



2019 Annual Report of Sponsored Research

Office of Research
& Creative Activities

Table of Contents

Preface.....	5
The University	7
Information by College or School.....	17
David O. McKay School of Education	23
Ira A. Fulton College of Engineering	29
College of Family, Home & Social Sciences.....	49
College of Fine Arts & Communications	57
College of Humanities	61
J. Reuben Clark Law School.....	67
College of Life Sciences	73
Marriott School of Business.....	87
College of Nursing.....	93
College of Physical & Mathematical Sciences	97
Religious Education.....	113
Non-College Units	117
Compliance Committees.....	123
Appendix 1.....	127
Appendix 2.....	133

Preface

This report covers January 1, 2019 to December 31, 2019.

Included are a number of activities that are carried out by the Office of Research & Creative Activities (ORCA).

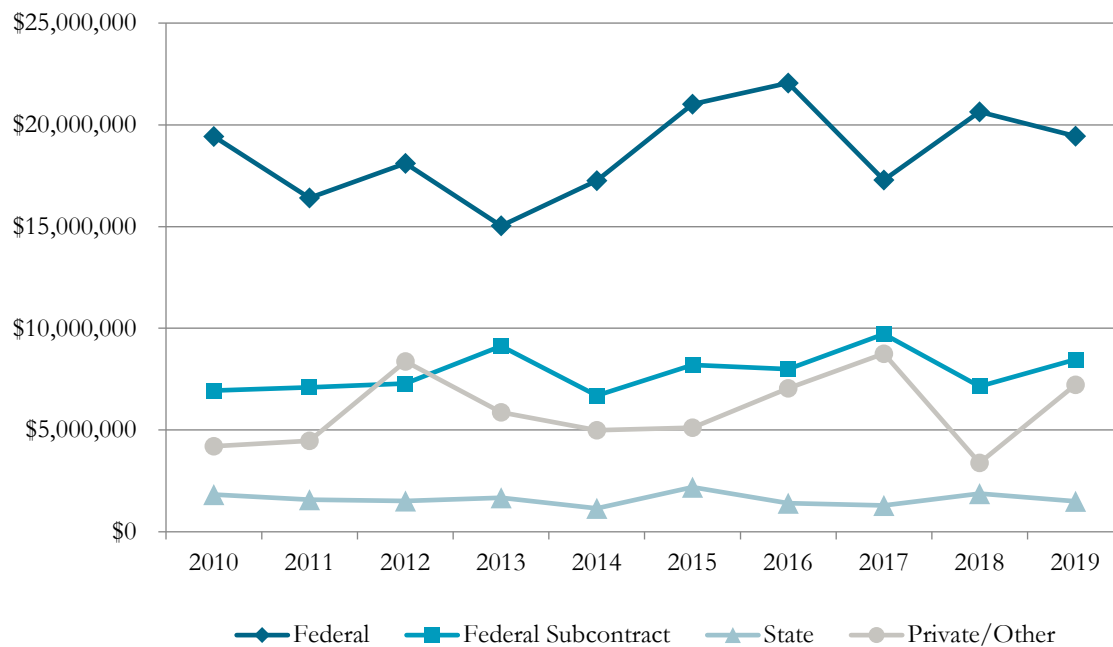
- ***Reports of Sponsored Projects:*** Sponsored projects at BYU are those funded by external sources through ORCA. They are largely research projects, but many include programs that are designed to develop or support instructional or service activities. Support for creative activities such as performance, artistic creations, etc., may also come through ORCA.
- ***Administrative Activities in Support of Research and Creative Activities:*** ORCA supports three university committees which oversee compliance with university, state, and federal regulations.



The University

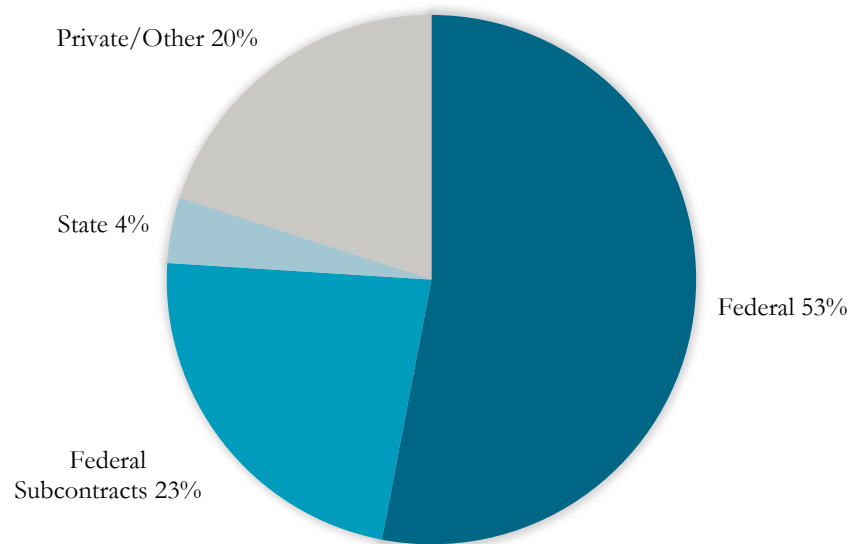
External Research Funding

Grants/Contracts						
Year	Federal	Federal Subcontract	State	Private/Other	Total	%Federal
2010	\$19,425,099	\$6,949,056	\$1,837,689	\$4,208,063	\$32,419,907	81%
2011	\$16,415,455	\$7,097,675	\$1,572,162	\$4,471,211	\$29,556,503	80%
2012	\$18,110,757	\$7,282,203	\$1,523,034	\$8,379,690	\$35,295,684	72%
2013	\$15,034,387	\$9,126,548	\$1,679,472	\$5,871,718	\$31,712,125	76%
2014	\$17,260,137	\$6,693,946	\$1,151,886	\$4,984,448	\$30,090,417	79%
2015	\$21,015,987	\$8,205,836	\$2,192,841	\$5,115,501	\$36,433,016	80%
2016	\$22,056,396	\$7,987,588	\$1,411,764	\$7,051,367	\$38,507,115	78%
2017	\$17,293,839	\$9,715,815	\$1,290,090	\$8,756,281	\$37,056,025	73%
2018	\$20,636,221	\$7,147,550	\$1,876,552	\$3,386,457	\$33,046,780	84%
2019	\$19,445,058	\$8,469,044	\$1,502,620	\$7,231,977	\$36,648,699	76%



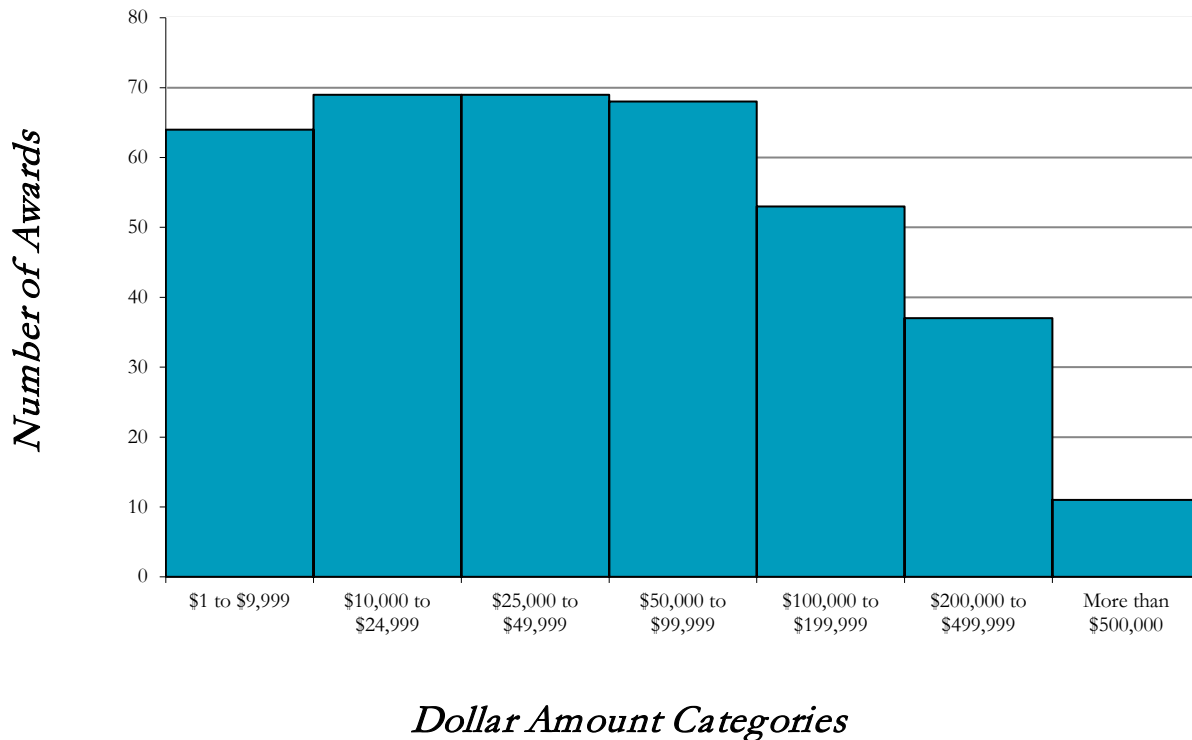
External Funds by Source-2019

Source	Amount	% of Total
Federal	\$19,445,058	53%
Federal Subcontracts	\$8,469,044	23%
State	\$1,502,620	4%
Private/Other	\$7,231,977	20%
<i>Total Funding</i>	\$36,648,699	100%

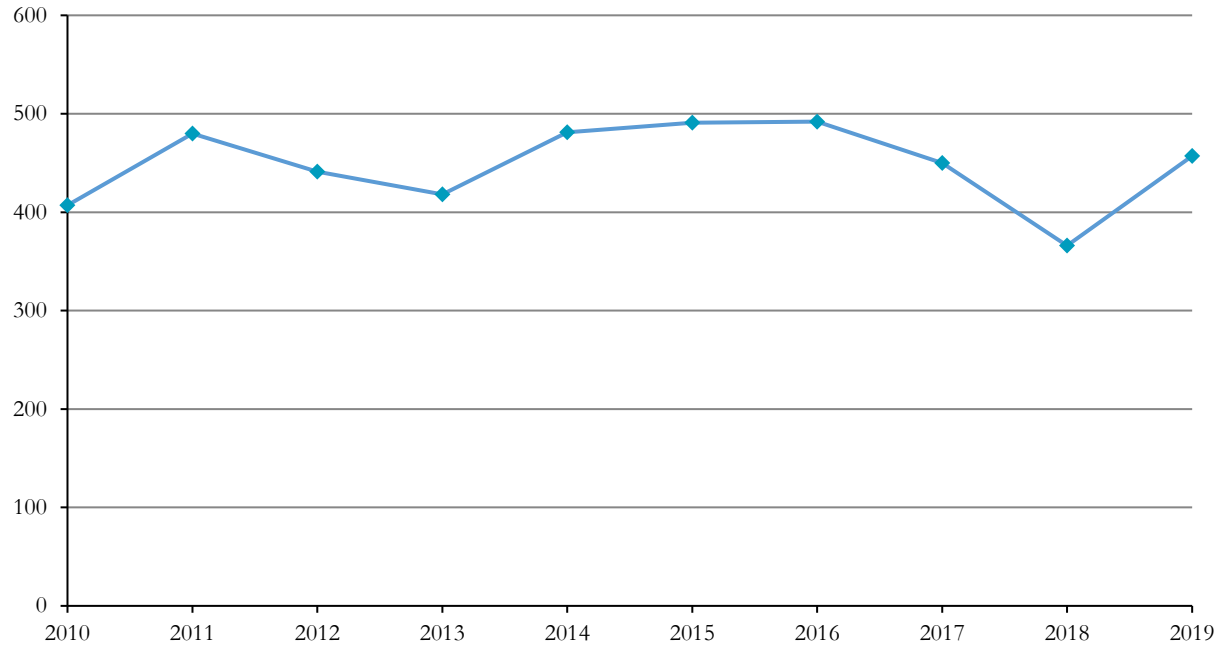


Awards by Amount-2019

Dollar Amount Categories	# of Awards	% of Total Awards by #	\$ Awards	% of Total Awards by \$ Amount
\$1 to \$9,999	64	17%	\$317,548	1%
\$10,000 to \$24,999	69	19%	\$1,251,337	3%
\$25,000 to \$49,999	69	19%	\$2,568,900	7%
\$50,000 to \$99,999	68	18%	\$4,929,575	13%
\$100,000 to \$199,999	53	14%	\$7,243,076	20%
\$200,000 to \$499,999	37	10%	\$12,438,711	34%
More than \$500,000	11	3%	\$7,899,552	22%
Totals	371	100%	\$36,648,699	100%

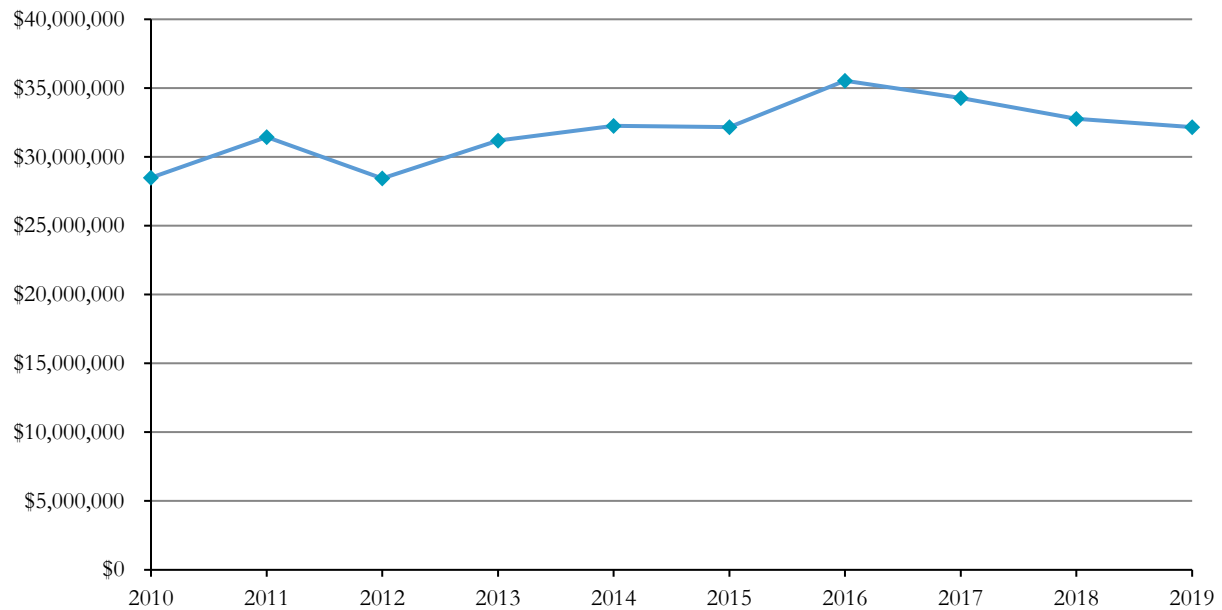


Proposals Submitted



Total Award Expenditures

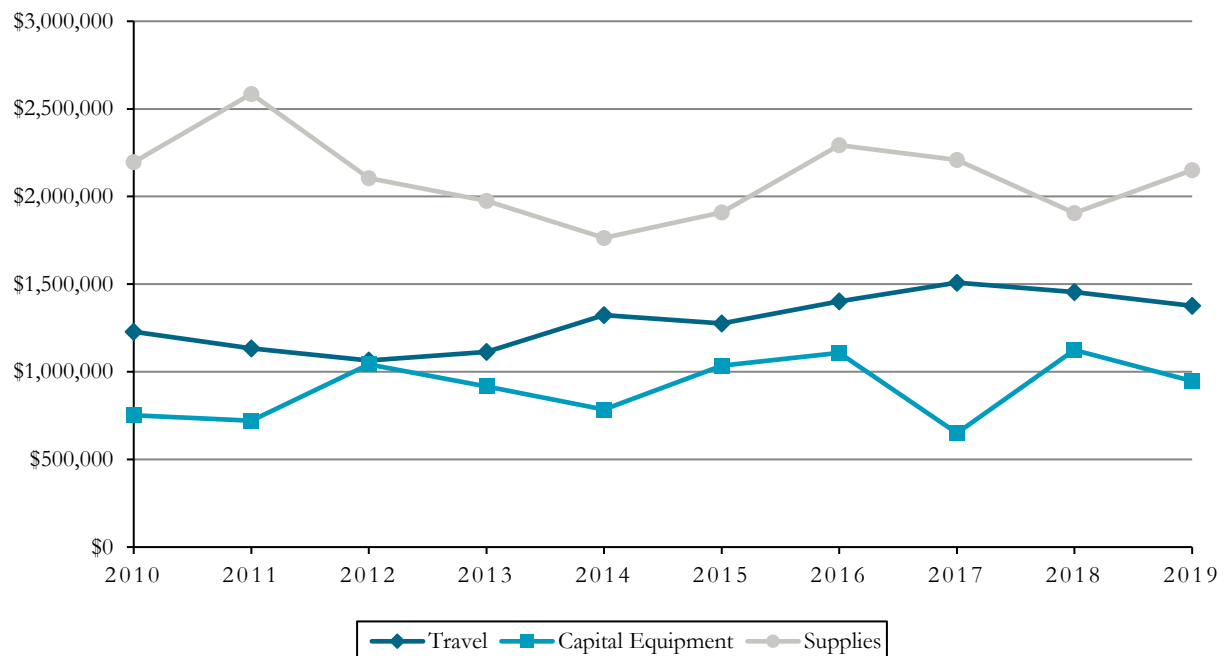
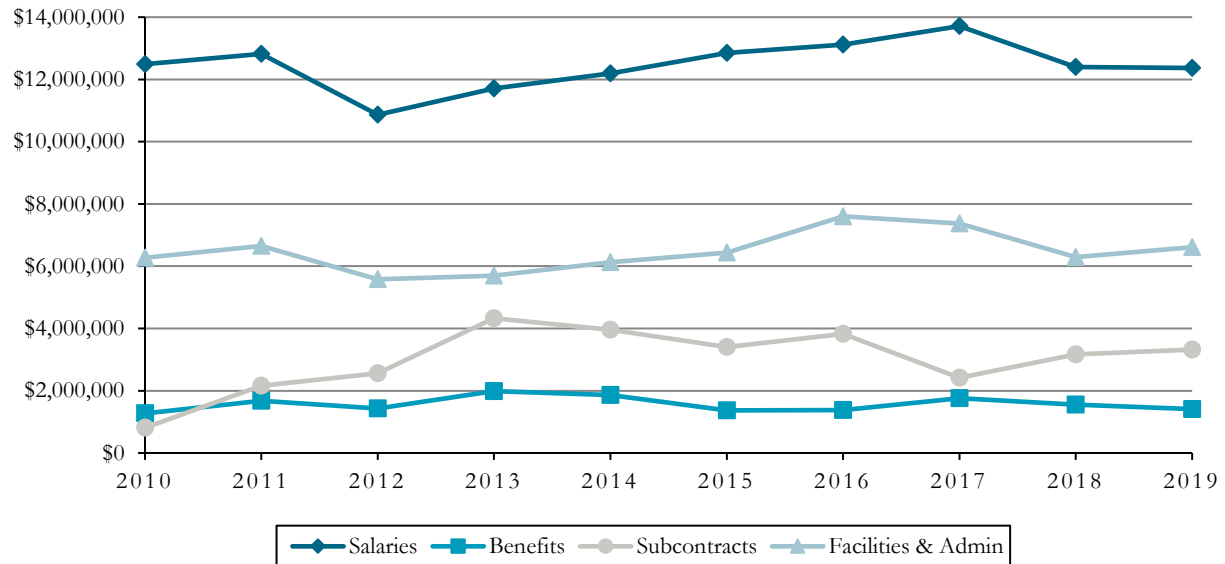
Year	Total Expenditures
2010	\$28,503,008
2011	\$31,443,918
2012	\$28,438,600
2013	\$31,184,980
2014	\$32,258,073
2015	\$32,177,342
2016	\$35,537,915
2017	\$34,278,900
2018	\$32,772,780
2019	\$32,177,733



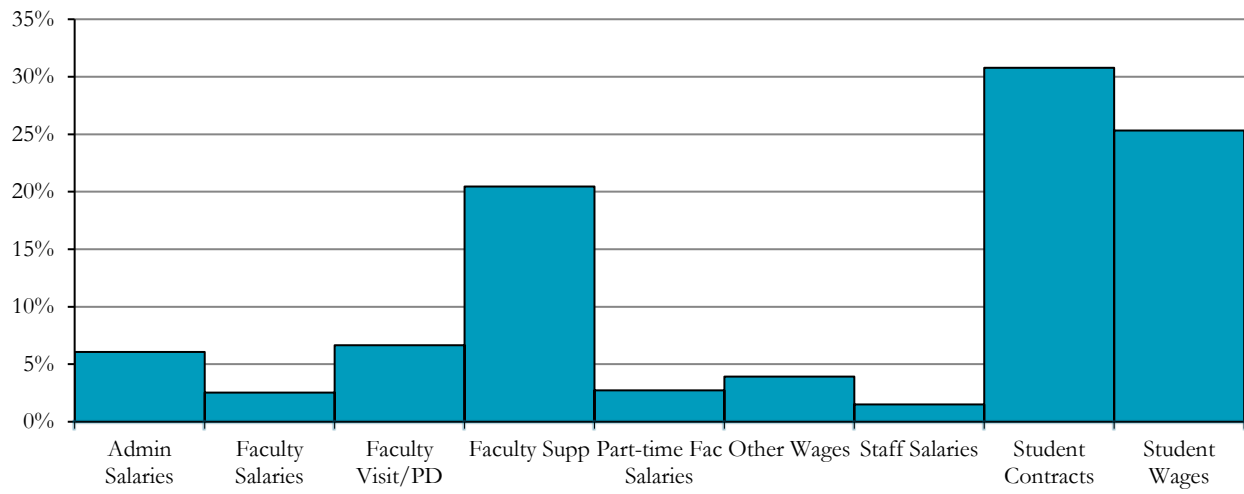
2019 Award Expenditures by Category

<i>Personnel Costs</i>	<i>Amount</i>
<i>Salaries & Wages</i>	
Administrative Salaries	747,072
Faculty Salaries	312,639
Faculty Sal-Visit-Health Ben	861,804
Faculty—Supplemental	2,976,456
Part-time Faculty Salaries	237,502
Other Wages	392,461
Staff Salaries	145,057
Student Contracts	3,683,185
Student Wages	3,016,564
Total Salaries & Wages	\$12,372,740
Fringe Benefits	\$1,411,341
Total Personnel Costs	\$13,784,081
<i>Other</i>	
Access Equipment	4,610
Advertising and Promotion	120
Capital Equipment	947,586
Conference & Symposium Costs	168,975
Computer Serv-Campus-Contract	2,913
Consultants	496,404
Contract Services	748,348
Employee Development/Training	20,970
Equipment Repair & Maintenance	43,684
Facilities & Administration	6,613,015
Hosting, Food, Entertainment	78,030
Non-Capital Equipment	101,237
Participant Stipends	289,515
Postage & Mailing	12,432
Printing & Copying	20,711
Program Income	(5,450)
Rental Expense	93,898
Research Fellowships	20,436
Research Publications Costs	30,911
Software Acquisitions/Support	22,352
Software Maintenance	5,500
Student Aid	1,820,197
Subcontracts	3,320,213
Supplies	2,150,492
Telecommunications	9,503
Travel	1,376,727
Uniforms/Costumes/Laundry	320
Total Other Expenditures	\$18,393,652
Total Research Expenditures	\$32,177,733

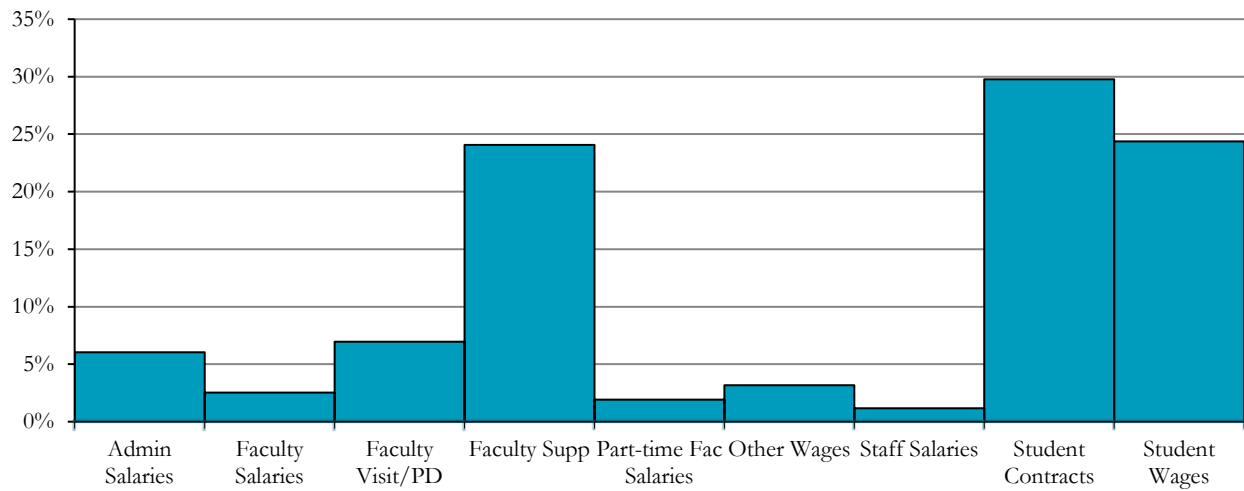
Award Dollars Expended



2018 Salaries and Wages Expenditures
Total: \$12,399,487



2019 Salaries and Wages Expenditures
Total: \$12,372,740

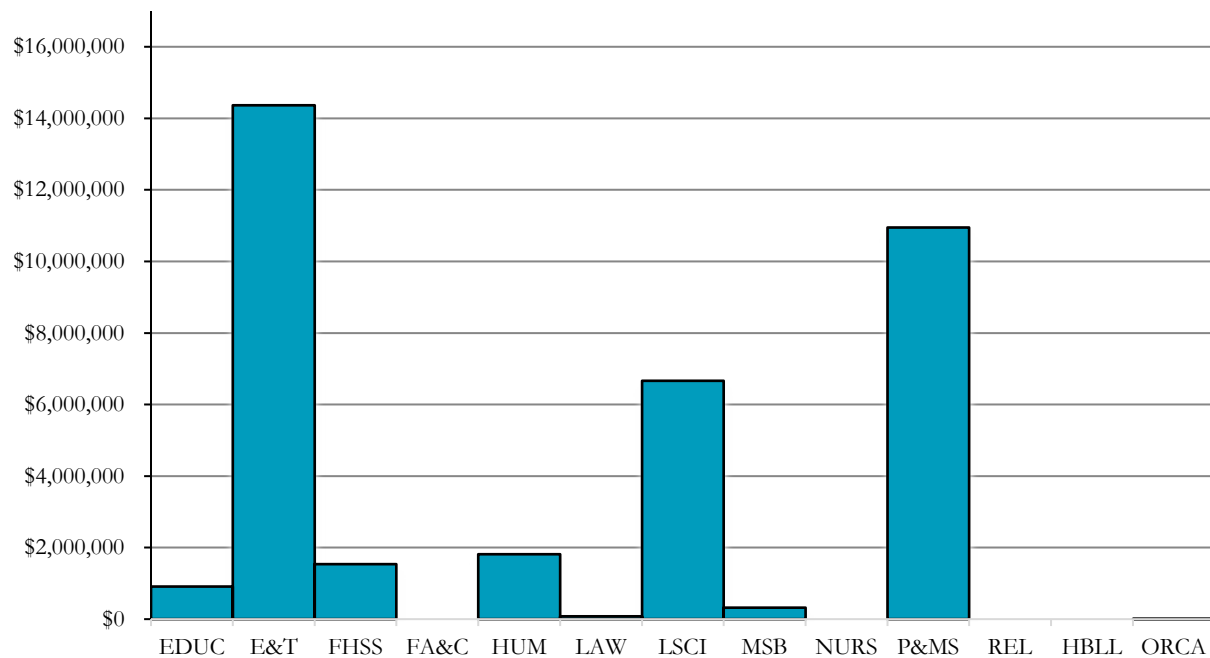




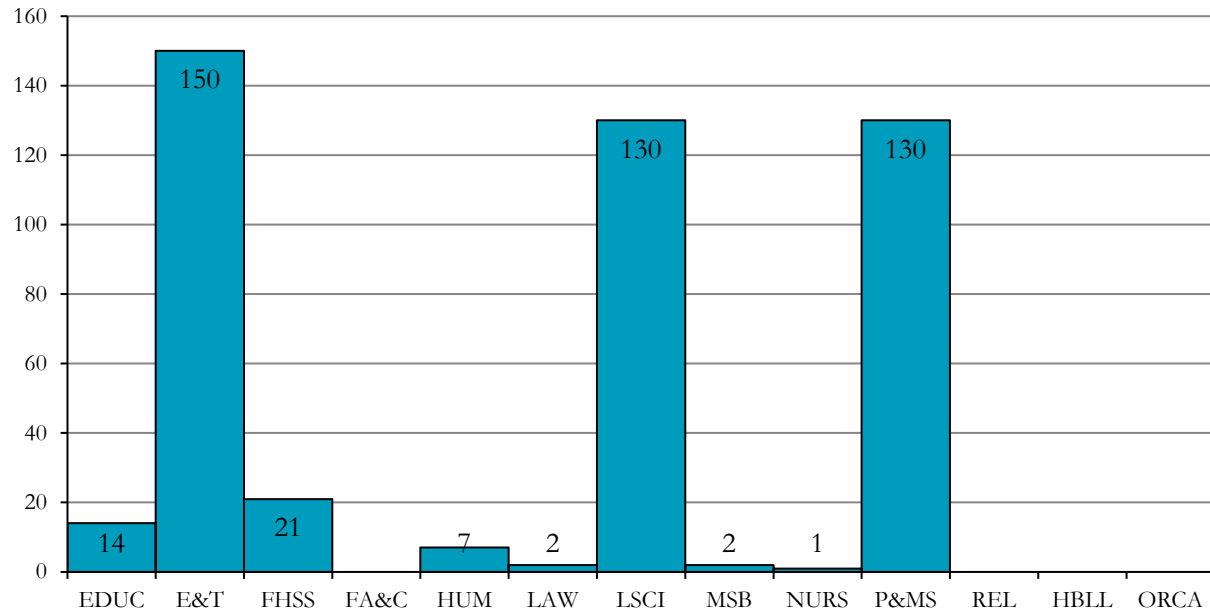
Information by College or School

Total Awards by College

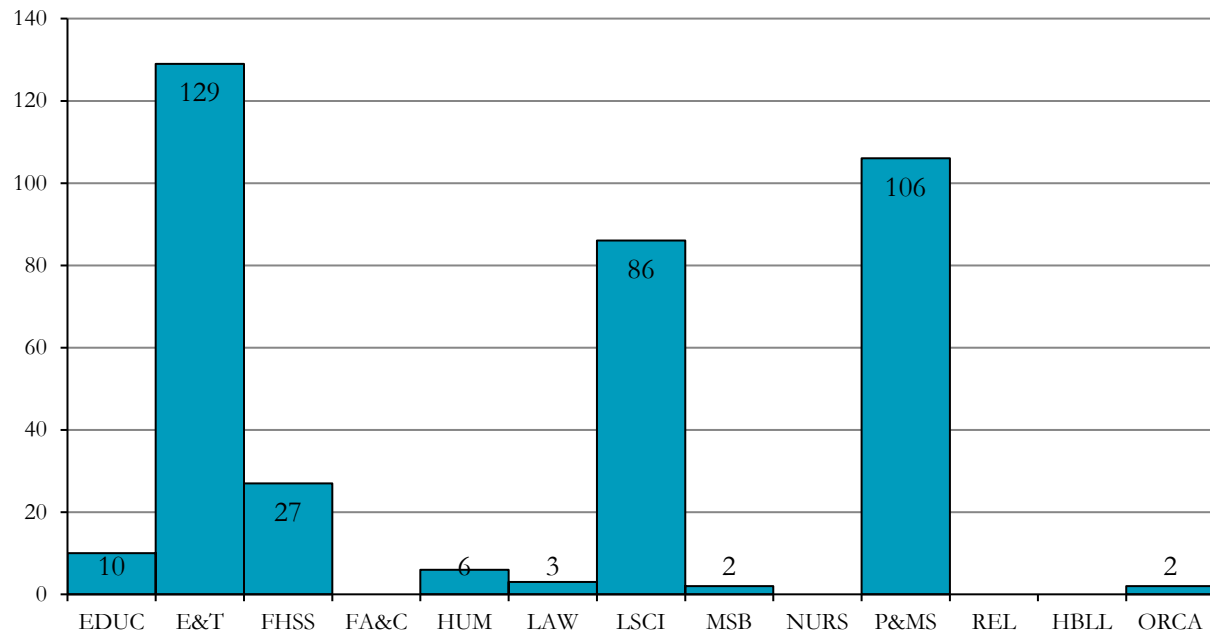
<i>College or School</i>	<i>Total</i>
David O. McKay School of Education	\$913,574
Ira A. Fulton College of Engineering	\$14,364,936
College of Family, Home & Social Sciences	\$1,539,966
College of Fine Arts & Communications	\$0
College of Humanities	\$1,813,832
J. Reuben Clark Law School	\$76,117
College of Life Sciences	\$6,665,109
Marriot School of Business	\$323,439
College of Nursing	\$0
College of Physical & Mathematical Sciences	\$10,951,176
Religious Education	\$0
Harold B. Lee Library	\$0
ORCA	\$550
University Total	\$36,648,699



Number of Proposals-2019



Number of Awards-2019



Total Awards by College and Department

<i>College and Department</i>	<i>Amount</i>
<u>David O. McKay School of Education</u>	
Center for Improvement of Teacher Education & Schooling	\$190,000
Communication Disorders	\$369,942
Counseling, Psychology, & Special Education	\$177,300
Education Leadership & Foundations	0
Instructional Psychology	\$176,332
Teacher Education	0
TOTAL	\$913,574
<u>Ira A. Fulton College of Engineering</u>	
Chemical Engineering	\$3,155,491
Civil & Environmental Engineering	\$1,423,790
Electrical & Computer Engineering	\$3,178,818
Manufacturing Engineering	\$607,277
Mechanical Engineering	\$5,546,320
School of Technology	\$453,240
TOTAL	\$14,364,936
<u>College of Family, Home, & Social Sciences</u>	
Anthropology	\$20,000
Economics	\$358,450
Geography	\$22,500
History	\$446,716
Museum of Peoples & Cultures	0
Office of Public Archaeology	0
Political Science	\$400,401
Psychology	\$204,241
School of Family Life	0
Social Work	\$63,703
Sociology	\$23,955
TOTAL	\$1,539,966
<u>College of Fine Arts & Communications</u>	0
<u>College of Humanities</u>	
Asian & Near East Languages	\$1,709,548
Comparative Arts & Letters	0
English	\$104,284
French & Italian	0
German & Russian	0
Linguistics & English Language	0
Philosophy	0
Spanish & Portuguese	0
TOTAL	\$1,813,832

<u>J. Reuben Clark Law School</u>	TOTAL	\$76,117
<u>College of Life Sciences</u>		
Monte L. Bean Life Science Museum		\$34,000
Biology		\$990,046
Exercise Science		\$538,561
Public Health		\$360,153
Microbiology & Molecular Biology		\$686,017
Nutrition, Dietetics, & Food Science		\$723,323
Physiology & Developmental Biology		\$1,130,525
Plant & Wildlife Sciences		\$2,202,484
	TOTAL	\$6,665,109
<u>Marriott School of Business</u>		
School of Accountancy		0
Experience Design & Management		0
Finance & Managerial Economics		0
Global Management Center		\$142,500
Information Systems		\$38,439
Management		0
Marketing & Global Supply Chain		\$142,500
Romney Institute of Public Management		0
	TOTAL	\$323,439
<u>College of Nursing</u>		0
<u>Office of Research & Creative Activities</u>		\$550
<u>College of Physical & Mathematical Sciences</u>		
Chemistry & Biochemistry		\$4,663,594
Computer Science		\$1,890,702
Museum of Paleontology		0
Geology		\$870,830
Mathematics		\$102,533
Mathematics Education		\$667,208
Physics & Astronomy		\$2,555,624
Statistics		\$200,685
	TOTAL	\$10,951,176
<u>Religious Education</u>		
Ancient Scripture		0
Church History & Doctrine		0
	TOTAL	0
<u>Harold B. Lee Library</u>	TOTAL	0
Grand Total		\$36,648,699

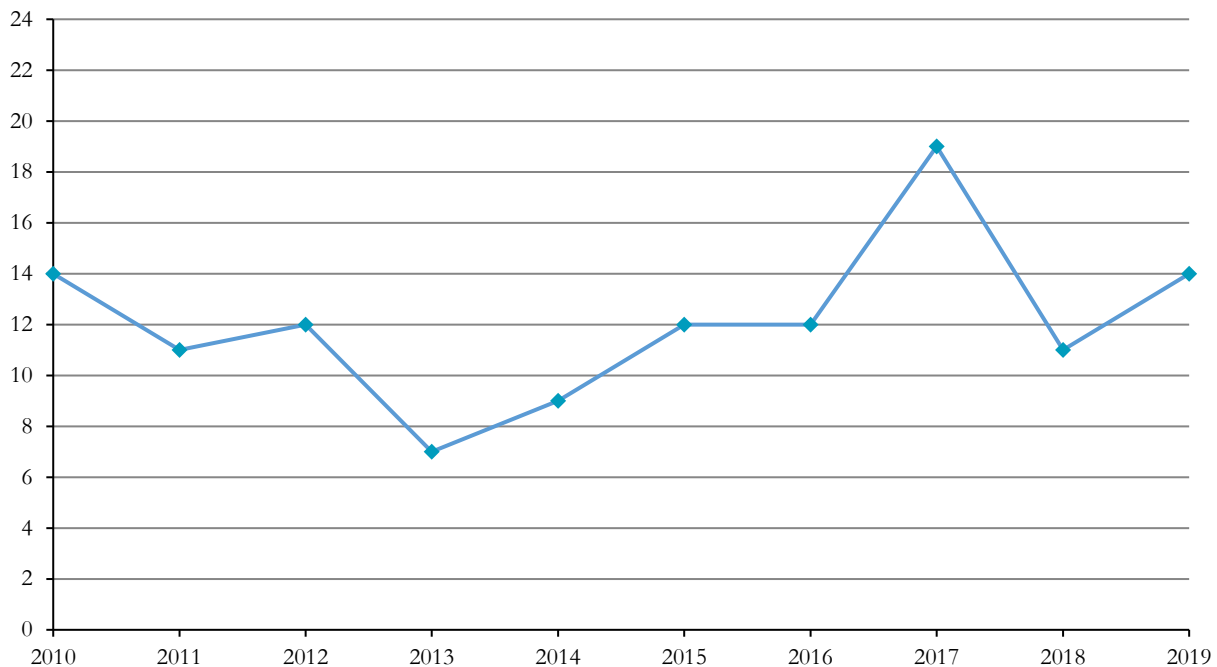


David O. McKay School of Education

Summary by Departments

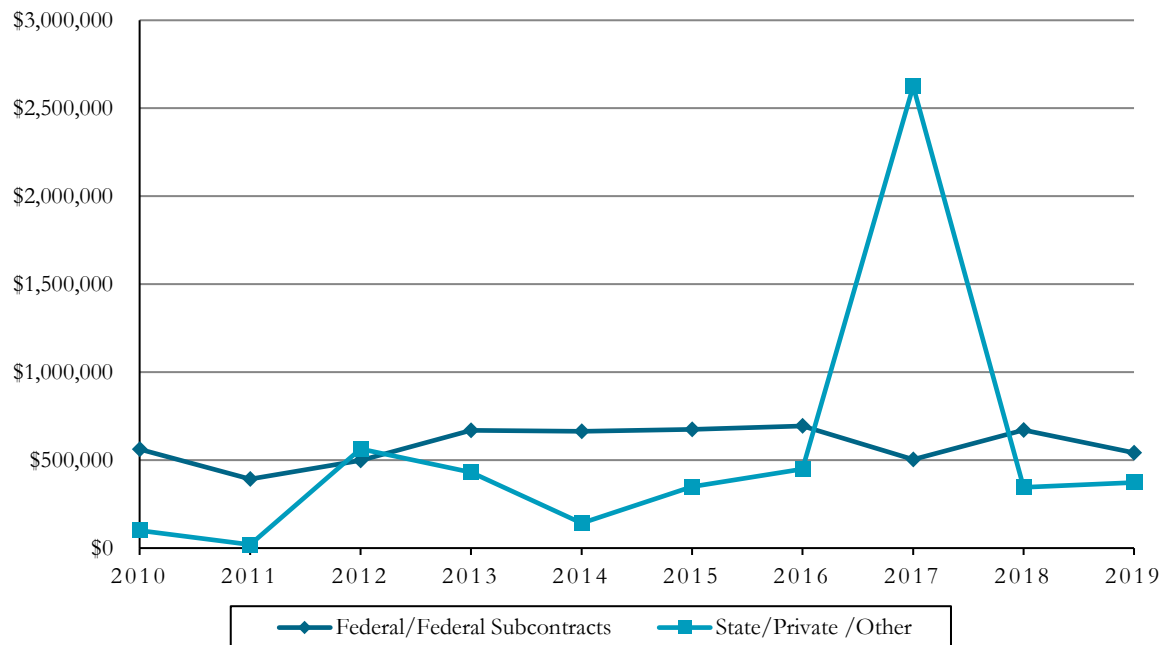
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Center for Improvement of Teacher Education & Schooling	2	3	2	\$190,000
Communication Disorders	1	2	3	\$369,942
Counseling, Psychology, & Special Education	6	3	4	\$177,300
Educational Leadership & Foundations	1	0	0	\$0
Instructional Psychology & Technology	4	1	1	\$176,332
Teacher Education	3	5	0	\$0
TOTALS	17	14	10	\$913,574

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$562,137	\$99,172	\$661,309
2011	\$392,300	\$19,700	\$412,000
2012	\$498,499	\$564,185	\$1,062,684
2013	\$669,318	\$430,120	\$1,099,438
2014	\$663,944	\$141,000	\$804,944
2015	\$675,327	\$348,440	\$1,023,767
2016	\$693,993	\$449,966	\$1,143,959
2017	\$503,548	\$2,624,841	\$3,128,389
2018	\$671,011	\$345,902	\$1,016,913
2019	\$541,274	\$372,300	\$913,574



David O. McKay School of Education 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
<i>Center for Improvement of Teacher Education & Schooling</i>								
Flox, Cally		Utah Division of Arts & Museums		BYU Arts Partnership Native American Curriculum Initiative	5/30/2019	6/30/2020	R0402334	\$15,000
Flox, Cally		Utah State Board of Education		Beverly Taylor Sorenson Arts Learning Professional Development SFY2020	7/1/2019	6/30/2020	R0402338	\$175,000
<i>Communication Disorders</i>								
Cabbage, Kathryn		American Speech-Language-Hearing Association		Advancing Academic Research Careers Award	9/16/2019	2/28/2021	R0502309	\$5,000
Tanner, Kristine		NIH		Pathophysiology of Voice Disorders due to Combination Inhaled Corticosteroids in Asthma	5/14/2018	4/30/2023	R0102086	\$295,862
Tanner, Kristine		NIH		Imaging and influence of glottic and subglottic anatomy in healthy and stenotic patients	9/1/2018	8/31/2020	R0102088	\$69,080
<i>Counseling, Psychology, & Special Education</i>								
Gabrielsen, Terisa	w/ Young, Ellie	Utah State Board of Education		Retaining School Psychology Graduates in Utah Schools	8/9/2019	6/30/2021	R0402343	\$41,400
Heath, Melissa	w/ Cutrer-Parraga, Elizabeth	Utah State Board of Education		ULEAD grant funds to BYU to conduct a research project designed to understand how children's anxiety interacts with early reading skill development.	9/17/2019	6/30/2020	R0402341	\$5,000
Kellems, Ryan	w/ Charlton, Cade	Utah State Board of Education		Recruitment and Preparation of High-Qualified Special Educators in Mathematics at Brigham Young University	6/14/2019	6/30/2021	R0402337	\$17,250
Nielsen, Stevan Lars		Templeton Foundation		Studying the effects of integrating spirituality in psychotherapy	3/31/2017	3/27/2020	R0502284	\$50,000
Young, Ellie		Utah State Board of Education		Retaining School Psychology Graduates in Utah Schools	8/9/2019	6/30/2021	R0402343	\$41,400

Instructional Psychology & Technology

McDonald, Jason	w/ Hansen, Derek	NSF	Collaboration in the Future of Work: Developing Playable Case Studies to Improve STEM Career Pathways	7/1/2019	6/30/2022	R0112404	\$104,284	
Rich, Peter		George Mason University	NSF	Project REVEAL-HS: Fostering Student Computational Thinking in Data Analysis Through Self-Regulated Learning Prompts and Analytics (Joint Proposal with George Mason University)	10/1/2018	9/30/2019	R0302828	\$72,048

David O. McKay School of Education Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
NIH	2	\$364,942
NSF	1	\$104,284
Total	3	\$469,226
Federal Subcontract		
George Mason University	1	\$72,048
Total	1	\$72,048
State		
Utah Division of Arts & Museums	1	\$15,000
Utah State Board of Education	7	\$302,300
Total	8	\$317,300
Private/Other		
American Speech-Language-Hearing Association	1	\$5,000
Templeton Foundation	1	\$50,000
Total	2	\$55,000
Grand Total	14	\$913,574

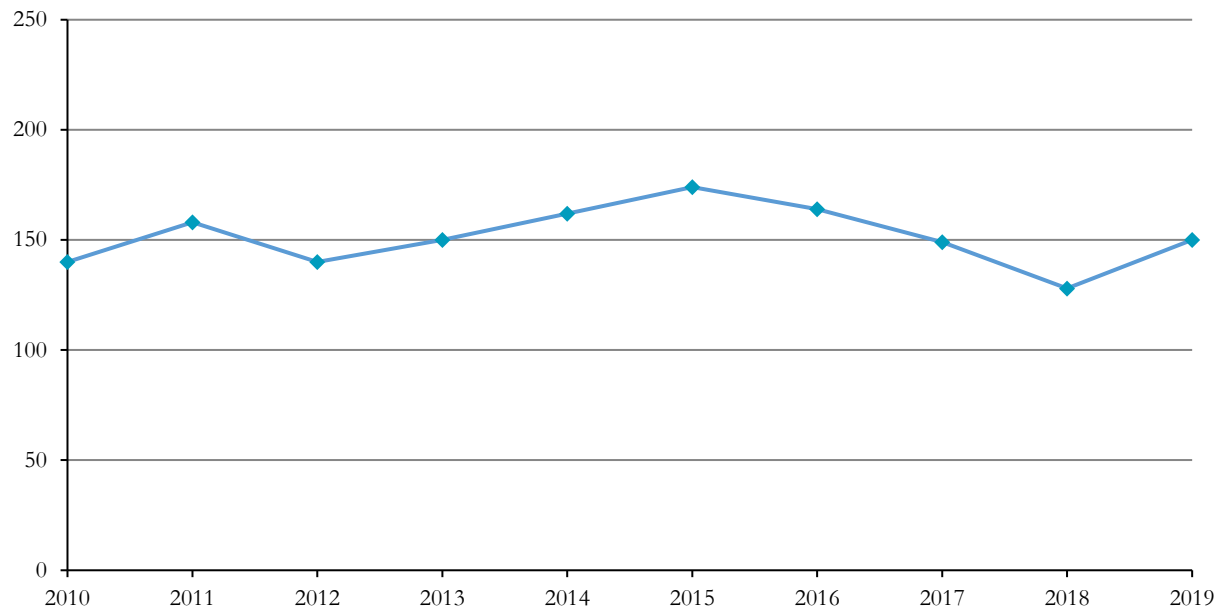


Ira A. Fulton College of Engineering

Summary by Departments

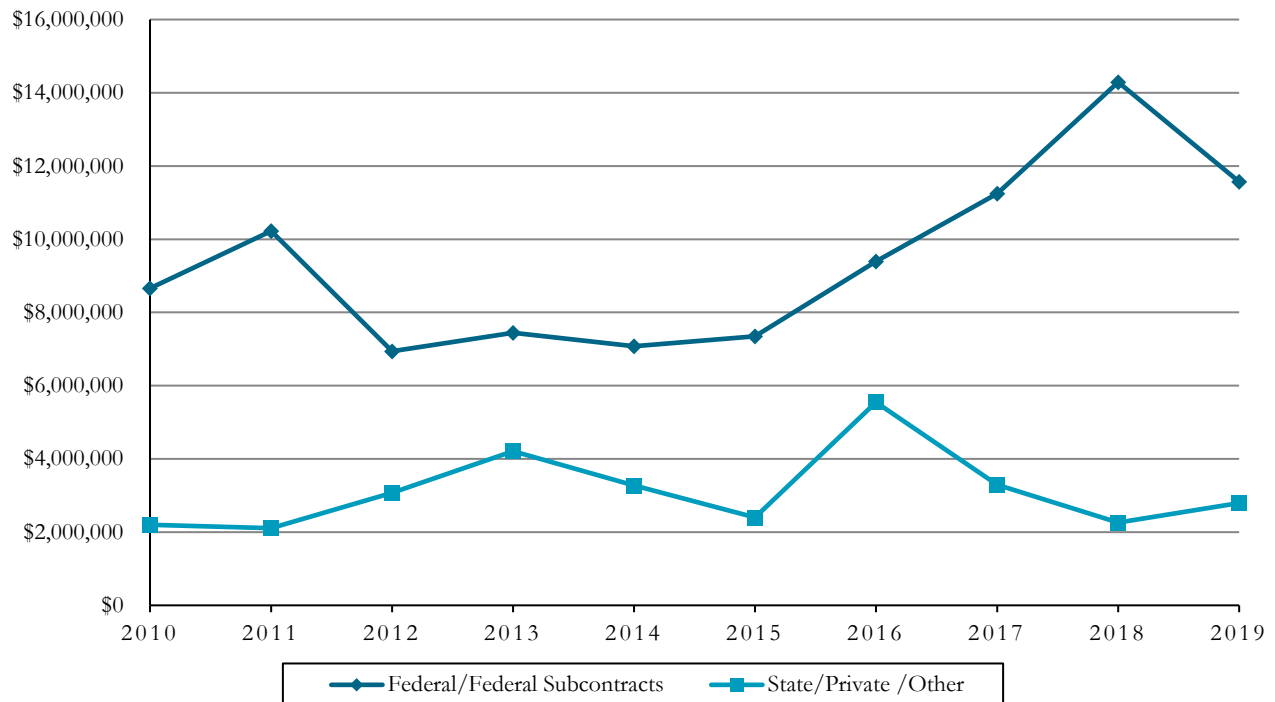
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Chemical Engineering	14	24	14	\$3,155,491
Civil & Environmental Engineering	11	22	20	\$1,423,790
Electrical & Computer Engineering	17	29	34	\$3,178,818
Manufacturing Engineering	6	8	6	\$607,277
Mechanical Engineering	24	55	50	\$5,546,320
School of Technology	11	12	5	\$453,240
TOTALS	83	150	129	\$14,364,936

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$8,659,447	\$2,198,382	\$10,857,829
2011	\$10,224,839	\$2,108,091	\$12,332,930
2012	\$6,940,419	\$3,075,235	\$10,015,653
2013	\$7,446,524	\$4,208,437	\$11,654,961
2014	\$7,073,257	\$3,279,114	\$10,352,371
2015	\$7,345,708	\$2,397,665	\$9,743,373
2016	\$9,391,742	\$5,546,423	\$14,938,165
2017	\$11,246,406	\$3,294,087	\$14,540,493
2018	\$14,289,851	\$2,259,118	\$16,548,969
2019	\$11,570,059	\$2,794,877	\$14,364,936



Ira A. Fulton College of Engineering 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
<i>Chemical Engineering</i>								
Baxter, Larry		DOE		Nuclear Energy University Programs-Fellowship and Scholarship	11/1/2013	6/30/2022	R0202405	\$162,500
Bundy, Brad	w/ Knotts, Tommy	NSF		Designing Unnatural-Amino-Acid-Enabled Second-Generation Biomaterials: Advanced Surfaces, Biocatalysts and Biotherapeutics - An Integrated Computational/Experimental Approach	9/1/2017	8/31/2020	R0112364	\$65,001
Fletcher, Tom		USDA FS		Fundamental Measurements and Modeling of Prescribed Fire Behavior in the Naturally Heterogeneous Fuel Beds of Southern Pine	4/15/2016	9/30/2019	R0202467	\$88,496
Fry, Andrew		University of Utah	Pacificorp	Technical Assistance in Support of Biomass Co-firing Demonstration	6/1/2017	9/30/2021	R0602554	\$108,813
Harb, John		Ford Motor Company		Ford URP: Development of a Fundamentally Based Model of E-coat Deposition	3/24/2017	12/31/2019	R0602541	\$40,000
Harb, John		Alpha Tech Research Corp		Alpha Tech NET Fellowship	3/1/2017	4/30/2020	R0602548	\$35,000
Harb, John	w/ Memmott, Matthew	Kairos Power		Preparation of Lab to Handle FLiBe Salt in Order to perform Property Studies of FLiBe	12/1/2018	2/1/2020	R0602582	\$44,513
Hedengren, John	w/ McLain, Tim	NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$8,000
Hedengren, John		DOE		Proactive Hybrid Nuclear with Load Forecasting	10/1/2019	9/30/2022	R0202525	\$313,352
Hedengren, John		BP		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
Knotts, Tommy		NSF		Designing Unnatural-Amino-Acid-Enabled Second-Generation Biomaterials: Advanced Surfaces, Biocatalysts and Biotherapeutics - An Integrated Computational/Experimental Approach	9/1/2017	8/31/2020	R0112364	\$65,001
Knotts, Tommy	w/ Wilding, Vincent	AIChE		DIPPR 801	1/1/2018	12/31/2020	R0602557	\$304,000

Lignell, David		ConocoPhillips		Kinetic analysis of coke formation in a industrial chemical processes	10/1/2018	3/31/2019	R0602593	\$3,000
Memmott, Matthew	w/ Hedengren, John	DOE		Proactive Hybrid Nuclear with Load Forecasting	10/1/2019	9/30/2022	R0202525	\$313,352
Memmott, Matthew	w/ Nickerson, Stella	DOE		Validated, Multi-Scale Molecular Dynamics Simulations to Predict the Thermophysical Properties of Molten Salts Containing Fuel, Fission, and Corrosion Products	10/1/2019	9/30/2022	R0202526	\$265,922
Memmott, Matthew		University of Idaho	DOE	Investigation of Molten Salts to be used in Nuclear Thermal Storage and Integration Systems	10/1/2018	9/30/2021	R0302833	\$164,490
Memmott, Matthew		University of New Mexico	DOE	Experimental Investigation of Radioisotope Retention Capability of Liquid Metal Coolants (Lead and Sodium)	10/1/2018	9/30/2019	R0302849	\$72,500
Memmott, Matthew		Kairos Power		Preparation of Lab to Handle FLiBe Salt in Order to perform Property Studies of FLiBe	12/1/2018	2/1/2020	R0602582	\$44,514
Nickerson, Stella		DOE		Validated, Multi-Scale Molecular Dynamics Simulations to Predict the Thermophysical Properties of Molten Salts Containing Fuel, Fission, and Corrosion Products	10/1/2019	9/30/2022	R0202526	\$265,922
Nickerson, Stella	w/ Memmott, Matthew	Kairos Power		Preparation of Lab to Handle FLiBe Salt in Order to perform Property Studies of FLiBe	12/1/2018	2/1/2020	R0602582	\$44,513
Pitt, Bill	w/ Hawkins, Aaron	NIH		Multiplexed, Non-Amplified, Nucleic Acid-Based Identification of Multidrug Resistant Pathogens Using an Integrated Optofluidic Platform	3/1/2015	2/28/2019	R0102068	\$245,601
Wheeler, Dean		University of California, Berkeley	LBNL	Addressing Heterogeneity in Electrode Fabrication Processes	3/12/2019	12/31/2019	R0302850	\$175,000
Wilding, Vincent		AIChE		DIPPR 801	1/1/2018	12/31/2020	R0602557	\$304,000
Civil & Environmental Engineering								
Ames, Dan		NASA		An AmeriGEOSS Cloud-based Platform for Rapid Deployment of GEOGLOWS Water and Food Security Decision Support Apps	1/20/2018	1/19/2021	R0162032	\$90,085
Ames, Dan	w/ Nelson, Jim	NASA		Improving Resiliency and Reducing Risk due to Extreme Hydrologic Events through Application of Earth Observations and In-Situ Monitoring Information	11/1/2019	10/31/2022	R0162040	\$72,239
Ames, Dan		University of Texas, Austin	EPA	A Sustainable Center for Crowd-Sourced Water Infrastructure Modeling	9/1/2016	8/31/2021	R0302708	\$33,137

Ames, Dan		Utah State University	NSF	SI2SSI: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis	10/1/2017	9/30/2021	R0302774	\$19,377
Ames, Dan		CUAHSI	NSF	National Water Center and Summer Institute Support	2/1/2018	1/31/2019	R0302821	\$22,351
Ames, Dan		Aquaveo, LLC		Investigation of possible transitions from Jupyter Notebooks to Tethys apps	9/17/2018	5/31/2019	R0602577	\$5,000
Franke, Kevin	w/ McLain, Tim	NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$8,000
Franke, Kevin		BP		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
Hotchkiss, Rollin		Utah State University	USGS	Bathymetric surveying using sonar and drones for recurring data analysis	6/18/2019	5/18/2020	R0302881	\$12,500
Jones, Norm		NASA		Geospatial Information Tools for Sustainable Groundwater Management in West Africa	10/28/2019	10/27/2022	R0162039	\$107,345
Jones, Norm	w/ Ames, Dan	Utah State University	NSF	SI2SSI: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis	10/1/2017	9/30/2021	R0302774	\$19,377
Macfarlane, Gregory		UDOT		A Synthesis of Passive Third-Party Datasets Used For Transportation Planning	9/1/2019	12/31/2020	R0402347	\$24,762
Nelson, Jim	w/ Ames, Dan	NASA		An AmeriGEOSS Cloud-based Platform for Rapid Deployment of GEOGLOWS Water and Food Security Decision Support Apps	1/20/2018	1/19/2021	R0162032	\$90,085
Nelson, Jim		NASA		Improving Resiliency and Reducing Risk due to Extreme Hydrologic Events through Application of Earth Observations and In-Situ Monitoring Information	11/1/2019	10/31/2022	R0162040	\$72,239
Nelson, Jim	w/ Ames, Dan	Utah State University	NSF	SI2SSI: Cyberinfrastructure for Advancing Hydrologic Knowledge through Collaborative Integration of Data Science, Modeling and Analysis	10/1/2017	9/30/2021	R0302774	\$19,377
Nelson, Jim		Johns Hopkins University	NASA	Environmental Determinants of Enteric Infectious Disease: a GEO Platform for analysis and risk assessment.	12/21/2017	12/20/2018	R0302795	\$25,000
Nelson, Jim	w/ Ames, Dan	CUAHSI	NSF	National Water Center and Summer Institute Support	2/1/2018	1/31/2019	R0302821	\$22,350
Rollins, Kyle		NSF		RAPID: Blast Testing to Investigate Resin-Injection Treatment for Liquefaction Mitigation	4/1/2019	3/31/2020	R0112401	\$191,355
Rollins, Kyle		National Academy of Sciences		Proposed AASHTO Specifications for Design of Piles for Downdrag	6/27/2019	6/26/2022	R0302865	\$40,000

Rollins, Kyle		UDOT		Evaluation of Lateral Pile Resistance Near MSE Walls at a Dedicated Wall Site - Phase 2	8/20/2019	9/20/2020	R0402317	\$80,000
Rollins, Kyle		UDOT		Improved Geotechnical Parameters for LPILE analysis	12/20/2018	4/30/2020	R0402328	\$50,000
Rollins, Kyle		University of Utah	UDOT	Mitigation of Differential Settlement at Highway Bridge Approaches	7/1/2019	7/15/2020	R0402342	\$27,874
Rollins, Kyle		Deep Foundations Institute		Old and New-Reliability is Key: A Close-Up Look into the Accuracy of P-y Formulations in Predicting Lateral Foundation Resistance	3/1/2018	3/1/2019	R0502286	\$14,500
Schultz, Grant		UDOT		Evaluating the Quality of Signal Operations using Signal Performance Measures	1/24/2019	9/30/2020	R0402329	\$60,000
Schultz, Grant		UDOT		Analysis of the Effectiveness of DSRC on Snow Plow Operations in Utah	9/1/2019	12/31/2020	R0402345	\$69,997
Schultz, Grant		UDOT		Analysis of Performance Measures of UDOT's Traffic Incident Management Program: Phase II	9/15/2019	2/28/2021	R0402346	\$74,996
Scott, Michael		Sandia National Lab	DOE	Using smooth shape functions to improve the efficiency of explicit time integration	5/15/2019	9/30/2019	R0302861	\$30,000
Williams, Gus	w/ Jones, Norm	NASA		Geospatial Information Tools for Sustainable Groundwater Management in West Africa	10/28/2019	10/27/2022	R0162039	\$107,345
Williams, Gus	w/ Hotchkiss, Rollin	Utah State University	USGS	Bathymetric surveying using sonar and drones for recurring data analysis	6/18/2019	5/18/2020	R0302881	\$12,500
Electrical & Computer Engineering								
Beard, Randy	w/ McLain, Tim	NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$8,000
Beard, Randy	w/ McLain, Tim	NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - VRS Supplement	3/15/2017	2/28/2022	R0112362	\$5,000
Beard, Randy	w/ McLain, Tim	AeroVironment		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
Beard, Randy	w/ McLain, Tim	Insitu		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
Camacho, Ryan		NSF		QLCI-CG Quantum Challenge Institute for Quantum Photonic Information	9/1/2019	8/31/2020	R0112416	\$149,658
Camacho, Ryan		UT Battelle	DOE	Chip-Scale Continuous Variable Quantum Key Distribution	12/14/2018	11/30/2019	R0302834	\$85,000
Camacho, Ryan		UT Battelle	DOE	Chip-Scale Continuous Variable Quantum Key Distribution	12/14/2018	11/30/2019	R0302834	\$9,000

Chiang, Shiuh-hua Wood	w/ Austin, Daniel	NASA		A Circuit Board Charge Detector for Characterization of Martian Dust	8/21/2017	8/20/2020	R0162030	\$70,598
Chiang, Shiuh-hua Wood	w/ Lunt, Barry	Legacy Storage International		A Hybrid Carbon Fuse-CMOS Memory Chip	4/15/2019	9/30/2019	R0502290	\$3,975
Chiang, Shiuh-hua Wood	w/ Lunt, Barry	Legacy Storage International		A Hybrid Carbon Fuse-CMOS Memory Chip	4/15/2019	7/31/2019	R0502290	\$3,825
Chiang, Shiuh-hua Wood	w/ Iverson, Brian	PerkinElmer		Compact Next-generation GC and MS Instrumentation	6/1/2018	12/31/2018	R0602482	\$49,995
Goeders, Jeff	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC)	9/1/2017	8/31/2022	R0112378	\$4,000
Goeders, Jeff	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC) - MIPR: Government Memberships	9/1/2017	8/31/2022	R0112389	\$12,452
Goeders, Jeff		Lockheed		I/UCRC: SHREC Phase I Industry Membership Dues	9/1/2017	8/31/2022	R0602555	\$20,000
Harrison, Willie		NSF		CIF: Small: Best wiretap codes for real-world physical-layer security	10/1/2019	9/30/2022	R0112417	\$449,928
Hawkins, Aaron		NIH		Multiplexed, Non-Amplified, Nucleic Acid-Based Identification of Multidrug Resistant Pathogens Using an Integrated Optofluidic Platform	3/1/2015	2/28/2019	R0102068	\$245,604
Hawkins, Aaron	w/ Austin, Daniel	NASA		A Circuit Board Charge Detector for Characterization of Martian Dust	8/21/2017	8/20/2020	R0162030	\$70,598
Hawkins, Aaron		University of California, Santa Cruz	NIH	Nanopore-based molecular analysis with high throughput	8/1/2019	4/30/2020	R0302873	\$101,175
Hawkins, Aaron	w/ Iverson, Brian	PerkinElmer		Compact Next-generation GC and MS Instrumentation	6/1/2018	12/31/2018	R0602482	\$49,995
Hutchings, Brad	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC)	9/1/2017	8/31/2022	R0112378	\$4,000
Hutchings, Brad	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC) - MIPR: Government Memberships	9/1/2017	8/31/2022	R0112389	\$12,452
Hutchings, Brad		Lockheed		I/UCRC: SHREC Phase I Industry Membership Dues	9/1/2017	8/31/2022	R0602555	\$20,000
Lee, D. J.		eCortex, Inc.	Naval Sea Systems Command	Automated Archerfish EO/Sonar Detection Techniques for Naval Mines	5/1/2017	12/5/2019	R0302747	\$25,000

Long, David		NASA		Consistency in the Scatterometer Climate Record	10/24/2018	10/23/2022	R0162035	\$150,300
Long, David		NASA		DESIGNING A SMALLSAT CONSTELLATION OF MICROWAVE IMAGERS TO VIABLY MEASURE NEAR-HOURLY OCEAN WIND VECTORS	9/1/2019	8/31/2021	R0162037	\$45,000
Long, David		NASA		Designing microwave cubesate sensors for use in a constellation providing near-hourly revisit of global ocean vector winds	9/5/2019	9/4/2020	R0202531	\$59,950
Long, David		University of Utah	NASA	Utah NASA Space grant Consortium	4/10/2015	4/9/2019	R0302618	\$88,100
Long, David		University of Utah	NASA	Utah NASA Space grant Consortium 2018	4/10/2015	5/17/2020	R0302618	\$500
Long, David		University of Colorado, Boulder	US Army Corps of Engineers	Using Enhanced-Resolution Passive Microwave Data to Improve Spatially Distributed Near Real-Time Snow Water Equivalent	9/25/2018	8/31/2021	R0302862	\$41,102
Lundrigan, Phil		Deseret International Charities		Mongolian Ger Air Quality Measurement and Analysis	7/1/2019	4/30/2020	R0702018	\$15,250
Mazzeo, Brian		Battelle Energy Alliance, LLC	DOE	Control System Protocol Dissector - E&T Capstone Project	9/10/2018	4/30/2019	R0302807	\$600
Mazzeo, Brian	w/ Wheeler, Dean	University of California, Berkeley	LBNL	Addressing Heterogeneity in Electrode Fabrication Processes	3/12/2019	12/31/2019	R0302850	\$175,000
Mazzeo, Brian		Sandia National Lab	DOE	Gray Level Co-Occurrence Matrix Algorithm Test Bench - Capstone	8/5/2019	4/30/2010	R0302871	\$22,000
Mazzeo, Brian		Idaho National Laboratory	DOE	Industrial Control System (ICS) Communication Monitoring & Analysis	7/2/2019	4/30/2020	R0302874	\$23,000
Mazzeo, Brian		Idaho National Laboratory		Industrial Control System (ICS) Communication Monitoring & Analysis	7/2/2019	4/30/2020	R0302874	\$2,500
Nelson, Brent	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC)	9/1/2017	8/31/2022	R0112378	\$4,000
Nelson, Brent	w/ Wirthlin, Mike	NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC) - MIPR: Government Memberships	9/1/2017	8/31/2022	R0112389	\$12,452
Nordin, Greg	w/ Woolley, Adam	NIH		3D-Printed Integrated Microfluidic Devices for Preterm Birth Biomarker Analysis	9/18/2018	6/30/2019	R0102090	\$93,467
Nordin, Greg	w/ Munro, Troy	NIH		3D temperature control to study biological processes	4/1/2019	3/31/2022	R0102093	\$146,352

Peterson, Cammy	w/ McLain, Tim	NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$6,000
Peterson, Cammy		R Cubed Engineering	NASA	Independent Authentication of ADSB and Transponder Equipped Aircraft Location	9/1/2019	8/31/2021	R0302885	\$100,830
Schultz, Stephen		Army		High Repetition-Rate Shape Sensing using Fiber Bragg Gratings	9/9/2015	11/6/2019	R0202462	\$141,539
Schultz, Stephen		Army		High Repetition-Rate Shape Sensing using Fiber Bragg Gratings (Phase 4)	9/9/2015	11/6/2019	R0202462	\$75,000
Schultz, Stephen		Nielson Scientific, LLC	NSF	Transparent Cryogenic Probe Card based of Silicon Carbide MEMS	7/1/2019	3/31/2020	R0302872	\$69,537
Smalley, Daniel		NSF		Breakthrough Display Technology as a New Medium for Spatial Thinking in STEM	4/1/2019	3/31/2024	R0112399	\$87,123
Smalley, Daniel		TIPD	Air Force Research Laboratory	Circular Buffer phase I	1/1/2019	10/4/2019	R0302846	\$22,500
Smalley, Daniel		Charles Stark Draper Laboratory Inc		Draper/BYU Investigation to Improve the Leaky Modulator Platform for Holography	4/1/2017	6/29/2019	R0602544	\$2,875
Warnick, Karl		Naval Air Warfare Center Weapons Division	DOD	Compact, lightweight, low cost electronically scanned phased array radar transmitter	4/1/2019	9/1/2020	R0202515	\$76,885
Wirthlin, Mike		NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC)	9/1/2017	8/31/2022	R0112378	\$4,000
Wirthlin, Mike		NSF		I/UCRC SHREC Membership Dues - AFRL	9/1/2017	8/31/2022	R0112389	\$40,000
Wirthlin, Mike		NSF		Phase-I- I/UCRC Brigham Young University: Center for Space, High-Performance, and Resilient Computing (SHREC) - MIPR: Government Memberships	9/1/2017	8/31/2022	R0112389	\$12,452
Wirthlin, Mike		Sandia National Lab	DOE	Fault-Injection and Scrubbing Infrastructure for Stratix X	11/1/2019	10/31/2020	R0302884	\$56,250
Wirthlin, Mike		Raytheon		I/UCRC: SHREC Phase I Industry Membership Dues	9/1/2017	8/31/2022	R0602555	\$40,000
Wirthlin, Mike		BAE Systems		I/UCRC: SHREC Phase I Industry Membership Dues	9/1/2017	8/31/2022	R0602555	\$80,000
Wirthlin, Mike		Ball Aerospace		I/UCRC: SHREC Phase I Industry Membership Dues	9/1/2017	8/31/2022	R0602555	\$40,000

Manufacturing Engineering

Domike, Reuben	w/ Taylor, Brad	Western Dairy	Utah State University	Vitamin stability of dairy-based foods fortified with ferrous sulfate	5/1/2019	8/31/2021	R0502294	\$18,000
Hovanski, Yuri		Northrup Grumman		Design and Fabrication of IIoT Mobile Demonstration Platform	6/5/2019	12/31/2019	R0602608	\$72,000
Miles, Michael		NSF		GOALI/Collaborative Research: Strain Gradient Plasticity Modeling to Link Microstructural Non-Local Effects of Dislocation/Interface Interactions with Ductility and Springback	10/1/2019	9/30/2022	R0112414	\$149,928
Miles, Michael		NASA		Development of a Methodology for Characterizing the Tool/Part Interface in Friction Stir Welding for Improvement of Predictive Modeling in Aluminum Alloys	1/14/2019	1/13/2022	R0162036	\$60,613
Miles, Michael		UT Battelle	DOE	Solid-State Body-in-White Spot Joining of Al to AHSS at Prototype Scale	11/13/2014	1/31/2019	R0302592	\$1,102
Miles, Michael		UT Battelle	DOE	Solid-State Body-in-White Spot Joining of Al to AHSS at Prototype Scale (Phase III)	2/6/2019	1/31/2020	R0302842	\$200,021
Nelson, Tracy	w/ Miles, Michael	NASA		Development of a Methodology for Characterizing the Tool/Part Interface in Friction Stir Welding for Improvement of Predictive Modeling in Aluminum Alloys	1/14/2019	1/13/2022	R0162036	\$60,613
Nelson, Tracy		GE		Feasibility Study on A New Method for Obtaining Material Flow Data for Inertia Weld Modeling	11/18/2019	12/31/2019	R0602621	\$45,000

Mechanical Engineering

Adams, Brad	w/ Carling, Greg	Utah Division of Air Quality	State of Utah Department of Environmental Quality	Characterizing air quality impacts from exceptional events along the Wasatch Front	7/1/2019	6/30/2021	R0402340	\$75,000
Blotter, Jonathan	w/ Sommerfeldt, Scott	NSF		Development of a Vibration-based Acoustic Sound Power Measurement Method	9/1/2019	8/31/2022	R0112405	\$194,367
Blotter, Jonathan	w/ Sommerfeldt, Scott	Caterpillar		Acoustic Modeling of Resonators and Development of a Multi-Driver Volume Velocity Source	1/1/2014	12/31/2019	R0602437	\$39,941
Blotter, Jonathan		Nexus Outdoors		Active noise control of an ozone generating device	4/1/2019	3/31/2020	R0602600	\$22,813
Bowden, Anton		NIH		Wearable nanocomposite sensor system for diagnosing mechanical sources of low back pain and guiding rehabilitation	9/26/2019	8/31/2021	R0102098	\$241,880

Bowden, Anton		NSF		Smart nanocomposite bio-sensing wearable for enhanced out-of-clinic rehabilitation	7/1/2019	6/30/2022	R0112403	\$96,740
Crane, Nathan		NSF		Could Slower Be Better? Assessing Sintering Time, Temperature, and Area Tradeoffs in Polymer Sintering - REU Supplement	8/7/2018	7/31/2019	R0112411	\$8,000
Crane, Nathan		NSF		Collaborative Research: Microfluidic MM-Wave RF Devices with Integrated Actuation	9/1/2019	8/31/2022	R0112415	\$224,953
Crane, Nathan		NSF		Could Slower Be Better? Assessing Sintering Time, Temperature, and Area Tradeoffs in Polymer Sintering - Intern Supplement	8/7/2018	7/31/2020	R0112422	\$40,182
Fullwood, David	w/ Bowden, Anton	NIH		Wearable nanocomposite sensor system for diagnosing mechanical sources of low back pain and guiding rehabilitation	9/26/2019	8/31/2021	R0102098	\$241,880
Fullwood, David	w/ Bowden, Anton	NSF		Smart nanocomposite bio-sensing wearable for enhanced out-of-clinic rehabilitation	7/1/2019	6/30/2022	R0112403	\$96,740
Fullwood, David	w/ Miles, Michael	NSF		GOALI/Collaborative Research: Strain Gradient Plasticity Modeling to Link Microstructural Non-Local Effects of Dislocation/Interface Interactions with Ductility and Springback	10/1/2019	9/30/2022	R0112414	\$149,927
Fullwood, David		DOE		Grain Boundary - Dislocation Interactions in Polycrystals: Characterization and Simulation for the Effective Design of High-Ductility Structural Alloys	8/15/2014	8/14/2019	R0202437	\$72,351
Fullwood, David		University of Utah	NASA	BYU Rocketry 2019 SA Cup Participation	4/10/2019	5/17/2020	R0302855	\$4,550
Fullwood, David		University of Utah	NASA	BYU Rocketry 2019 SA Cup Participation	4/10/2019	5/17/2020	R0302855	\$3,550
Gorrell, Steve		Clemson University	Boeing	AerosPACE Capstone 2018-2019	7/1/2018	6/30/2019	R0602587	\$26,000
Gorrell, Steve	w/ Salmon, John	Pratt & Whitney		BYU-Design Automation and Optimization Tools - 2019	1/1/2019	12/31/2019	R0602588	\$32,500
Gorrell, Steve		Concepts NREC		Flow Range Extension of a Radial Air Compressor	11/1/2019	10/31/2020	R0602620	\$32,395
Homer, Eric		NSF		Discovering the Building Blocks and Structure Property Relationships of Grain Boundaries using Machine Learning	8/15/2019	7/31/2022	R0112402	\$70,000
Homer, Eric	w/ Fullwood, David	DOE		Grain Boundary - Dislocation Interactions in Polycrystals: Characterization and Simulation for the Effective Design of High-Ductility Structural Alloys	8/15/2014	8/14/2019	R0202437	\$72,351

Homer, Eric		DOE		Computational and Experimental Investigation of Cryogenic Grain Boundary Motion for Enhanced Mechanical Behavior and Properties	8/1/2016	7/31/2019	R0202473	\$240,848
Howell, Larry		NSF		I-Corps: Morphing Minimally Invasive Surgery Instruments	6/15/2019	11/30/2019	R0112400	\$50,000
Howell, Larry		NSF		Mechanisms on Developable Surfaces - REU Supplement	5/1/2017	4/30/2020	R0112421	\$5,333
Howell, Larry	w/ Magleby, Spencer	Florida International University	Air Force Office of Scientific Research	Transforming Antennas Center (TAC)	8/15/2019	8/14/2024	R0302882	\$75,000
Iverson, Brian		NASA		Dynamic Control of Radiative Surface Properties with Origami-Inspired Design (Rydge Mulford) NASA SPACE TECHNOLOGY RESEARCH FELLOWSHIPS (NSTRF)	8/1/2015	7/31/2019	R0162023	\$5,000
Iverson, Brian		PerkinElmer		Compact Next-generation GC and MS Instrumentation	6/1/2018	12/31/2018	R0602482	\$49,998
Iverson, Brian		Pacificorp		Solar Thermal Capture Project	1/1/2019	12/31/2020	R0602589	\$186,443
Iverson, Brian		NSF		Condensation and Droplet Dynamics Under Shear at Superhydrophobic Surfaces	9/1/2018	8/31/2021	R0112395	\$6,000
Jensen, Brian	w/ Davis, Robert	Tula Health, Inc		A Carbon Electrode Array for Bioimpedance Spectroscopy	12/19/2018	12/31/2019	R0602596	\$65,535
Jensen, Brian		Tula Health, Inc		Constant-Force Wristband to hold a suite of Biometric Sensors	4/23/2019	12/31/2019	R0602601	\$85,688
Johnson, Oliver		NSF		CAREER: CDS&E: Quantifying & Designing Grain Boundary Network Structure via Spectral Graph Theory	6/1/2017	5/31/2022	R0112336	\$115,520
Killpack, Marc		University of Tulsa	NSF	EFRI C3 SoRo: Between a Soft Robot and a Hard Place: Estimation and Control Algorithms that Exploit Soft Robots' Unique Abilities	1/1/2020	12/31/2023	R0302880	\$414,473
Magleby, Spencer	w/ Howell, Larry	NSF		Mechanisms on Developable Surfaces - REU Supplement	5/1/2017	4/30/2020	R0112421	\$5,333
Magleby, Spencer		NASA		Deployable Solar Array Structures with High Stowed Volume Efficiencies	8/1/2017	7/31/2021	R0162031	\$113,920
Magleby, Spencer		Florida International University	Air Force Office of Scientific Research	Transforming Antennas Center (TAC)	8/15/2019	8/14/2024	R0302882	\$75,000
Mattson, Chris		US Air Force Academy		Promoting Desirability and Transferability in Engineering Design through Customized Development Processes	9/29/2017	9/28/2021	R0202505	\$45,000

Maynes, Daniel	w/ Iverson, Brian	NSF		Condensation and Droplet Dynamics Under Shear at Superhydrophobic Surfaces	9/1/2018	8/31/2021	R0112395	\$6,000
Maynes, Daniel		Nuclear Regulatory Commission		Faculty Development Program to Integrate New Faculty in Nuclear Engineering Research at Brigham Young University	7/10/2019	7/9/2022	R0202519	\$225,000
Maynes, Daniel		University of Utah	NASA	Aerodynamic Investigation of Closely Spaced Propellers through Wind Tunnel Testing	4/10/2019	5/17/2020	R0302851	\$10,000
Maynes, Daniel		Concepts NREC		CFD Analysis of Turbomachines	4/9/2019	8/31/2019	R0602597	\$5,000
Maynes, Daniel	w/ Gorrell, Steve	Concepts NREC		Flow Range Extension of a Radial Air Compressor	11/1/2019	10/31/2020	R0602620	\$32,395
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - NSF Center Support	3/15/2017	2/28/2022	R0112339	\$55,709
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$8,000
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - REU Supplement	3/15/2017	2/28/2022	R0112343	\$6,000
McLain, Tim		NSF		AFRL C-UAS Membership Dues	3/15/2017	2/28/2022	R0112353	\$112,164
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - Interagency Memberships	3/15/2017	2/28/2022	R0112353	\$44,693
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - Interagency Memberships	3/15/2017	2/28/2022	R0112353	\$40,968
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - VRS Supplement	3/15/2017	2/28/2022	R0112362	\$5,000
McLain, Tim		NSF		I/UCRC: Center for Unmanned Aircraft Systems, Phase II Site - NSF Center Support - Managing Director	3/15/2017	2/28/2022	R0112367	\$44,291
McLain, Tim		University of Colorado, Boulder	NSF	UCBC: Center for Unmanned Aircraft Systems, Phase II, Managing Director Support REU Supplement	4/1/2019	3/31/2019	R0302750	\$36,920
McLain, Tim		Virginia Polytechnic Institute and State University	NSF	I/UCRC: Center for UAS Phase II Site: Virginia Tech	3/1/2017	2/28/2020	R0302761	\$38,915
McLain, Tim		AeroVironment		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
McLain, Tim		Insitu		I/UCRC: C-UAS Phase II Industry Membership Dues	3/15/2017	2/28/2022	R0602546	\$22,000
Munro, Troy		NIH		3D temperature control to study biological processes	4/1/2019	3/31/2022	R0102093	\$146,354

Munro, Troy	w/ Maynes, Daniel	Nuclear Regulatory Commission		Faculty Development Program to Integrate New Faculty in Nuclear Engineering Research at Brigham Young University	7/10/2019	7/9/2022	R0202519	\$225,000
Munro, Troy	w/ Nickerson, Stella	DOE		Validated, Multi-Scale Molecular Dynamics Simulations to Predict the Thermophysical Properties of Molten Salts Containing Fuel, Fission, and Corrosion Products	10/1/2019	9/30/2022	R0202526	\$265,922
Ning, Andrew		NREL	DOE	Multidisciplinary Optimization and Uncertainty Qualification of Wind Energy Systems	12/15/2017	12/14/2018	R0302778	\$45,219
Ning, Andrew	w/ Maynes, Daniel	University of Utah	NASA	Aerodynamic Investigation of Closely Spaced Propellers through Wind Tunnel Testing	4/10/2019	5/17/2020	R0302851	\$10,000
Ning, Andrew		Beijing Goldwind Science & Creation Windpower Equipment Co., Ltd.		Development of tools for Robust and Rapid Optimization of Wind Turbine Blade and Wind Turbine System	6/30/2019	6/30/2020	R0570026	\$82,123
Salmon, John		Pratt & Whitney		BYU-Design Automation and Optimization Tools - 2019	1/1/2019	12/31/2019	R0602588	\$32,500
Sorensen, Carl	w/ Miles, Michael	NASA		Development of a Methodology for Characterizing the Tool/Part Interface in Friction Stir Welding for Improvement of Predictive Modeling in Aluminum Alloys	1/14/2019	1/13/2022	R0162036	\$60,613
Sorensen, Carl	w/ Mattson, Chris	US Air Force Academy		Promoting Desirability and Transferability in Engineering Design through Customized Development Processes	9/29/2017	9/28/2021	R0202505	\$45,000
Sorensen, Carl		Los Alamos National Laboratory	DOE	Explosive Detonator Shot Bar Alignment Tool	8/3/2018	5/31/2019	R0302836	\$20,000
Sorensen, Carl		University of Utah	NASA	University Rover Challenge Capstone Project Proposal	4/10/2019	5/17/2020	R0302854	\$7,500
Sorensen, Carl		University of Utah	NASA	University Rover Challenge Capstone Project Proposal	4/10/2019	5/17/2020	R0302854	\$4,000
Sorensen, Carl	w/ Nelson, Tracy	GE		Feasibility Study on A New Method for Obtaining Material Flow Data for Inertia Weld Modeling	11/18/2019	12/31/2019	R0602621	\$45,000
Thomson, Scott		NIH		Imaging and Influence of Glottic and Subglottic Anatomy in healthy and stenotic patients	9/1/2018	8/31/2019	R0102087	\$548,823
Tree, Dale		Solar Turbines		Gas Temperature Measurement Proof of Concept/Measurement Design and Fabrication	11/18/2016	12/31/2019	R0602533	\$8,000

School of Technology

Bingham, Evan	w/ Smith, James	Mortenson Construction	Innovative Construction Management Techniques	8/1/2019	8/1/2020	R0602616	\$12,450
Farnsworth, Clifton	w/ Smith, James	Mortenson Construction	Innovative Construction Management Techniques	8/1/2019	8/1/2020	R0602616	\$12,450
Giboney, Justin	w/ Hansen, Derek	NSF	Collaboration in the Future of Work: Developing Playable Case Studies to Improve STEM Career Pathways	7/1/2019	6/30/2022	R0112404	\$104,284
Hansen, Derek		NSF	Collaboration in the Future of Work: Developing Playable Case Studies to Improve STEM Career Pathways	7/1/2019	6/30/2022	R0112404	\$104,284
Hughes, Amanda	w/ Hansen, Derek	NSF	Collaboration in the Future of Work: Developing Playable Case Studies to Improve STEM Career Pathways	7/1/2019	6/30/2022	R0112404	\$104,284
Hughes, Amanda	w/ Nelson, Jim	NASA	Improving Resiliency and Reducing Risk due to Extreme Hydrologic Events through Application of Earth Observations and In-Situ Monitoring Information	11/1/2019	10/31/2022	R0162040	\$72,239
Lunt, Barry		Legacy Storage International	A Hybrid Carbon Fuse-CMOS Memory Chip	4/15/2019	9/30/2019	R0502290	\$3,975
Lunt, Barry		Legacy Storage International	A Hybrid Carbon Fuse-CMOS Memory Chip	4/15/2019	7/31/2019	R0502290	\$3,825
Smith, James		Mortenson Construction	Innovative Construction Management Techniques	8/1/2019	8/1/2020	R0602616	\$12,450
Teng, Chia-Chi		Idaho National Laboratory	DOE Industrial Control System (ICS) Virtual Learning Experience	9/20/2019	4/30/2020	R0302886	\$23,000

Ira A. Fulton College of Engineering Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
Army	2	\$216,539
DOE	9	\$1,972,520
NASA	17	\$1,308,783
Naval Air Warfare Center Weapons Division	1	\$76,885
NIH	8	\$1,909,961
NSF	46	\$2,997,572
Nuclear Regulatory Commission	2	\$450,000
US Air Force Academy	2	\$90,000
USDA FS	1	\$88,496
Total	88	\$9,110,756
Federal Subcontract		
Battelle Energy Alliance, LLC	1	\$600
CUAHSI	2	\$44,701
eCortex, Inc.	1	\$25,000
Florida International University	2	\$150,000
Idaho National Laboratory	3	\$48,500
Johns Hopkins University	1	\$25,000
Los Alamos National Laboratory	1	\$20,000
National Academy of Sciences	1	\$40,000
Nielson Scientific, LLC	1	\$69,537
NREL	1	\$45,219
R Cubed Engineering	1	\$100,830
Sandia National Lab	3	\$108,250
TIPD	1	\$22,500
University of California, Berkeley	2	\$350,000
University of California, Santa Cruz	1	\$101,175
University of Colorado, Boulder	2	\$78,022
University of Idaho	1	\$164,490
University of New Mexico	1	\$72,500
University of Texas, Austin	1	\$33,137
University of Tulsa	1	\$414,473
University of Utah	8	\$128,200
UT Battelle	4	\$295,123
Utah State University	5	\$295,123
Virginia Polytechnic Institute and State University	1	\$38,915
Total	46	\$2,459,303

State		
UDOT	6	\$359,755
University of Utah	1	\$27,874
Utah Division of Air Quality	1	\$75,000
Total	8	\$462,629
Private/Other		
AeroVironment	2	\$44,000
AIChE	2	\$608,000
Alpha Tech Research Corp	1	\$35,000
Aquaveo, LLC	1	\$5,000
BAE Systems	1	\$80,000
Ball Aerospace	1	\$40,000
Beijing Goldwind Science & Creation		
Windpower Equipment Co., Ltd.	1	\$82,123
BP	2	\$44,000
Caterpillar	1	\$39,941
Charles Stark Draper Laboratory Inc	1	\$2,875
Clemson University	1	\$26,000
Concepts NREC	3	\$69,790
ConocoPhillips	1	\$3,000
Deep Foundations Institute	1	\$14,500
Deseret International Charities	1	\$15,250
Ford Motor Company	1	\$40,000
GE	2	\$90,000
Insitu	2	\$44,000
Kairos Power	3	\$133,540
Legacy Storage International	4	\$15,600
Lockheed	2	\$40,000
Mortenson Construction	3	\$37,350
Nexus Outdoors	1	\$22,813
Northrup Grumman	1	\$72,000
Pacificorp	1	\$186,443
PerkinElmer	3	\$149,988
Pratt & Whitney	2	\$65,000
Raytheon	1	\$40,000
Solar Turbines	1	\$8,000
Tula Health, Inc	2	\$151,223
University of Utah	1	\$108,813
Western Dairy	1	\$18,000
Total	51	\$2,332,249
Grand Total	193	\$14,364,936

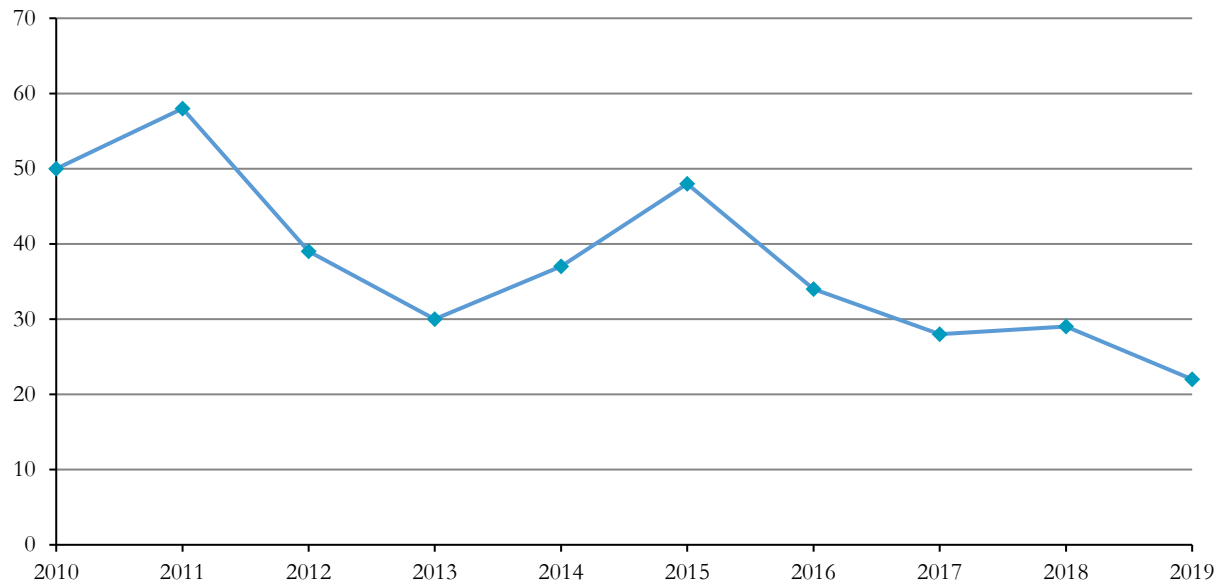


College of Family, Home, & Social Sciences

Summary by Departments

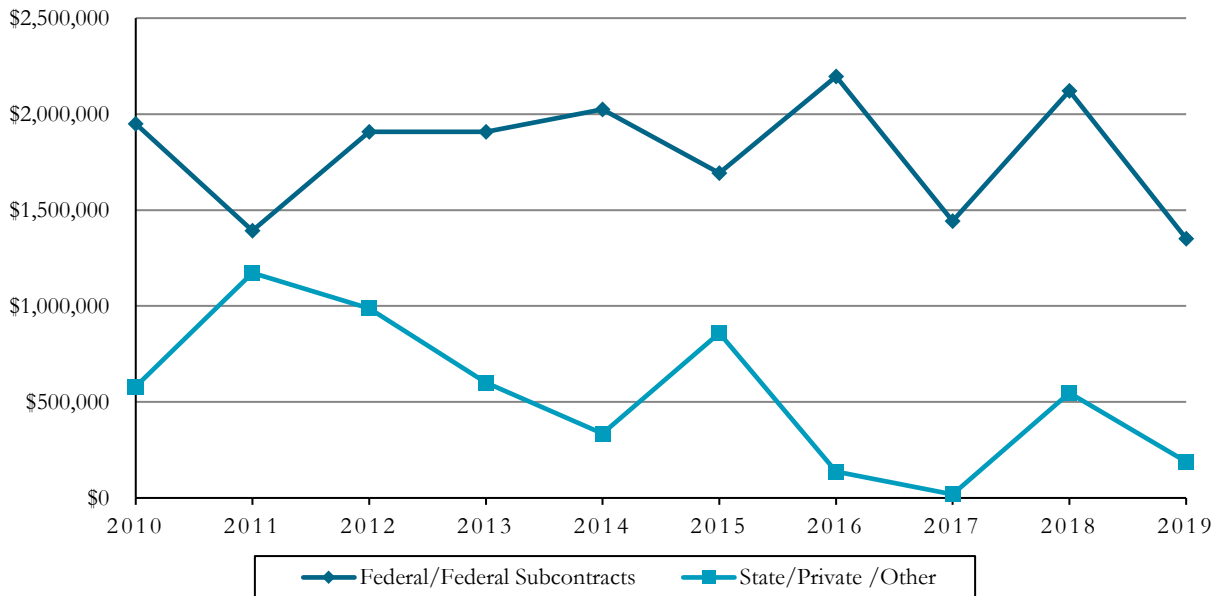
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Anthropology	0	0	1	\$20,000
Economics	4	5	8	\$358,450
Geography	0	0	0	\$22,500
History	0	0	4	\$446,716
Museum of Peoples & Cultures	0	0	0	\$0
Office of Public Archaeology	0	0	0	\$0
Political Science	4	2	3	\$400,401
Psychology	7	6	3	\$204,241
School of Family Life	4	2	0	\$0
Social Work	3	6	6	\$63,703
Sociology	0	0	2	\$23,955
TOTALS	22	21	27	\$1,539,966

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$1,948,855	\$580,250	\$2,529,105
2011	\$1,391,892	\$1,172,630	\$2,564,522
2012	\$1,907,383	\$987,853	\$2,564,522
2013	\$1,908,007	\$600,123	\$2,377,935
2014	\$2,024,525	\$334,700	\$2,359,225
2015	\$1,692,729	\$859,560	\$2,552,289
2016	\$2,196,122	\$137,839	\$2,333,961
2017	\$1,442,760	\$18,636	\$1,461,396
2018	\$2,121,801	\$547,574	\$2,669,375
2019	\$1,351,545	\$188,421	\$1,539,966



College of Family, Home, & Social Sciences 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
<i>Anthropology</i>								
Talbot, Richard		USDA FS		US Forest Service Challenge Cost Share Agreement - 2017	4/15/2017	6/1/2020	R0202494	\$20,000
<i>Economics</i>								
Eliason, Paul		NSF		The Influences of Market Power, Mergers, and Provider Incentives on the Cost and Quality of Healthcare: The Case of Dialysis	9/1/2019	8/31/2022	R0112418	\$155,966
Pope, Arden		Carnegie Mellon University	EPA	Center for Air, Climate, And Energy Solutions (CASES)	5/1/2016	4/30/2021	R0302696	\$20,003
Pope, Arden		University of Louisville	NIH	Endothelial progenitor cells and particulate air pollution	4/1/2018	3/31/2019	R0302786	\$37,923
Price, Joe		University of Michigan	NIH	Longitudinal and intergenerational determinants of aging and mortality	5/1/2018	12/31/2018	R0302826	\$70,520
Price, Joe		University of Notre Dame	Russell Sage Foundation	Social Inequality and Intergenerational Mobility: Evidence from Genealogy Records and Linked Data	12/1/2018	11/30/2019	R0502299	\$46,412
Price, Joe		University of California, Los Angeles		Longevity and intergenerational correlations in longevity over multiple generations in the US	4/1/2019	3/31/2020	R0802044	\$20,000
Price, Joe		San Francisco State University		Linking Employment records to the 1940 census	2/15/2019	7/31/2019	R0802046	\$6,000
Price, Joe		San Francisco State University		Linking Employment records to the 1940 census	2/15/2019	8/31/2019	R0802046	\$1,627
<i>Geography</i>								
Jensen, Ryan	w/ Hansen, Neil	BARD		Spatiotemporal decision support systems for recognizing variability and managing precision irrigation	12/1/2019	11/30/2022	R0570025	\$22,500
<i>History</i>								
Crandell, Jill		University of Wisconsin, Madison	Defense POW/MIA Accounting Agency	Defense POW/MIA Accounting Agency Historical and Genealogical Research	7/31/2017	4/16/2019	R0302773	\$9,352

Shumway, Jeffrey		University of Utah	Department of Education	Intermountain Consortium for Latin American Studies Undergraduate FLAS Program	8/15/2018	8/14/2019	R0302823	\$279,000
Shumway, Jeffrey		University of Utah	Department of Education	Intermountain Consortium for Latin American Studies Undergraduate NRC and FLAS Programs (NRC)	8/15/2018	8/14/2019	R0302839	\$75,900
Shumway, Jeffrey		University of Utah	Department of Education	Intermountain Consortium for Latin American Studies Undergraduate NRC and FLAS programs (NRC)	8/15/2018	8/15/2020	R0302839	\$82,464
Political Science								
Hyer, Eric		University of Utah	DOE	Intermountain Consortium for Asian and Pacific Studies Undergraduate FLAS Program	8/15/2018	8/14/2020	R0302824	\$289,500
Hyer, Eric		University of Utah	Department of Education	Asian and Pacific Studies NRC 2018	8/15/2018	8/14/2019	R0302829	\$101,401
Nielson, Daniel		Charles Koch Foundation		Trade Protection and U.S. Firms' Political Action	10/15/2019	12/31/2020	R0502318	\$9,500
Psychology								
Baldwin, Scott		University of Washington	NIH	Evaluating change in drinking identity as a mechanism for reducing hazardous drinking	5/5/2016	4/30/2020	R0302678	\$33,518
Cobia, Derin		Northwestern University	NIH	Determinants of neurodegenerative decline in the aphasic variant of Alzheimer's disease	5/1/2017	2/28/2019	R0302765	\$5,625
Jones, Melissa	w/ Nielsen, Stevan Lars	Templeton Foundation		Studying the effects of integrating spirituality in psychotherapy	3/31/2017	3/27/2020	R0502284	\$50,000
Kirwan, Brock	w/ Anderson, Bonnie	Temple University	NSF	SaTC: CORE: Small: The Blurring of Non-essential Notifications and Critical Security Warnings: Examining the Problem of Generalization in the Brain	9/1/2018	8/31/2020	R0302878	\$38,440
Steffensen, Scott		NIH		Novel methods of acupuncture delivery in the treatment of drug-abuse disorders	1/1/2019	12/31/2021	R0102092	\$76,658
Sociology								
Erickson, Lance		Veterans Administration		Mobility Assignment	10/1/2018	9/30/2019	R0202514	\$14,155
Ward, Carol		Chief Dull Knife College	NASA	Student Transformational Experiences Project	11/1/2019	9/30/2020	R0302887	\$9,800

Social Work

Clark, Charlene	Utah Commission on Service and Volunteerism	Corporation for National and Community Service	AmeriCorps Program 2018-2019	8/15/2018	8/14/2019	R0302819	\$8,260
Clark, Charlene	Utah Commission on Service and Volunteerism	Corporation for National and Community Service	AmeriCorps Program 2019-2020	8/15/2019	8/1/2020	R0302877	\$23,061
Shaw, Stacey	IRC	LDS Charities	IRC adjustment support groups: Salt Lake	4/1/2019	3/31/2020	R0502312	\$3,794
Shaw, Stacey	IRC	LDS Charities	IRC adjustment support groups: Denver	4/1/2019	3/31/2020	R0502313	\$3,794
Shaw, Stacey	IRC	LDS Charities	IRC adjustment support groups: Oakland	4/1/2019	3/31/2020	R0502314	\$3,794
Wood, David	University of Utah	Wheeler Foundation	Evaluating the Climate for Suicide Prevention Climate among Veterans	9/1/2018	8/31/2019	R0502302	\$21,000

College of Family, Home, & Social Sciences Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
NIH	1	\$76,658
NSF	1	\$155,966
USDA FS	1	\$20,000
Veterans Administration	1	\$14,155
Total	4	\$266,779
Federal Subcontract		
Carnegie Mellon University	1	\$20,003
Chief Dull Knife College	1	\$9,800
Northwestern University	1	\$5,625
Temple University	1	\$38,440
University of Louisville	1	\$37,923
University of Michigan	1	\$70,520
University of Utah	5	\$828,265
University of Washington	1	\$33,518
University of Wisconsin, Madison	1	\$9,352
Utah Commission on Service and Volunteerism	2	\$31,321
Total	15	\$1,084,766
Private/Other		
BARD	1	\$22,500
Charles Koch Foundation	1	\$9,500
IRC	3	\$11,382
San Francisco State University		\$7,627
Templeton Foundation	1	\$50,000
University of California, Los Angeles	2	\$20,000
University of Notre Dame	1	\$46,412
University of Utah	1	\$21,000
Total	11	\$188,421
Grand Total	30	\$1,539,966

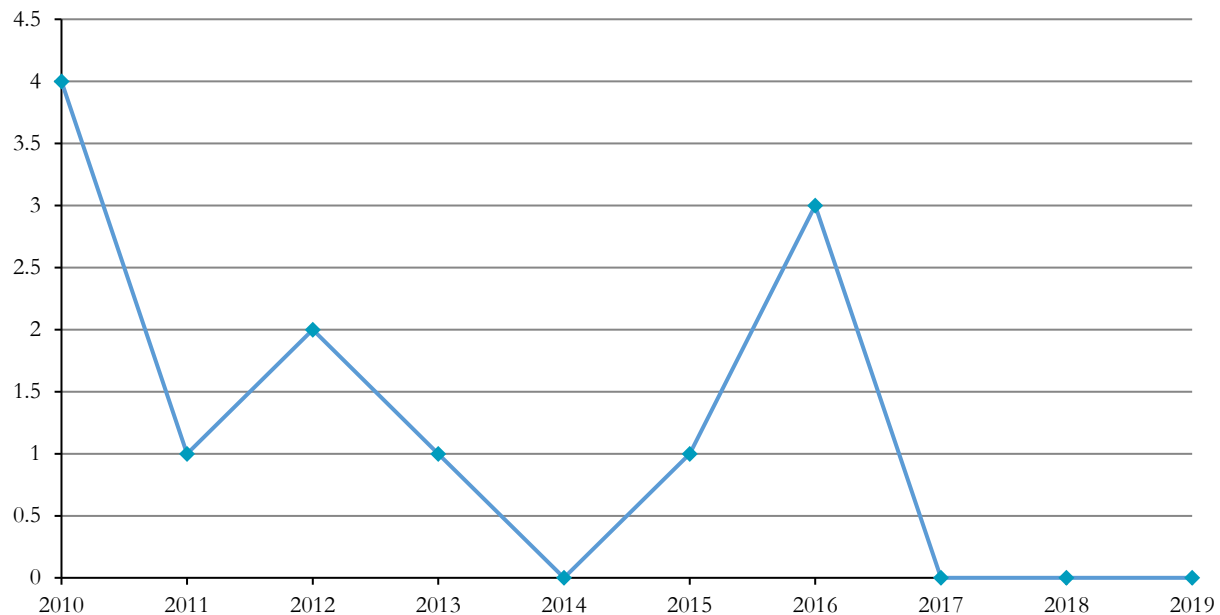


College of Fine Arts & Communication

Summary by Departments

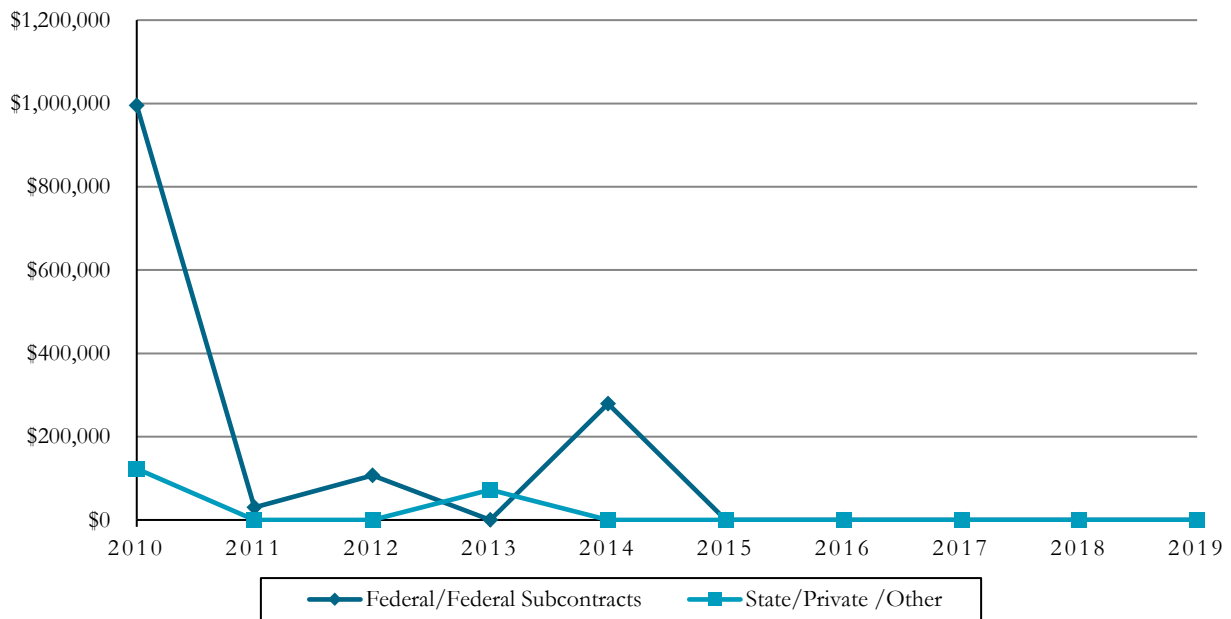
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Art	0	0	0	\$0
Communications	0	0	0	\$0
Dance	0	0	0	\$0
Design	0	0	0	\$0
School of Music	0	0	0	\$0
Theatre & Media Arts	0	0	0	\$0
TOTALS	0	0	0	\$0

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$995,395	\$122,900	\$1,118,296
2011	\$30,000	\$0	\$0
2012	\$107,250	\$0	\$107,250
2013	\$0	\$72,500	\$72,500
2014	\$278,688	\$0	\$278,688
2015	\$0	\$0	\$0
2016	\$0	\$0	\$0
2017	\$0	\$0	\$0
2018	\$0	\$0	\$0
2019	\$0	\$0	\$0



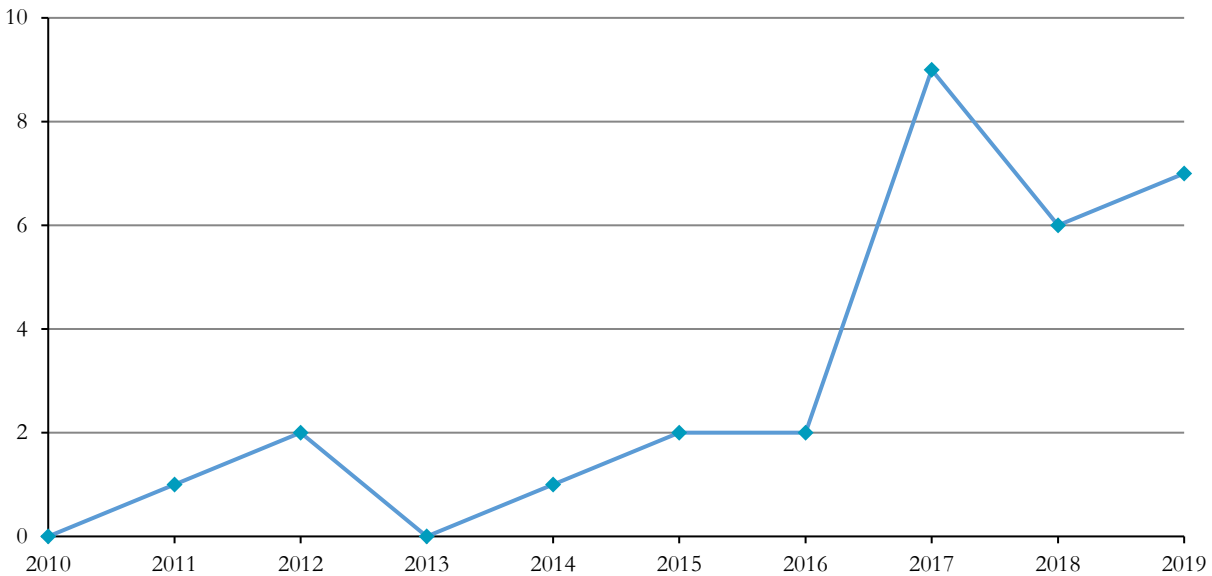


College of Humanities

Summary by Departments

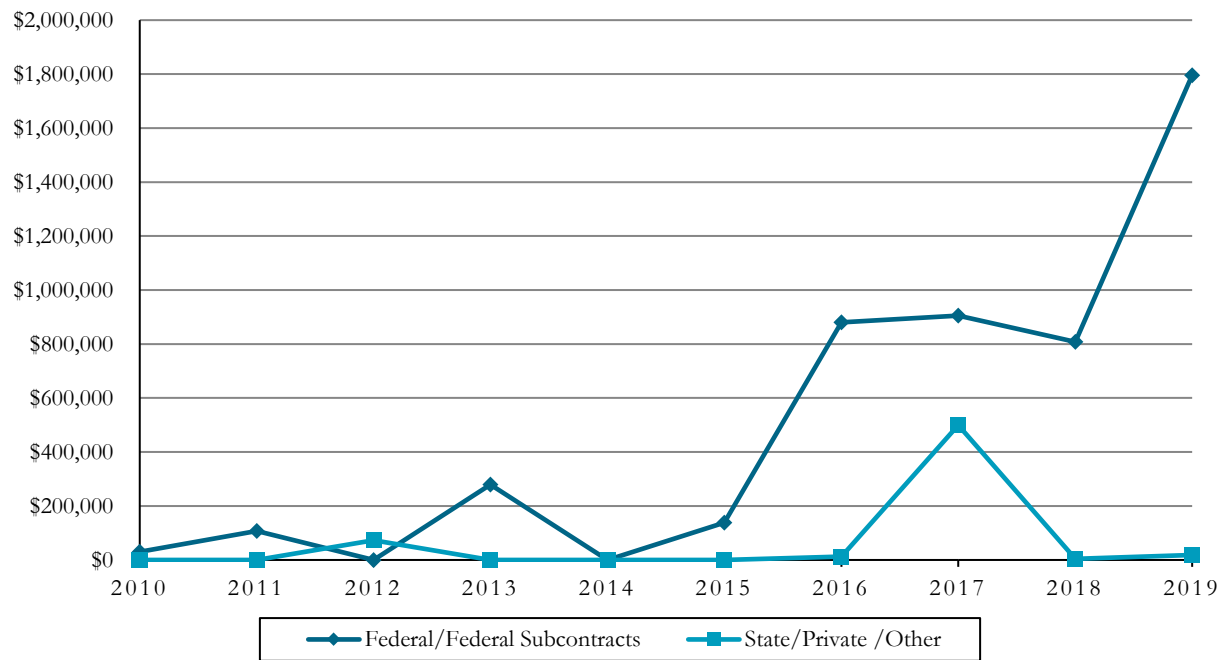
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Asian & Near Eastern Languages	3	4	6	\$1,709,548
Comparative Arts & Letters	0	0	0	\$0
English	2	2	0	\$104,284
French & Italian	0	0	0	\$0
German & Russian	0	0	0	\$0
Linguistics & English Language	0	0	0	\$0
Philosophy	1	0	0	\$0
Spanish & Portuguese	2	1	0	\$0
TOTALS	8	7	6	\$1,813,832

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$30,000	\$0	\$0
2011	\$107,250	\$0	\$107,250
2012	\$0	\$72,500	\$72,500
2013	\$278,688	\$0	\$278,688
2014	\$0	\$0	\$0
2015	\$137,798	\$0	\$137,798
2016	\$880,583	\$12,320	\$892,903
2017	\$904,942	\$499,520	\$1,403,942
2018	\$807,501	\$4,000	\$811,501
2019	\$1,795,832	\$18,000	\$1,813,832



College of Humanities 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Asian & Near Eastern Languages								
Belnap, Kirk		IIE	NSEP	Arabic Flagship Student Support 2019-2020	4/1/2019	5/31/2020	R0302859	\$70,000
Belnap, Kirk		IIE	NSEP	Domestic Undergraduate Arabic Flagship Program 2019-20	6/1/2019	5/31/2020	R0302867	\$324,962
Belnap, Kirk		Qatar Foundation		BYU Arabic Summer Camp Scholarships	3/27/2019	9/30/2019	R0502316	\$18,000
Christensen, Matthew		IIE	NSEP	BYU Chinese Flagship Center- Overseas	6/1/2019	5/31/2020	R0302847	\$880,123
Christensen, Matthew		IIE	NSEP	BYU Chinese Flagship Center- Domestic	6/1/2016	5/31/2020	R0302868	\$324,963
Christensen, Matthew		IIE	NSEP	Chinese Flagship Student Support 2019-2020	4/1/2019	5/31/2020	R0302860	\$91,500
English								
Balzotti, Jon	w/ Hansen, Derek	NSF		Collaboration in the Future of Work: Developing Playable Case Studies to Improve STEM Career Pathways	7/1/2019	6/30/2022	R0112404	\$104,284

College of Humanities Source Breakdown

<u>Sponsor</u>	<u>Number Awarded</u>	<u>Total Amount</u>
Federal		
NSF	1	\$104,284
Total	1	\$104,284
Federal Subcontract		
IIE	5	\$1,691,548
Total	5	\$1,691,548
Private/Other		
Qatar Foundation	1	\$18,000
Total	1	\$18,000
Grand Total	7	\$1,813,832

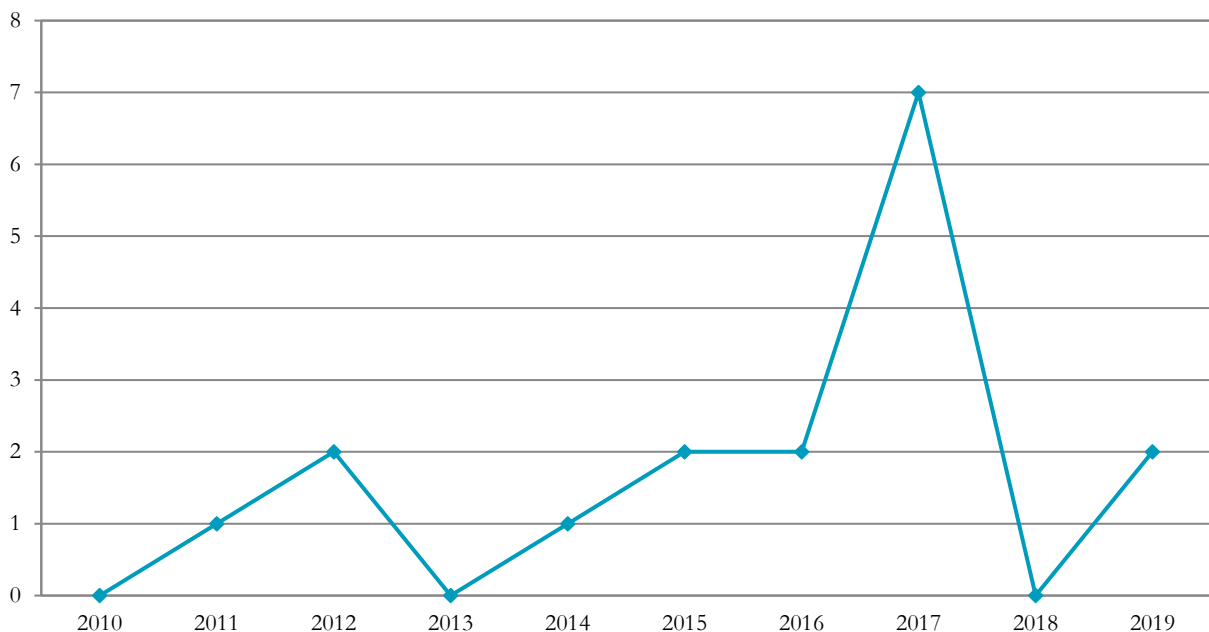


J. Reuben Clark Law School

Summary by Departments

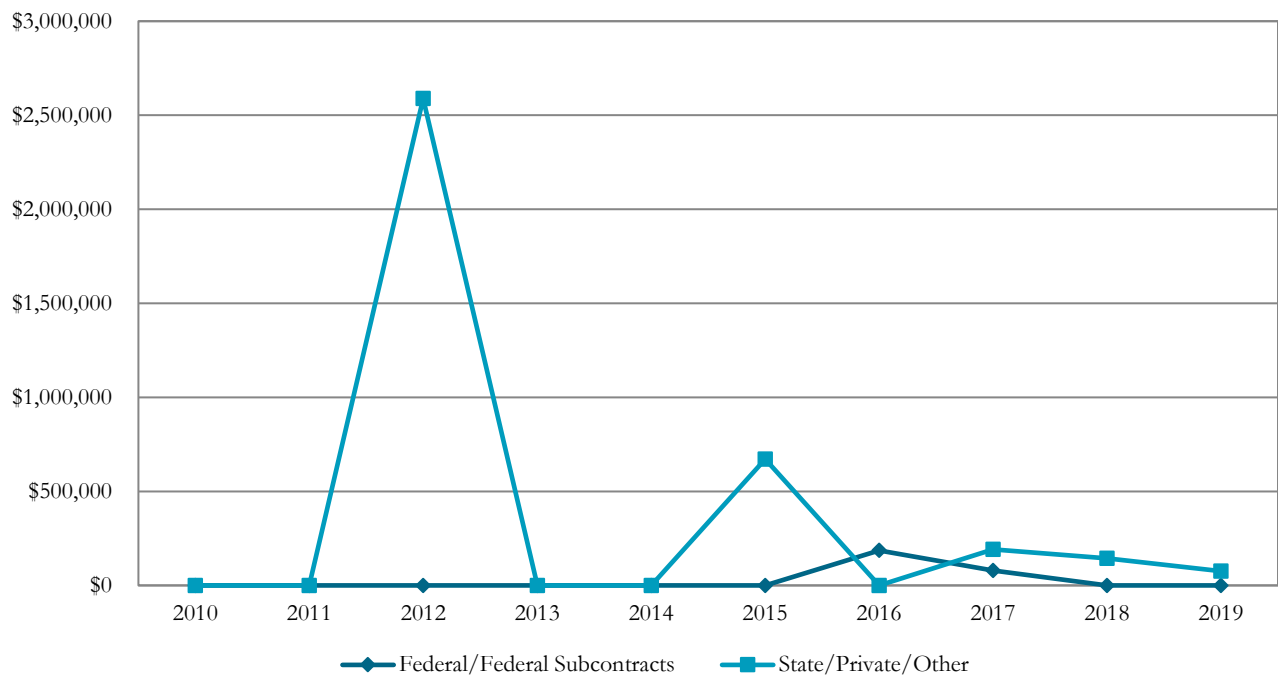
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Law School	2	2	3	\$76,117
TOTALS	2	2	3	\$76,117

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private	
2010	\$0	\$0	\$0
2011	\$0	\$0	\$0
2012	\$0	\$2,588,209	\$2,588,209
2013	\$0	\$0	\$0
2014	\$0	\$0	\$0
2015	\$0	\$670,637	\$670,637
2016	\$185,790	\$0	\$185,790
2017	\$79,189	\$191,800	\$270,989
2018	\$0	\$143,423	\$143,423
2019	\$0	\$76,117	\$76,117



J. Reuben Clark Law School 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Daniels, Brigham		University of California, Santa Barbara	Global Integrity	Rewarding Good Governance Through Community Recognition	1/1/2019	12/31/2019	R0502298	\$31,961
Daniels, Brigham		University of California, Santa Barbara	Global Integrity	Rewarding Good Governance Through Community Recognition	1/1/2019	12/31/2019	R0502298	\$25,199
Jensen, Eric		Human Rights Voices		Workshop on War in Cities	10/4/2017	7/31/2019	R0502281	\$18,957

J. Reuben Clark Law School Source Breakdown

<u>Sponsor</u>	<u>Number Awarded</u>	<u>Total Amount</u>
Private/Other		
Human Rights Voices	1	\$18,957
University of California, Santa Barbara	2	\$57,160
Total	3	\$76,117
Grand Total	3	\$76,117

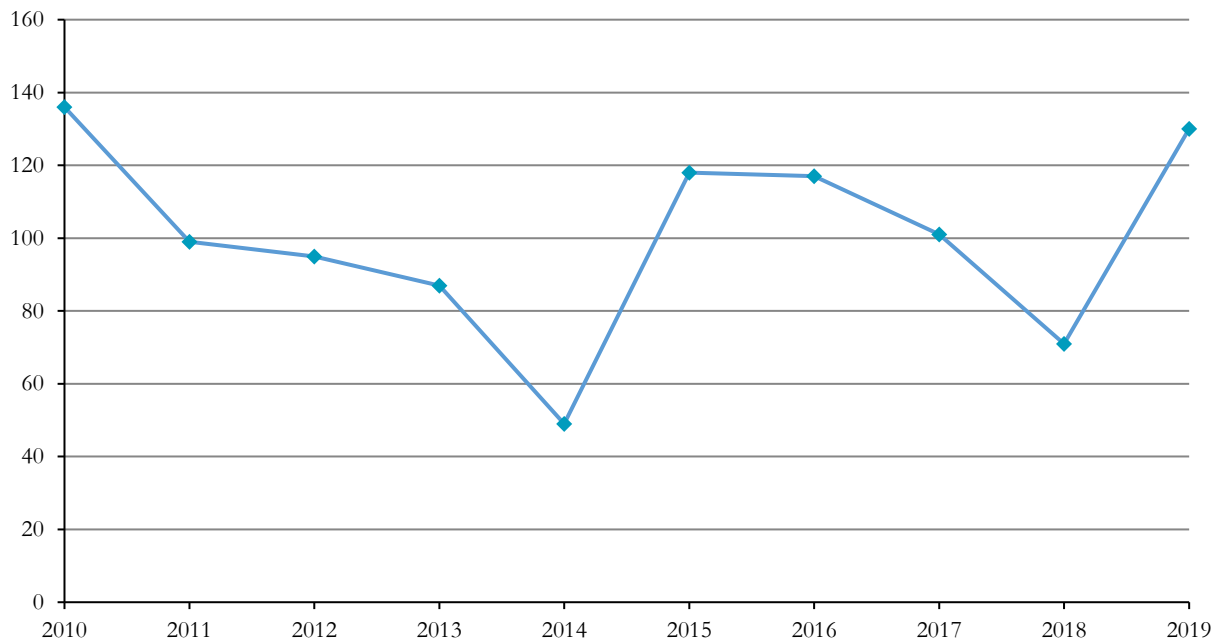


College of Life Sciences

Summary by Departments

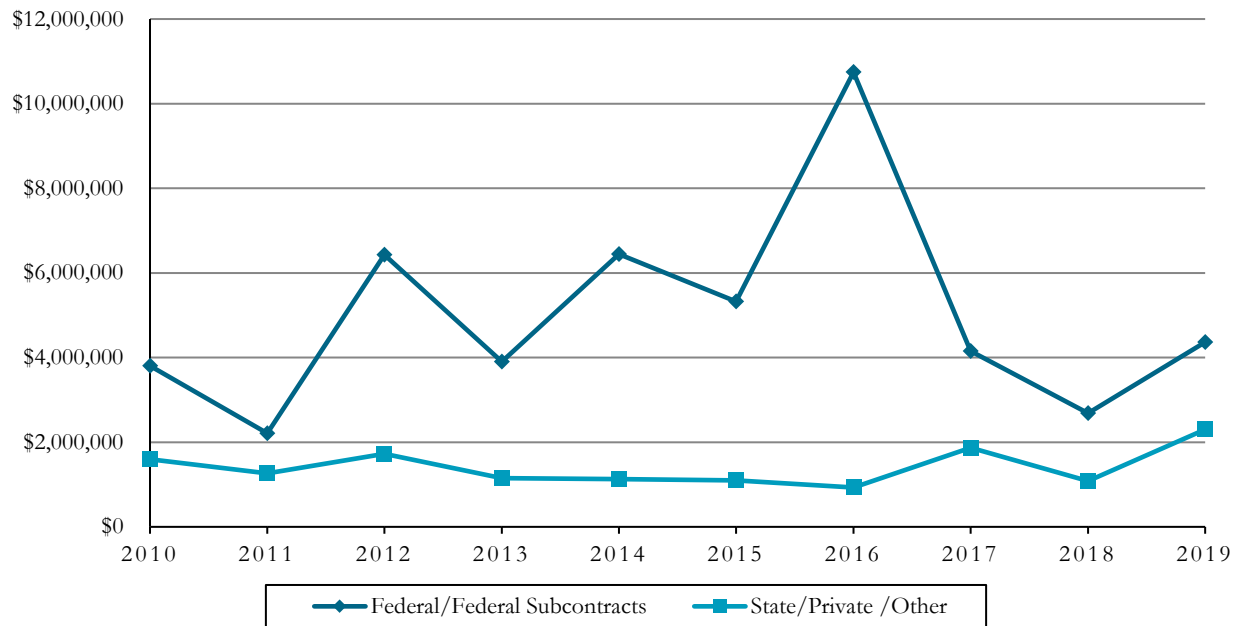
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Monte L. Bean Life Science Museum	2	1	2	\$34,000
Biology	15	35	13	\$990,046
Exercise Science	5	4	3	\$538,561
Microbiology & Molecular Biology	8	13	7	\$686,017
Nutrition, Dietetics & Food Science	9	18	19	\$723,323
Physiology & Developmental Biology	10	16	7	\$1,130,525
Plant & Wildlife Sciences	20	41	34	\$2,202,484
Public Health	8	2	1	\$360,153
TOTALS	77	130	86	\$6,665,109

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$3,803,488	\$1,598,562	\$5,402,050
2011	\$2,211,664	\$1,263,459	\$3,475,123
2012	\$6,426,283	\$1,727,334	\$8,163,617
2013	\$3,905,977	\$1,151,388	\$4,988,584
2014	\$6,442,140	\$1,125,358	\$7,567,498
2015	\$5,327,507	\$1,099,440	\$6,426,947
2016	\$10,743,176	\$929,921	\$11,673,097
2017	\$4,154,421	\$1,869,843	\$6,024,264
2018	\$2,688,968	\$1,082,714	\$3,771,682
2019	\$4,363,993	\$2,301,116	\$6,665,109



College of Life Sciences

2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Monte L. Bean Life Science Museum								
Knight, Katy	w/ Rogers, Duke	Utah Division of Arts & Museums		General Operating Support for the Bean Life Science Museum of BYU	7/1/2019	6/30/2020	R0402348	\$5,000
Rogers, Duke		Utah Division of Arts & Museums		General Operating Support for the Bean Life Science Museum of BYU	7/1/2019	6/30/2020	R0402348	\$5,000
Rogers, Duke		Center for the Involvement of Teacher Education and Schooling		Education Partnership-Bean Museum	1/1/2011	12/31/2020	R0502113	\$24,000
Biology								
Adams, Byron		University of Colorado, Boulder	NSF	LTER: Ecosystem response to amplified landscape connectivity in the McMurdo Dry Valleys, Antarctica	6/15/2017	5/31/2020	R0302755	\$152,562
Belk, Mark		UDWR		Bluegill adaptations studies - Quagga Mussels	5/1/2017	3/30/2020	R0402301	\$12,500
Bybee, Seth	w/ Jensen, Jamie	Howard Hughes Medical Institute		Building Roads to Reconciliation at the Intersection of Evolution & Religion	6/1/2019	12/31/2020	R0502287	\$49,075
Griffen, Blaine		NSF		Grad Fellowship for Alexis Garretson	7/1/2018	6/30/2023	R0112406	\$46,000
Jensen, Jamie		Howard Hughes Medical Institute		Building Roads to Reconciliation at the Intersection of Evolution & Religion	6/1/2019	12/31/2020	R0502287	\$49,075
Johnson, Jerald		ALA		Fish Olfactory Behavior	7/1/2019	6/30/2022	R0502304	\$2,000
Johnson, Leigh	w/ Leavitt, Steve	BLM		Genetic characterization of Astragalus Anserinus across its geographic range	9/4/2019	9/30/2020	R0202528	\$5,750
Johnson, Robert	w/ Anderson, Val	BLM UT		BLM Listed Cacti Sampling and Monitoring in Sevier, Emery and Wayne Counties, Utah	12/1/2018	13/31/2021	R0202511	\$19,987
Johnson, Robert	w/ Stevens, Mikel	Zion Natural History Association		Is Penstemon x jonesii a naturally occurring hybrid, a variant of P. eatonii, or a very rare species?	2/1/2019	12/31/2019	R0502289	\$5,000
Kauwe, Keoni	w/ Ridge, Perry	University of Pennsylvania	NIH	Pleiotropy GWAS of Alzheimer's Disease	5/1/2019	4/30/2020	R0302727	\$54,077

Kauwe, Keoni		Icahn School of Medicine at Mt. Sinai	NIH	Integrative Network Modeling of Cognitive Resilience to Alzheimer's Disease	9/15/2017	5/31/2020	R0302775	\$30,030
Leavitt, Steve		USGS		Evaluating metagenomic methods for rapid assessment of biocrust responses to fire	9/15/2019	12/31/2021	R0202527	\$10,105
Leavitt, Steve		BLM		Genetic characterization of Astragalus Anserinus across its geographic range	9/4/2019	9/30/2020	R0202528	\$5,750
Leavitt, Steve		Western North American Naturalist		Great Basin Desert: halophic lichens	5/1/2019	4/30/2021	R0502297	\$1,500
Payne, Samuel		New York University	NIH	Proteogenomic Data Analysis for Cancer Systems Biology and Clinical Translation	9/1/2018	8/31/2021	R0302818	\$143,577
Payne, Samuel		Charles Koch Foundation		Bioethic Seminar Series	9/1/2019	12/31/2019	R0502291	\$6,000
Payne, Samuel	w/ Kelly, Ryan	Biogen		Leveraging NanoPOTS for neuronal proteomics in human motor neuron diseases	3/1/2019	2/28/2021	R0602595	\$243,031
Ridge, Perry		University of Pennsylvania	NIH	Pleiotropy GWAS of Alzheimer's Disease	5/1/2019	4/30/2020	R0302727	\$54,077
Whiting, Michael		NSF		Collaborative Research: Digitization TCN: Digitizing collections to trace parasite-host associations and predict the spread of vector-borne disease	9/1/2019	8/31/2022	R0112410	\$99,951
Exercise Sciences								
Bruening, Dustin		NSF		Grad Fellowship for Lauren Williams	7/1/2018	6/30/2023	R0112419	\$46,000
Davidson, Lance		IHC		Intermountain LiVe Well Center Clinical Record Data Extraction Project	7/10/2019	12/31/2020	R0602605	\$50,000
Hunter, Iain		USA Track and Field		Analysis of distance running	10/4/2003	12/31/2018	R0502040	\$7,200
Mitchell, Ulrike	w/ Bowden, Anton	NIH		Wearable nanocomposite sensor system for diagnosing mechanical sources of low back pain and guiding rehabilitation	9/26/2019	8/31/2021	R0102098	\$241,880
Mitchell, Ulrike	w/ Bowden, Anton	NSF		Smart nanocomposite bio-sensing wearable for enhanced out-of-clinic rehabilitation	7/1/2019	6/30/2022	R0112403	\$96,740
Seeley, Matthew	w/ Bowden, Anton	NSF		Smart nanocomposite bio-sensing wearable for enhanced out-of-clinic rehabilitation	7/1/2019	6/30/2022	R0112403	\$96,740
Microbiology & Molecular Biology								
Griffitts, Joel		NIH		The structural basis of spatially constrained enzymatic promiscuity	4/1/2019	3/31/2022	R0102094	\$337,500

Griffitts, Joel	w/ Taylor, Brad	Western Dairy	Utah State University	Genetic interactions resulting in exceptional desiccation and thermal resistance in Cronobacter ssp. in low-moisture food matrices	1/18/2018	12/31/2019	R0502268	\$8,416
Grose, Julianne		Gerald Hayes		Manipulating the Microbiome of small hive beetles and Varroa mites.	6/10/2019	5/31/2021	R0602602	\$79,000
Robison, Richard	w/ Hawkins, Aaron	NIH		Multiplexed, Non-Amplified, Nucleic Acid-Based Identification of Multidrug Resistant Pathogens Using an Integrated Optofluidic Platform	3/1/2015	2/28/2019	R0102068	\$245,601
Robison, Richard		Solutions BioMed		Anti microbial materials and select agents	6/5/2005	6/30/2019	R0602144	\$2,400
Robison, Richard		Solutions BioMed		Anti microbial materials and select agents	6/17/2005	6/30/2019	R0602144	\$2,400
Robison, Richard		Solutions BioMed		Anti microbial materials and select agents	6/17/2005	6/30/2019	R0602144	\$1,200
Robison, Richard		Young Living Essential Oils		The Antimicrobial Effects of Essential Oil Mixtures	2/8/2019	1/31/2021	R0602592	\$9,000
Robison, Richard		Richards Labs		Preparation of a Bacillus subtilis spore suspension for Richards Labs, Pleasant Grove, UT	7/1/2019	7/17/2019	R0602611	\$500
<i>Nutrition, Dietetics, & Food Science</i>								
Dunn, Michael		Western Dairy	Utah State University	Metabolome analysis of acid whey from Greek yogurt produced with probiotic cultures	9/1/2018	8/31/2020	R0502270	\$18,000
Dunn, Michael		Western Dairy	Utah State University	Consumer Attitude Assessment and RSM Evaluation of Natural Stabilizer Efficacy in Ice Creams	4/1/2019	12/31/2020	R0502293	\$20,000
Dunn, Michael	w/ Taylor, Brad	Western Dairy	Utah State University	Vitamin stability of dairy-based foods fortified with ferrous sulfate	5/1/2019	8/31/2021	R0502294	\$18,000
Jefferies, Laura		Western Dairy	Utah State University	Factors driving consumer purchase decisions for milk	1/1/2019	12/31/2019	R0502288	\$18,000
Jefferies, Laura		Western Dairy	Utah State University	Factors driving consumer purchase decisions for milk	1/1/2019	12/31/2020	R0502288	\$15,000
Jefferies, Laura		BAF		Sensory Panel Projects 2019	1/1/2019	12/31/2019	R0602604	\$50,000
Kenealey, Jason		Western Dairy	Utah State University	Increasing the stability of Lactase for Reuse in Processing Whey Permeate into Commercially Viable Products (Dindi)	9/1/2019	8/31/2021	R0502305	\$25,000
Kenealey, Jason		Western Dairy	Utah State University	Optimization of immobilized enzyme mixture to utilize whey permeate (Eliza)	9/1/2019	8/31/2021	R0502306	\$25,000

LeCheminant, James	w/ Richards, Rickelle	Utah State University	UDWS	Homeless Health and Wellness	6/1/2019	5/31/2020	R0402339	\$10,473
Pike, Oscar	w/ Taylor, Brad	Western Dairy	Utah State University	Vitamin stability of dairy-based foods fortified with ferrous sulfate	5/1/2019	8/31/2021	R0502294	\$18,000
Pike, Oscar		Welfare Services		BYU Quality Assurance Laboratory	1/1/2019	12/31/2019	R0700031	\$110,000
Pike, Oscar		Welfare Services		Food Research for the Department of Welfare and Self-Reliance Services (Production and Distribution Division) of The Church of Jesus Christ of Latter-day Saints	1/1/2020	12/31/2020	R0700031	\$54,000
Richards, Rickelle		Utah State University	UDWS	Homeless Health and Wellness	6/1/2019	5/31/2020	R0402339	\$10,474
Steele, Frost	w/ Taylor, Brad	Western Dairy	Utah State University	Genetic interactions resulting in exceptional desiccation and thermal resistance in Cronobacter ssp. in low-moisture food matrices	1/18/2018	12/31/2019	R0502268	\$8,416
Steele, Frost	w/ Taylor, Brad	Western Dairy	Utah State University	Sporeformer presence and control in a milk fractionation process	9/1/2018	12/31/2020	R0502271	\$8,750
Steele, Frost		Western Dairy	Utah State University	Isolation and use of bacteriophage to control bacterial spore former growth in dairy powder production	8/15/2019	8/14/2021	R0502301	\$20,000
Steele, Frost		Deseret Meats		Pathogen Analysis for Meat	1/1/2019	12/31/2019	R0702001	\$46,250
Steele, Frost		Deseret Meats		Pathogen Analysis for Peanut Butter	1/1/2019	12/31/2019	R0702001	\$23,500
Steele, Frost	w/ Taylor, Brad	Deseret International Charities		Food Safety and Preservation MONGOLIA	8/1/2019	12/31/2020	R0702019	\$9,646
Taylor, Brad		Western Dairy	Utah State University	Genetic interactions resulting in exceptional desiccation and thermal resistance in Cronobacter ssp. in low-moisture food matrices	1/18/2018	12/31/2019	R0502268	\$8,418
Taylor, Brad		Western Dairy	Utah State University	Sporeformer presence and control in a milk fractionation process	9/1/2018	12/31/2020	R0502271	\$8,750
Taylor, Brad		Western Dairy	Utah State University	Vitamin stability of dairy-based foods fortified with ferrous sulfate	5/1/2019	8/31/2021	R0502294	\$18,000
Taylor, Brad		Deseret International Charities		Food Safety and Preservation MONGOLIA	8/1/2019	12/31/2020	R0702019	\$9,646
Tessem, Jeff		American Diabetes Association		Exploring the function of Nr4a1 in the pancreatic beta cell during type 2 diabetes progression	1/1/2017	12/31/2018	R0502242	\$115,000

Tessem, Jeff		Beatson Foundation		Defining beta cell heterogeneity to expand functional beta cell mass as a treatment for Type 1 Diabetes	7/1/2019	6/30/2020	R0502307	\$55,000
<i>Physiology & Developmental Biology</i>								
Arroyo, Juan	w/ Reynolds, Paul	FAMRI		RAGE and SAGE: Modeling Secondhand Smoke-Induced COPD and Therapeutic Modalities	7/1/2016	6/30/2020	R0502229	\$40,688
Hansen, Jason		University of Massachusetts, Amherst	NIH	Activation of Nrf2 during embryonic development: Mechanisms and consequences	6/1/2016	5/31/2020	R0302683	\$24,738
Hansen, Jason		Sanford Research	NIH	Cysteine-based redox relays in lung development and hyperoxic injury	8/10/2017	6/30/2019	R0302770	\$17,028
Hansen, Jason		University of Pittsburgh	NIH	Mechanism of Telomere-Mediated Lung Disease	7/10/2018	6/30/2020	R0302816	\$45,501
Hill, Jonathon		NIH		Developing a CRISPR-based forward-genetic screening method in embryonic zebrafish	8/1/2019	7/31/2022	R0102095	\$447,000
Hill, Jonathon		Utah Valley University	NIH	Seeing Red: Recessive red pigeons as an innovative model to elucidate Sox 10 function and evolution in vertebrate pigmentation.	8/13/2019	7/31/2020	R0302888	\$9,886
Hill, Jonathon	w/ Tessem, Jeff	Beatson Foundation		Defining beta cell heterogeneity to expand functional beta cell mass as a treatment for Type 1 Diabetes	7/1/2019	6/30/2020	R0502307	\$55,000
Reynolds, Paul		FAMRI		RAGE and SAGE: Modeling Secondhand Smoke-Induced COPD and Therapeutic Modalities	7/1/2016	6/30/2020	R0502229	\$40,688
Suli, Arminda		NIH		Identifying and characterizing auditory-visual multisensory neurons in the optic tectum of zebrafish larvae	8/1/2019	7/31/2022	R0102096	\$449,997
<i>Plant & Wildlife Sciences</i>								
Aanderud, Zach		CUWCD		Creating an early detection network for aquatic cyanobacteria	7/1/2019	6/30/2020	R0402333	\$17,701
Aanderud, Zach		DEQ		Bioassays to Investigate Nutrient Limitation in Utah Lake	7/1/2019	6/30/2020	R0402336	\$49,727
Aanderud, Zach	w/ Hansen, Jaron	Aqua Environmental Services, Inc.		Thermophilic bacterial pretreatment of lignocellulosic and wet waste for increased biogas production	11/25/2019	5/1/2021	R0602622	\$14,738
Abbott, Ben		NSF		Collaborative Research: Arctic Stream Networks as Nutrient Sensors in Permafrost Ecosystems	10/1/2019	9/30/2022	R0112423	\$469,943
Abbott, Ben	w/ St Clair, Sam	UDNR		Instrumentation of Pole Creek Fire	7/1/2018	6/30/2019	R0402330	\$8,228

Abbott, Ben	w/ St Clair, Sam	UDNR		Instrumentation of Pole Creek Fire	7/1/2019	6/30/2019	R0402330	\$5,857
Abbott, Ben	w/ St Clair, Sam	UDNR		Megafire impacts on terrestrial and aquatic ecosystems and management interventions to protect wildlife habitat and watershed hydrology FY2021	7/1/2019	6/30/2020	R0402332	\$26,654
Abbott, Ben	w/ Aanderud, Zach	DEQ		Bioassays to Investigate Nutrient Limitation in Utah Lake	7/1/2019	6/30/2020	R0402336	\$49,727
Allen, Phil		STIHL		Overcoming obstacles to significantly increase use of battery powered robotic mowers	6/27/2019	6/26/2021	R0602610	\$18,375
Allphin Flinders, Loreen		UDWR		Monitoring of rare plant populations and ungulate use on alpine plant communities of the Tushar Mountains	7/1/2019	6/30/2022	R0402335	\$55,830
Anderson, Val		BLM UT		BLM Listed Cacti Sampling and Monitoring in Sevier, Emery and Wayne Counties, Utah	12/1/2018	13/31/2021	R0202511	\$19,987
Anderson, Val	w/ Petersen, Steve	USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
Anderson, Val		Western North American Naturalist		Great Basin Desert: halophic lichens	5/1/2019	4/30/2021	R0502296	\$1,500
Frandsen, Paul	w/ St Clair, Sam	UDNR		Megafire impacts on terrestrial and aquatic ecosystems and management interventions to protect wildlife habitat and watershed hydrology FY2022	7/1/2019	6/30/2020	R0402332	\$26,654
Frandsen, Paul		Western North American Naturalist		Great Basin Desert: halophic lichens	5/1/2019	4/30/2021	R0502295	\$1,500
Geary, Bradley		USDA		Control of Pythium Leak (Pythium Ultimum) and Silver Scurf (Helminthosporium Solani) Infection of Potato Using Antagonistic Streptomycetes	7/1/2018	6/30/2021	R0152014	\$28,004
Geary, Bradley	w/ Taylor, Brad	Deseret International Charities		Food Safety and Preservation MONGOLIA	8/1/2019	12/31/2020	R0702019	\$9,646
Hansen, Neil	w/ St Clair, Sam	UDNR		Instrumentation of Pole Creek Fire	7/1/2018	6/30/2019	R0402330	\$8,228
Hansen, Neil	w/ St Clair, Sam	UDNR		Instrumentation of Pole Creek Fire	7/1/2019	6/30/2019	R0402330	\$5,857
Hansen, Neil	w/ St Clair, Sam	UDNR		Megafire impacts on terrestrial and aquatic ecosystems and management interventions to protect wildlife habitat and watershed hydrology FY2023	7/1/2019	6/30/2020	R0402332	\$26,654
Hansen, Neil		Utah State University	4R Research	Stacking and Intersecting Nutrient and Irrigation 4R's	7/1/2019	5/31/2024	R0502317	\$13,530

Hansen, Neil		BARD		Spatiotemporal decision support systems for recognizing variability and managing precision irrigation	12/1/2019	11/30/2022	R0570025	\$22,500
Hopkins, Bryan		USGS		USGS Canyonlands Soil Analysis Contract	9/26/2015	9/25/2019	R0202463	\$5,500
Hopkins, Bryan	w/ Petersen, Steve	USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
Hopkins, Bryan		SSSA		North American Proficiency Testing Program Coordinator	1/1/2020	12/31/2021	R0502308	\$103,201
Hopkins, Bryan	w/ Hansen, Neil	Utah State University	4R Research	Stacking and Intersecting Nutrient and Irrigation 4R's	7/1/2019	5/31/2024	R0502317	\$13,530
Hopkins, Bryan	w/ Hansen, Neil	BARD		Spatiotemporal decision support systems for recognizing variability and managing precision irrigation	12/1/2019	11/30/2022	R0570025	\$22,500
Larsen, Randy		URMCC		Monitoring bird abundance and movement for Provo river delta restoration project	2/1/2017	1/31/2022	R0202489	\$30,000
Larsen, Randy		URMCC		Study of Sage-grouse in Strawberry Valley	7/1/2019	6/30/2024	R0202518	\$65,000
Larsen, Randy		Army Dugway	DOD	Monitoring of Natural Resources with Remote Cameras	9/5/2019	9/4/2020	R0202529	\$70,814
Larsen, Randy	w/ Petersen, Steve	USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
Larsen, Randy	w/ McMillan, Brock	UDWR		Research examining the limiting factors for mule deer and elk throughout Utah	7/1/2019	6/30/2022	R0302864	\$163,517
Larsen, Randy	w/ McMillan, Brock	UDWR		Neonate deer and elk survival on the Book Cliffs management unit, Utah	12/21/2018	3/1/2022	R0402331	\$78,971
Larsen, Randy	w/ St Clair, Sam	UDNR		Megafire impacts on terrestrial and aquatic ecosystems and management interventions to protect wildlife habitat and watershed hydrology FY2024	7/1/2019	6/30/2020	R0402332	\$26,654
Larsen, Randy		Hawaii DLNR		Use of Remote Cameras to Estimate Abundance of Feral Goats for the State of Hawaii Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW)	10/17/2019	6/30/2020	R0470018	\$2,492
Madsen, Matthew		USDA		Seeding Technologies for Post-Fire Restoration	4/1/2019	12/31/2023	R0152015	\$33,444
Madsen, Matthew		BLM		Use of Flash Flaming, Fungicide, and Absciscic Acid Treatments to Improve Seed Delivery and Establishment of Winterfat (Krascheninnikovia lanata)	9/3/2019	9/2/2021	R0202530	\$49,000

Madsen, Matthew		BLM		Accelerating Post-Fire Restoration with a Novel Fungicide and Absciscic Acid Seed Coating Formulation	12/1/2019	11/30/2021	R0202532	\$24,942
Madsen, Matthew	w/ Petersen, Steve	USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
Madsen, Matthew		UDWR		Novel Seed Treatments to Reduce the Risk of Post-fire Seeding Failure	2/21/2017	2/20/2022	R0402299	\$17,776
Madsen, Matthew		University of Nevada, Reno		Novel Seed Treatments to Arrest the Cheatgrass Wildfire Cycle	7/16/2019	9/30/2020	R0802045	\$27,600
Maughan, Jeff		USDA		Techniques and improved efficiency in next generation sequencing	9/15/2016	9/14/2021	R0152012	\$19,625
McMillan, Brock	w/ Larsen, Randy	Army Dugway	DOD	Monitoring of Natural Resources with Remote Cameras	9/5/2019	9/4/2020	R0202529	\$70,814
McMillan, Brock		UDWR		Research examining the limiting factors for mule deer and elk throughout Utah	7/1/2019	6/30/2022	R0302864	\$163,517
McMillan, Brock		UDWR		Neonate deer and elk survival on the Book Cliffs management unit, Utah	12/21/2018	3/1/2022	R0402331	\$78,971
McMillan, Brock	w/ Larsen, Randy	Hawaii DLNR		Use of Remote Cameras to Estimate Abundance of Feral Goats for the State of Hawaii Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW)	10/17/2019	6/30/2020	R0470018	\$2,492
Petersen, Steve		BLM		Quantifying the distribution and land use of horses in relation to sage-grouse breeding habitat in Utah	9/13/2019	9/30/2021	R0202522	\$21,000
Petersen, Steve		USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
Petersen, Steve		Nature Conservancy		Blue Bonds Marine Spatial Planning	10/2/2019	4/30/2021	R0502310	\$30,000
Smith, Tom	w/ Petersen, Steve	USFWS		Natural Resources Support for Natural Resources Program, UTTR, Utah and Nevada	1/1/2020	12/31/2020	R0202533	\$22,090
St Clair, Sam		UDNR		Instrumentation of Pole Creek Fire	7/1/2018	6/30/2019	R0402330	\$8,228
St Clair, Sam		UDNR		Instrumentation of Pole Creek Fire	7/1/2019	6/30/2019	R0402330	\$5,857
St Clair, Sam		UDNR		Megafire impacts on terrestrial and aquatic ecosystems and management interventions to protect wildlife habitat and watershed hydrology FY2020	7/1/2019	6/30/2020	R0402332	\$26,654
Stevens, Mikel		USDA FS		Morphological and Genetic Characterization of Blue Penstemon (Penstemon cyaneus)	9/19/2019	9/30/2020	R0202524	\$20,009

Stevens, Mikel		Zion Natural History Association	Is Penstemon x jonesii a naturally occurring hybrid, a variant of P. eatonii, or a very rare species?	2/1/2019	12/31/2019	R0502289	\$5,000
Stevens, Mikel		American Penstemon Society	Publication Assistance Grant Proposal For the Forth Coming Book: "Natural History of the Penstemons of Utah"	5/1/2019	6/30/2020	R0502292	\$2,000
Public Health							
Crookston, Benjamin	w/ Taylor, Brad	Deseret International Charities	Food Safety and Preservation MONGOLIA	8/1/2019	12/31/2020	R0702019	\$9,646
Merrill, Ray	w/ Tanner, Kristine	NIH	Pathophysiology of Voice Disorders due to Combination Inhaled Corticosteroids in Asthma	5/14/2018	4/30/2023	R0102086	\$295,862
Redelfs, Alisha		University of Texas, El Paso	Paso Del Norte Health Foundation 2014 Heal: Creating a Culture of Healthy Eating and Active Living in the Paso del Norte Region	1/1/2019	13/31/19	R0502285	\$45,000
West, Josh	w/ Taylor, Brad	Deseret International Charities	Food Safety and Preservation MONGOLIA	8/1/2019	12/31/2020	R0702019	\$9,646

College of Life Sciences Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
Army Dugway	2	\$141,627
BLM	5	\$106,442
BLM UT	2	\$39,9730
NIH	6	\$2,017,840
NSF	6	\$855,375
URMCC	2	\$95,000
USDA	3	\$81,073
USDA FS	1	\$20,009
USFWS	6	\$132,540
USGS	2	\$15,605
Total	35	\$3,505,484
Federal Subcontract		
Icahn School of Medicine at Mt. Sinai	1	\$30,030
New York University	1	\$143,577
Sanford Research	1	\$17,028

UDWR	2	\$327,033
University of Colorado, Boulder	1	\$152,562
University of Massachusetts, Amherst	1	\$24,738
University of Pennsylvania	2	\$108,154
University of Pittsburgh	1	\$45,501
Utah Valley University	1	\$9,886
Total	11	\$858,509
State		
CUWCD	1	\$17,701
DEQ	2	\$99,454
UDNR	11	\$175,524
UDWR	5	\$244,048
Utah Division of Arts & Museums	2	\$10,000
Utah State University	2	\$20,947
Total	23	\$567,674
Private/Other		
ALA	1	\$2,000
American Diabetes Association	1	\$115,000
American Penstemon Society	1	\$2,000
Aqua Environmental Services, Inc.	1	\$14,738
BAF	1	\$50,000
BARD	2	\$45,000
Beatson Foundation	2	\$110,000
Biogen	1	\$243,031
Center for the Involvement of Teacher Education	1	\$24,000
Charles Koch Foundation	1	\$6,000
Deseret International Charities	5	\$48,229
Deseret Meats	2	\$69,750
FAMRI	2	\$81,375
Gerald Hayes	1	\$79,000
Hawaii DLNR	2	\$4,984
Howard Hughes Medical Institute	2	\$98,150
IHC	1	\$50,000
Nature Conservancy	1	\$30,000
Richards Labs	1	\$500
Solutions BioMed	3	\$6,000
SSSA	1	\$103,201
STIHL	1	\$18,375
University of Nevada, Reno	1	\$27,600
University of Texas, El Paso	1	\$45,000
USA Track and Field	1	\$7,200
Utah State University	2	\$27,060
Welfare Services	2	\$164,000
Western Dairy	15	\$237,750
Western North American Naturalist	3	\$4,500
Young Living Essential Oils	1	\$9,000
Zion Natural History Association	2	\$10,000
Total	62	\$1,733,443
Grand Total	131	\$6,665,109

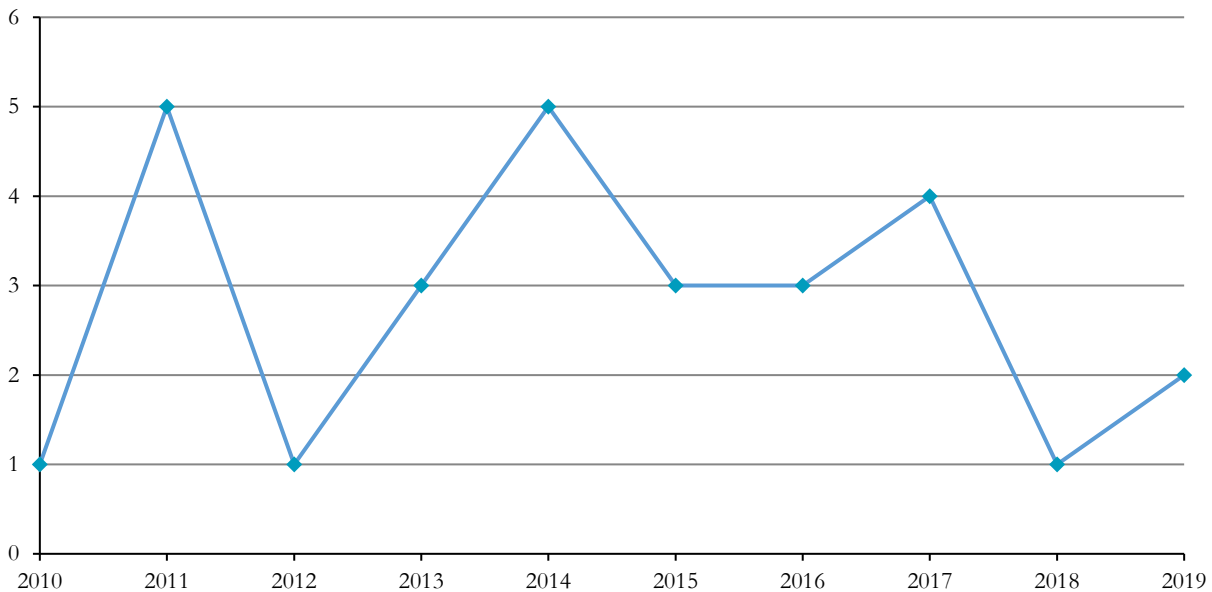


Marriott School of Business

Summary by Departments

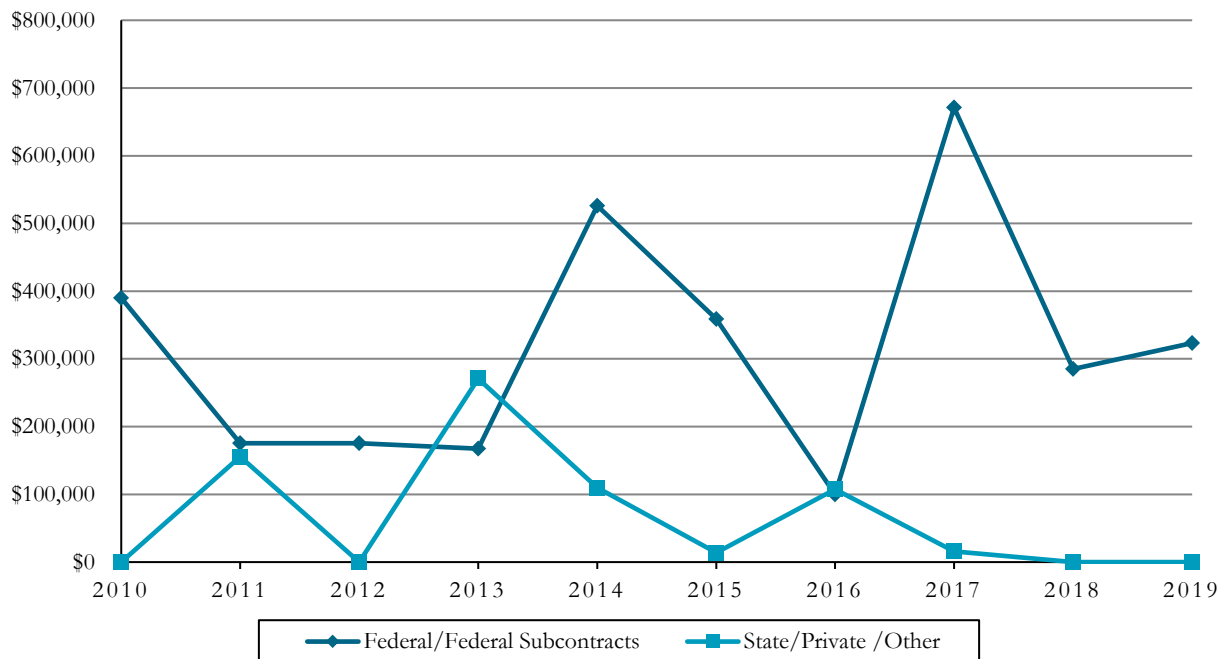
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
School of Accountancy	0	0	0	\$0
Experience Design & Management	0	0	0	\$0
Finance & Managerial Economics	0	0	0	\$0
Global Management Center	0	0	0	\$142,500
Information Systems	1	1	1	\$38,439
Management	1	1	0	\$0
Marketing & Global Supply Chain	0	0	1	\$142,500
Romney Institute of Public Management	0	0	0	\$0
TOTALS	2	2	2	\$323,439

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$390,200	\$0	\$390,200
2011	\$175,321	\$155,800	\$331,121
2012	\$175,321	\$0	\$175,321
2013	\$167,256	\$270,767	\$438,023
2014	\$526,276	\$110,000	\$636,276
2015	\$358,690	\$13,910	\$372,600
2016	\$100,000	\$107,500	\$207,500
2017	\$671,051	\$15,600	\$686,651
2018	\$285,000	\$0	\$285,000
2019	\$323,439	\$0	\$323,439



Marriott School of Business

2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Global Management Center								
Wood, Jonathon	w/ Money, Bruce	Department of Education		2018-2020 Center for International Business Education Grant	10/1/2018	9/30/2022	R0132024	\$142,500
Information Systems								
Anderson, Bonnie		Temple University	NSF	SaTC: CORE: Small: The Blurring of Non-essential Notifications and Critical Security Warnings: Examining the Problem of Generalization in the Brain	9/1/2018	8/31/2020	R0302878	\$38,439
Marketing & Global Supply Chain								
Money, Bruce		Department of Education		2018-2020 Center for International Business Education Grant	10/1/2018	9/30/2022	R0132024	\$142,500

Marriott School of Business

Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
Department of Education	2	\$285,000
Total	2	\$285,000
Federal Subcontract		
Temple University	1	\$38,439
Total	1	\$38,439
Grand Total	3	\$323,439

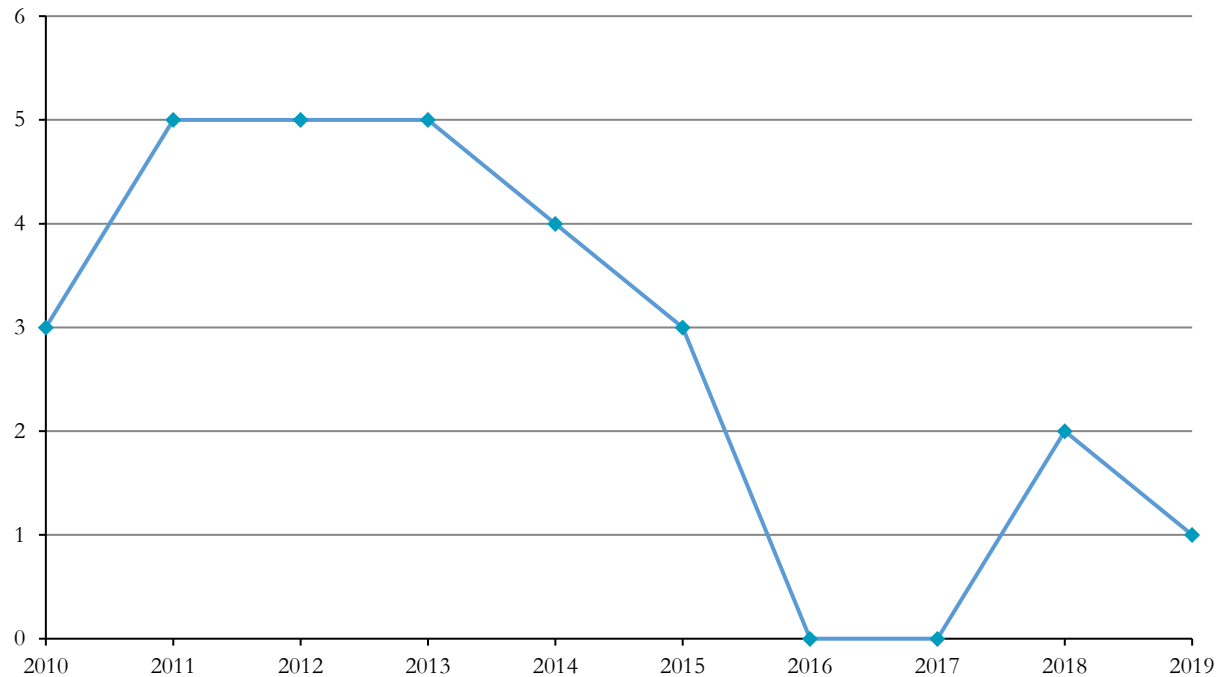


College of Nursing

Summary by Departments

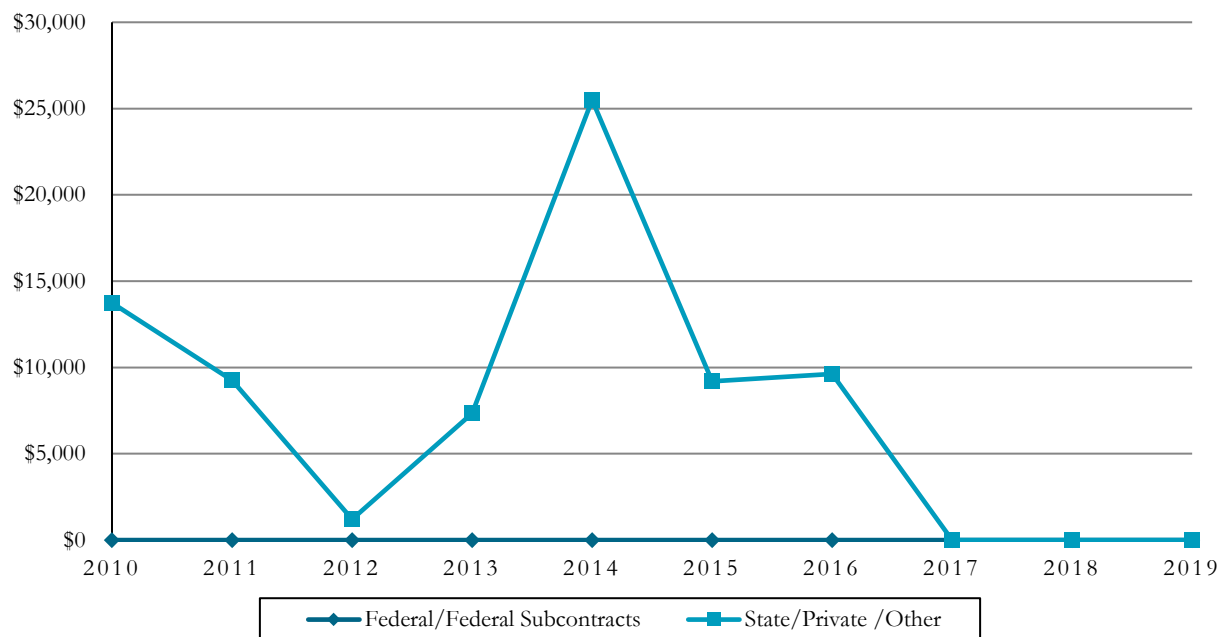
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Nursing	2	1	0	\$0
<i>TOTALS</i>	2	1	0	\$0

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$0	\$13,750	\$13,750
2011	\$0	\$9,250	\$9,250
2012	\$0	\$1,200	\$1,200
2013	\$0	\$7,350	\$7,350
2014	\$0	\$25,500	\$25,500
2015	\$0	\$9,200	\$9,200
2016	\$0	\$9,626	\$9,626
2017	\$0	\$0	\$0
2018	\$0	\$0	\$0
2019	\$0	\$0	\$0



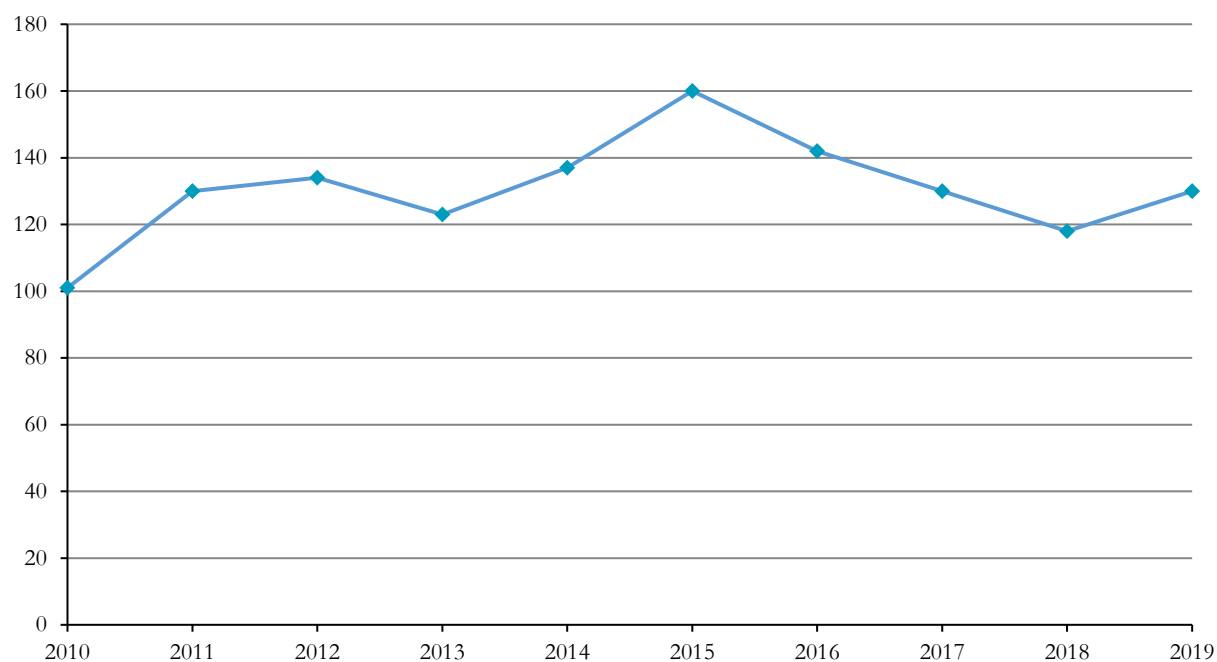


College of Physical & Mathematical Sciences

Summary by Departments

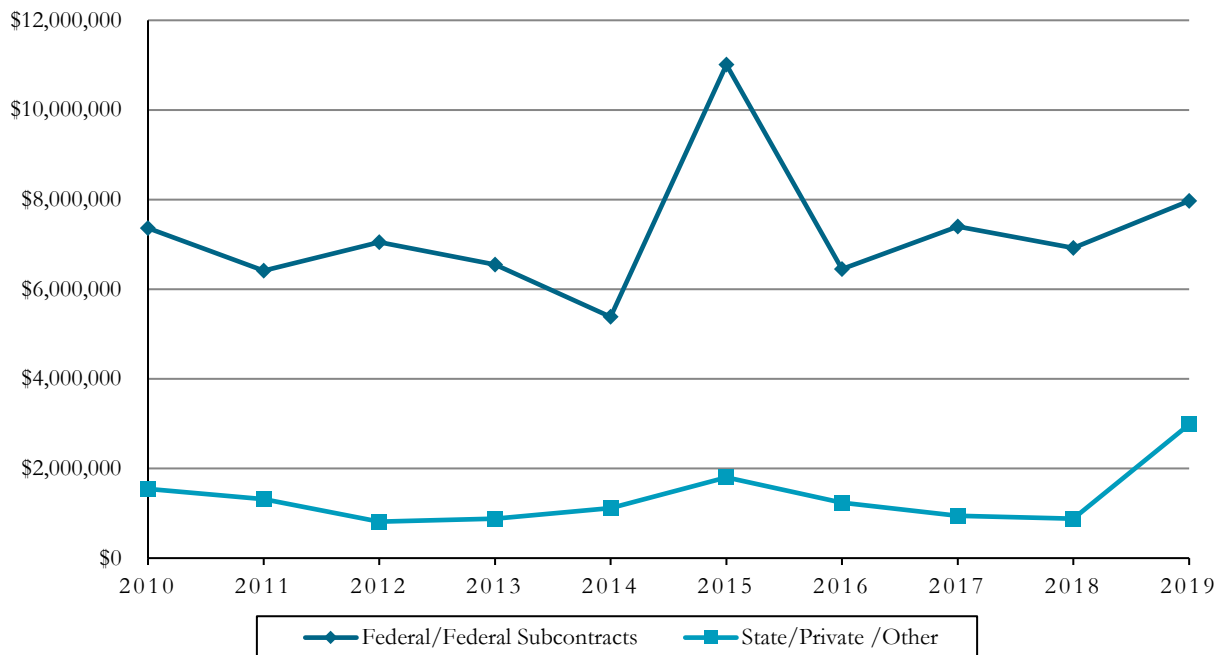
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Chemistry & Biochemistry	32	54	35	\$4,663,594
Computer Science	11	9	15	\$1,890,702
Museum of Paleontology	0	0	0	\$0
Geology	6	15	11	\$870,830
Mathematics	21	19	6	\$102,533
Mathematics Education	2	2	3	\$667,208
Physics & Astronomy	19	23	34	\$2,555,624
Statistics	9	8	2	\$200,685
TOTALS	100	130	106	\$10,951,176

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$7,363,938	\$1,545,052	\$8,908,990
2011	\$6,410,182	\$1,313,108	\$7,723,290
2012	\$7,049,532	\$813,628	\$7,963,160
2013	\$6,548,760	\$878,540	\$7,408,208
2014	\$5,382,972	\$1,113,596	\$6,496,568
2015	\$11,009,182	\$1,803,190	\$12,812,372
2016	\$6,447,585	\$1,239,899	\$7,687,484
2017	\$7,399,801	\$944,244	\$8,344,045
2018	\$6,919,640	\$878,316	\$7,797,596
2019	\$7,967,960	\$2,983,216	\$10,951,176



College of Physical & Mathematical Sciences 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Chemistry & Biochemistry								
Andersen, Josh		NIH		The regulation and targeting of cell survival pathways in cancer	12/22/2015	6/30/2022	R0102075	\$432,000
Andersen, Josh		American Cancer Society		Regulation & Oncogenic Mutation within a Novel PDFR-TNK1 Signaling Axis	7/1/2019	6/30/2023	R0502303	\$788,000
Asplund, Matthew	w/ Dearden, David	NSF		Collision Cross Section Measurements Using Fourier Transform Ion Cyclotron Resonance Techniques	7/1/2019	6/30/2022	R0112408	\$167,500
Asplund, Matthew	w/ Dearden, David	NSF		Collision Cross Section Measurements Using Fourier Transform Ion Cyclotron Resonance Techniques	7/1/2019	6/30/2022	R0112408	\$80,000
Austin, Daniel		NASA		A Circuit Board Charge Detector for Characterization of Martian Dust	8/21/2017	8/20/2020	R0162030	\$70,598
Castle, Steven		NSF		Reaching New Horizons in Iminyl Radical Chemistry via Microwave Irradiation	8/1/2019	7/31/2022	R0112409	\$165,468
Dearden, David		NSF		Collision Cross Section Measurements Using Fourier Transform Ion Cyclotron Resonance Techniques	7/1/2019	6/30/2022	R0112408	\$167,500
Dearden, David		NSF		Collision Cross Section Measurements Using Fourier Transform Ion Cyclotron Resonance Techniques	7/1/2019	6/30/2022	R0112408	\$80,000
Ess, Dan		DOE		Theory of Main-Group P-Block Hydrocarbon Functionalization Reactions	9/15/2017	9/14/2020	R0202502	\$63,094
Ess, Dan		Phillips 66		Computational Optimization of Solid Acid Metal-Organic Frameworks Brigham Young University-Phillips 66	9/1/2019	8/31/2024	R0602607	\$117,519
Hansen, Jaron		Verde		Biological Pretreatment of Biomass for Enhanced Biogas Production	1/16/2017	12/31/2019	R0602536	\$5,000
Hansen, Jaron		Aqua Environmental Services, Inc.		Thermophilic bacterial pretreatment of lignocellulosica and wet waste for increased biogas production	11/25/2019	5/1/2021	R0602622	\$14,738
Kelly, Ryan		Biogen		Leveraging NanoPOTS for neuronal proteomics in human motor neuron diseases	3/1/2019	2/28/2021	R0602595	\$243,032

Kelly, Ryan	Bristol Myers Squibb		Innovation Grant - Nanoscale Proteomics	7/1/2019	6/30/2021	R0602603	\$125,000
Kelly, Ryan	Axcend LLC		Packed Capillary Column Technology for Hand-Portable Liquid Chromatography	9/1/2019	8/31/2020	R0602606	\$93,705
Kelly, Ryan	PNNL	NIH	Joint Appointment Agreement 428804 (Contract)	9/1/2018	9/30/2019	R0302845	\$20,000
Linford, Matt	Corning Glass		Glass Surface Functional Group and Composition Analysis Methods	4/1/2015	4/1/2019	R0602472	\$15,000
Linford, Matt	Moxtek		Optimizing the Deposition of Silicon, Titanium, Aluminum, and Hafnium Oxide Coatings on Substrates	9/1/2019	4/30/2020	R0602613	\$20,000
Linford, Matt	Restek Corporation		ALD on Materials for Sample Preparation and Chromatography, and SPME	11/1/2019	10/31/2020	R0602619	\$65,000
Michaelis, David	NIH		Multifunctional enzyme-like catalysts for organic synthesis	8/1/2019	7/31/2022	R0102097	\$436,500
Patterson, James	Naval Air Warfare Center Weapons Division	DOD	Determination of the Effects of Thermal and Mechanical Stress on PBX Binder Materials and the HE/Binder Interface	5/29/2019	12/31/2019	R0202517	\$130,942
Patterson, James	Naval Air Warfare Center Weapons Division		Determination of the Effects of Thermal and Mechanical Stress on PBX Binder Materials and the HE/Binder Interface	5/29/2019	12/31/2019	R0202517	\$14,928
Patterson, James	Electric Power Research Institute		Nonlinear Optics for the Determination of Early Stage Fatigue	3/8/2019	12/31/2019	R0602594	\$18,365
Patterson, James	Electric Power Research Institute		Use of Nonlinear Optics for Assessment of Cable Polymer Aging	4/26/2019	12/31/2019	R0602599	\$13,875
Savage, Paul	Scripps Research Institute	NIH	Biology of Alpha-linked Glycosylceramides in the Immune System	1/1/2019	12/31/2019	R0302779	\$75,000
Savage, Paul	Scripps Research Institute	NIH	Development of the Next Generation of Conjugate Vaccines	7/1/2019	6/30/2020	R0302803	\$164,291
Savage, Paul	N8 Medical	NIH	A 3D Printed Resorbable Antimicrobial Envelope to Prevent Infection of Implanted Cardiac Devices	9/1/2018	8/31/2019	R0302817	\$60,000
Savage, Paul	Vanderbilt University Medical Center	NIH	Molecular Basis of Cd1D and natural Killer T Cell Function	8/19/2019	7/31/2020	R0302883	\$37,500
Savage, Paul	N8 Medical		Quarterly Research Funds	5/12/2004	12/31/2019	R0802005	\$25,000
Savage, Paul	N8 Medical		Quarterly Research Funds	5/12/2004	12/31/2019	R0802005	\$12,500
Savage, Paul	N8 Medical		Quarterly Research Funds	5/12/2004	12/31/2019	R0802005	\$12,500

Savage, Paul		N8 Medical		Quarterly Research Funds	5/12/2004	12/31/2019	R0802005	\$12,500
Stowers, Kara		Battelle Energy Alliance, LLC	Idaho National Laboratory	Synthesis of hierarchical mesoporous nanocatalysts for efficient electrocatalytic processes	12/18/2018	8/30/2019	R0302837	\$20,237
Watt, Richard		Rockwell Medical, Inc.		Trace Iron Analysis on Washes from Dialysis Machines	11/10/2018	5/9/2019	R0602585	\$10,882
Willardson, Barry		NIH		Mechanisms of Assembly of Photoreceptor G Protein Complexes	5/3/1999	12/31/2019	R0102053	\$348,000
Willardson, Barry		Beckman Foundation		Beckman Scholars Program (2019)	5/1/2017	4/30/2020	R0502244	\$52,000
Woolley, Adam	w/ Hawkins, Aaron	NIH		Multiplexed, Non-Amplified, Nucleic Acid-Based Identification of Multidrug Resistant Pathogens Using an Integrated Optofluidic Platform	3/1/2015	2/28/2019	R0102068	\$245,601
Woolley, Adam		NIH		3D-Printed Integrated Microfluidic Devices for Preterm Birth Biomarker Analysis	9/18/2018	6/30/2020	R0102090	\$93,467
Woolley, Adam	w/ Munro, Troy	NIH		3D temperature control to study biological processes	4/1/2019	3/31/2022	R0102093	\$146,352
Computer Science								
Clement, Mark		Ancestry		Handwriting Recognition	10/1/2019	10/1/2020	R0602614	\$15,000
Crandall, Jacob		Carnegie Mellon University	ONR	Success: Self-Assessment and Understanding of Competence and Conditions to Ensure System Success	6/1/2018	5/31/2020	R0302806	\$172,155
Deccio, Casey		Comcast Corporation		DNS Resolvers - A study in proximity and Unintended Exposure	1/1/2019	12/31/2019	R0602586	\$50,000
Deccio, Casey		Comcast Corporation		A Study of the Pervasiveness and Quality of DNS Cookie Deployment	1/1/2020	12/31/2023	R0602615	\$27,580
Farrell, Ryan		NSF		CAREER: Inverse Origami: Generalized Pose-normalization for Large-scale Fine-grained Recognition	6/1/2017	5/31/2022	R0112337	\$94,218
Farrell, Ryan		NSF		CAREER: Inverse Origami: Generalized Pose-normalization for Large-scale Fine-grained Recognition	6/1/2017	5/31/2022	R0112337	\$242,246
Goodrich, Michael		ONR		Swarms, Colonies, and Human Organizations: Towards a Science of Managed Bio-Inspired Collectives	9/1/2016	8/31/2019	R0202479	\$150,008
Goodrich, Michael	w/ Crandall, Jacob	Carnegie Mellon University	ONR	Success: Self-Assessment and Understanding of Competence and Conditions to Ensure System Success	6/1/2018	5/31/2020	R0302806	\$172,155

Goodrich, Michael		Oregon State University	ONR	A Formal Framework for Developing Resilient Teams of Heterogeneous Autonomous Agents	8/15/2018	8/14/2020	R0302835	\$105,386
Goodrich, Michael		Oregon State University	ONR	A Formal Framework for Developing Resilient Teams of Heterogeneous Autonomous Agents	8/15/2018	8/14/2019	R0302835	\$38,905
Martinez, Tony		Thinci		Advanced Generative Adversarial Networks and ThinCI Acceleration	1/1/2019	12/31/2020	R0602591	\$44,000
Mercer, Eric		Google		Google Summer of Code 2019	9/1/2019	9/30/2020	R0602612	\$5,700
Morse, Bryan	w/ Clement, Mark	Ancestry		Handwriting Recognition	10/1/2019	10/1/2020	R0602614	\$15,000
Seamons, Kent		NSF		TWC: Small: Middleware for Certificate-Based Authentication (REU Supplement)	9/1/2015	8/31/2019	R0112407	\$7,920
Seamons, Kent		Crimson Vista	Army	Ransomware	5/1/2019	8/31/2019	R0302856	\$75,000
Seppi, Kevin		Air Force Research Laboratory	DOD	Second-generation Metalearning for Data-driven Discovery of Models	3/21/2017	3/20/2021	R0202486	\$138,874
Snell, Quinn	w/ Clement, Mark	Ancestry		Handwriting Recognition	10/1/2019	10/1/2020	R0602614	\$15,000
Wingate, David		NSF		CAREER: Blending Deep RL and Probabilistic Programming	3/1/2017	2/28/2022	R0112338	\$99,163
Wingate, David	w/ Killpack, Marc	University of Tulsa	NSF	EFRI C3 SoRo: Between a Soft Robot and a Hard Place: Estimation and Control Algorithms that Exploit Soft Robots' Unique Abilities	1/1/2020	12/31/2023	R0302880	\$414,473
Zappala, Daniel	w/ Seamons, Kent	NSF		TWC: Small: Middleware for Certificate-Based Authentication (REU Supplement)	9/1/2015	8/31/2019	R0112407	\$7,920
Geology								
Carling, Greg		Utah Division of Air Quality	State of Utah Department of Environmental Quality	Characterizing air quality impacts from exceptional events along the Wasatch Front	7/1/2019	6/30/2021	R0402340	\$75,000
Carling, Greg		University of Utah	Utah Department of Water Quality	Utah Lake Sediment--Water Nutrient Interactions	8/1/2019	5/29/2020	R0402344	\$21,000
Carling, Greg		Tintic Consolidated Metals		Water chemistry of springs and seeps in the Tintic mining area	8/19/2019	8/31/2020	R0602609	\$49,562

Harris, Ronald		Geoscientists Without Borders		Building Resilience to Seismic Hazards in Indonesia: Training in Multi-Channel Analysis of Surface Waves (MASW) and Implementing Seismic Disaster Mitigation Strategies	5/1/2018	4/30/2020	R0502273	\$25,000
Hudson, Sam		ConocoPhillips		Outcrop Characterization of Brookian Deltaic Topsets of the Nanushuk Formation	1/22/2019	12/31/2021	R0602590	\$450,000
McBride, John		University of Illinois	DOE	CarbonSAFE Evaluation of Seismic Data Wabash Valley, Illinois	2/1/2019	1/31/2020	R0302876	\$40,796
McBride, John	w/ Harris, Ronald	Geoscientists Without Borders		Building Resilience to Seismic Hazards in Indonesia: Training in Multi-Channel Analysis of Surface Waves (MASW) and Implementing Seismic Disaster Mitigation Strategies	5/1/2018	4/30/2020	R0502273	\$25,000
Nelson, Steve		National Jewish Health	NSF	The Hawaiian Islands as a Model to Predict the Environmental, Ecological and Behavioral Risk Factors or Nontuberculous Mycobacterial Lung Infections	7/15/2017	6/30/2021	R0302768	\$6,600
Nelson, Steve		South Davis Sewer District		An Evaluation of the Trophic Status and Algal Productivity of Utah Lake	7/1/2018	12/31/2019	R0492048	\$46,517
Radebaugh, Jani		Jet Propulsion Laboratory	NASA	Yardangs: Wind Flow and Controls on Formation	2/12/2019	2/11/2020	R0302840	\$79,189
Radebaugh, Jani		USGS	NASA	Planetary Spatial Data Infrastructure Development and Support	9/14/2018	4/30/2022	R0302841	\$49,500
Radebaugh, Jani		Johns Hopkins University	NASA	Dragonfly Phase B Bridge	9/5/2019	12/31/2019	R0302875	\$2,666
Mathematics								
Allen, Mark		Simons Foundation		Nonlocal Equations and Free Boundary Problems	9/1/2019	8/31/2024	R0502315	\$8,400
Dorff, Michael		NSA	DOD	PIC Math: Preparation for Industrial Careers in the Mathematical Science	2/1/2019	1/31/2020	R0202516	\$55,200
Fisher, Todd		Simons Foundation		Topological Pressure and Equilibrium States for Smooth Dynamic Systems	9/1/2018	8/31/2023	R0502274	\$8,400
Halverson, Denise	w/ Howell, Larry	NSF		Mechanisms on Developable Surfaces - REU Supplement	5/1/2017	4/30/2020	R0112421	\$5,333
Kent, Curt		Simons Foundation		Topology of Coarse Geometry Structures	9/1/2018	8/31/2023	R0502275	\$8,400
Priddis, Nathan		Simons Foundation		Mirror Symmetry and the LG/CY Correspondence	9/1/2018	8/31/2023	R0502276	\$8,400

Whitehead, Jared		Simons Foundation		Analysis and Computation of Geophysical Fluid Dynamics	9/1/2018	8/31/2023	R0502277	\$8,400
Mathematics Education								
Jones, Steven		Stephen F. Austin State University	NSF	Calculus in Virtual Reality(CalcVR)	12/1/2018	8/30/2020	R0302843	\$23,007
Leatham, Keith	w/ Peterson, Blake	NSF		Collaborative Research: Investigating Productive Use of High-Leverage Student Mathematical Thinking	6/1/2017	5/31/2021	R0112350	\$164,603
Leatham, Keith	w/ Peterson, Blake	NSF		Collaborative Research: Investigating Productive Use of High-Leverage Student Mathematical Thinking	6/1/2017	5/31/2021	R0112350	\$157,497
Peterson, Blake		NSF		Collaborative Research: Investigating Productive Use of High-Leverage Student Mathematical Thinking	6/1/2017	5/31/2021	R0112350	\$164,604
Peterson, Blake		NSF		Collaborative Research: Investigating Productive Use of High-Leverage Student Mathematical Thinking	6/1/2017	5/31/2021	R0112350	\$157,497
Physics & Astronomy								
Allred, David	w/ Vanfleet, Richard	University of Utah	NASA	Improving of EUV plasma lamps via collimators based on infiltrated carbon nanotube forests	4/10/2019	5/17/2020	R0302852	\$6,666
Allred, David		University of Utah	NASA	RASC-AL Competition	4/10/2019	5/17/2020	R0302853	\$7,500
Anderson, Brian	w/ Neilsen, Traci	ONR		Testbed for Quantifying Uncertainty in Ocean Acoustics Machine Learning	8/1/2019	7/31/2020	R0202520	\$127,377
Anderson, Brian		Los Alamos National Laboratory	DOE	Source Signature Encryption and Super Resolution Imaging using Near Field Scattering	6/11/2019	9/30/2022	R0302863	\$100,263
Bergeson, Scott		Air Force Office of Scientific Research		Laser-Cooled Ions in Hybrid Traps for Studying Collision Physics in SCPs	7/15/2017	7/14/2020	R0202499	\$107,204
Colton, John	w/ Van Huele, Jean-Francois	NSF		REU Site: Physics Research at Brigham Young University	7/1/2018	6/30/2021	R0112383	\$29,625
Colton, John	w/ Van Huele, Jean-Francois	NSF		REU Site: Physics Research at Brigham Young University	7/1/2018	6/30/2021	R0112384	\$59,018
Davis, Robert		Tula Health, Inc		A Carbon Electrode Array for Bioimpedance Spectroscopy	12/19/2018	12/31/2019	R0602596	\$65,536
Davis, Robert	w/ Vanfleet, Richard	Tula Health, Inc		Microscale spectrometer for plethysmographic spectroscopy of arterial blood	4/23/2019	12/31/2019	R0602599	\$74,930
Gee, Kent		BRRC	DOD	Connecting High-Power Jet Noise Characteristics with Human Annoyance	9/15/2016	12/15/2018	R0302692	\$30,000

Gee, Kent		BRRC	National Academy of Sciences	Commercial Space Operations Noise and Sonic Boom Measurements	8/7/2017	5/31/2019	R0302752	\$20,000
Gee, Kent		NIA	NASA	Development of a Weather-Robust Ground-Based System for Sonic Boom Measurements	6/1/2018	12/31/2019	R0302801	\$82,612
Gee, Kent		NIA	NASA	Development of a Weather-Robust Ground-Based System for Sonic Boom Measurements	6/1/2018	12/31/2019	R0302801	\$9,123
Gee, Kent		BRRC		Advanced Non-Linear Acoustic Modeling- AICU Studies and Noisemap Enhancements	12/10/2018	9/29/2019	R0302830	\$24,504
Gee, Kent		BRRC		Advanced Non-Linear Acoustic Modeling- AICU Studies and Noisemap Enhancements	12/10/2018	9/29/2019	R0302830	\$24,992
Gee, Kent		Ball Aerospace	DOD	Measurement and Data Validation of the T-X Trainer Aircraft (Auditory & Acoustic Research)	7/25/2019	4/30/2020	R0302869	\$59,679
Hart, Gus	w/ Homer, Eric	NSF		Discovering the Building Blocks and Structure Property Relationships of Grain Boundaries using Machine Learning	8/15/2019	7/31/2022	R0112402	\$70,000
Hintz, Eric		Mt. Cuba Astronomical Foundation		Confirming Observations for Transiting Exoplanets from TESS to KELT	1/1/2019	12/31/2019	R0502283	\$16,121
Hirschmann, Eric	w/ Neilsen, David	NSF		Collaborative Proposal: Dendro-GR: Massively parallel simulations of compact objects with wavelet adaptive multiresolution	7/15/2019	6/30/2022	R0112420	\$150,000
Joner, Michael	w/ Hintz, Eric	Mt. Cuba Astronomical Foundation		Confirming Observations for Transiting Exoplanets from TESS to KELT	1/1/2019	12/31/2019	R0502283	\$16,118
Neilsen, David		NSF		Collaborative Proposal: Dendro-GR: Massively parallel simulations of compact objects with wavelet adaptive multiresolution	7/15/2019	6/30/2022	R0112420	\$150,000
Neilsen, Traci		ONR		Testbed for Quantifying Uncertainty in Ocean Acoustics Machine Learning	8/1/2019	7/31/2020	R0202520	\$127,377
Neilsen, Traci	w/ Gee, Kent	BRRC	DOD	Connecting High-Power Jet Noise Characteristics with Human Annoyance	9/15/2016	12/15/2018	R0302692	\$29,999
Neilsen, Traci		KSA, LLC	Naval Air Warfare Center Aircraft Division	SSN sensor environment using machine learning and statistical inference applied to acoustic data generated by passing ships	10/15/2018	10/14/2019	R0302838	\$15,000
Neilsen, Traci		KSA, LLC	ONR	Through the Sensor Statistical Inference Module (SIM) for Assessing Predictions made on SSNs	12/15/2018	12/31/2019	R0302848	\$54,777
Neilsen, Traci		KSA, LLC	ONR	Through the Sensor Statistical Inference Module (SIM) for Assessing Predictions made on SSNs	12/15/2018	4/15/2019	R0302848	\$9,100

Ragozzine, Darin		NASA		Homogeneous Photodynamical Analysis of Kepler's Multiply-Transiting Systems	1/19/2018	1/18/2021	R0162033	\$120,420
Ragozzine, Darin		NASA		AMES COOP: Architectures of Multi Planet Systems	5/15/2018	1/14/2020	R0162034	\$22,219
Ragozzine, Darin		Arizona State University	NASA	Haumea: Internal Structure and Collisional Family	10/12/2018	10/11/2019	R0302844	\$37,427
Ragozzine, Darin	w/ Hintz, Eric	Mt. Cuba Astronomical Foundation		Confirming Observations for Transiting Exoplanets from TESS to KELT	1/1/2019	12/31/2019	R0502283	\$16,118
Sommerfeldt, Scott		NSF		Development of a Vibration-based Acoustic Sound Power Measurement Method	9/1/2019	8/31/2022	R0112405	\$194,367
Sommerfeldt, Scott		Caterpillar		Acoustic Modeling of Resonators and Development of a Multi-Driver Volume Velocity Source	1/1/2014	12/31/2019	R0602437	\$39,941
Sommerfeldt, Scott	w/ Blotter, Jonathan	Nexus Outdoors		Active noise control of an ozone generating device	4/1/2019	3/31/2020	R0602600	\$22,813
Stephens, Denise		University of Utah	NASA	Proposal for the Apollo 50th Anniversary Award Program	4/10/2019	5/17/2020	R0302857	\$500
Stephens, Denise	w/ Hintz, Eric	Mt. Cuba Astronomical Foundation		Confirming Observations for Transiting Exoplanets from TESS to KELT	1/1/2019	12/31/2019	R0502283	\$16,118
Transtrum, Mark		Cornell University	NSF	Center for Bright Beams	10/1/2016	9/30/2020	R0302716	\$62,226
Transtrum, Mark		Cornell University	NSF	Center for Bright Beams	10/1/2016	9/30/2019	R0302718	\$3,251
Transtrum, Mark		Cornell University	NSF	Center for Bright Beams	10/1/2016	9/30/2021	R0302718	\$3,193
Transtrum, Mark		Cornell University	NSF	Center for Bright Beams REU	10/1/2016	9/30/2020	R0302800	\$9,000
Transtrum, Mark		Cornell University	NSF	Center for Bright Beams REU - Amendment 4	10/1/2016	9/30/2019	R0302800	\$7,500
Transtrum, Mark	w/ Neilsen, Traci	KSA, LLC	Naval Air Warfare Center Aircraft Division	SSN sensor environment using machine learning and statistical inference applied to acoustic data generated by passing ships	10/15/2018	10/14/2019	R0302838	\$15,000
Transtrum, Mark	w/ Neilsen, Traci	KSA, LLC	ONR	Through the Sensor Statistical Inference Module (SIM) for Assessing Predictions made on SSNs	12/15/2018	12/31/2019	R0302848	\$54,777
Transtrum, Mark	w/ Neilsen, Traci	KSA, LLC	ONR	Through the Sensor Statistical Inference Module (SIM) for Assessing Predictions made on SSNs	12/15/2018	4/15/2019	R0302848	\$9,100
Turley, R. Steven		NSF		NSF IPA Assignment for Steve Turley	1/2/2019	1/1/2020	R0112373	\$276,780

Turley, R. Steven	w/ Vanfleet, Richard	University of Utah	NASA	Improving of EUV plasma lamps via collimators based on infiltrated carbon nanotube forests	4/10/2019	5/17/2020	R0302852	\$6,666
Van Huele, Jean-Francois		NSF		REU Site: Physics Research at Brigham Young University	7/1/2018	6/30/2021	R0112383	\$29,625
Van Huele, Jean-Francois		NSF		REU Site: Physics Research at Brigham Young University	7/1/2018	6/30/2021	R0112384	\$59,018
Van Huele, Jean-Francois		Arizona State University	NSF	Quantum Dynamics of Open Systems	5/1/2019	9/30/2019	R0302866	\$450
Vanfleet, Richard		University of Utah	NASA	Improving of EUV plasma lamps via collimators based on infiltrated carbon nanotube forests	4/10/2019	5/17/2020	R0302852	\$6,668
Vanfleet, Richard		Tula Health, Inc		Microscale spectrometer for plethysmographic spectroscopy of arterial blood	4/23/2019	12/31/2019	R0602598	\$74,930
Statistics								
Christensen, William	w/ Reese, Shane	University of Utah	NASA	Precipitation and Glacier Mass Balance in High Mountain Asia Over the Common Area	8/16/2016	7/31/2016	R0302695	\$8,800
Heaton, Matt	w/ Hansen, Neil	BARD		Spatiotemporal decision support systems for recognizing variability and managing precision irrigation	12/1/2019	11/30/2022	R0570025	\$22,500
Page, Garritt		Basque Center for Applied Mathematics		Clustering Derivative Curves	5/12/2019	6/18/2019	R0570024	\$4,623
Reese, Shane		University of Utah	NASA	Precipitation and Glacier Mass Balance in High Mountain Asia Over the Common Area	8/16/2016	7/31/2016	R0302695	\$8,800
Richardson, Robert	w/ Belk, Mark	UDWR		Bluegill adaptations studies - Quagga Mussels	5/1/2017	3/30/2020	R0402301	\$12,500
Tolley, Dennis	w/ Woolley, Adam	NIH		3D-Printed Integrated Microfluidic Devices for Preterm Birth Biomarker Analysis	9/18/2018	6/30/2020	R0102090	\$93,467
Tolley, Dennis	w/ Iverson, Brian	PerkinElmer		Compact Next-generation GC and MS Instrumentation	6/1/2018	12/31/2018	R0602482	\$49,995

College of Physical & Mathematical Sciences

Source Breakdown

Sponsor	Number Awarded	Total Amount
Federal		
Air Force Office of Scientific Research	1	\$107,204
Air Force Research Laboratory	1	\$138,874
DOE	1	\$63,094
NASA	3	\$213,237
Naval Air Warfare Center Weapons Division	2	\$145,870
NIH	7	\$1,795,386
NSA	1	\$55,200
NSF	24	\$2,779,902
ONR	3	\$404,762
Total	43	\$5,703,530
Federal Subcontract		
Arizona State University	2	\$37,877
Ball Aerospace	1	\$59,679
Battelle Energy Alliance, LLC	1	\$20,237
BRRC	5	\$129,495
Carnegie Mellon University	2	\$344,310
Cornell University	5	\$85,170
Crimson Vista	1	\$75,000
Jet Propulsion Laboratory	1	\$79,189
Johns Hopkins University	1	\$2,666
KSA, LLC	6	\$157,753
Los Alamos National Laboratory	1	\$100,263
N8 Medical	1	\$60,000
National Jewish Health	1	\$6,600
NIA	2	\$91,735
Oregon State University	2	\$144,291
PNNL	1	\$20,000
Scripps Research Institute	2	\$239,291
Stephen F. Austin State University	1	\$23,007
University of Illinois	1	\$40,796
University of Tulsa	1	\$414,473
University of Utah	7	\$45,600
USGS	1	\$49,500
Vanderbilt University Medical Center	1	\$37,500
Total	47	\$2,264,431

State		
South Davis Sewer District	1	\$46,517
UDWR	1	\$12,500
University of Utah	1	\$21,000
Utah Division of Air Quality	1	\$75,000
Total	4	\$155,017
Private/Other		
American Cancer Society	1	\$788,000
Ancestry	3	\$45,000
Aqua Environmental Services, Inc.	1	\$14,738
Axcend LLC	1	\$93,705
BARD	1	\$22,500
Basque Center for Applied Mathematics	1	\$4,623
Beckman Foundation	1	\$52,000
Biogen	1	\$243,032
Bristol Myers Squibb	1	\$125,000
Caterpillar	1	\$39,941
Comcast Corporation	2	\$77,580
ConocoPhillips	1	\$450,000
Corning Glass	1	\$15,000
Electric Power Research Institute	2	\$32,240
Geoscientists Without Borders	2	\$50,000
Google	1	\$5,700
Moxtek	1	\$20,000
Mt. Cuba Astronomical Foundation	4	\$64,475
N8 Medical	4	\$62,500
Nexus Outdoors	1	\$22,813
PerkinElmer	1	\$49,995
Phillips 66	1	\$117,519
Restek Corporation	1	\$65,000
Rockwell Medical, Inc.	1	\$10,882
Simons Foundation	5	\$42,000
Thinci	1	\$44,000
Tintic Consolidated Metals	1	\$49,562
Tula Health, Inc	3	\$215,395
Verde	1	\$5,000
Total	46	\$2,828,199
Grand Total	140	\$10,951,176

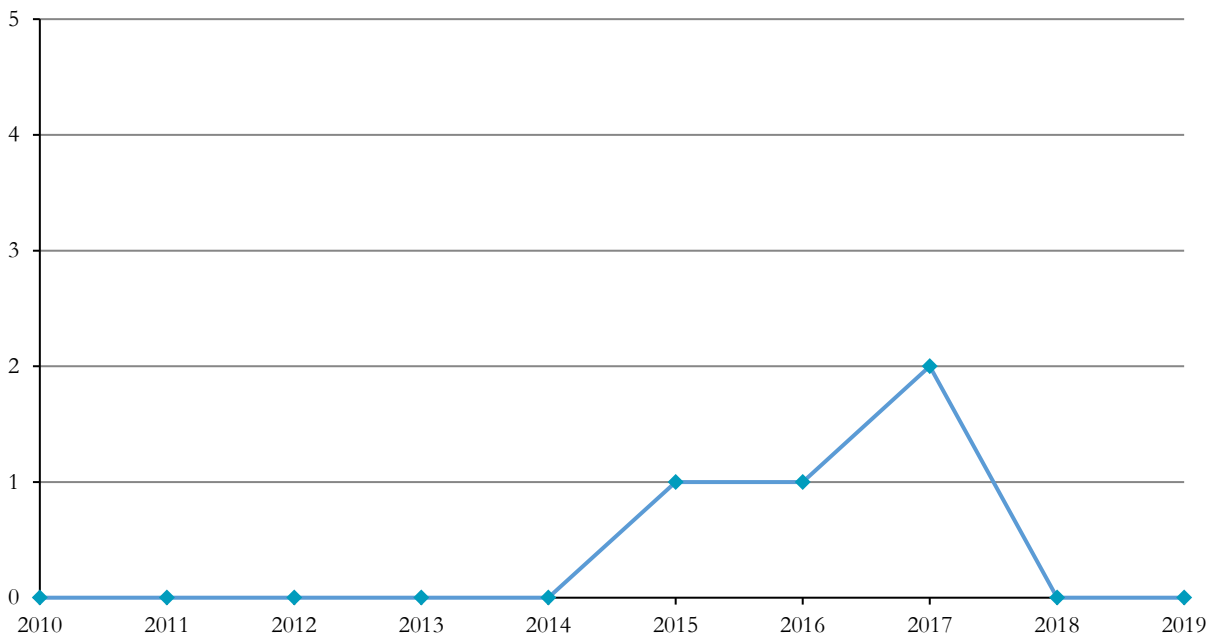


Religious Education

Summary by Departments

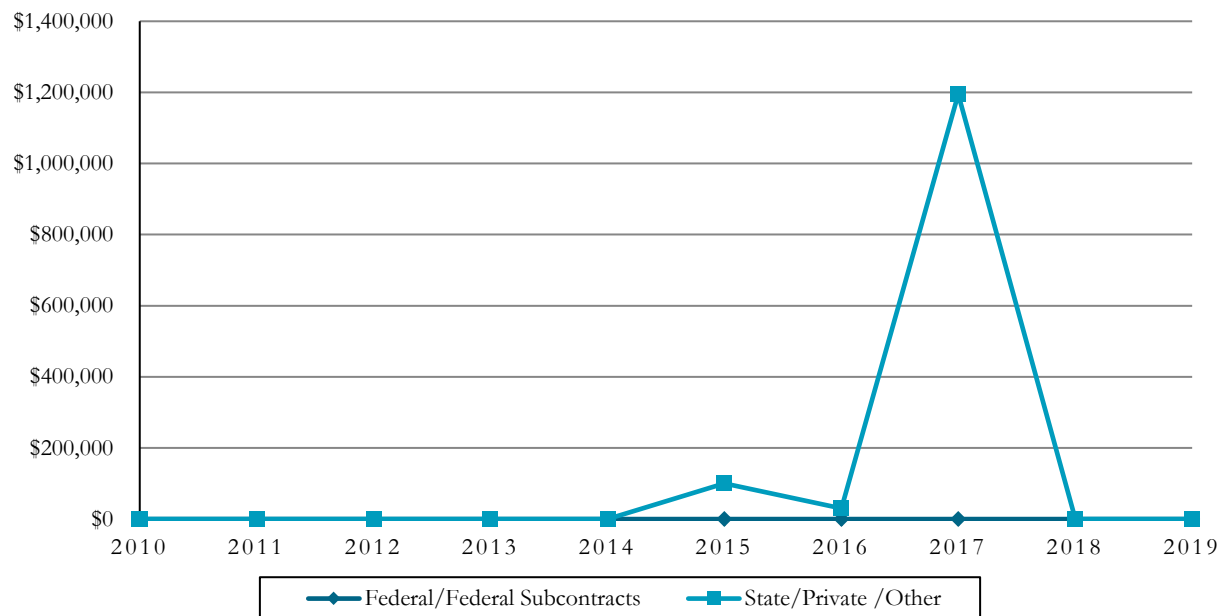
Department	# of Faculty Submitting	# of Proposals Submitted	# of Awards	Dollars Awarded
Ancient Scripture	0	0	0	\$0
Church History & Doctrine	0	0	0	\$0
<i>TOTALS</i>	0	0	0	\$0

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$0	\$0	\$0
2011	\$0	\$0	\$0
2012	\$0	\$0	\$0
2013	\$0	\$0	\$0
2014	\$0	\$0	\$0
2015	\$0	\$100,000	\$100,000
2016	\$0	\$30,000	\$30,000
2017	\$0	\$1,194,811	\$1,194,811
2018	\$0	\$0	\$0
2019	\$0	\$0	\$0



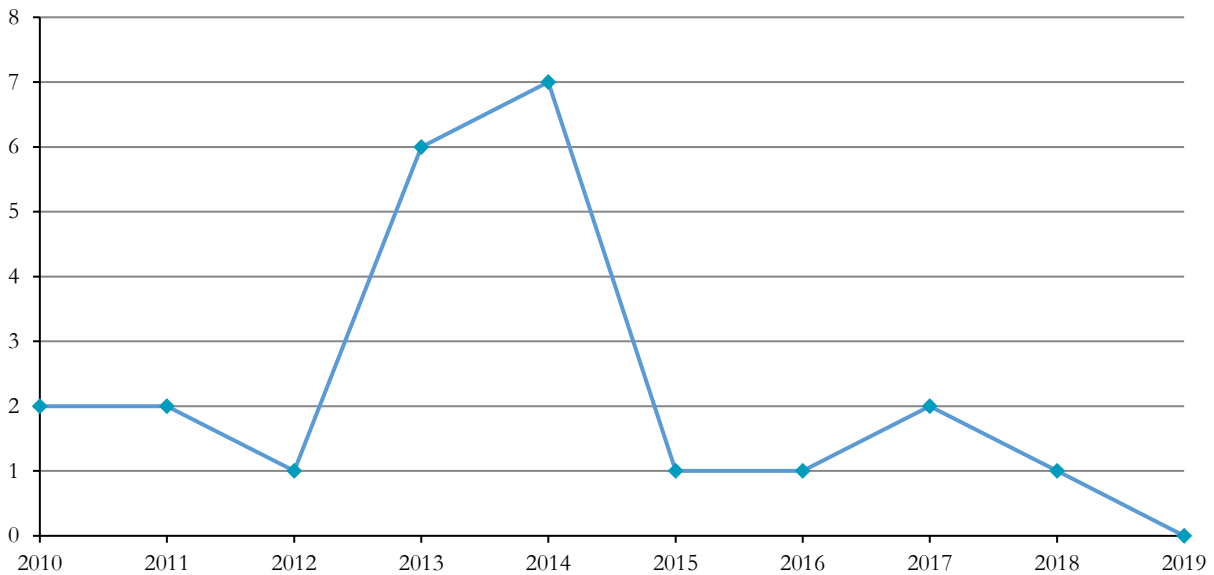


Non-College Units

Summary by Units

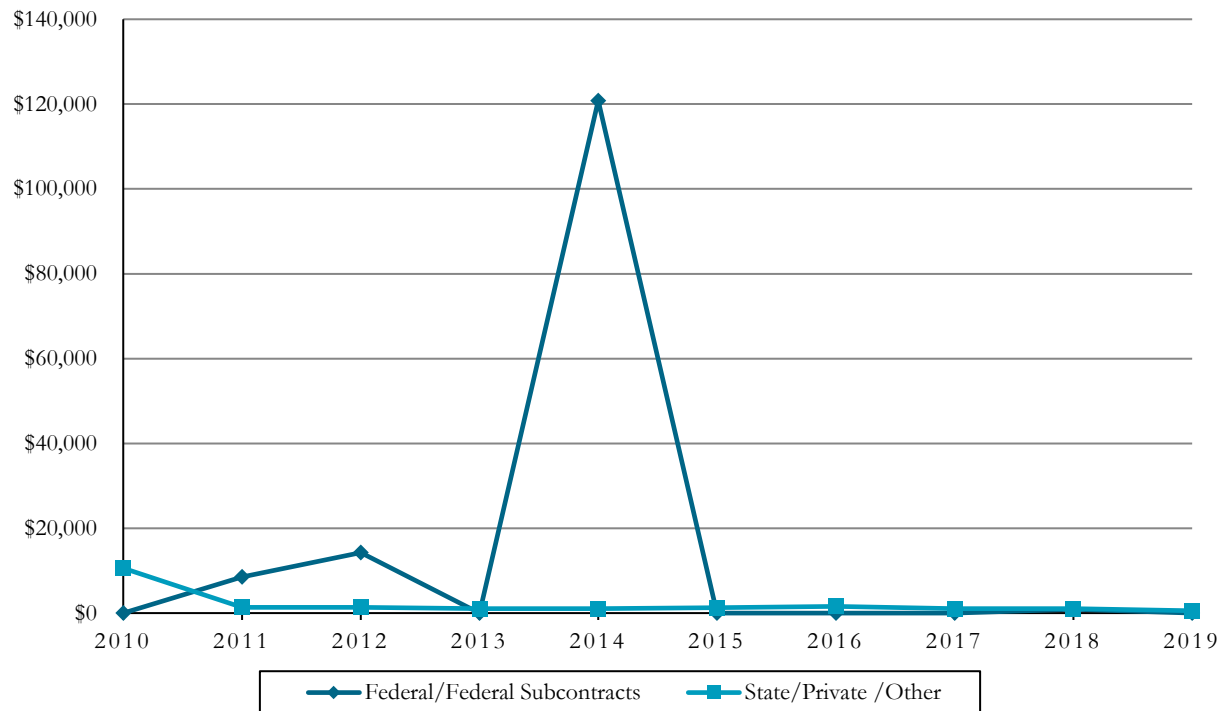
Department	# of Proposals Submitted	# of Awards	Dollars Awarded
Harold B. Lee Library	0	0	\$0
Office of Research & Creative Activities	0	2	\$550
TOTALS	0	2	\$550

Proposal Submissions



Awards by Sources

Year	Grants/Contracts		Total
	Federal/Federal Subcontracts	State/Private /Other	
2010	\$0	\$10,584	\$10,584
2011	\$8,500	\$1,335	\$9,835
2012	\$14,281	\$1,380	\$15,661
2013	\$0	\$1,047	\$1,047
2014	\$120,816	\$1,066	\$121,816
2015	\$0	\$1,300	\$1,300
2016	\$0	\$1,588	\$1,588
2017	\$0	\$1,045	\$1,045
2018	\$935	\$1,027	\$1,962
2019	\$0	\$550	\$550



Non-College Units 2019 Awards

<u>PI</u>	<u>Co-PI</u>	<u>Sponsor</u>	<u>Prime Sponsor</u>	<u>Title</u>	<u>Beg Date</u>	<u>End Date</u>	<u>Account</u>	<u>Amount</u>
Garrett, Sandy		Lost Paws		Vet Practicum	1/1/2007	12/31/2025	R0602182	\$300
Garrett, Sandy		Lost Paws		Vet Practicum	1/1/2007	12/31/2025	R0602182	\$250

Non-College Units Source Breakdown

Sponsor	Number Awarded	Total Amount
Private/Other		
Lost Paws	2	\$550
<i>Total</i>	2	\$550
<i>Grand Total</i>	2	\$550



Compliance Committees

There are a number of federal, state, and university regulations which are intended to ensure the safety and well-being of those associated with research and creative activities at academic institutions. The Office of Research and Creative Activities specifically supports three university committees and provides other certifications as needed. This page contains a record of official actions taken by these committees during the January 2019 through December 2019 time period. In addition to those official actions, the committee—their individual chairs and members—and the ORCA staff actively reviewed facilities, developed and updated policies, and educated the university research community on pertinent issues. The following is a brief description of each committee.

The Human Research Protections Program (HRPP)/Institutional Review Board (IRB)

purpose and responsibility is to protect the rights and welfare of human subjects. The HRPP provides administrative and regulatory support to the IRB and collaborates with ancillary committees across campus who develop, approve and facilitate human research. IRB reviews and oversees such research to ensure that it meets well established ethical principles and that it complies with federal regulations at 45 CFR 46 and 21 CFR 50 and 56, that pertain to human subject protection.

The HRPP/IRB are established to review all BYU human subjects research regardless of the source of funding. All research involving human subjects/human materials, and all other activities which even in part involve such research, regardless of sponsorship, are subject to these policies and procedures if one or more of the following apply:

- The research is sponsored by institutional authorities; and/or
- The research is conducted by or under the direction of any employee, faculty, staff, student or agent of the Institution in connection with his or her institutional responsibilities.

During 2019, the IRB reviewed 433 new protocols. There were also approximately 91 on-going approved studies. New regulations as of January 2019 removed the requirement to renew some categories of studies, thus, affecting the number of new and renewed protocols.

The Institutional Animal Care and Use Committee (IACUC) ensures appropriate housing, care, and humane treatment of animals used in research or other academic activities. ORCA supports this committee and maintains the university's "Assurance" status with federal agencies. The "Assurance" document is actually a way of accrediting BYU to maintain and work with laboratory animals. During 2019, there were 129 active IACUC protocols. The IACUC reviewed 29 new protocols and 43 amendments; there were also 133 other administrative actions.

The Institutional Biosafety Committee (IBC) supervises the use of recombinant DNA and other biological safety and hazard issues at BYU. The Institutional Biosafety Committee must review all proposed experiments and approve such in advance of actual work. As with the other committees listed above, IBC has jurisdiction over any recombinant DNA experiments on campus—be they a part of funded or unfunded research or part of instructional activities. During 2019, there were 45 active IBC protocols. The IBC reviewed 8 new protocols and 3 amendments; there were also 52 other administrative actions.



Appendix 1

The Office of Research & Creative Activities

Purpose. The office exists to support students, staff, faculty, and BYU administration in their efforts to encourage and support research, creative activities, and other expressions of academic scholarship.

Functional Organization. The office is organized to provide service to sponsored research and creative activities and to provide supportive leadership to such policy matters as appropriate. The office is under the direction of the Associate Academic Vice President for Research and Graduate Studies. The office has a close relationship with the Technology Transfer Office and the Creative Works Office for coordination of certain pre-award contracts, with the Grants & Contracts Accounting Office for post-award grant and contract administration, and with the Faculty Personnel Office for payment of research compensation.

Personnel.

Director: Gene Larson

Associate Director: Debbie Silversmith

HRPP Manager: Sandee Aina

IRB Administrator: Wayne Larsen

IRB Secretaries: Stephanie Coyne, Chloe Sampson

Systems Administration Manager: Rachel Teki

Research/IACUC Administrator: Jason Jay

Research Administrator: Susie Quartey

IACUC/IBC Secretary: Regina McCarthy

University Veterinarian: Sandy Garrett

Animal Care Manager: Russ Matheson

Assistant Animal Care Manager: Sarah Coffin

Office Functions.

1) Policy Review and Development

- ◆ Monitor research accounts in conjunction with Financial Services to assure compliance with contract requirements, government regulations, and BYU policy.
- ◆ Review and update BYU policies relative to research.

2) Opportunity Coordination

- ◆ Represent the university's research program to other research organizations, funding agencies, and other universities.
- ◆ Monitor requests for proposals and deadlines.
- ◆ Work with Research Development to disseminate information on funding opportunities to faculty.
- ◆ Maintain PIVOT subscription to assist faculty in research funding searches.

3) Proposal Preparation and Submission

- ◆ Provide support for faculty in using Kualu.
- ◆ Coordinate the preparation of large, inter-collegiate, and inter-institutional research proposals.
- ◆ Assist with proposal budgets and processing for signatures.
- ◆ Assist in developing process/software for budgets and forms.
- ◆ Assist in creating and approving proposals in Kualu.

- 4) Negotiating and Interacting with Sponsors
 - ◆ Negotiate and manage grants and contracts.
 - ◆ Interface with sponsoring agencies to maintain awareness of research funding trends.
 - ◆ Represent the university's research programs to other research organizations, funding agencies, and other universities.
- 5) Compliance with Federal and Other Requirements
 - ◆ Monitor government regulations pertaining to federal grants and contracts.
 - ◆ Work with the Inventory Office to manage government property to assure compliance with federal regulations.
 - ◆ Assure compliance with reporting requirements and manage closeout documentation.
 - ◆ Oversee three compliance committees and assist them through secretarial support for meetings, correspondence, and proposal approval.
- 6) Negotiating and Interfacing with Subcontractors and Independent Contractors/Consultants
 - ◆ Negotiate terms of agreement or subcontract.
 - ◆ Monitor agency regulations and BYU policy and procedures for stipulations concerning subcontracts and/or independent consultants/contractors.
 - ◆ Prepare contracts, amendments, payment documents, and initiate processing through the university.
 - ◆ Administer contractual terms between prime contractor (BYU) and subcontractors and or/consultants.
 - ◆ Educate principal investigators.
- 7) Project and Account Management (Post-Award)
 - ◆ Control assignment of account numbers and coordinate activation with Financial Services.
 - ◆ Monitor research accounts in conjunction with Financial Services to assure compliance with contract requirements, government regulations, and BYU policy.
 - ◆ Manage government property to assure compliance with federal regulations.
 - ◆ Assist Financial Services with audits of project accounts.
 - ◆ Assure compliance with reporting requirements and manage closeout documents.
 - ◆ Act as a liaison between researchers and sponsors to facilitate management of projects.
- 8) Financial Management
 - ◆ Document cost sharing approvals.
 - ◆ Compile and publish monthly and yearly financial reports.
 - ◆ Process incoming funds from sponsors.
 - ◆ Monitor university compliance with appropriate federal and state regulations.
 - ◆ Assist with completion of annual audits.
- 9) Policy Review and Development
 - ◆ Develop policies and procedures to foster research.
 - ◆ Publish policy brochures for dissemination to campus community.
 - ◆ Update BYU policies relevant to research and creative activities in the electronic handbook.

10) University Negotiations/Trouble Shooting

- ◆ Participate in DHHS indirect costs justification.
- ◆ Review/respond to internal and external audits.
- ◆ Direct negotiations with sponsors on problems such as termination or nonpayment of invoices.

11) Office Management

- ◆ Host Annual Sponsored Research Luncheon and present Sponsored Research Award.
- ◆ Assist in budget management and accounting of office accounts.
- ◆ Put together an annual report of university research activities.
- ◆ Monitor and compile Full-time Equivalency reports.
- ◆ Type and distribute a monthly Funding Activity Report (FAR).
- ◆ Assist in preparation of reports and paperwork.
- ◆ Maintain ORCA website (<http://orca.byu.edu>).



Appendix 2

Compliance Obligations (As Per Federal Statute or Regulation)

The following pages list those areas where formal compliance to federal statutes and regulations is required to participate in federal funding. The full list is included to illustrate the range of possible certification or other compliance. Specific grants and contracts may involve only a subset of these compliance obligations.

Regulatory Framework

- Uniform Guidance
- Federal Acquisition Regulations (FAR)
- Defense Federal Acquisition Regulations (DFAR)
- Department of Energy Acquisition Regulations (DEAR)
- USAID Acquisition Regulations (AIDAR)
- HIPPA
- FFATA
- ITAR/EAR
- RCR – NSF
- E-Verify
- The Coordinated Review Process-Executive Order 12372
- Rights to Inventions Made by Nonprofit Organizations and Small Business Firms
- Compliance Information for Specific Circumstances
 - Facilities Management
 - Historic Preservation
 - Paperwork Reduction Act

Individual Rights

- Antidiscrimination
 - Civil Rights Act of 1964—Title VI
 - Employment of the Handicapped-Rehabilitation Act of 1973
 - Americans with Disabilities Act
 - Title IX—Sex Discrimination
 - Age Discrimination
 - Equal Employment Opportunity
 - Affirmative Action for Special Disabled and Vietnam Era Veterans
 - Utilization of Women-Owned Small Business
 - Utilization of Labor Surplus Area Concerns
 - Utilization of Small and Small Disadvantaged Business Concerns

Privacy

- Privacy Act of 1974
- Freedom of Information Act
- Confidentiality of Patient Records

Protection Issues

- Environmental Protection
 - Clean Air Act and Clean Water Act

- Hazardous Materials
- Protection of Living Organisms
 - Human Subjects Compliance
 - Use of Animals in Research
- Marine Mammal Act
- Research Involving Recombinant DNA Molecules

Employee Directives

- Drug-free Workplace
- Drug-free Work Force
- Drug-free Schools and Campuses Act
- Lobbying
- Occupation Safety and Health
- David Bacon Act
- Walsh-Healey Public Contracts Act
- Service Contract Act
- Contract Work Hours and Safety Standards Act of 1962

Fraud, Waste, and Abuse

- Misconduct in Science
- Procurement Integrity
- Debarment and Suspension
- Covenant Against Contingent Fees
- Anti-Kickback Act of 1986
- Officials Not to Benefit

Specific Administrative Requirements

- General Requirements
 - Buy American Act
 - Fly American Act
 - Competition in Contracting
 - Export Administration Act and Arms Export Control Act
 - Insurance-Immunity from Tort Liability
 - Prompt Payment
 - Non-delinquency of Federal Debt
 - Certificate of Current Cost and Pricing Data
 - Acknowledgment of Federal Grant Support (Stevens Amendment)