

Annual Report on Research
FY 2020



College of Sciences and Mathematics
Office of the Associate Dean for Research

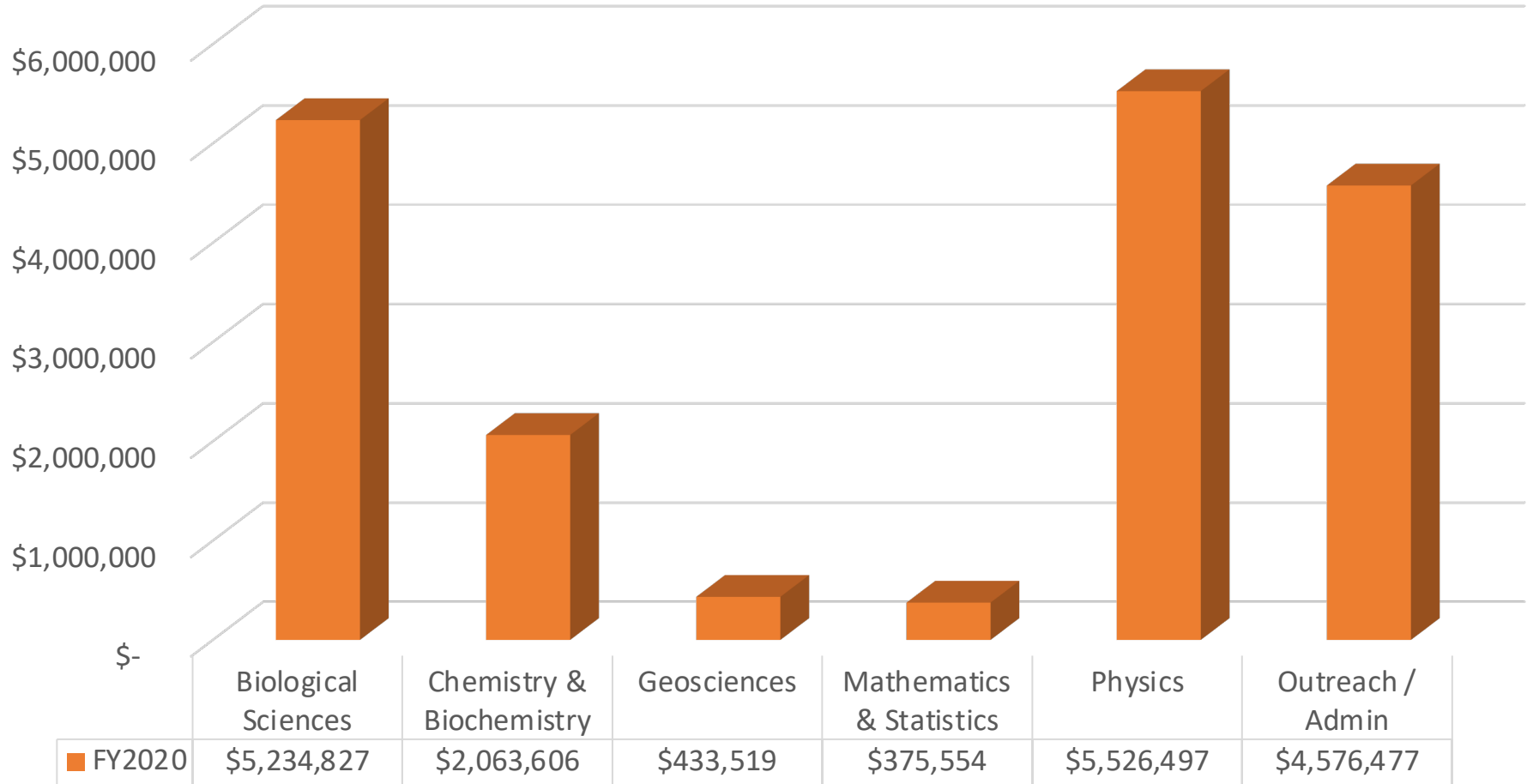
Dr. Edward Thomas, Jr.
Amy Thomas, J.D.
Courtney Thomas
Sharon Godbee
Kathryn Brown

Release date: March 22, 2021

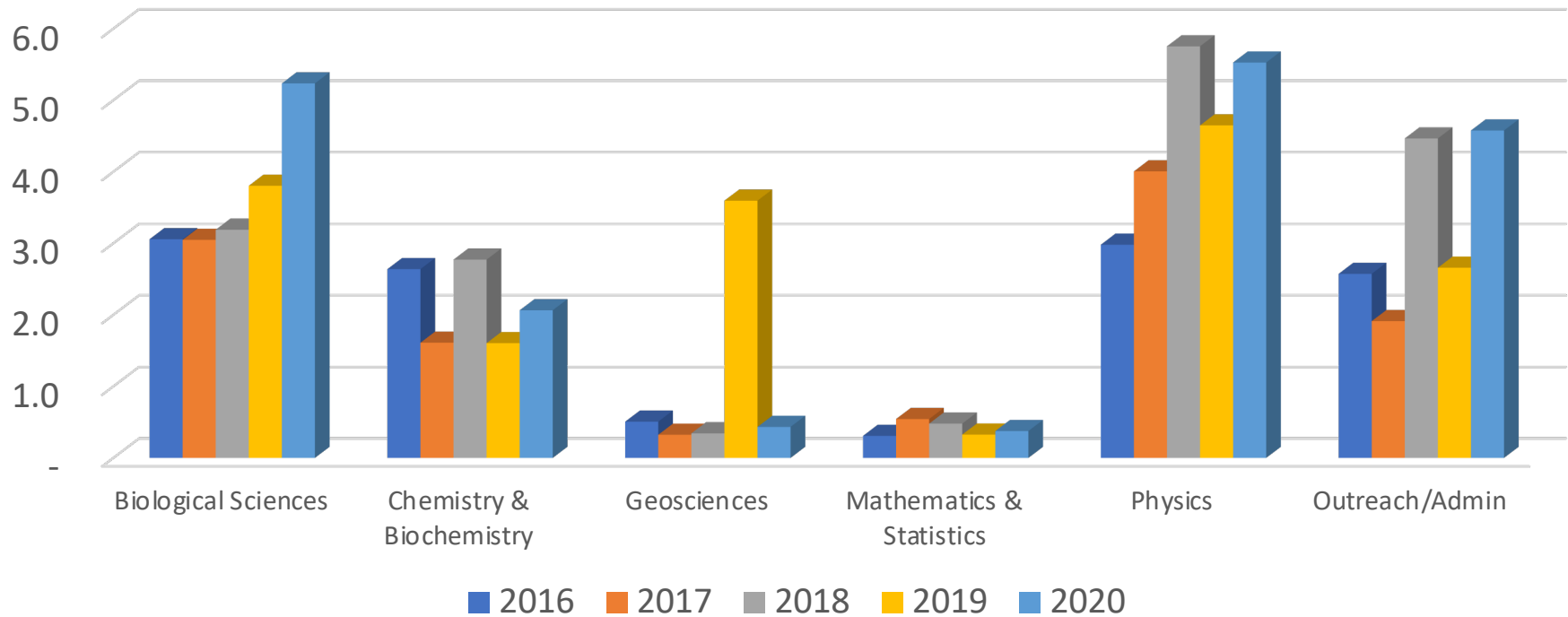
COSAM Data:

- Extramural funding for FY2020
- Five-year history of COSAM extramural funding (FY16-FY20)
- Proposal submission information for FY2020
 - Submissions by department
 - Submissions by sponsor

COSAM Extramural Budget Loads for FY2020



COSAM 5-year funding history FY16-FY20

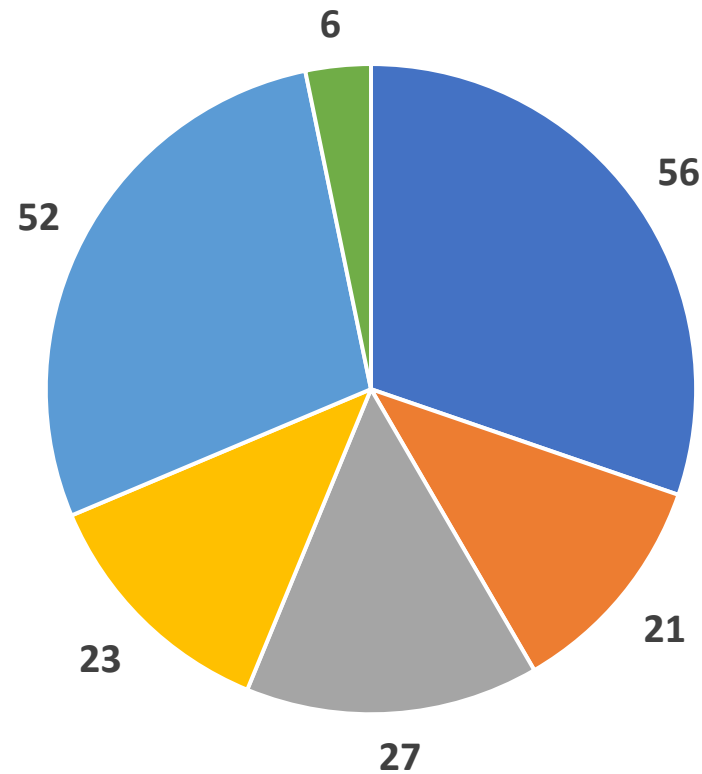


	FY2016	FY2017	FY2018	FY2019	FY2020
Biological Sciences	3.057	3.048	3.189	3.804	5.235
Chemistry & Biochemistry	2.638	1.610	2.771	1.604	2.064
Geosciences	0.507	0.324	0.343	3.596	0.434
Mathematics & Statistics	0.308	0.543	0.479	0.326	0.376
Physics	2.980	4.005	5.753	4.648	5.526
Outreach/Admin	2.573	1.912	4.465	2.658	4.576
Total	12.063	11.442	17.001	16.636	18.210

Awarded external dollars in millions

Submissions to all sources (fed, non-fed, foundation, state, etc.)

Proposal Submission – FY20
COSAM proposal pipeline - Total: 185



- Biological Sciences
- Chemistry and Biochemistry
- Geosciences
- Mathematics and Statistics
- Physics
- Outreach/Admin

Breakdown of data by academic units:

- Department of Biological Sciences (DBS)
- Department of Chemistry and Biochemistry (DCB)
- Department of Geosciences
- Department of Mathematics and Statistics
- Department of Physics
- COSAM Outreach and Administration

Departmental data will be presented as follows:

- Chart of 5-year funding history
- Table of new funding received for the fiscal year (budget loads)
- Table of active awards for the fiscal year (active accounts)
- Table of proposals submitted during the current fiscal year

Analysis of COSAM departments funding profiles using Academic Analytics - 2019 database (AAD2019.03.01740)

The peer institution comparisons are filtered on:

- States: AL, AR, FL, GA, KY, LA, MS, MO, SC, TN, TX (approx. SEC)
- Carnegie Very High Research Activity (R1)
- Public, Land Grant Institutions

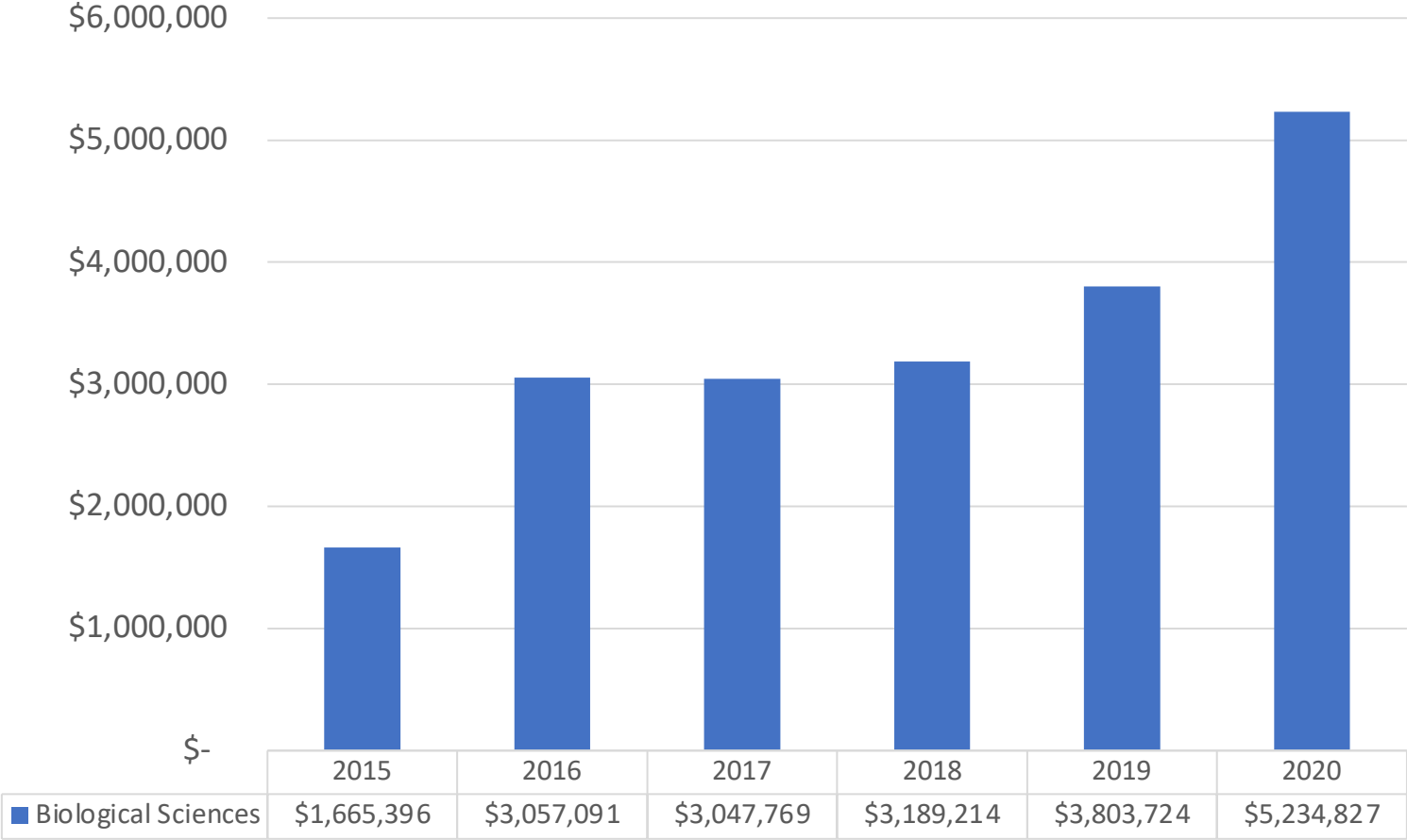
This is aggregated information from publicly available sources that is compiled by Academic Analytics based on FY2019 only. Funding from state funds or foundations is not included. The data for the Department of Geosciences in the database is organized by Geology and Geography separately. The data for Department of Mathematics and Statistics in the database is organized by Mathematics and Statistics separately.

For the “spider” chart, the nominal 50% line denotes the average performance for the group of institutions that are being compared.

This data is being included this year to attempt to provide a more global view of the grant activity within the units of COSAM in relation to our regional peer institutions.

Department of Biological Sciences
Chair, Prof. Scott Santos

Biological Sciences



Biological Sciences
Extramural Research Grants with New Dollars Received in FY2020

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Armbruster, Jonathan	PI	Enviromental Ed at Robert G Wehle Nature Ctr	Alabama Dept of Conservation & Natural Resources	\$ 21,000.00
Armbruster, Jonathan	PI	Waterdog & Musk Turtle eDNA Survey	The Nature Conservancy/USFWS	\$ 60,191.00
Avila Flores, Adriana	PI	Optimization of Transfection Using Baptofect-25	Phoreus Biotechnology	\$ 15,385.00
Ballen, Cissy Jordan Harshman	PI COPI	Equity & Diversity in Undergraduate STEM	Univ. Minnesota - NSF Fed Flow	\$ 118,253.00
Ballen, Cissy	PI	Diversifying & Humanizing Scientist Role Models to Increase Impact of Data Literacy Instruction on Student Interest & Retention in Stem*	National Science Foundation (MSU Collaboration)	\$ 520,847.00
Boyd, Robert Schotz, Alfred	PI COPI	Surveys & Potential Introduction of American Chaffseed in AL	Alabama Dept of Conservation & Natural Resources	\$ 22,500.00
Boyd, Robert Shotts, Gavin	PI COPI	Understanding Sexual Diversity in Endangered SE Spigelia for Improved Ex Situ Conservation	Garden Club of America	\$ 4,500.00
Cobine, Paul	PI	Copper Transport by Members of the Mitochoncrial Carrier Family	National Institutes of Health	\$ 259,481.00
Godwin, James Armbruster, Jonathan	PI COPI	Escambia Map Turtle Status Survey	Alabama Dept of Conservation & Natural Resources - FWS	\$ 17,023.28
Godwin, James Armbruster, Jonathan	PI COPI	Mississippi Gopher Frog Survey	Alabama Dept of Conservation & Natural Resources - FWS	\$ 25,784.08
Godwin, James Armbruster, Jonathan	PI COPI	Escambia Map Turtle Status Survey	Alabama Dept of Conservation & Natural Resources - FWS	\$ 39,054.00
Godwin, James	PI	BNK ANHP Aquatics eDNA Agreement	USDA Forest Service	\$ 8,000.00
Godwin, James	PI	Occurrence of Western Chicken Turtle	LA Dept Wildlife & Fisheries	\$ 136,436.00
Godwin, James	PI	Genetic & Habitat Analyses to Support Recovery Efforts for Flattened Musk Turtle	Alabama Dept of Conservation & Natural Resources - FWS	\$ 79,524.00
Halanych, Kenneth Maria	Witte, PI COPI	Graduate Research Fllwshp Prog for Kyle David	National Science Foundation	\$ 46,000.00
Halanych, Kenneth	PI	Documenting Marine Biodiversity thru Digitization of Invertebrate Collections	National Science Foundation	\$ 34,019.00

Biological Sciences
Extramural Research Grants with New Dollars Received in FY2020

Hood, Wendy Andreas	Kavazis,	PI COPI	RII Track-2 Genome to fitness: An Analysis of the Stress Response in Peromyscus	University of South Carolina - Fed Flow	NSF	\$ 315,672.00
Hood, Wendy Witte, Maria		PI COPI	Graduate Research Fellowship for Chloe Josefson		National Science Foundation	\$ 2,977.15
Hood, Wendy		PI	Effects of Mitohormesis on Reproduction & Longevity *		National Science Foundation	\$ 1,738.00
Liles, Mark		PI	Transnational Partnership on Functional Metagenomics For Biopharmaceutical Innovation *	SINTEF		\$ 27,522.00
Liles, Mark Sanz Saez, Alvaro		PI COPI	Identification of Bacillus Velezensis Strains With Enhanced Soybean Growth Promoting Activity in Combination with Orange Peel Powder	Reazent		\$ 35,847.37
Liles, Mark Calderon, A. / Petrov, A.		PI COPI	Determine the Chemical Structure of Antibacterial Metabolites Drived from a Soil Metagenome	Varigen Biosciences		\$ 50,000.00
Liles, Mark		PI	Assesment of Immunomodulatory Effect of Probiotics on the Catfish Adaptive Immune Response & Columnaris Disease Resistance	USDA		\$ 125,000.00
Liles, Mark		PI	Reducing Bioburden of Europa Lander Solid Rocket Motor Insulation & Assessing Bioburden of other SRM Nonmetallic Materials of Concern for Planetary Protection	NASA - Goddard		\$ 146,529.00
Liles, Mark		PI	Developmental Studies for a Fish Vaccine	Merck Animal Health		\$ 65,874.00
Oaks, Jamie		PI	Enhancing Captive Breeding Efforts Toward the Recovery of the Eastern Indigo Snake	FL Fish & Wildlife Conservation Commission - FWS		\$ 42,179.21
Range, Ryan		PI	Developmental Biology of Sea Urchin & other Marine Invertebrates	National Institutes of Health		\$ 15,000.00
Santos, Scott		PI	Micro & Macro Ecological Succession in Anchialine Habitats During Creation via Volcanism	National Science Foundation		\$ 30,200.00
Santos, Scott		PI	Establishing Immortalized Cell Lines from the European Honey Bee	Kansas State Univ. - NSF Fed Flow		\$ 2,000.00
Schotz, Alfred		PI	Invasive Species Assessments at Redstone Arsenal	Army		\$ 108,796.00

Biological Sciences
Extramural Research Grants with New Dollars Received in FY2020

Schotz, Alfred	PI	Range-Wide Status Assessment for Ravine Sedge	US Fish & Wildlife Services	\$ 24,734.00
Schotz, Alfred	PI	Habitat Modeling & Site Verification for Helianthus Verticillatus in AL	Alabama Dept of Conservation & Natural Resources - FWS	\$ 19,000.00
Schotz, Alfred	PI	Conduct Surveys for Rare Plants	Campbell Global	\$ 7,980.00
Steen, David Guyer, Craig	PI COPI	Brumation Behavior & Reproductive Success of Argentine Tegus	US Geological Survey	\$ 4,044.36
Strader, Marie Buckley, Katherine	PI COPI	Influence of Environmental Change on the Epigenome & Phenotype Plasticity in Purple Sea Urchins*	National Science Foundation	\$ 497,138.00
Sztuba-Solinsk, Joanna	PI	The Fifth Nucleotide & its Potential to Modulate Long Non-Coding RNA Structure	National Institutes of Health	\$ 451,661.00
Upton, Jason	PI	Viral Transcription in Herpesvirus-Induced Necroptosis	National Institutes of Health	\$ 149,987.51
Wada, Haruka Witte, Maria	PI COPI	Graduate Resch Fellowship Program for Victoria Coutts	National Science Foundation	\$ 46,000.00
Wada, Haruka Schwartz, Tonia	PI COPI	Integrating Engineering Theory & Biological Measures to Model Stress Resilience, Damage & Fitness-Related Consequences*	National Science Foundation	\$ 936,815.00
Wada, Haruka	PI	Career: Proteostasis to Allostasis: Integration of Cellular and Organismal Level Stress Responses*	National Science Foundation	\$ 187,859.00
Warner, Daniel Godwin, James	PI COPI	Reintro of Eastern Indigo Snake in Conecuh NF Testing Alternative Routes of Adaptive Phenotype	Alabama Dept of Conservation & Natural Resources - FWS	\$ 351,488.00
Warner, Daniel	PI	Environment Matching Across Heterogeneous Landscapes in Wild Populations*	National Science Foundation	\$ 180,788.00
		Biological Sciences Count	Accounts: 42	Individual
			Awards: 27	
		Biological Sciences Total		\$ 5,234,826.96
*Denotes Participant Support Costs Included				

**Biological Sciences
Active Awards**

PI	Sponsor	Title	Start Date	End Date
Armbruster, Jonathan	Alabama Dept of Conservation & Natural Resources	ADCNR-Enviromental Ed-21	8/17/2020	7/31/2021
Armbruster, Jonathan	Nature Conservancy	TNC-030119 A105227	3/1/2019	3/31/2021
Armbruster, Jonathan	US Army	US Army-Redstone-20	5/31/2018	5/31/2021
Armbruster, Jonathan	U.S. Fish & Wildlife Services	FWS-F20AP12103	10/1/2020	12/31/2022
Armbruster, Jonathan	AI Assn resource Conervation & Development Councils	AARC&D-Mobile Museum	10/1/2020	7/17/2021
Avila Flores, Adriana	Phoreus Biotechnology	Phoreus Biotechnology	6/19/2020	12/31/2020
Ballen, Margaret	University of Minnesota	UN MN-P007692401	9/1/2019	8/31/2023
Ballen, Margaret	National Science Foundation	NSF-DUE-2011995*	10/1/2020	9/30/2025
Bond, Jason	National Science Foundation	NSF-IOS-1556165*	7/1/2016	6/30/2021
Bond, Jason	U.S. Department of Agriculture	FS-15-CS-11080100-003*	8/19/2015	7/15/2020
Cobine, Paul	National Institutes of Health	NIH-1R01GM120211-01A1	6/1/2017	4/30/2021
Counterman, Brian	National Science Foundation	NSF-IOS-2108227	10/1/2020	8/31/2021
Dobson, F.	University of Strasbourg	UN Strasbourg-Dobson	12/1/2018	11/30/2020
Godwin, James	US Army	ARMY-W9128F18200008	7/30/2018	1/28/2021
Godwin, James	Alabama Dept of Conservation & Natural Resources	ADCNR-MS Gopher Frog-20	12/1/2019	9/30/2021
Godwin, James	US Forest Service	FS-20-PA-11080100-103	6/19/2020	4/30/2025
Godwin, James	LA Dept. Wildlife & Fisheries	LDWF-PO 2000482193	10/1/2019	9/30/2022
Godwin, James	Alabama Dept of Conservation & Natural Resources	ADCNR-Flattened Musk Turtle-21	10/1/2020	9/30/2021
Goertzen, Leslie	Alabama Dept of Conservation & Natural Resources	ADCNR-S621-AUTRL	10/1/2020	8/31/2021
Graze, Rita	National Science Foundation	NSF-DEB-1751296 *	8/1/2018	7/31/2023
Halanych, Kenneth	National Science Foundation	NSF-OPP-1916661	9/1/2019	8/31/2023

**Biological Sciences
Active Awards**

Halanych, Kenneth	National Science Foundation	NSF-IOS-1755377	7/15/2018	6/30/2021
Halanych, Kenneth	National Science Foundation	NSF-DGE-1937964-KD	9/1/2019	8/31/2021
Halanych, Kenneth	National Science Foundation	NSF-DBI-2001316	11/1/2020	10/31/2024
Hill, Geoffrey	National Science Foundation	NSF-IOS-1754152	5/15/2018	7/31/2022
Hood, Wendy	National Science Foundation	NSF-DBI-1453784*	4/1/2015	3/31/2021
Hood, Wendy	University of South Carolina	UN SC-18-3423-PO#2000035389	8/1/2017	7/31/2021
Liles, Mark	SINTEF	SINTEF-Liles-22*	4/22/2019	4/23/2022
Liles, Mark	NASA	NASA-80NSSC20K0665	2/14/2020	2/13/2023
Liles, Mark	Varigen Biosciences	Varigen Biosciences	5/1/2020	4/30/2021
Liles, Mark	Merck Animal Health	MAH-Fish Vaccine	7/1/2020	7/1/2021
Liles, Mark	Reazent-Liles	Reazent-Liles	6/1/2020	5/30/2021
Liles, Mark	Citrus Extracts-Liles	Citrus Extracts-Liles	11/1/2020	10/31/2021
Liles, Mark	U.S. Department of Agriculture	USDA-58-6010-0-009	7/1/2020	6/30/2025
Locy, Robert	Alabama Soybean Producers	ASP-Disease Diagnosis-16A	3/1/2016	2/28/2021
Mendonca, Mary	National Science Foundation	NSF-IOS-1456440	5/15/2015	4/30/2021
Oaks, Jamie	National Science Foundation	NSF-DEB-1656004 *	5/1/2017	4/30/2021
Oaks, Jamie	FL Fish & Wildlife Conservation	FFWCC-Agrmt 19149	7/22/2020	12/31/2021
Range, Ryan	National Institutes of Health	NIH-7R13HD101241-01	2/1/2020	1/31/2021
Santos, Scott	National Science Foundation	NSF-DEB-2020081	5/1/2020	4/30/2021
Santos, Scott	Kansas State University	KSU-A20-0470-S001	5/15/2020	4/30/2023
Schotz, Alfred	US Army	ARMY-W9126G-19-2-0064	9/27/2019	9/26/2021
Schotz, Alfred	Alabama Dept of Conservation & Natural Resources	ADCNR-S619-AUWFO	5/31/2019	9/30/2020
Schotz, Alfred	U.S. Fish & Wildlife Services	FWS-F20AP11387	10/1/2020	9/30/2022

**Biological Sciences
Active Awards**

Schotz, Alfred	Alabama Dept of Conservation & Natural Resources	ADCNR-S621-AUPON	12/7/2020	9/30/2021
Schwartz, Tonia	National Institutes of Health	NIH-1R5AG064655-01	8/1/2019	7/31/2022
Schwartz, Tonia	National Science Foundation	NSF-DGE-1414475-AC	9/1/2017	8/31/2021
Schwartz, Tonia	National Science Foundation	NSF-DGE-1937964-AC	9/1/2019	8/31/2021
Seibenhener, Michael	University of South Carolina	UN SC-19-3832-PO#2000045449	1/1/2019	12/31/2020
Steen, David	Environmental Protection Agency	EPA-CD-00D65317-0	10/1/2017	9/30/2021
Stevison, Laurie	National Science Foundation	NSF-DEB-1939090	8/15/2019	7/31/2021
Strader, Marie	National Science Foundation	NSF-OCE-1935308	6/15/2019	5/31/2021
Strader, Marie	National Science Foundation	NSF-EF-2021886*	7/15/2020	6/30/2023
Sztuba-Solinska, Joanna	National Institutes of Health	NIH-1R15GM136535-01	5/6/2020	4/30/2023
Sztuba-Solinska, Joanna	Edward via Lol Osteopathic Med	EVCOM-Sztuba-Solinska	7/1/2020	6/30/2021
Upton, Jason	National Institutes of Health	NIH-7R21AI135709-02	1/1/2019	12/31/2020
Wada, Haruka	National Science Foundation	NSF-IOS-1553657*	4/15/2016	3/31/2021
Wada, Haruka	National Science Foundation	NSF-DGE-1937964-VC	6/1/2020	5/31/2021
Wada, Haruka	National Science Foundation	NSF-IOS-2015802-DBS*	6/15/2020	5/31/2024
Warner, Daniel	National Science Foundation	NSF-DGE-1414475-JP	9/1/2017	12/31/2021
Warner, Daniel	National Science Foundation	NSF-DGE-1937964-JP	9/1/2019	8/31/2021
Warner, Daniel	National Science Foundation	NSF-DEB-1942145*	3/1/2020	2/28/2025
Warner, Daniel	Alabama Dept of Conservation & Natural Resources	ADCNR-Indigo Snake-16	10/1/2015	9/30/2021
		Total Active: 62		
*Includes Participant Support Costs				

**Biological Sciences
Proposals Submitted FY2020**

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0826-20P	Armbruster, Jonathan	COPI	AL Dept. of Conservation & Natural Resources	\$ 58,745.00
0803-20P	Armbruster, Jonathan	COPI	AL Dept. of Conservation & Natural Resources	\$ 43,051.00
1174-20P	Armbruster, Jonathan	PI	Coypu Foundation	\$ 49,822.50
1229-20P	Armbruster, Jonathan	PI	U.S. Fish and Wildlife Service	\$ 85,852.00
0114-20P	Avila Flores, Adriana	PI	NIH - R15	\$ 445,723.00
0609-20P	Avila Flores, Adriana	PI	USDA-NIFA AFRI	\$ 499,999.00
0074-20P	Avila Flores, Adriana	PI	NIH - R21	\$ 426,872.00
1030-20P	Avila Flores, Adriana	PI	Phoreus Biotech	\$ 15,385.00
1033-20P	Avila Flores, Adriana	PI	NIH	\$ 414,739.00
1056-19P	Ballen, Cissy	PI	NSF	\$ 772,157.57
1006-19P	Ballen, Cissy	PI	NSF	\$ 633,378.00
1238-20P	Ballen, Cissy	PI	NSF	\$ 299,231.00
0228-20P	Ballen, Cissy	Collaborator	NSF (MSU)	\$ 716,164.00
0483-20P	Bernal de Leon, Moises Antonio	PI	Gulf Research Program of the National Science Engineering & Medicine	\$ 75,000.00
1287-20P	Bernal de Leon, Moises Antonio	PI	NSF	\$ 505,879.85
ANP	Boyd, Robert	PI	Garden Club of America	\$ 4,500.00
1019-20P	Bruner, Toni	PI	AL Assoc. of RC&D Councils	\$ 9,619.20
466-20P	Godwin, James	PI	AL Division of Wildlife & Freshwater Fisheries	\$ 159,048.00
0006-20P	Halanych, Kenneth	PI	NSF	\$ 34,019.00
0611-20P	Hill, Geoffrey	PI	NSF	\$ 1,524,623.00

**Biological Sciences
Proposals Submitted FY2020**

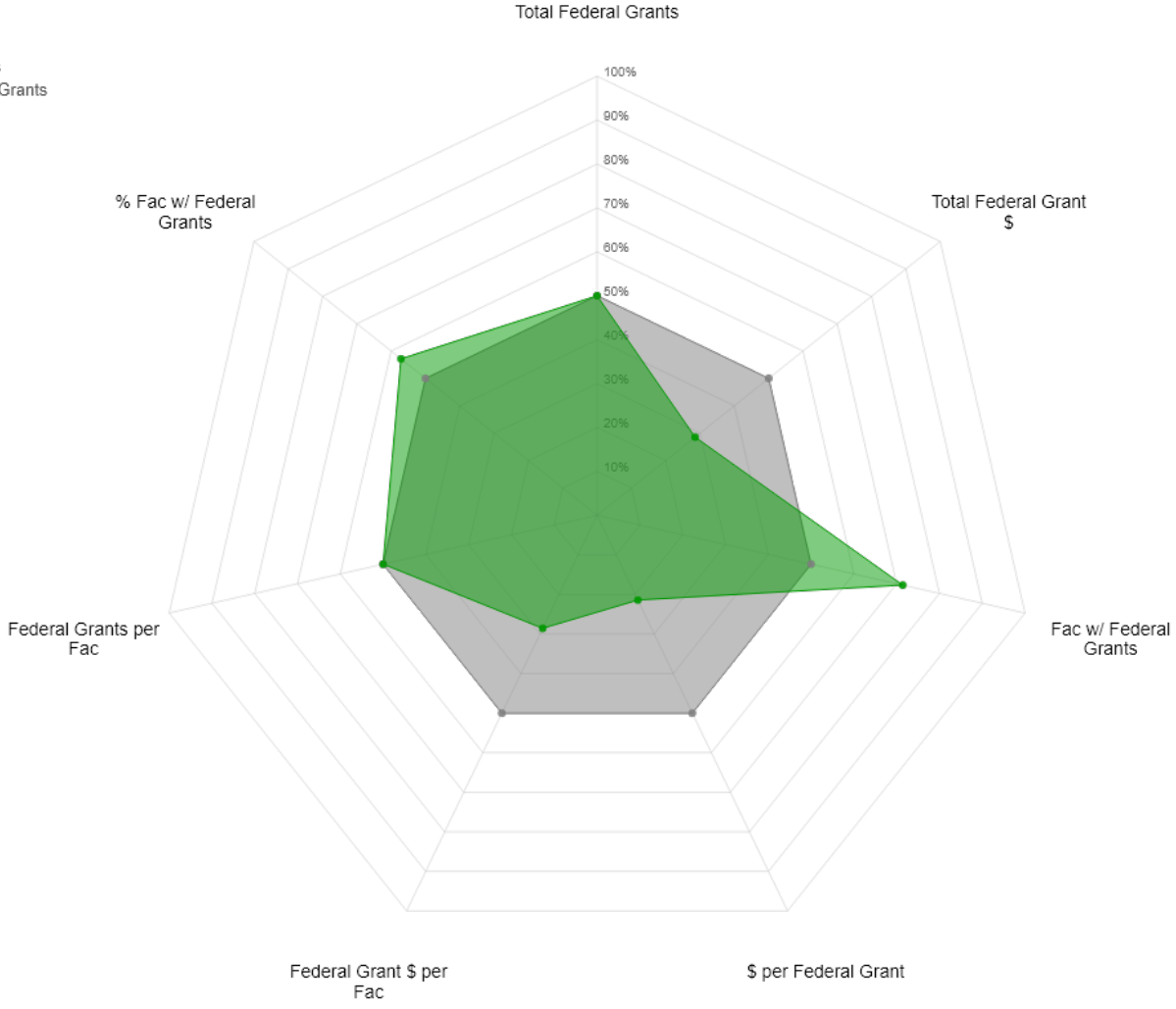
0907-20P	Hill, Geoffrey	PI	AL Division of Wildlife & Freshwater Fisheries	\$ 132,470.00
0960-20P	Hill, Geoffrey	PI	NSF	\$ 324,377.95
0431-20P	Hood, Wendy	PI	NSF	\$ 1,738.00
0526-20P	Hood, Wendy	PI	American Federation for Aging Research	\$ 50,056.50
0675-20P	Leisner, Courtney	PI	USDA NIFA	\$ 479,731.03
1341-20P	Leisner, Courtney	PI	NSF	\$ 4,981,332.67
0899-20P	Liles, Mark	PI	USDA ARS	\$ 125,000.00
1017-20P	Liles, Mark	PI	Merck Animal Health	\$ 65,874.00
1274-20P	Liles, Mark	PI	Reazant, Inc.	\$ 35,847.37
0906-20P	Liles, Mark	PI	TechAccel	\$ 40,071.78
0023-20P	Petrov, Alexey	PI	NIH	\$ 2,080,167.00
0545-20P	Range, Ryan	PI	NIH R15	\$ 449,523.38
0984-20P	Range, Ryan	PI	NSF	\$ 538,128.00
0045-20P	Rashotte, Aaron	PI	NSF	\$ 1,000,735.00
0756-20P	Rashotte, Aaron	PI	NSF IOS	\$ 248,950.00
0410-20P	Santos, Scott	COPI	NSF-DEB	\$ 30,200.00
0472-20P	Santos, Scott	COPI	KSU - NSF Flow	\$ 2,000.00
0144-20P	Schotz, Alfred	PI	AL Dept. of Conservation & Natural Resources	\$ 19,000.00
1214-20P	Schotz, Alfred	PI	U.S. Fish and Wildlife Service	\$ 24,734.00
0522-20P	Shotts, Gavin	PI	Southern Appalachia Botanical Society	\$ 1,200.00
0554-20P	Shotts, Gavin	PI	American Society of Plant Taxonom	\$ 1,200.00
0485-20P	Stevison, Laurie	PI	Society for the Study of Evolution	\$ 2,500.00

**Biological Sciences
Proposals Submitted FY2020**

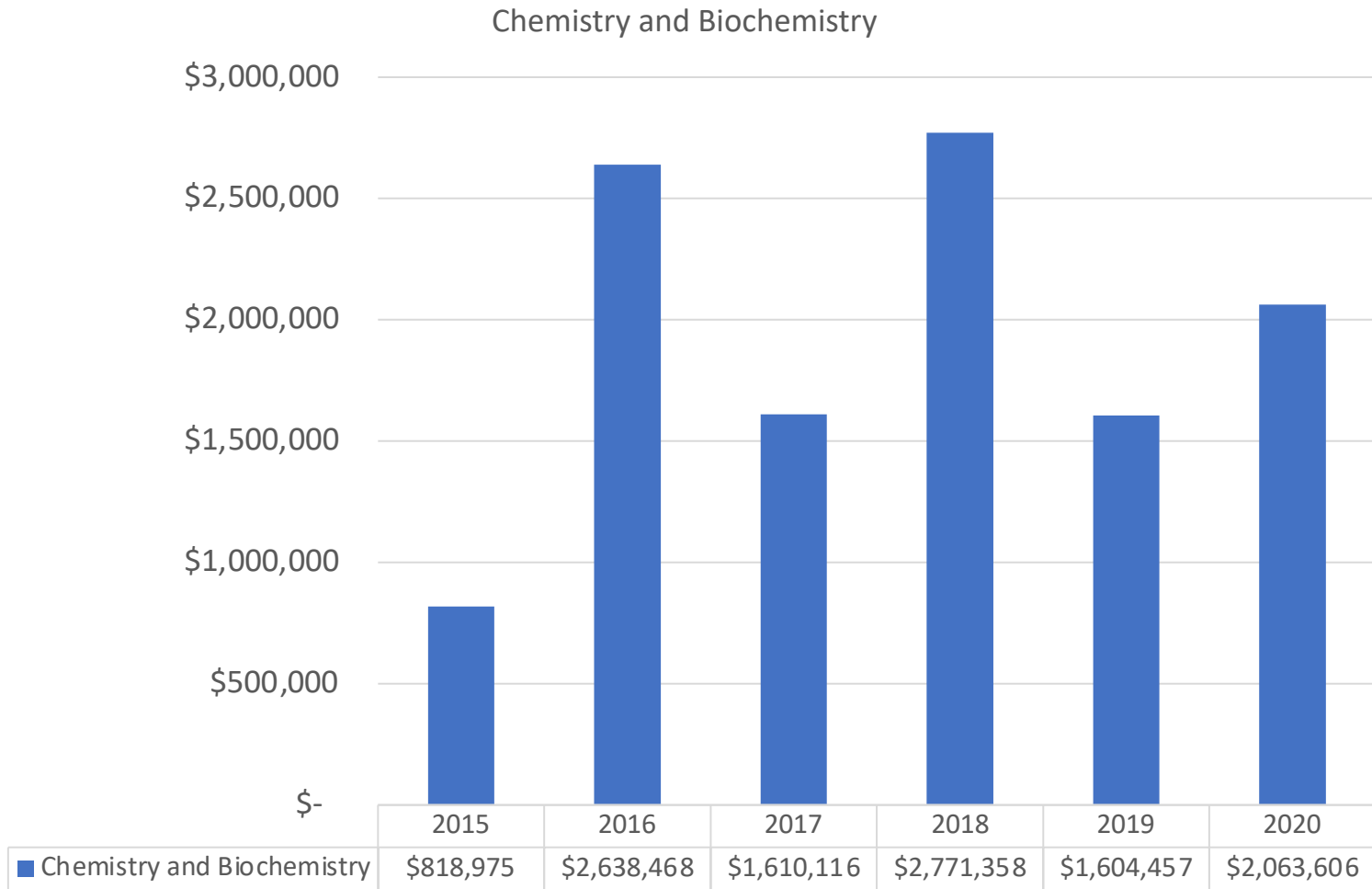
0014-20P	Strader, Marie	PI	Johnson & Johnson	\$ 150,000.00
0333-20P	Strader, Marie	PI	NSF	\$ 497,284.00
0506-20P	Strader, Marie	PI	National Acadamies	\$ 76,000.00
0139-20P	Sztuba-Solinska, Joanna	PI	NSF	\$ 792,809.00
0455-20P	Sztuba-Solinska, Joanna	PI	NIH R15	\$ 451,099.22
0851-20P	Sztuba-Solinska, Joanna	COPI	VICOM-sub	\$ 32,000.00
1018-19P	Sztuba-Solinska, Joanna	PI	NIH NIAID	\$ 1,848,631.00
1149-20P	Sztuba-Solinska, Joanna	PI	NSF Career	\$ 1,341,107.00
0889-20P	Upton, Jason	PI	NIH	\$ 377,500.00
0302-20P	Wada, Haruka	PI	NSF	\$ 1,961,854.00
0457-20P	Wada, Haruka	PI	NSF Career	\$ 1,666.00
1035-19P	Warner, Daniel	PI	Nat Geo	\$ 20,675.00
1055-20P	Wills, Bill	PI	USDA NIFA	\$ 82,000.00
1259-20P	Zhong, Min	COPI	ETSU/Pea Publisher	\$ 2,000.00
	Total Requested:			\$ 25,043,270.02

Department of Biological Sciences

- Median
- Articles
- Awards
- Citations
- Federal Grants



Department of Chemistry and Biochemistry
Chair, Prof. Douglas Goodwin



Extramural Research Grants with New Dollars Received in FY2020
Chemistry - Biochemistry

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Duin, Eduardus	PI	Recombinant Methyl-Coenzyme M Reductase in the Methanogenic Archaeon Methanococcus Maripaludis for Examination of Activation & Role of Post-Translational Modifications	US Dept of Energy	\$ 203,575.58
Farnum, Byron	PI	Multi-Electron Nickel Redox Cycles for Solar Energy Conversion & Storage*	National Science Foundation	\$ 263,354.00
Goldsmith, Christian	PI	Ratiometric Sensors for H ₂ O ₂ with 19F & 1H MRI Outputs & Functional Mimics of Superoxide Dismutase with Non-Enzymatic Metals	National Science Foundation	\$ 420,000.00
Gorden, Anne	PI	Tailoring Redox Active Ligands for Probing the Reactivity of Actinides	U.S. Department of Energy	\$ 143,010.00
Gorden, Anne	PI	Delta-Descriptors of Energy Landscape by Topological Analysis	WA State Univ - NSF Fed Flow	\$ 38,338.81
Mansoorabadi, Steven	PI	Mechanistic Studies of a Primitive Homolog of Nitrogenase Involved in Coenzyme F ₄₃₀ Biosynthesis	U.S. Department of Energy	\$ 139,701.00
Mansoorabadi, Steven	PI	Methane Production & Oxidation by Recombinant Methyl-Coenzyme M Reductase	Exxon Mobil Research & Engineering Co	\$ 152,888.00
Miliordos, Evangelos	PI	State of the Art Quantum Calculations on a Novel Class of Super-Atoms*	National Science Foundation	\$ 269,178.00
Patkowski, Konrad	PI	New Extensions to Symmetry-Adapted Perturbation Theory*	National Science Foundation	\$ 433,561.00
Raj, Monika	PI	Molecular Imaging Agents for Monitoring Lysine Demethylases in Cells	National Institutes of Health	**
		Chemistry & Biochemistry Count:	Accounts: 9 Individual Awards: 9	
		Chemistry & Biochemistry Total:		\$ 2,063,606.39
*Participant Support Cost Included				
**Awarded to PI, not included in total - faculty member left AU end of FY2020				

**Chemistry and Biochemistry
Active Awards**

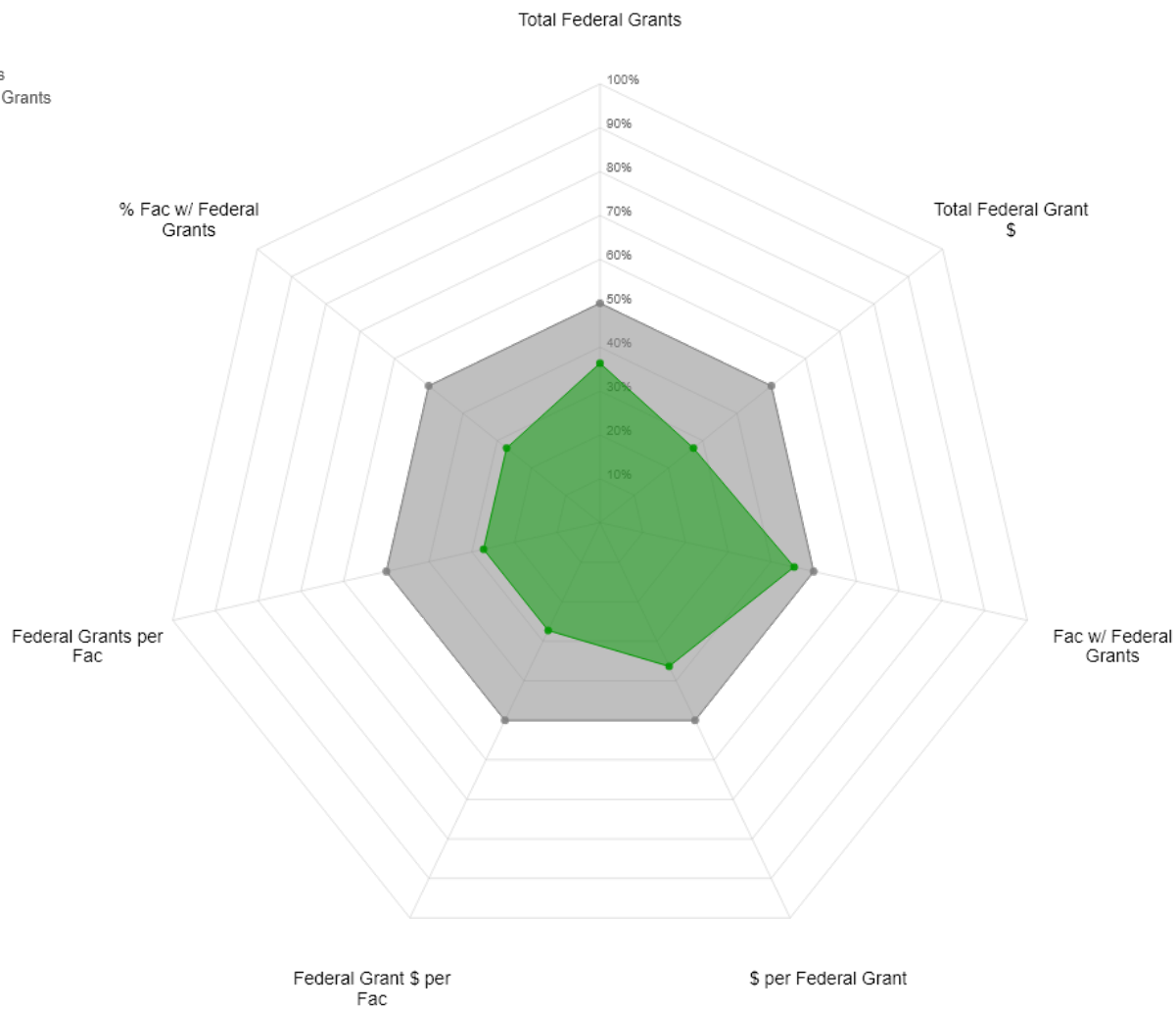
PI	Sponsor	Title	Start Date	End Date
Duin, Eduardus	University of Arkansas	UA-UA2019-63	8/15/2018	8/14/2021
Duin, Eduardus	Department of Energy	DE-SC0018011	9/1/2017	8/31/2021
Easley, Christopher	National Institutes of Health	NIH-1R01DK093810-01A1	6/8/2012	2/28/2021
Easley, Christopher	National Institutes of Health	NIH-1R01GM138828-01	9/18/2020	7/31/2021
Ellis, Holly	National Science Foundation	NSF-CHE-1808495	8/1/2018	7/31/2021
Franum, Byron	National Science Foundation	NSF-CHE-1945160*	7/1/2020	6/30/2025
Goldsmith, Christian	National Science Foundation	NSF-CHE-1662875	8/1/2017	7/31/2021
Goldsmith, Christian	National Science Foundation	NSF-CHE-1954336	8/1/2020	7/31/2023
Goodwin, Douglas	National Science Foundation	NSF-MCB-1616059*	7/1/2016	7/31/2021
Harshmann, Jordan	National Science Foundation	NSF-DUE-1915343	10/1/2019	9/30/2022
Karimov, Rashad	US Dept of Health & Human Services	CDC-75D30119P05144	8/1/2019	4/30/2020
Mansoorabadi, Steven	National Science Foundation	NSF-CHE-1555138	5/1/2016	4/30/2021
Mansoorabadi, Steven	Department of Energy	DE-SC0018043	9/1/2017	8/31/2021
Mansoorabadi, Steven	Exxon Mobile	EMRE-EM11662	9/15/2019	9/14/2022
Merner, Bradley	National Science Foundation	NSF-CHE-1654691	5/1/2017	4/30/2022
Miliordos, Evangelos	National Science Foundation	NSF-CHE-1940456*	9/1/2020	8/31/2025
Ortiz, Joseph	National Science Foundation	NSF-CHE-1565760	9/1/2016	8/31/2021
Patkowski, Konrad	National Science Foundation	NSF-CHE-1955328*	7/1/2020	6/30/2023
Zhan, Wei	National Science Foundation	NSF-CHE-1808123*	8/15/2018	7/31/2021
		Total Active: 19		
*Includes Participant Support Costs				

**Chemistry and Biochemistry
Proposals Submitted FY2020**

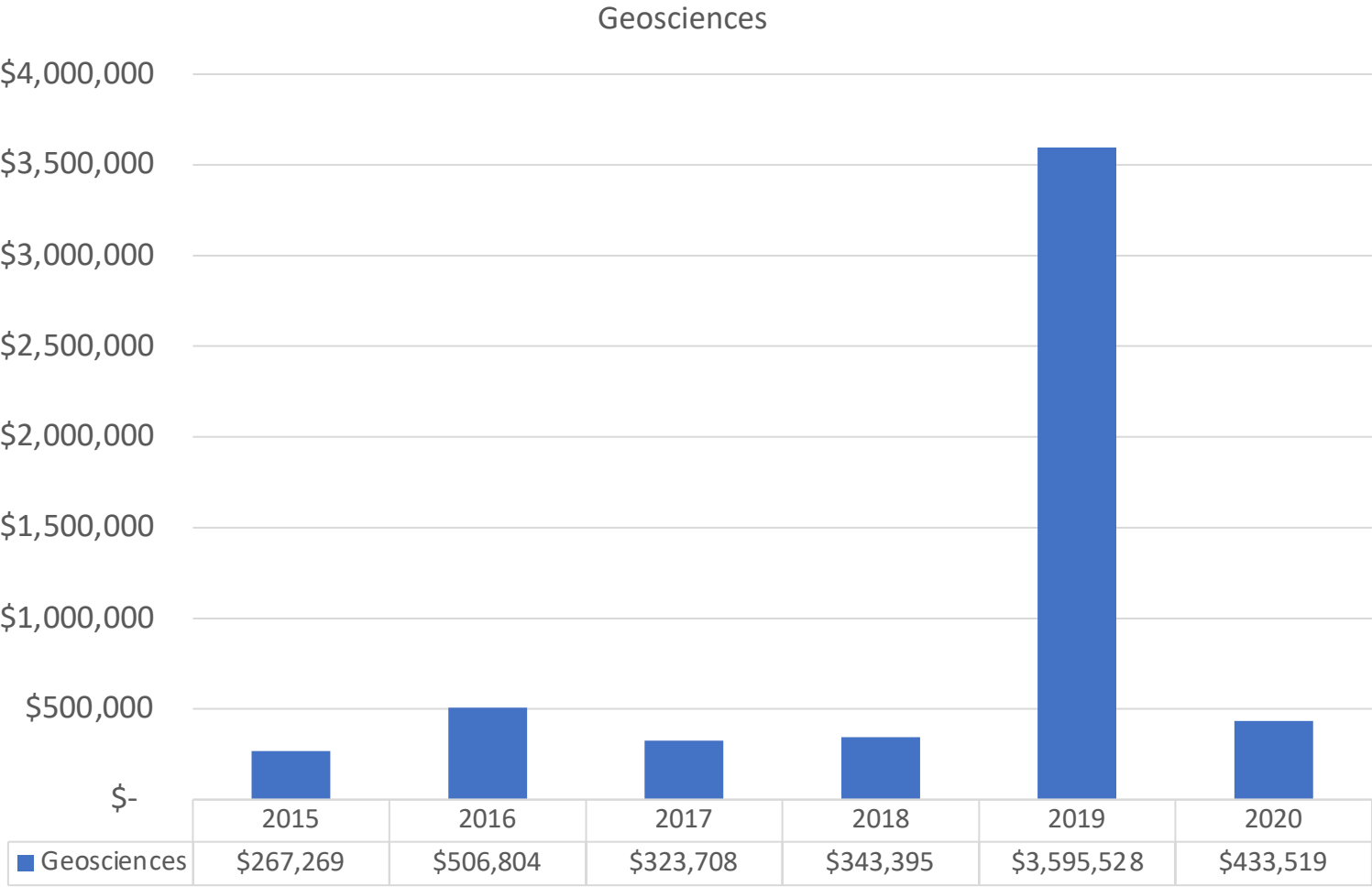
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
1038-19P	Chen, Ming	PI	NIH R35	\$ 1,868,002.00
1176-20P	Chen, Ming	PI	NSF Career	\$ 890,126.00
0292-20P	Duin, Eduardus	PI	Collaborator - DOE	\$ 358,280.00
1050-19P	Easley, Christopher	PI	NIH R01	\$ 1,488,757.05
0043-20P	Easley, Christopher	PI	Collaborator w/ Inna Med Inc. NSF Fed Flow	\$ 45,000.38
0124-20P	Easley, Christopher	PI	NIH R01	\$ 2,141,875.53
1311-20P	Easley, Christopher	PI	VIC Foundry, Inc. Sub-Awardee	\$ 124,998.58
0517-20P	Ellis, Holly	PI	NSF	\$ 435,212.00
0065-20P	Farnham, Byron	PI	ACS PRF	\$ 110,000.00
0926-20P	Goldsmith, Christian	PI	NSF	\$ 420,000.00
0558-20P	Hamid, Ahmed	PI	Society for Analytical Chemists of Pittsburgh	\$ 50,000.00
1031-19P	Harshman, Jordan	PI	NSF HER	\$ 176,805.34
1141-20P	Harshman, Jordan	PI	NSF Career	\$ 770,959.00
1036-19P	Karimov, Rashad	PI	NIH R35	\$ 1,868,005.51
0047-20P	Karimov, Rashad	PI	ACS Petroleum Research Fund	\$ 110,000.00
1408-20P	Karimov, Rashad	PI	NIH	\$ 1,870,808.35
1221-20P	Karimov, Rashad	PI	NSF Career	\$ 748,576.31
1170-20P	Miliordos, Evangelos	PI	DoE	\$ 380,439.94
0048-27	Raj, Monika	PI	American Cancer Society	\$ 791,850.97
0357-20P	Raj, Monika	PI	Consultant - NSF	\$ 1,000,577.00
1058-20P	Worley, S.D.	PI	Mede Tech Inc. -DOD Fed Flow	\$ 158,172.16
	Total Requested:			\$ 15,808,446.12

Department of Chemistry and Biochemistry

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Department of Geosciences
Chair, Prof. Ming-kuo Lee



Geosciences
Extramural Research Grants with New Dollars Received in FY2020

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
King, David	PI	AU Support for Advanced Reactor Siting Study for Feasibility of an Onsite Borehole Waste Mgt Approach	Electric Power Research Institute	\$ 30,000.00
Lee, Ming-Kuo	PI	Investigation of Long-Term Stability of Arsenic Sequestration by Pyrite	Anchor QEA, LLC	\$ 75,597.00
Marzen, Luke	PI	GIS Fellowship Agreement with City of Auburn	City of Auburn, Alabama	\$ 10,000.00
Marzen, Luke Mitra, Chandra	PI COPI	Stateview Program Dvlmt & Operations for State of AL	AmericaView, Inc.	\$ 23,473.00
McNeal, Karen Hanqin, T. Srivastava, P.	PI COPI	Hosting the SE Climate Ctr	NC State University	\$ 57,124.98
McNeal, Karen Witte, Maria	PI COPI	Graduate Resch Fellowship for Stephanie Courtney	National Science Foundation	\$ 46,000.00
McNeal, Karen Witte, Maria	PI COPI	Graduate Resch Fellowship for Elisha Johnson	National Science Foundation	\$ 46,000.00
McNeal, Karen Witte, Maria	PI COPI	Graduate Resch Fellowship Prog for Akilah Alwan	National Science Foundation	\$ 46,000.00
McNeal, Karen Srivastava/Worosz/Tian/ Burton	PI COPI COPI	Addressing Resiliency to Climate-Related Hazards & Disasters thru Data-Informed Decision Making	National Science Foundation	**
McNeal, Karen	PI	Data Analysis & Visualization to Support FWS Service Species Status Assessments	NC State University	\$ 30,494.00
McNeal, Karen	PI	Effectively Addressing Natural Resource Mgt Needs	NC State University	\$ 68,830.00
		Geosciences Count:	Accounts: 11 Individual Awards: 5	
*Participant Support Costs Included		Geosciences Total:		\$ 433,518.98
**Separate FOPs established for Crop Soil & Env. Sciences (200752-120301) & Forestry & Wildlife Sciences (200753-145001)				

**Geosciences
Active Awards**

PI	Sponsor	Title	Start Date	End Date
Burton, Christopher	Univ. of Southern Mississippi	USM-8005953-R/RCE-10	2/1/2018	1/31/2021
Marzen, Luke	Americaview Inc.	AVI-AV18-AL-01-GY19	9/18/2019	12/18/2020
Marzen, Luke	Americaview Inc.	AVI-AV18-AL-01-GY20	9/18/2020	9/17/2021
Marzen, Luke	City of Auburn	Auburn-GIS Fellow-21	8/15/2020	8/14/2021
McNeal, Karen	National Science Foundation	NSF-DGE-1922687 *	9/1/2019	8/31/2024
McNeal, Karen	National Science Foundation	NSF-DGE-1414475-EJ	6/1/2018	12/31/2021
McNeal, Karen	National Science Foundation	NSF-DGE-1937964-SC	9/1/2019	5/31/2021
McNeal, Karen	National Science Foundation	NSF-DGE-1937964-EJ	9/1/2019	5/31/2021
McNeal, Karen	National Science Foundation	NSF-DGE-1937964-AA	6/1/2020	5/31/2021
McNeal, Karen	North Carolina State University	NCSU-2017-1878-05	8/1/2018	7/31/2021
McNeal, Karen	North Carolina State University	NCSU-2020-0455-01	10/1/2019	9/30/2021
McNeal, Karen	North Carolina State University	NCSU-2020-0455-01 FY21	10/1/2020	9/30/2021
McNeal, Karen	North Carolina State University	NCSU-2020-2689-01	5/1/2020	3/31/2022
Medina-Elizalde, Martin	National Science Foundation	NSF-AGS-1903132	7/15/2019	6/30/2022
Medina-Elizalde, Martin	National Science Foundation	NSF-AGS-1702848	1/1/2018	9/30/2021
Mitra, Chandana	University of Georgia	UGA-SUB00002502	7/1/2020	7/1/2024
Savrda, Charles	American Chemical Society	ACS-PRF 57720-UR8	7/1/2017	8/31/2021
Zou, Haibo	American Chemical Society	ACS-PRF 57500-UR2	9/1/2017	8/31/2021
		Total Active: 18		
*Includes Participant Support Cost				

**Geosciences
Proposals Submitted FY2020**

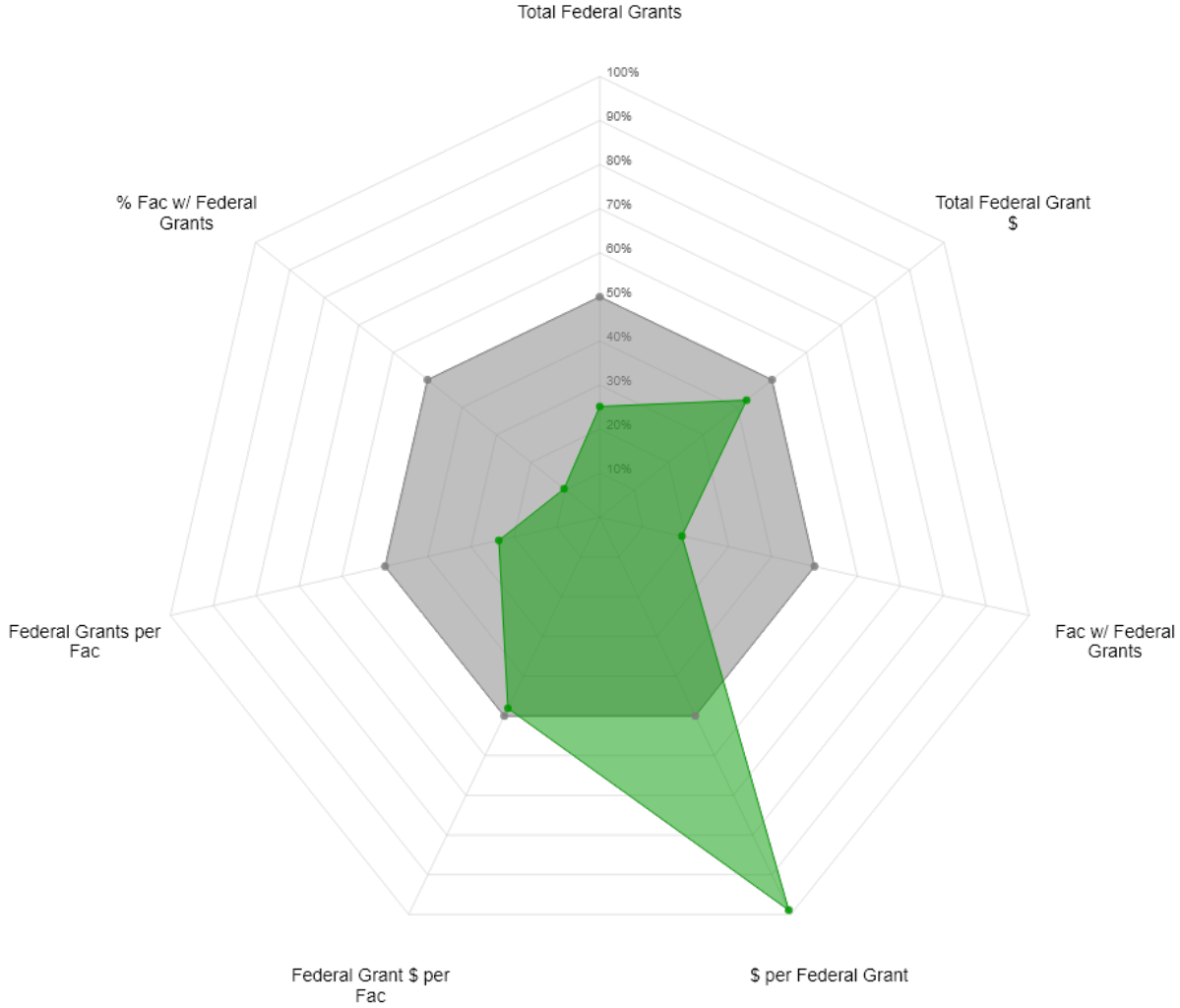
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
1120-20P	Chaney, Philip	PI	AL Dept of Economic & Community Affairs	\$ 66,073.00
0401-20P	King, David	PI	Electric Power Research Institute	\$ 30,000.00
0394-20P	King, David	COPI	NASA	\$ 455,020.00
1355-20P	King, David	COPI	NASA	\$ 1,820,121.00
0096-20P	Lee, Ming-Kuo	COPI	NSF	\$ 624,012.00
1036-20P	Marzen, Luke	PI	America View	\$ 23,493.99
1202-20P	Marzen, Luke	PI	City of Auburn	\$ 10,000.00
0127-20P	McNeal, Karen	PI	NSF AISL	\$ 2,989,925.00
0237-20P	McNeal, Karen	PI	NSF NRT	\$ 229,669.00
1144-20P	McNeal, Karen	COPI	NSF	\$ 139,375.00
0732-20P	Mitra, Chandana	PI	America View	\$ 7,499.40
0146-20P	Mitra, Chandana	PI	Sub-Awardee NASA	\$ 185,401.00
1061-20P	Mitra, Chandana	PI	UAH - NASA Sub	\$ 120,000.00
1043-19P	Ojeda, Ann	PI	NIH K25	\$ 610,014.11
0098-20P	Ojeda, Ann	PI	Alabama Water Resources Research Institute	\$ 24,954.00
0440-20P	Ojeda, Ann	PI	AL-MISS Sea Grant	\$ 9,662.00
0510-20P	Ojeda, Ann	PI	Thomas Jefferson Fund	\$ 7,700.00
1185-20P	Ojeda, Ann	PI	ARO	\$ 390,495.80
1313-20P	Ojeda, Ann	PI	NSF	\$ 109,585.00
1380-20P	Ojeda, Ann	PI	NSF	\$ 329,999.54
0080-20P	Rogers, Stephanie	PI	Project Apis M.	\$ 62,226.46
0105-20P	Rogers, Stephanie	COPI	California State Beekeeper Assoc.	\$ 62,226.26

**Geosciences
Proposals Submitted FY2020**

0439-20P	Rogers, Stephanie	PI	Project Apis M.	\$ 62,226.26
0760-10P	Rogers, Stephanie	PI	Southeast Climate Adaptation Science Center	\$ 174,561.00
1205-20P	Rogers, Stephanie	PI	Univ. of Texas at Dallas NSF STS- Collaboration	\$ 43,433.74
0688-20P	Shepherd, Stephanie	PI	USDA	\$ 499,061.00
0201-20P	Zou, Haibo	PI	UAH EPSCoR-NASA	\$ 79,999.99
	Total Requested:			\$ 9,166,734.55

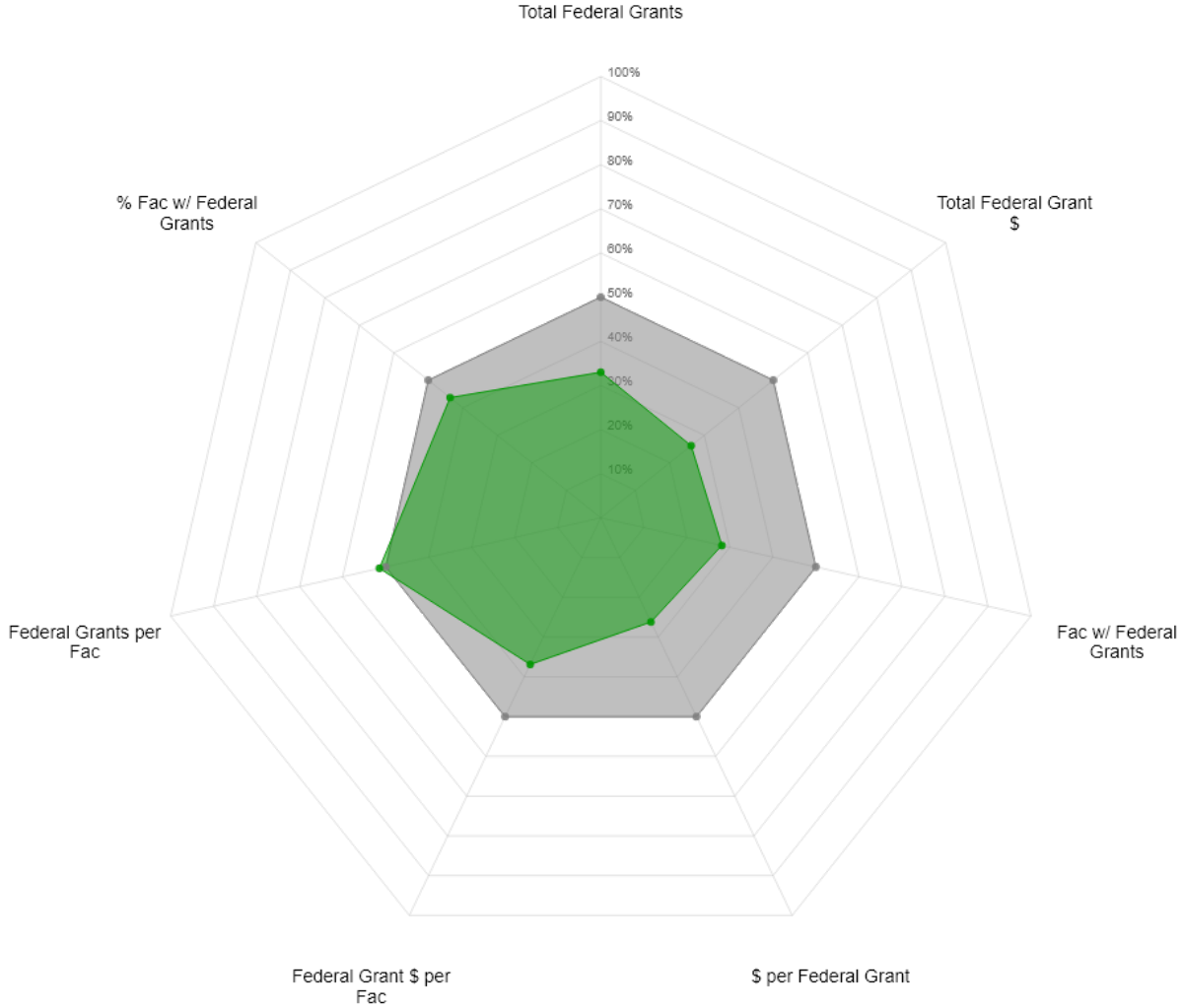
Department of Geosciences: Geology

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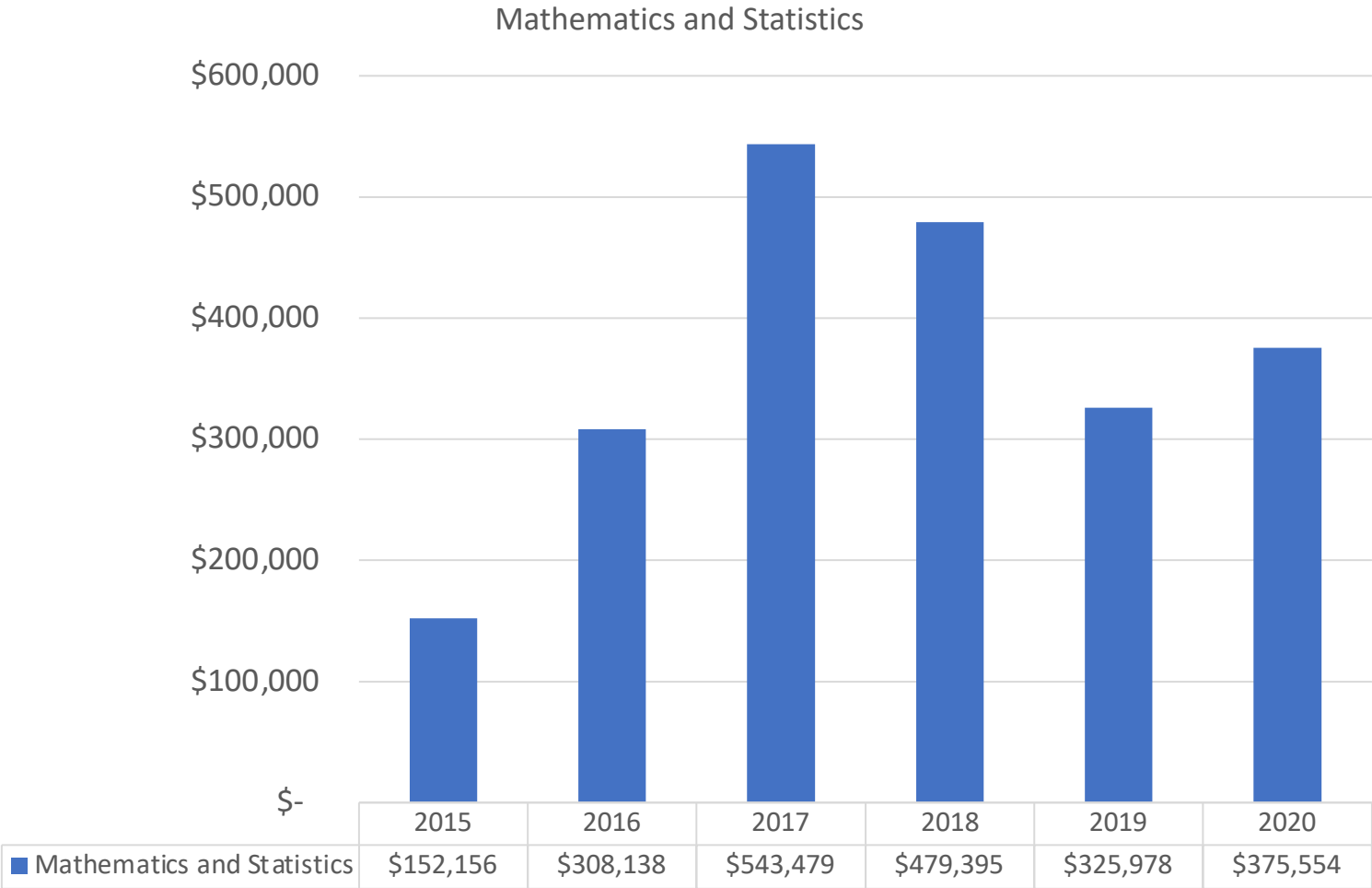


Department of Geosciences: Geography

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- Articles
- Awards
- Books
- Citations
- Federal Grants



Department of Mathematics and Statistics
Chair, Prof. Ash Abebe



Mathematics and Statistics
Extramural Research Grants with New Dollars Received in FY2020

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Carpenter, David	PI	DIA-15-D-0007/Travel Costs	Parsons Government Service	\$ 863.50
Carpenter, David	PI	Quantification of Confidence Level of Missile Models	Parsons Government Service-Sub DOD	\$ 745.00
Carpenter, David	PI	Solid Propellant Motor Analysis Pool	Parsons Government Service	\$ 82,771.98
Carpenter, David	PI	Quantification of Confidence Level of Missile Models	Parsons Government Service-Sub DOD	\$ 127,982.00
Han, Xiaoying	PI	Stochastic Dynamical Systems Arising from the Applied Sciences	Simons Foundation Inc.	\$ 7,000.00
Huang, Huajun	PI	Building Capacity for new Pathways to a Career	National Science Foundation	\$ 13,671.00
Martin, Wayne	COPI	in Math Teaching in Central AL		
Lin, Junshan	PI	Imaging & Sensing via Plasmonic Nanohole Resonances	National Science Foundation	\$ 76,873.00
Schenck, Henry	PI	Symbolic Computation Meets Computational Geometry & Data Approxiamtion	National Science Foundation	\$ 54,997.40
Van Wyk, Hans Werner Cao, Y./Lin, J./Hoang, T.	PI COPI	10th Annual Grad Student Mini-Conference in Computational Mathematics*	National Science Foundation	\$ 10,650.00
		Mathematics & Statistics Count:	9	
		Mathematics & Statistics Total:		\$ 375,553.88
*Includes Participant Support Cost				

**Mathematics and Statistics
Proposals Submitted FY2020**

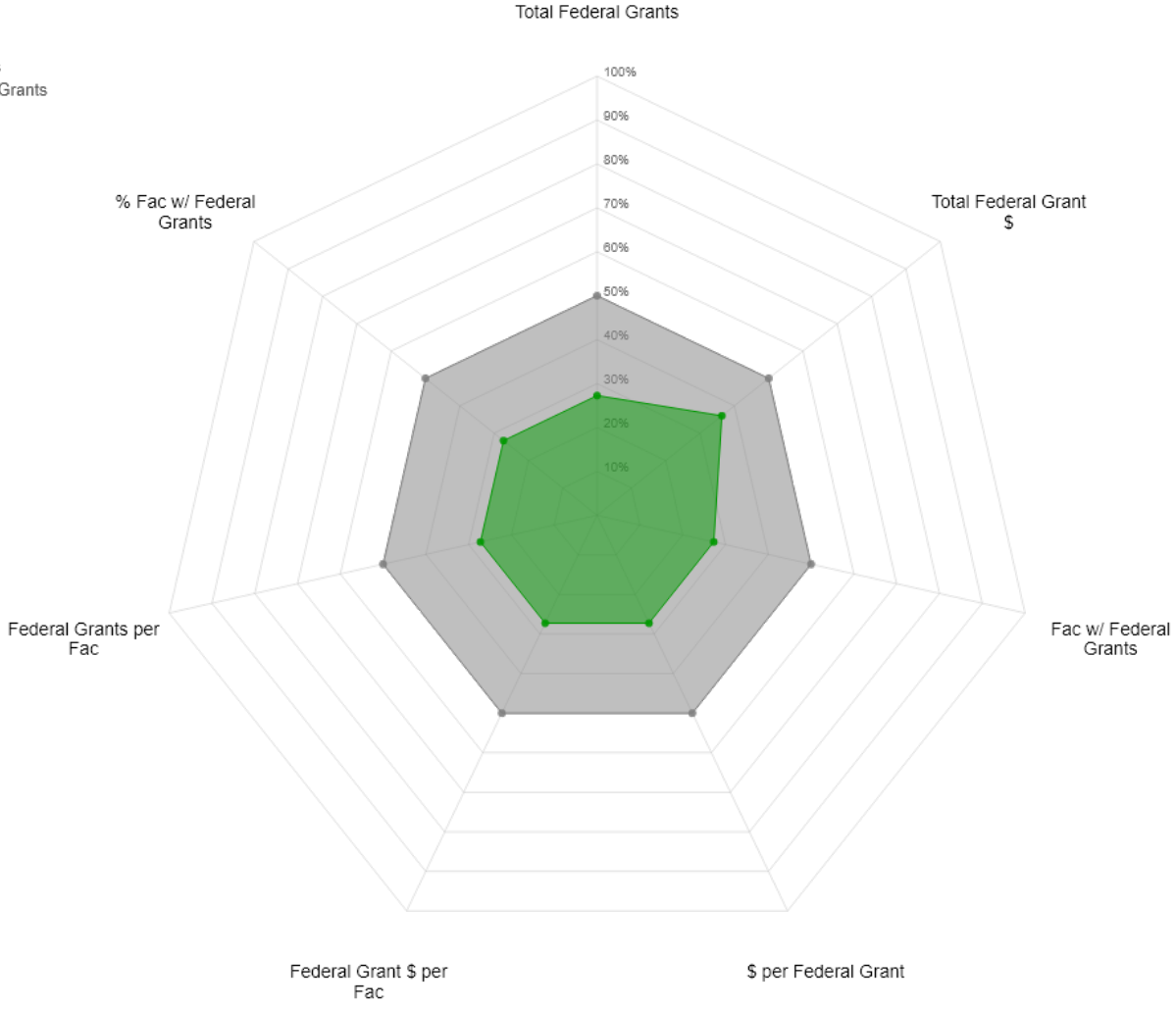
Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0392-20P	Bezdek, Andras	PI	Simons Foundation	\$ 42,000.00
0218-20P	Cao, Yanzhao	PI	NSF	\$ 221,182.00
0715-20P	Carpenter, Mark	COPI	NASA	\$ 75,000.00
0990-20P	Carpenter, Mark	COPI	Parsons	\$ 300,000.00
1133-20P	Hoang, Thi Thao Phuyong	PI	NSF Career	\$ 439,053.00
0288-20P	Jenda, Overtun	PI	NSF (MASI)	\$ 535,165.00
0155-20P	Lin, Junshan	PI	NSF	\$ 221,487.00
0329-20P	Nane, Erkan	PI	Simons Foundation	\$ 42,000.00
0528-20P	Oeding, Luke	PI	FACE Foundation	\$ 10,000.00
0417-20P	Puleo, Gregory	PI	Simons Foundation	\$ 42,000.00
1241-20P	Puleo, Gregory	PI	NSF Career	\$ 566,957.14
0779-20P	Rodger, Chris	PI	Univ. of Colorado-Collaboration NSF	\$ 73,078.00
0889-20P	Schenck, Henry	PI	NSF RTG	\$ 2,000,000.00
1275-20P	Schenck, Henry	PI	NSF	\$ 86,476.00
1351-20P	Schenck, Henry	PI	Simons Foundation	\$ 132,000.00
0827-20P	Schenck, Henry	PI	NSF	\$ 200,000.00
1389-20P	Sukhtaiev, Selim	PI	NSF	\$ 179,230.72
0383-20P	Zalik, Richard	PI	Simons Foundation	\$ 42,000.00
0407-20P	Zeng, Peng	PI	Simons Foundation	\$ 42,000.00
0424-20P	Zheng, Jingyi	PI	Simons Foundation	\$ 42,000.00
0418-20P	Zheng, Jingyi	PI	Univ. of Arizona NSF-Fed Flow	\$ 40,724.78

**Mathematics and Statistics
Proposals Submitted FY2020**

0951-20P	Zheng, Jingyi	COPI	NSF	\$ 747,784.63
	Total Requested:			\$ 6,080,138.27

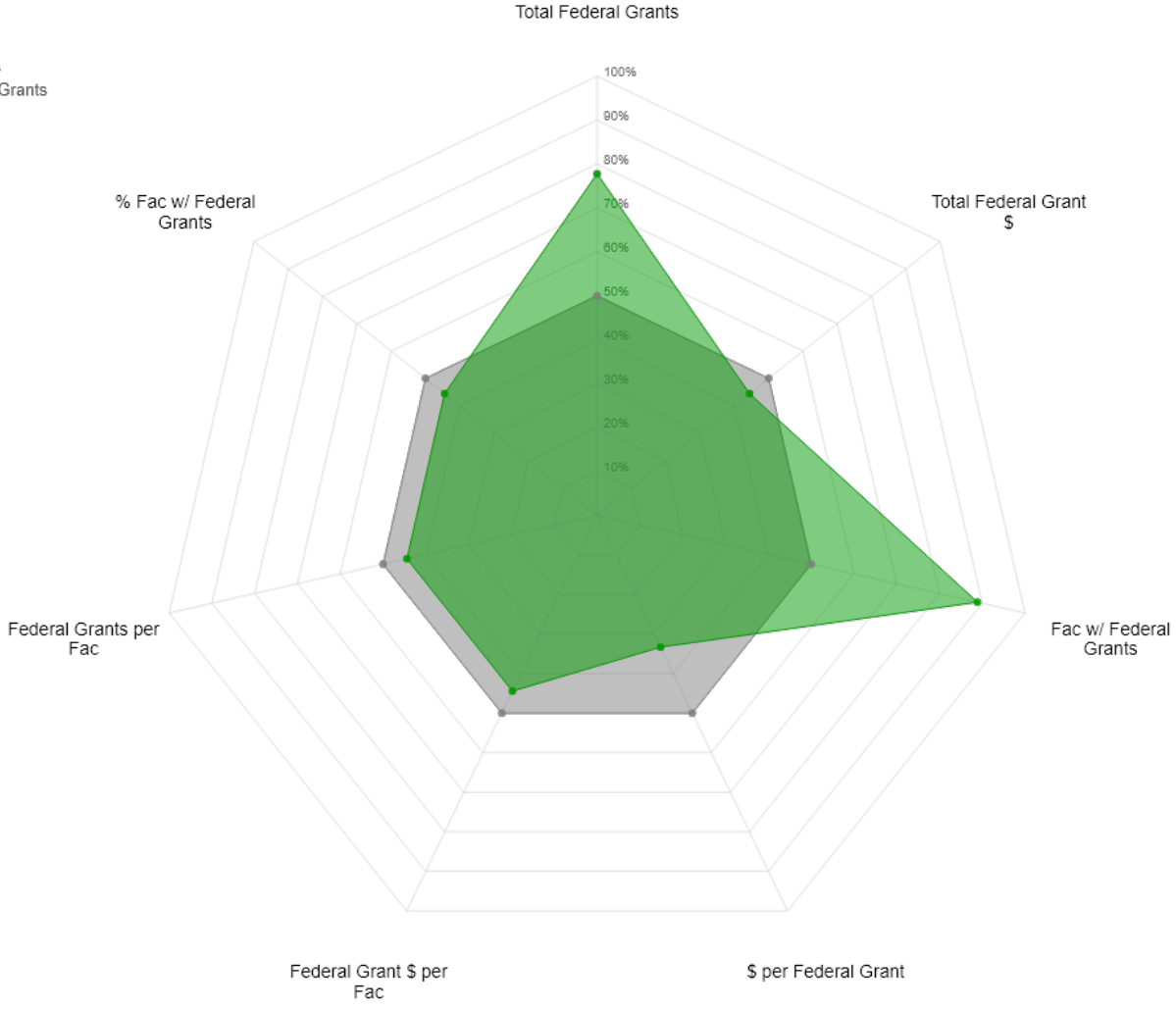
Department of Mathematics and Statistics: Mathematics

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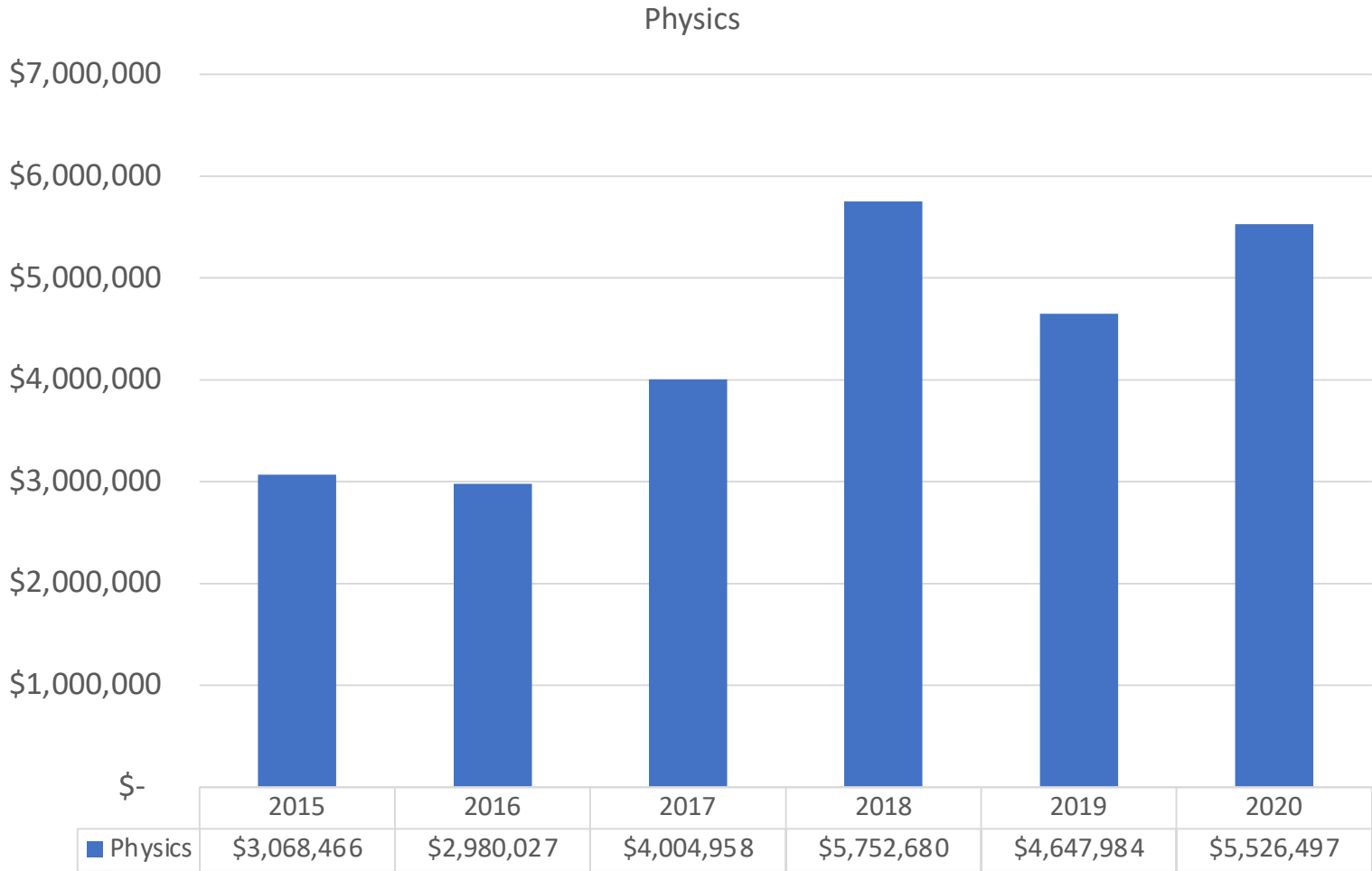


Department of Mathematics and Statistics: Statistics

- Median
- Articles
- Awards
- Citations
- Federal Grants



Department of Physics
Chair, Prof. Allen Landers



Physics
Extramural Research Grants with New Dollars Received in FY2020

PI NAME	PI/COPI	PROJECT TITLE	SPONSOR	AMOUNT
Ahyi, Ayayi (Claude)	PI	Zener Diode & Voltage References for Extended Operation at 500 Celsius	University of AL in Huntsville - NASA	\$ 80,000.00
Bodewits, Dennis	PI	Neil Gehrels-Swift Observatory Catalogue of UV Spectra of Asteroids	NASA	\$ 23,839.62
Bodewits, Dennis	PI	Rapid Follow Up Characterization of Cometary Outburst Ejecta	NASA	\$ 40,000.00
Bodewits, Dennis	PI	Archiving Two Decades of Wide-Field Space-Based UV-Visible Observations of Comets	Planetary Science Institute sub - NASA	\$ 68,406.00
Bodewits, Dennis	PI	Comet Outburst Target of Opportunity	Space Telescope Science Institute - NASA	\$ 15,800.00
Bodewits, Dennis	PI	HST-COS Chemical Inventory & Activity of Interstellar Object 21/Borisov	Space Telescope Science Institute - NASA	\$ 13,940.00
Bodewits, Dennis	PI	Constraining the Coma Volatile Content of Interstellar Comet 21/Borisov	Space Telescope Science Institute - NASA	\$ 29,581.00
Bodewits, Dennis	PI	Grating Spectroscopy of Unexpectedly Bright Comet C/2019 Y4 Atlas	Smithsonian Institution - NASA	\$ 12,320.00
Bodewits, Dennis	PI	Determining the Cause of Activity of the First Active Trojan, 2019 LD2	Space Telescope Science Institute - NASA	\$ 16,607.00
Comes, Ryan	PI	Acquisition of a X-Ray Diffraction System for Amterials Research in Alabama	National Science Foundation	\$ 280,487.00
Beidaghi/Tae-Sik Oh/ Farnum/Sumani/Peng Li	COPI COPI			
Comes, Ryan	PI	Metaastable Oxides for High-Mobility & Spin-Orbit 2D Electronics	Air Force Research Lab	\$ 149,411.00
Dhar, Sarit	PI	Accelerator Services (12)	various	\$ 144,733.90
Ennis, David Loch, Stuart	PI COPI	Erosion & Re-Deposition Sepctroscopic Diagnostic Dvlmts for High-Z PFCS in DIII-D	Us Department of Energy	\$ 356,717.00
Fogle, Michael Adams, Mark (EE)	PI COPI	Trusted-Node Quantum Key Distribution from a CUBESAT	Space Dynamics Labaoratory (AF)	\$ 47,450.00
Giordano, Nicholas	PI	Physics of Wind Musical Instruments	National Science Foundation	\$ 117,641.00
Guazzotto, Luca	PI	Two Fluid Equilibrium & Stability Analysis in Axisymmetric Plasmas	U.S. Department of Energy	\$ 110,903.00
Hanson, James	PI	Cobalt Services 60 (3)	Times Microwave Systems	\$ 6,719.50
Konopk, Uwe Thomas, Edward	PI COPI	Complex Plasma Under Microgravity: Utilizing the Intl Space Station Experiment PK-4 & Beyond	Jet Propulsion Lab- California Inst. Technology	\$ 146,500.00

Physics
Extramural Research Grants with New Dollars Received in FY2020

Konopka, Uwe	PI	Compact Mission Science Definition Team	Jet Propulsion Lab- California Inst. Technology	\$ 15,000.00
Konopka, Uwe	PI	Dusty Plasmas: Space Life & Physical Sciences & Research Apps	University of AL in Huntsville - NASA	\$ 80,000.00
Laurent, Guillaume	PI	Attosecond Electron Dynamics in Metallic Nanoparticles, Metallic Surfaces & Nanoparticles-Covered Metallic Surfaces	U.S. Air Force	\$ 221,655.00
Laurent, Guillaume	PI	Real-Time Observation of Multi-Electron Processes in Atoms & Diatomic Molecules	U.S. Department of Energy	\$ 145,069.00
Lin, Yu	PI	Impact of Solar Wind Pressure Pulses & Foreshock Waves on the Dayside Magnetosphere	NASA	\$ 158,312.00
Lin, Yu	PI	Heliospheric Magnetic Energy Storage & Conversion	UCLA sub - NASA	\$ 52,954.00
Lin, Yu Perez, Joseph Wang, Xueyi	PI COPI COPI	Fast Flows in the Magnetotail & Energetic Particle Transport	NASA	\$ 243,107.00
Loch, Stuart Fogle, Michael	PI COPI	Bound-Bound & Bound-Free Opacities of Heavy Lowly-Charged r-Process IONS	National Science Foundation	\$ 99,624.00
Maurer, David	PI	Three Dimensional Equilibrium Stability&its Impact on Edge Transport&Divertor Performance in Wendelstein7-X	U.S. Department of Energy	\$ 200,000.00
Maurer, David Knowlton, Stephen Hartwell, Greg	PI COPI COPI	MHD Stability & Equilibrium in a Current Driven Stellartor-Tokamak Hybrid	U.S. Department of Energy	\$ 540,000.00
Perez, Joseph	PI	Interpreting Magnetic Field & Cosmic Ray Observations in the Outer Heliosheath	University of AL in Huntsville - NASA	\$ 55,975.00
Schmitt, John	PI	Optimized Stellarator Pilot Plant Design	Princeton Plasma Physics Lab sub - Dept of Energy	\$ 22,218.14
Thomas, Edward	PI	Connecting the Plasma Universe to Plasma Technology in Alabama*	University of AL in Huntsville - EPSCoR (NSF)	\$ 571,916.00
Thomas, Edward	PI	Cerif Grad Student Support for Taylor Hall	University of AL in Huntsville - EPSCoR (NSF)	\$ 60,000.00
Thomas, Edward	PI	Seed Funding for Dr. Feng Shi	University of AL in Huntsville - EPSCoR (NSF)	\$ 38,438.00
Thomas, Edward	PI	Seed Funding for Dr. Surahbi Jaiswal	University of AL in Huntsville - EPSCoR (NSF)	\$ 35,000.00
Thomas, Edward Konopka, Uwe	PI COPI	Magnetized Plasma Resch Lab as a DOE Plasma Science Facility	U.S. Department of Energy	\$ 499,999.00
Thomas, Edward	PI	Simulated Plasma Conditions in the Upper Atmosphere	L3Harris	\$ 377,099.30

Physics
Extramural Research Grants with New Dollars Received in FY2020

Thomas, Edward	PI	Lunar Dust Resch & Mitigation Science Definition Team	Jet Propulsion Lab sub - NASA	\$ 20,725.19
Thomas, Edward Konpka/Bodewits/King Hirabayashi, Masatoshi(AE)	COPI COPI PI	Investigate Potential Mars or Lunar Resources	University of AL in Huntsville - NASA	\$ 58,027.00
Wang, Xueyi	PI	Investigating Magnetosonic Wave Excitationn in the Earth's Magnetosphere	University of TX at Dallas sub - NASA	\$ 107,441.00
Wang, Xueyi	PI	Impact of Foreshock Transients on the Earth's Nightside Magnetosphere	UCLA sub - NASA	\$ 202,481.00
Wersinger, Jean Marie Fogle, Michael	PI COPI	Observing Terrestrial Gamma-Ray Flash Beams with a Pair of CUBESATS	National Science Foundation	\$ 60,400.00
			Accounts: 39	
		Physics Count:	Service Center: 15	
			Individual Awards: 29	
		Physics Total:		\$ 5,526,496.65
*Participant Support Costs Included				

**Physics
Active Awards**

PI	Sponsor	Title	Start Date	End Date
Ahyi, Ayayi (Claude)	University of Alabama in Huntsville	UAH-2020-1246	6/1/2020	7/31/2021
Bodewits, Dennis	Planetary Science Institute	PSI-Subaward 1528 Auburn	8/1/2018	5/15/2021
Bodewits, Dennis	NASA	NASA-80NSSC19K0152	1/1/2019	12/31/2020
Bodewits, Dennis	NASA	NASA-80NSSC19K0245	3/14/2019	3/13/2021
Bodewits, Dennis	NASA	NASA-80NSSC19K1304	9/1/2019	8/31/2022
Bodewits, Dennis	NASA	NASA-80NSSC20K0839	4/1/2020	9/30/2021
Bodewits, Dennis	NASA	NASA-80NSSC21K0127	11/1/2020	10/31/2021
Bodewits, Dennis	NASA	NASA-Bodewits (Goddard)	5/1/2020	4/30/2021
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15625.001-A	3/1/2019	2/28/2022
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15372.011-A	12/1/2018	11/30/2021
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-15965.001-A	12/1/2019	11/30/2022
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16049.001-A	3/1/2019	2/28/2023
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16040.003-A	4/1/2020	3/31/2023
Bodewits, Dennis	Association of Universities for Research in Astronomy	STSI-HST-GO-16077.003-A	8/1/2020	7/31/2023
Bodewits, Dennis	Smithsonian Institution	SAO-GO8-19001A	12/7/2018	12/6/2021
Bodewits, Dennis	Smithsonian Institution	SAO-DDO-21117A	4/28/2020	4/27/2021
Bodewits/Konopka/Thomas	University of Alabama in Huntsville	UAH-2019-215-PY	7/1/2019	5/31/2021
Comes, Ryan	National Science Foundation	NSF-DMR-1809847*	7/1/2018	6/30/2021
Comes, Ryan	National Science Foundation	NSF-DMR-2018794*	8/1/2020	7/31/2023
Comes, Ryan	US Air Force	AF-FA9550-20-1-0034	1/1/2020	1/26/2023

**Physics
Active Awards**

Dhar, Sarit	US Army	ARMY-W911NF-18-2-0160	6/21/2018	6/21/2020
Dhar, Sarit	Alliance for Sustainable Energy, LLC	NREL-AHL-9-92362-01	9/10/2019	9/17/2021
Dhar, Sarit	The Aerospace Corporation	TAC-PO 4600006756	8/8/2019	9/30/2021
Dhar, Sarit	Regher Solar	Accelerator	1/10/2020	12/31/2021
Dhar, Sarit	Solaero Tech	PO S000009857	8/1/2020	8/1/2022
Dhar, Sarit	Solaero Tech	PO S000009854	8/1/2020	8/1/2022
Dhar, Sarit	Spectrolab	PO 110212	9/25/2020	9/25/2021
Ennis, David	US Department of Energy	DE-SC0015877	6/1/2016	6/30/2021
Fogle, Michael	National Science Foundation	NSF-AGS-1445465-PHY	8/15/2015	7/31/2022
Fogle, Michael	Clemson University	CU-2125-204-2013329	2/1/2019	3/11/2021
Fogle, Michael	Space Dynamics Lab	SDL-CP0053703	1/1/2019	2/28/2021
Giordano, Nicholas	National Science Foundation	NSF-PHY-1806231	12/15/2019	11/30/2022
Guazzotto, Luca	US Department of Energy	DE-SC0014196	7/1/2015	6/30/2021
Hanson, James	US Department of Energy	DE0FG02-03ER54692B	12/1/2002	10/31/2021
Konopka, Uwe	National Science Foundation	NSF-DMR-1740784	6/1/2017	5/31/2021
Konopka, Uwe	Jet Propulsion Lab-California Inst Technology	JPL-RSA 1571699	4/15/2007	4/15/2021
Konopka, Uwe	Jet Propulsion Lab-California Inst Technology	JPL-1655063	10/1/2020	9/30/2022
Konopka, Uwe	University of Alabama in Huntsville	UAH-2020-1255	9/1/2020	7/31/2021
Kuroda, Marcelo	National Science Foundation	NSF-DMR-1848344*	7/1/2019	6/30/2024
Landers, Allen	National Science Foundation	NSF-IIA-1348368 *	3/15/2014	7/31/2020
Laurent, Guillaume	US Department of Energy	DE-SC0017984	8/15/2017	8/14/2021
Laurent, Guillaume	US Air Force	AF-FA9550-18-1-0333	6/15/2018	6/14/2022
Lin, Yu	NASA	NASA-80NSSC17K0012	6/13/2017	6/12/2021

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Lin, Yu	NASA	NASA-NNX17AI47G	4/1/2017	3/31/2021
Lin, Yu	NASA	NASA-80NSSC20K1322	7/14/2020	7/13/2023
Lin, Yu	US Department of Energy	DE-SC0018071	8/15/2017	8/14/2021
Lin, Yu	University of IOWA	UN IA-PO 1002078137	3/5/2018	3/31/2021
Lin, Yu	UCLA	UCLA-2090 G XA735	2/18/2020	2/17/2021
Loch, Stuart	National Science Foundation	NSF-AST-1816984	9/1/2018	8/31/2021
Loch, Stuart	Smithsonian Institution	SAO-SV8-88019	6/1/2018	12/31/2021
Maurer, David	US Department of Energy	DE-FG02-00ER54610	9/1/2000	5/15/2021
Maurer, David	US Department of Energy	DE-SC0014529	8/15/2015	8/14/2021
Perez, Joseph	University of Alabama in Huntsville	UAH-2018-251	6/26/2019	5/25/2021
Schmitt, John	Princeton University	PPPL-S018052	4/29/2020	9/30/2021
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096*	8/1/2017	7/31/2022
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-GRA	9/1/2017	7/31/2022
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-A10-FS	9/1/2017	7/31/2022
Thomas, Edward	University of Alabama in Huntsville	UAH-2017-096-A13-ET	10/1/2020	7/31/2022
Thomas, Edward	US Department of Energy	DE-SC0019176	9/1/2018	8/31/2021
Thomas, Edward	Jet Propulsion Lab-California Inst Technology	JPL-1646773-PHY	2/6/2020	2/5/2021
Thomas, Edward	L3 Harris	L3Harris-PO A000529678	2/27/2020	12/31/2021
Wang, Xueyi	University of Texas in Dallas	UN TX-DALLAS-1604915	7/1/2017	6/30/2021
Wang, Xueyi	UC Regents	UCLA-0965 G XA019	4/16/2019	4/15/2021
*Includes Participant Support Costs		Total Active: 63		

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Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0215-20P	Ahyi, Ayayi (Claude)	PI	UAH	\$ 79,999.80
0382-20P	Ahyi, Ayayi (Claude)	COPI	NSF MRI	\$ 506,898.00
0249-20P	Bodewits, Dennis	PI	STSCI	\$ 31,600.00
0247-20P	Bodewits, Dennis	PI	STSCI	\$ 32,625.00
0278-20P	Bodewits, Dennis	PI	STSCI	\$ 91,350.00
0420-20P	Bodewits, Dennis	PI	NASA	\$ 39,999.99
0497-20P	Bodewits, Dennis	PI	NASA	\$ 50,000.00
0640-20P	Bodewits, Dennis	PI	NASA	\$ 40,301.90
0903-20P	Bodewits, Dennis	PI	SAO - NASA fed flow	\$ 12,320.00
1135-20P	Bodewits, Dennis	PI	NASA	\$ 488,094.39
0156-20P	Comes, Ryan	PI	DOD 0 DARPA	\$ 994,638.41
0347-20P	Comes, Ryan	PI	NSF MRI	\$ 280,487.00
1151-20P	Comes, Ryan	PI	NSF Career	\$ 671,419.14
0072-20P	Dhar, Sarit	PI	SolAero Technologies	\$ 4,112.39
0071-20P	Dhar, Sarit	PI	SolAero Technologies	\$ 9,791.40
0136-20P	Dhar, Sarit	PI	SolAero Technologies	\$ 1,370.81
0222-20P	Dhar, Sarit	PI	NRL	\$ 19,582.80
0335-20P	Dhar, Sarit	PI	Spectrolab	\$ 2,839.51
0336-20P	Dhar, Sarit	PI	Regher Solar	\$ 14,687.10
1125-20P	Dhar, Sarit	PI	SolAero Technologies	\$ 25,000.00
1124-20P	Dhar, Sarit	PI	SolAero Technologies	\$ 25,000.00
1122-20P	Dhar, Sarit	PI	AZUR Space	\$ 9,057.05
1397-20P	Dhar, Sarit	PI	PBJ Partners	\$ 7,098.77

**Physics
Proposals Submitted FY2020**

1396-20P	Dhar, Sarit	PI	Spectrolab	\$ 2,692.64
0372-20P	Ennis, David	PI	Oakridge National Lab-Sub for ARPA-E DOE	\$ 241,644.00
0788-20P	Fogle, Michael	PI	NSF	\$ 60,400.00
0224-20P	Gramlich, Michael	PI	NIH R21	\$ 412,992.75
0496-20P	Gramlich, Michael	PI	Beckman Foundation	\$ 1,200,000.00
1169-20P	Gramlich, Michael	PI	NSF Career	\$ 1,427,737.00
0531-20P	Hanson, James	PI	Times Microwave	\$ 1,812.00
0676-20P	Hanson, James	PI	Times Microwave	\$ 2,567.00
0676-20P	Hanson, James	PI	Times Microwave	\$ 2,567.00
1292-20P	Konopka, Uwe	PI	JPL	\$ 29,868.48
0216-20P	Konopka, Uwe	PI	UAH EPSCoR - NASA	\$ 80,000.00
1034-20P	Konopka, Uwe	COPI	NASA	\$ 520,539.00
0896-19P	Lin, Yu	PI	NASA HSR	\$ 182,971.00
0025-20P	Lin, Yu	PI	Andrews Univ. Sub-NASA flow	\$ 186,811.00
0895-19P	Lin, Yu	PI	NSF HSR	\$ 458,543.00
0206-20P	Lin, Yu	PI	NASA	\$ 928,868.00
0597-20P	Lin, Yu	PI	NSF	\$ 2,082,410.83
1175-20P	Lin, Yu	PI	IOWA Tracers - NASA flow	\$ 25,299.00
0343-20P	Maurer, David	PI	PPL - DOE fed flow	\$ 89,999.08
0839-20P	Maurer, David	PI	DOE	\$ 50,000.00
0194-20P	Oks, Evgueni	PI	NSF	\$ 299,037.37
0101-20P	Park, Minseo	PI	NSF	\$ 509,411.42
0122-20P	Perez, Joseph	PI	Goddard Space Flight Center-Sub NASA flow	\$ 243,609.70

**Physics
Proposals Submitted FY2020**

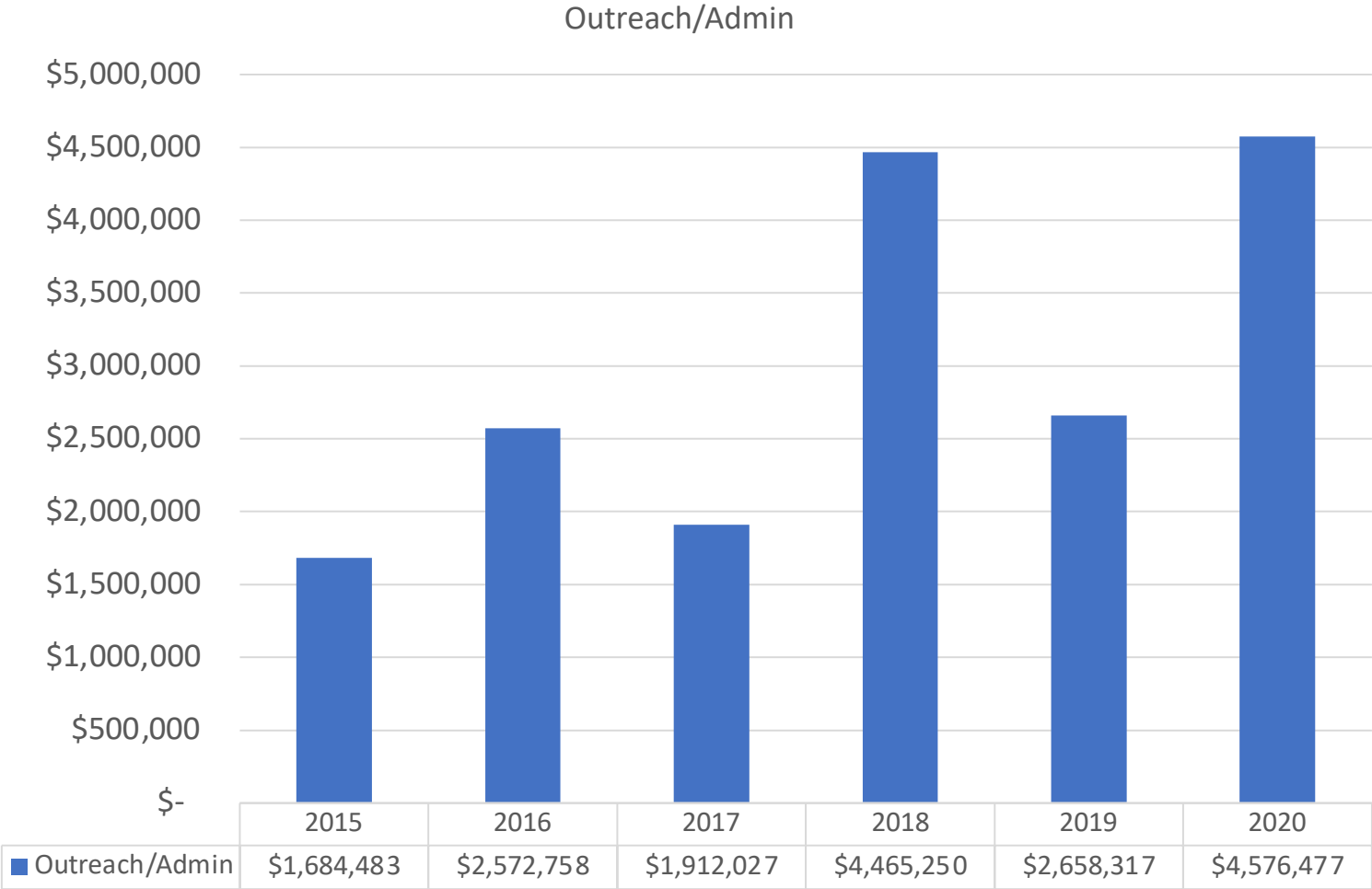
0631-20P	Schmitt, John	PI	PPPL Sub-Awardee DOE Fed Flow	\$ 73,204.78
0157-20P	Shi, Feng	PI	NSF	\$ 458,690.00
0157-20P	Shi, Feng	PI	NSF-DOE	\$ 445,399.00
ANP	Thomas, Edward	PI	L3Harris	\$ 409,795.88
022-20P	Wang, Xueyi	PI	Univ. of Md - NASA Flow	\$ 408,460.00
			Total Requested:	\$ 14,273,603.39

Department of Physics

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COSAM Outreach and Administrative Units



COSAM Central
Extramural Research Grants with New Dollars Received in FY2020

PI NAME	PI/COPI	DEPARTMENT	PROJECT TITLE	SPONSOR	AMOUNT
Ewald, Mary L. Martin, Wayne Strutchen Marilyn	PI COPI COPI	AMSTI COSAM	ALA MATH, SCIENCE & TECHNOLOGY INITIATIVE	Alabama State Department of Education	\$ 361.63
Ewald, Mary L. Martin, Wayne Strutchen Marilyn	PI COPI COPI	AMSTI COSAM	ALA MATH, SCIENCE & TECHNOLOGY INITIATIVE	Alabama State Department of Education	\$ 2,259,079.00
			AMSTI Count:	2	
			AMSTI Total:		\$ 2,259,440.63
Ewald, Mary L.	PI	COSAM Outreach	ALA Science in Motion - FY20	Alabama State Department of Education	\$ 356,561.00
Ewald, Mary L.	PI	COSAM Outreach	Support for Robotics Education Coordinator	Robotics Ed & Competition FDN	\$ 22,000.00
			COSAM Outreach Count:	2	
			COSAM Outreach Total:		\$ 378,561.00
Jenda, Overton Johnson, Peter	PI COPI	Mathematics & Statistics	REU in Algebra and Discrete Mathematics at AU*	National Science Foundation	\$ 259,200.00
Jenda, Overtoun	PI	Sciences & Math Admin	Greater ALA Black Belt Region LSAMP*	National Science Foundation	\$ 994,799.00
Jenda, Overtoun	PI	Sciences & Math Admin	Black Belt Region STEM Initiative Summer Academy	Alabama State Department of Education	\$ 30,000.00
Jenda, Overtoun Johnson, Peter Asheber	PI COPI COPI	Abebe, Sciences & Math Admin	US-Africa Collaborative Resch Network in Mathematical Sciences*	National Science Foundation	\$ 250,000.00

**COSAM Central
Active Awards**

PI	Sponsor	Title	Start Date	End Date
Ewald, Mary	Alabama State Dept of Education	AL DOE-U200143	10/1/2019	9/30/2021
Ewald, Mary	Alabama State Dept of Education	AL DOE-U210038	10/1/2020	9/30/2021
		Outreach Total: 2		
Ewald, Mary	Alabama State Dept of Education	AL DOE-U200071 *	10/1/2019	9/30/2021
Ewald, Mary	Alabama State Dept of Education	AL DOE-U210027*	10/1/2020	9/30/2021
		AMSTI Total: 2		
Jenda, Overtoun	National Science Foundation	NSF-HRD-1712692 *	9/1/2017	8/31/2023
Jenda, Overtoun	National Science Foundation	NSF-DUE-1644007 *	10/1/2016	9/30/2021
Jenda, Overtoun	National Science Foundation	NSF-HRD-1649344*	10/1/2016	3/31/2021
Jenda, Overtoun	National Science Foundation	NSF-DMS-1950563 *	4/1/2020	3/31/2023
Jenda, Overtoun	National Science Foundation	NSF-DMS-2015425*	7/15/2020	6/30/2023
Mulligan-Guy, Kimberly	National Science Foundation	NSF-EEC-1950304*	4/15/2020	3/31/2023
Witt, Lawrence	Alabama Dept of Public Health	ADPH-Rural Med Prog	7/1/2010	9/30/2021
		Sciences & Math - Admin Total: 7		
		Total Active: 11		
*Includes Participant Support Cost				

**COSAM Central
Proposals Submitted FY2020**

Proposal ID	PI/COPI	Title	Sponsor	Amount Requested
0874-19P	Ewald, Mary Lou	PI	Robotics Education	\$ 22,000.00
1139-20P	Ewald, Mary Lou	PI	USDA-Project Ag Inquiry	\$ 299,879.00
1232-20P	Ewald, Mary Lou	PI	ALDOE-AL Science in Motion	\$ 469,314.00
			COSAM OUTREACH TOTAL:	\$ 791,193.00
1233-20P	Ewald, Mary Lou	PI	ALDOE - AMSTI 2021	\$ 2,043,078.78
			AMSTI OUTREACH TOTAL:	\$ 2,043,078.78
0141-20P	Jenda, Overtun	PI	NSF	\$ 1,074,992.00
	Jenda, Overtun	PI	Sub-Awardee NSF	\$ 3,998.84
1197-20P	Jenda, Overtun	PI	NSF	\$ 65,268.00
1270-20P	Jenda, Overtun	PI	NSF DTI	\$ 1,287,909.00
			SCIENCES & MATH ADMIN TOTAL:	\$ 2,432,167.84
			TOTAL REQUESTED:	\$ 5,266,439.62