations along with validating the values keyed onto the FISAP. Both of these positions were vacant at the time of the 2017 FISAP completion, and a different staff member completed the FISAP, without anyone reviewing their work or what was keyed onto the FISAP.

We already have in place a formal review process for all other sections of the FISAP, where the process owner provides the FISAP information to the Compliance Officer, who then keys the information onto the FISAP. The draft FISAP then goes back to the process owner for review, and they initial that they have reviewed the FISAP and confirm that the information is correct.

Moving forward, regardless of how we are staffed, we will return to having two staff members implement the formal reconciliation and review process for all portions of the FISAP. We have filled the two open positions, and plan on conducting training sessions on FISAP completion, reviewing this finding, and documenting the review process.

Issue Coordinator: Leslie Bridson, Director of Financial Aid, MIT
Completion Date: January 3, 2018

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Office of the Vice President for Finance

vpf.mit.edu

Finding 2017-002

Compliance Requirement: Reporting (L)

Management's Views and Corrective Action Plan

MIT has reviewed and revised its policies and procedures to better ensure that Federal Financial Reports are submitted timely with accurate information. Our updated policies and procedures as implemented highlight the deadlines for submission and emphasize that outstanding items must be resolved prior to submission of the final FFR within the deadlines set by applicable Federal awarding agencies.

Issue Coordinator: Danielle Khoury, Controller
Completion date: March 1, 2018