

Research Newsletter



January 2019

A MESSAGE FROM THE VCR:

Colleagues,

Welcome to a new year and a new semester. While many of you are working on pre-proposals for the UM System's Investment in Research and Creative Works (due on or before January 30), let's not forget that there are more funding opportunities for our faculty.

Here are a few of the workshops and information meetings held by Federal agencies in 2019. I encourage you very strongly to consider attending (remember that my office will cover 2/3 of your travel costs: <http://sponsoredprograms.mst.edu/resources/policies/>):

AFOSR has already announced its 2019 workshops and reviews. You can find the list here: <https://community.apan.org/wg/afosr/w/researchareas/24083/workshops-and-reviews---2019/>

ARL has yet to announce its 2019 open campuses (one of them will probably be in Chicago). Please visit <https://www.arl.army.mil/opencampus/> for a list of ARL Centers and also for announcements regarding the open campuses.

DARPA has scheduled some 2019 events, including a proposers' day for "Materials Architectures and Characterization for Hypersonics" and an AI Colloquium. Please visit <https://www.darpa.mil/events> for details.

A reminder that NIH is organizing a Regional Seminar on May 15-17, 2019, when you will have "Unique opportunity to hear the latest NIH grants process and policies directly from over 65 NIH & HHS Program, Grants, Review and Policy presenters...all in a central location. In addition, you have the option to meet with over 35 additional experts representing NIH Institutes and Centers for 15 minute chats. That's over 100 experts available to choose from!" <https://nexus.od.nih.gov/all/2018/10/31/spring-into-action-and-register-for-the-2019-nih-regional-seminar-in-baltimore-today/>

In other news, I was happy to see that some of our graduate students have already taken advantage of the new program to support their travel to present at conferences: <http://grad.mst.edu/currentstudents/travelfund/>

I hope that our faculty will also avail themselves of the new Scholarly Outreach program that provides partial support for making presentations at Universities: <http://sponsoredprograms.mst.edu/media/research/sponsoredprograms/documents/forms/Scholarly%20Outreach%20Program.pdf>

Finally, here is a small piece of information regarding our proposal success: Below is the success rate in the past 4 fiscal years (FY14-17) for our proposals to agencies where we have received \$2M or more. Caveats: some of the grants awarded were not competitive; an assumption was made that proposals submitted in one FY were awarded in the following FY; the success is in terms of total dollars, not proposal

News	1
Recent Awards	
October	3
November	6
Funding Opportunities	9
Upcoming Events	10

Office of the Vice Chancellor of Research FY2018 Summary

663

PROPOSALS SUBMITTED

240

FACULTY & STAFF
RECEIVING AWARDS

\$39M

IN SPONSOR DOLLARS



INDUSTRY FEDERAL STATE OTHER

numbers. I realize these are not always correct, but I hope this data will give you some more information about our success with different agencies.

Dr. Costas Tsatsoulis

	FY15-18 Total Awards (based on FY14-17 proposals)	Success rate
DOD	\$10,854,274	18.2%
US DOT	\$15,043,844	71.8%
NASA	\$6,388,054	33.3%
NSF	\$31,055,392	11.3%
DOE	\$18,571,199	23.4%
DOEduc	\$9,765,836	35.6%
TOTAL	\$104,857,695	18.2%

ON WORKING WITH DARPA

Interested in working on cutting-edge national security research with DARPA? Check out Fedscoop’s article on the topic, featuring advice from DARPA’s own senior adviser for commercial strategy, David Henshall: <https://www.fedscoop.com/how-to-work-with-darpa/>

PIVOT CHANGES WEB ADDRESS

On March 1, Pivot will be changing its web address from pivot.cos.com to pivot.proquest.com. The new “.proquest.com” address is already fully operational. **Addresses ending in “.cos.com” will not automatically redirect to the new address.** Be sure to change any saved links or bookmarks on Pivot by changing the “.cos” extension to “.proquest”.

Office of the VCR HIRES NEW COMPLIANCE MANAGER

Karen Towns recently joined the Office of the Vice Chancellor of Research as the new Compliance Manager. Raised in Hawaii, Karen received two Bachelor of Arts degrees in English and Psychology from the University of Hawai’i and subsequently graduated with honors from the University of North Carolina School of Law. Karen hopes that her legal enforcement experience as an Associate Chief Counsel for the United States Food and Drug Administration will serve her well in her duties as the Compliance Manager for the Office of the Vice Chancellor of Research.

RECENT AWARDS

OCTOBER 2018

PI: *Neil Anderson*

Department: Geosciences & Geological & Petroleum Engineering

Proposal Title: Geophysical Imaging of a sinkhole in Springfield MO

Sponsor: Geoengineers, Inc.

Award: \$2,500

PI: *S. Balakrishnan*

Department: Mechanical & Aerospace Engineering

Proposal Title: Mission Space Grant Consortium

Sponsor: NASA

Award: \$246,010

PI: *Rui Bo*

Department: Electrical & Computer Engineering

Proposal Title: Agent-based Anti-gaming Platform for Wholesale Electricity Market Monitoring and Rule Design Using Big Data Analytics and Computational Intelligence

Sponsor: Department of the Interior, DARPA

Award: \$192,411

PI: *Emily Brickler*

Department: Student Affairs

Proposal Title: Leach Theatre Presenting and Educating Series

Sponsor: NEA Foundation

Award: \$10,000

PI: *Douglas Bristow*

Department: Mechanical & Aerospace Engineering

Proposal Title: CAMT: Boeing 2nd Full Membership

Sponsor: Boeing Company

Award: \$50,000

PI: *Douglas Bristow*

Department: Mechanical & Aerospace Engineering

Proposal Title: CAMT: Boeing Full Membership

Sponsor: Boeing Company

Award: \$50,000

PI: *Douglas Bristow*

Department: Mechanical & Aerospace Engineering

Proposal Title: CAMT: LMI Aerospace Inc. Membership

Sponsor: LMI Aerospace Inc

Award: \$50,000

PI: *Douglas Bristow*

Department: Mechanical & Aerospace Engineering

Proposal Title: CAMT: Bodine Aluminum Inc. Membership

Sponsor: Boding Aluminum Inc.

Award: \$50,000

PI: *Douglas Bristow*

Department: Mechanical & Aerospace Engineering

Proposal Title: CAMT: DMG MORI Advanced Solutions Membership

Sponsor: DMG Advanced Solutions, Inc.

Award: \$15,000

PI: *Richard Brow*

Department: Materials Science & Systems Engineering

Proposal Title: Corning Fellowship - Paul Porter

Sponsor: Corning, Inc.

Award: \$50,000

RECENT AWARDS

OCTOBER 2018

PI: Joel Burken

Department: Civil, Architectural, & Environmental Engineering

Proposal Title: Collaborative Data Assessment & Phytoforensic Analysis for Organic Leachate Pollutants

Sponsor: US Forest Service

Award: \$240,000

PI: K. Chandreshekhara

Department: Mechanical & Aerospace Engineering

Proposal Title: Thin-Ply Composite Technology and Application

Sponsor: Technical Data Analysis, Inc

Award: \$37,500

PI: K. Chandreshekhara

Department: Mechanical & Aerospace Engineering

Proposal Title: Investigation of line-speed and product performance of pultruded soy-based polyurethane composites

Sponsor: Smith Bucklin and Associates

Award: \$75,000

PI: Genda Chen

Department: Civil, Architectural, & Environmental Engineering

Proposal Title: FHWA Unmanned Aerial System Tech Brief Development and Every Day Counts Round 5 Supports

Sponsor: Iowa State University

Award: \$21,577

PI: Genda Chen

Department: Civil, Architectural, & Environmental Engineering

Proposal Title: Magnet-assisted Fiber Optic Sensing for Internal and External Corrosion-induced Mass Losses of Metal Pipelines under Operation Conditions

Sponsor: Department of Transportation

Award: \$299,988

PI: Jun Fan

Department: Electrical & Computer Engineering

Proposal Title: CEMC Membership Agreement for Boeing

Sponsor: Boeing Company

Award: \$70,000

PI: Jie Huang

Department: Electrical & Computer Engineering

Proposal Title: Probing Challenges in Pressure with Sub-pascal Resolution Using an Optical Fabry-Perot Interferometer

Sponsor: Institute of Electrical and Electronics Engineering

Award: \$15,000

PI: Kamal Khayat

Department: Civil, Architectural, & Environmental Engineering

Proposal Title: Performance of Synthetic Fiber-Reinforced Concrete with Adapted Rheology

Sponsor: GCP Applied Technologies

Award: \$75,000

PI: Chang-Soo Kim

Department: Electrical & Computer Engineering

Proposal Title: Smart sensor bandage for ulcer monitoring

Sponsor: Stoecker & Associates, Inc.

Award: \$120,950

RECENT AWARDS

OCTOBER 2018

PI: *Robert Landers*

Department: Mechanical & Aerospace Engineering

Proposal Title: IPA Assignment for Dr. Robert Landers to NSF CMMI

Sponsor: NSF

Award: \$5,825

PI: *Johnny Lewis*

Department: RPDC Misc. Instruction

Proposal Title: Leadership Specialist

Sponsor: MO Dept. of Education

Award: \$22,510

PI: *Vadym Mochalin*

Department: Chemistry

Proposal Title: Characterization, purification, Chemical Modification and Development of Nanodiamond Particles (ND) for ND-Polymer Composites

Sponsor: Daicel Corp

Award: \$210,120

PI: *Matthew O'Keefe*

Department: Materials Science & Systems Engineering

Proposal Title: Development and Evaluation of Non-Chromate LHE ZnNi Passivations for DOD Electrical Connectors

Sponsor: US Army Corps of Engineers

Award: \$828,001

PI: *Henry Pernicka*

Department: Mechanical & Aerospace Engineering

Proposal Title: Experimental Demonstration and System Analysis for Plasmonic Force Propulsion

Sponsor: NASA Goddard Space Flight Center

Award: \$49,618

PI: *David Pommerenke*

Department: Electrical & Computer Engineering

Proposal Title: CEMC Membership Agreement for Applied 2-ESD

Sponsor: Apple Computer, Inc.

Award: \$60,000

PI: *Honglan Shi*

Department: Chemistry

Proposal Title: Single Particle ICP-MS Methods for Nanoparticles Fate in Biological Samples: Methods Transformation and Optimization with a New Model of ICP-MS Instrument, Phase I

Sponsor: Pegasus

Award: \$11,250

PI: *Honglan Shi*

Department: Chemistry

Proposal Title: Method Development/Optimization to Enhance the Potable GC applications

Sponsor: Nanova Environmental, Inc.

Award: \$33,761

PI: *Honglan Shi*

Department: Chemistry

Proposal Title: Green Antibiotic Testing and Validation

Sponsor: Invogen, Inc.

Award: \$36,571

PI: *Jeanne Stanley*

Department: Arts, Languages, & Philosophy

Proposal Title: Creating a platform for understanding between cultures via Anon(ymous)

Sponsor: Missouri Humanities Council

Award: \$2,500

RECENT AWARDS

OCTOBER 2018

PI: *Risheng Wang*

Department: Chemistry

Proposal Title: New Material Characterization by SPME-GC-MS and OEA

Sponsor: Brewer Science Corporation

Award: \$3,513

PI: *Jeremey Watts*

Department: Materials Science & Systems Engineering

Proposal Title: Improving the Fracture Toughness of Friction Stir Welding Tools

Sponsor: Office of Naval Research

Award: \$67,500

PI: *Philip Whitefield*

Department: Chemistry

Proposal Title: Preparation and Production of an nvPM eLMS course

Sponsor: Booz Allen Hamilton

Award: \$88,000

PI: *Reza Zoughi*

Department: Electrical & Computer Engineering

Proposal Title: NSTRF For Katelyn Brinker: 17-17 Phase B-0023: Passively-Coded Embedded Wideband Microwave Sensors--Year 2 Fellowship Funds

Sponsor: NASA Goddard Space Flight Center

Award: \$39,813

PI: *Reza Zoughi*

Department: Electrical & Computer Engineering

Proposal Title: Accurate & Field Deployable Microwave Nondestructive Evaluation of Ablatives

Sponsor: Texas Research Institute at Austin

Award: \$44,000

NOVEMBER 2018

PI: *Laura Bartlett*

Department: Materials Science & Engineering

Proposal Title: Understanding the effect of steel composition on mechanical properties of hot rolled high manganese and aluminum steels for military armor

Sponsor: American Lightweight Materials Manufacturing Innovation Institute

Award: \$79,633

PI: *Aleksandr Chernatynskiy*

Department: Physics

Proposal Title: Irradiation Behavior of Piezoelectric Materials for Nuclear Research Centers

Sponsor: Ohio State University

Award: \$89,004

PI: *Cihan Dagli*

Department: Engineering Management and Systems Engineering

Proposal Title: Senior Design Project: 2018 MARSOC TE 3 Portable Translator

Sponsor: Stevens Institute of Technology

Award: \$2,500

PI: *Cihan Dagli*

Department: Engineering Management and Systems Engineering

Proposal Title: Senior Design Project: 2018 MARSOC TE 2 Speech Translation

Sponsor: Stevens Institute of Technology

Award: \$2,500

PI: *William Fahrenholtz*

Department: Materials Science & Engineering

Proposal Title: Detonation Synthesis of Nanomaterials

Sponsor: Army Research Office

Award: \$40,000

RECENT AWARDS

NOVEMBER 2018

PI: *Jun Fan*

Department: Electrical & Chemical Engineering
Proposal Title: CEMC Membership Agreement for Google
Sponsor: Google, LLC.
Award: \$60,000

PI: *Ian Ferguson*

Department: Electrical & Chemical Engineering
Proposal Title: Proof of Concept for Isolated Collection and Biasing System Solar Cells
Sponsor: Columbus Photovoltaics
Award: \$280,794

PI: *Gregory Hilmas*

Department: Materials Science & Engineering
Proposal Title: Intrinsic Thermal Properties of Boride Ceramics—NSSMS Conference Travel
Sponsor: Office of Naval Research
Award: \$67,500

PI: *Catherine Johnson*

Department: Mining & Nuclear Engineering
Proposal Title: Post Blast Forensics Training for Ft. Leonard Wood USAMPS
Sponsor: Department of Defense
Award: \$32,040

PI: *Amardeep Kaur*

Department: Electrical & Computer Engineering
Proposal Title: EAGER: I-Corps Tams Program: Autonomous Robotic mower applied to Labor Shortage in Landscaping
Sponsor: NSF
Award: \$50,000

PI: *Edward Kinzel*

Department: Mechanical & Aerospace Engineering
Proposal Title: Dimensional control and materials development for additive manufacturing of glass
Sponsor: D. Swarovksi KG
Award: \$58,648

PI: *Robert Landers*

Department: Mechanical & Aerospace Engineering
Proposal Title: IPA Assignment for Dr. Robert Landers to NSF CMMI
Sponsor: NSF
Award: \$5,825

PI: *FueWen Liou*

Department: Mechanical & Aerospace Engineering
Proposal Title: Phase I: Optimized Build Plate Design Tool for Metal Laser Powder Bed Additive
Sponsor: Product Innovation and Engineering
Award: \$50,000

PI: *FueWen Liou*

Department: Mechanical & Aerospace Engineering
Proposal Title: Phase II: Onsite Structural Restoration Methods for Aircraft Components
Sponsor: Product Innovation and Engineering
Award: \$100,000

PI: *David Lipke*

Department: Materials Science & Engineering
Proposal Title: Ultra-High Temperature Oxidation Resistant Nanocrystalline Oxides Stabilized by Carbon Networks
Sponsor: Office of Naval Research
Award: \$156,421

RECENT AWARDS

NOVEMBER 2018

PI: *Ronald O'Malley*

Department: Materials Science & Engineering
Proposal Title: Mold Heat Transfer Analysis and Continuous Cast Practice Development for Specialty Steel Grades at ATI Flat Rolled Products Brackenridge, PA

Sponsor: ATI Flat Rolled Products

Award: \$280,000

PI: *Ruwen Qin*

Department: Engineering Management and Systems Engineering
Proposal Title: Interdisciplinary Fellowship Program in Engineering Management and Systems Engineering for Rebuilding Infrastructure

Sponsor: Department of Education

Award: \$199,000

PI: *Sahra Sedighsarvestani*

Department: Electrical & Computer Engineering
Proposal Title: A Doctoral Program on Data-Enabled Assurance of Electromagnetic Compatibility

Sponsor: Department of Education

Award: \$199,000

PI: *Lesley Sneed*

Department: Civil, Architectural, & Environmental Engineering

Proposal Title: Investigation of the Performance of Dowels in Concrete Slabs

Sponsor: SIKA Corporation

Award: \$24,000

PI: *Daniel Tauritz*

Department: Computer Science
Proposal Title: LANL/Missouri University of Science and Technology Cyber Security Sciences Institute

Sponsor: Los Alamos National Laboratory

Award: \$16,000

PI: *Jeremy Watts*

Department: Materials Science & Engineering
Proposal Title: Improving the Fracture Toughness of Friction Stir Welding

Sponsor: Office of Naval Research

Award: \$52,500

PI: *Donald Wunsch*

Department: Electrical & Computer Engineering
Proposal Title: M2L for L2M: Mixed-Modality Learning for Lifelong Learning Machines

Sponsor: Department of Defense

Award: \$202,000

SELECTED FUNDING OPPORTUNITIES

Department of Defense (DoD)

[Photonics in the Package of Extreme Scalability \(PIPES\)](#)

Sponsor ID: HR001119S0004

Application Due: 03-01-19

[DARPA Biological Technologies](#)

Sponsor ID: HR001118S0041

Full Proposal Due: 04-25-19

Department of Commerce (DoC)

[Regional Ocean Acidification Observing Optimization Study \(OOS-OA19\)](#)

Sponsor ID: NOAA-OAR-OAP-2019-2005791

Letter of Intent Due: 03-04-19

National Science Foundation (NSF)

[Advanced Computing Systems & Services: Adapting to the Rapid Evolution of Science and Engineering Research](#)

Solicitation ID: 19-534

Full Proposal Due: 03-04-19

[NSF Scholarships in Science, Technology, Engineering, and Mathematics \(S-STEM\)](#)

Solicitation ID: 17-527

Full Proposal Due: 03-27-19

[Industry-University Cooperative Research Centers Program \(IUCRC\)](#)

Solicitation ID: 17-516

Preliminary Proposal Due: 04-17-19

[Expeditions in Computing](#)

Solicitation ID: 18-528

Full Proposal Due: 04-24-19

[NSF-CBMS Regional Research Conferences in the Mathematical Sciences](#)

Solicitation ID: 13-550

Full Proposal Due: 04-26-19

Department of Defense (DoD)

[FY 2020 Strategic Environmental Research and Development Program Exploratory Development \(SEED\) Solicitation](#)

Full Proposal Due: 03-05-19

National Lubricating Grease Institute (NLGI)

[National Lubricating Grease Institute \(NLGI\) 2019 Research Grant](#)

Application Due: 03-15-19

American Chemical Society (ACS)

[ACS Petroleum Research Fund \(ACS PRF\) Grants](#)

Application Due: 03-16-19

SELECTED EVENTS

Air Force Office of Scientific Research (AFOSR)

[2019 2nd Semiannual Government Workshop on 2D Materials](#)

March 22, 2019; Arlington, VA

[2019 Workshop on High-Pressure Spectroscopy of HC Combustion](#)

April 15-16, 2019; Arlington, VA

[2019 Multifunctional Materials for Defense Workshop](#)

August 26-30, 2019; Arlington, VA

[2019 Radiation-Electron Interaction Workshop](#)

October 7-9, 2019; Arlington, VA

[2019 Radiation-PH Interaction \(TBD\) Workshop](#)

October 22-24, 2019; Arlington, VA

[2019 Washington DC Government Workshop on 2D Materials Beyond Graphene](#)

TBD

Defense Advanced Research Projects Agency (DARPA)

[Artificial Intelligence Colloquium](#)

March 6-7, 2019; Alexandria, VA

[Spectrum Collaboration Challenge](#)

October 23, 2019; Los Angeles, CA

National Institutes for Health (NIH)

[NIH Regional Seminar on Program Funding and Grants Administration](#)

May 15-17, 2019; Baltimore, MD

National Science Foundation (NSF)

[Spring 2019 Grants Conference](#)

May 20-21, 2019; Los Angeles, CA

FUNDING SEARCH ENGINES

Federal Grants World

<https://grants.gov>

PIVOT—Funding Opportunity Database

<https://pivot.proquest.com>

National Science Foundation

<https://www.nsf.gov/funding/index.jsp>