

# BULLETIN

**CREATIVITY • INNOVATION • SERVICE**

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**VOLUME 2, NUMBER 4**

## **Fall 2019 Faculty Research and Creative Activity Committee (FRCAC) Recipients**

Congratulations to the Fall 2019 Faculty Research and Creative Activity Committee (FRCAC) recipients.

The committee received a \$8,000 funding increase for the 2019–20 fiscal year from the Provost's Office, resulting in the ability to fund an extra proposal this application cycle.

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## UPCOMING FUNDING OPPORTUNITIES

### National Science Foundation's Improving Undergraduate STEM Education: Education and Human Resources (IUSE: EHR)

Deadline: Varies depending on track  
(December / February)

[nsf.gov/pubs/2019/nsf19601/nsf19601.htm](https://www.nsf.gov/pubs/2019/nsf19601/nsf19601.htm)

IUSE: EHR also seeks to support projects that have high potential for broader societal impacts, including improved diversity of students and instructors participating in STEM education; professional development for instructors to ensure adoption of new and effective pedagogical techniques that meet the changing needs of students; and projects that promote institutional partnerships for collaborative research and development. IUSE: EHR especially welcomes proposals that will pair well with the efforts of NSF INCLUDES ([nsf.gov/news/special\\_reports/nsfincludes/index.jsp](https://www.nsf.gov/news/special_reports/nsfincludes/index.jsp)) to develop STEM talent from all sectors and groups in our society.

### National Endowment for the Humanities (NEH): Digital Humanities Advancement Grants

Deadline: Jan. 15

[neh.gov/grants/odh/digital-humanities-advancement-grants](https://www.neh.gov/grants/odh/digital-humanities-advancement-grants)

Digital Humanities Advancement Grants (DHAG) support innovative, experimental, and/or computationally challenging projects at different stages throughout their lifecycles, from early start-up phases through implementation and sustainability. Experimentation, reuse, and extensibility are hallmarks of this program, leading to innovative work that can scale to enhance scholarly research, teaching, and public programming in the humanities. This program is offered twice per year. Proposals are welcome for digital initiatives in any area of the humanities.

### National Endowment for the Humanities (NEH): Public Scholars

Deadline: Feb. 5

[neh.gov/grants/research/public-scholar-program](https://www.neh.gov/grants/research/public-scholar-program)

The Public Scholars program supports the creation of well-researched nonfiction books in the humanities written for the broad public. It does so by offering grants to individual authors for research, writing, travel, and other activities leading to publication. Writers with or without an academic affiliation may apply, and no advanced degree is required. The program is intended to: a) encourage non-academic writers to deepen their engagement with the humanities by strengthening the research underlying their books; and b) encourage academic writers in the humanities to communicate the significance of their research to the broadest possible range of readers. NEH especially encourages applications to this program from independent writers, researchers, scholars, and journalists.

### National Institutes of Health (NIH) Small Research Grant Program–R03

Deadline: Feb. 16

[grants.nih.gov/grants/guide/pa-files/PA-19-052.html](https://grants.nih.gov/grants/guide/pa-files/PA-19-052.html)

The NIH Small Research Grant Program supports discrete, well-defined projects that realistically can be completed in two years and that require limited levels of funding. This program supports different types of projects including, but not limited to:

- Pilot or feasibility studies
- Secondary analysis of existing data
- Small, self-contained research projects
- Development of research methodology
- Development of new research technology

### National Institutes of Health (NIH) Exploratory/Developmental Grant–R21

Deadline: Feb. 16

[grants.nih.gov/grants/guide/pa-files/PA-19-053.html](https://grants.nih.gov/grants/guide/pa-files/PA-19-053.html)

The NIH Exploratory/Developmental Grant supports exploratory and developmental research projects by providing support for the early and conceptual stages of these projects. These studies may involve considerable risk, but may lead to a breakthrough in a particular area or to the development of novel techniques, agents, methodologies, models, or applications that could have a major impact on a field of biomedical, behavioral, or clinical research.

### Academic Research Enhancement Award (AREA)–R15

Deadline: Feb. 25

[nigms.nih.gov/research/mechanisms/pages/area.aspx](https://nigms.nih.gov/research/mechanisms/pages/area.aspx)

The purpose of this Academic Research Enhancement Award (AREA) for Undergraduate-Focused Institutions is to support small scale research grants at institutions that do not receive substantial funding from the NIH, with an emphasis on providing biomedical research experiences primarily for undergraduate students and enhancing the research environment at these applicant institutions.

## HERE TO HELP!

For assistance with finding and preparing for funding opportunities, please contact your ORSP pre-award specialist:

### Samantha Cantrell

[samantha.cantrell@mtsu.edu](mailto:samantha.cantrell@mtsu.edu)

615-494-8751

*Behavioral and Health Sciences, Liberal Arts, Media and Entertainment, Jones College of Business, Walker Library, University College, non-academic units*

### Jolene Gordon

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*Basic and Applied Sciences, College of Education*

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## CONGRATULATIONS FALL 2019 FRCAC GRANT RECIPIENTS!

| NAME           | DEPARTMENT                         | COLLEGE                        | PROPOSAL TITLE   |
|----------------|------------------------------------|--------------------------------|--|
| Jessica Arbour | Biology                            | Basic and Applied Sciences     | Analyzing the Functional Morphology of Darters (Percidae: Etheostomatinae) Using Micro-computed Tomography                 |
| Adam Clark     | Music                              | Liberal Arts                   | Adam Clark, Solo Piano CD Recording - "Fantasy in F-sharp"   |
| Latoya Eaves   | Global Studies and Human Geography | Liberal Arts                   | Social and Economic Impacts of Regional Development in Upstate South Carolina  |
| Grant Gardner  | Biology                            | Basic and Applied Sciences     | Small Group Social Network Analysis  |
| Ying Jin       | Psychology                         | Behavioral and Health Sciences | A longitudinal analysis of high school STEM teacher persistence and effectiveness  |
| Sungyoon Lee   | Elementary and Special Education   | Education                      | Learner-Generated Drawing in Science Text Reading: The Moderating Effects of Support Level and Spatial Information in Text |
| David Nelson   | Biology                            | Basic and Applied Sciences     | Temporal Integration of Mitochondrial Stress Signals by the PINK: Parkin Mitophagy Pathway                                 |
| Suman Neupane  | Physics and Astronomy              | Basic and Applied Sciences     | Effects of different metal catalysts on the yield of carbon nanotubes synthesized directly on alumina powder               |

## FROM THE BIBLIOGRAPHER'S DESK

By Mary Ellen Sloane, Science Librarian

This is part 1 of 3

### Welcome

All of us at the University consume and/or create scholarly works. The way we create and share new knowledge is changing rapidly due to many factors. This three-part series will briefly profile current initiatives and issues that impact research and the dissemination of research.

### NIH Data Management and Sharing Activities Related to Public Access and Open Science

**National Institutes of Health Office of Science Policy.** (2019) *NIH data management and sharing activities related to public access and open science*. Retrieved from [osp.od.nih.gov/scientific-sharing/nih-data-management-and-sharing-activities-related-to-public-access-and-open-science](https://osp.od.nih.gov/scientific-sharing/nih-data-management-and-sharing-activities-related-to-public-access-and-open-science).

Funding agencies, organizations, universities, and journals have been refining policies and guidelines for data-sharing over the past several years. Principal investigators must now understand and comply with expectations to share research data, along with more traditional forms of scholarly communication. The NIH policy is noteworthy because it recognizes and accounts for the sensitive nature of much biomedical research data.

NIH researchers are invited to submit data on the NIH Figshare instance. Find more information about this collaboration at [nih.figshare.com/f/faq](https://nih.figshare.com/f/faq). Also see the NIH Strategic Plan for Data Science at [datascience.nih.gov/strategicplan](https://datascience.nih.gov/strategicplan).

Libraries worldwide have been very active in developing support systems, including information standards, to help researchers and funders meet the goal of improving access to research data and publications. Trends and norms in dissemination requirements established by large funders, like NIH, will extend to other disciplines over time.

You may share your comments with me at [maryellen.sloane@mtsu.edu](mailto:maryellen.sloane@mtsu.edu)

## Grant Writing Enhancement Program

Friendly reminder for all GEPers: Professional Development Plans are due by Friday, Jan. 10. Please email to [Jamie.Burriss@mtsu.edu](mailto:Jamie.Burriss@mtsu.edu).

### WORKSHOPS AND TRAINING

The Office of Research and Sponsored Programs (ORSP) plans to offer the following campus training workshops for the remainder of the 2019–20 academic year.

**January:** Working with Federal Sponsors

**February:** Scholarship and Cybersecurity; Working with Tennessee Agencies

**March:** Entrepreneurship

**April:** Intellectual Property, Technology Transfer, and Commercialization

**Summer 2020:** Working with Foundations

## MARK YOUR CALENDARS!

### RESCHEDULED!

**Working with Federal Sponsors—Department of Education, National Science Foundation, Department of Agriculture**

Friday, Jan. 24, 1:30–2:30 p.m., Wisner-Patton Science 102

Please [register here](#) in advance.

### Expert Panel:

Associate Professor **Song Cui** (MTSU School of Agriculture) earned his B.S. in Agricultural Science from Lanzhou University (China) in 2006 and his Ph.D. in Crop Science from Texas Tech University in 2011.

He is a broadly trained agronomist with expertise in big data algorithms, crop physiology, forage production, simulation modeling, soil and boundary layer flux (CO<sub>2</sub>, water vapor, and greenhouse gases) measurements, and large-scale agroecosystem studies addressing issues such as water sustainability and climate change. Particularly, Cui is interested in integrating machine learning techniques into advanced agronomic research domains, including remote sensing, bioinformatics, meta-analysis, and plant growth/ecological modeling.

Professor **Greg Rushton** (MTSU Department of Chemistry) is also director of the Tennessee STEM Education Center (TSEC) at MTSU. He has held faculty appointments previously at State University of New York–Stony Brook on Long Island and Kennesaw State University, just north of Atlanta. Rushton earned his undergraduate degree in Chemistry at the University of Southern California and graduate degrees in Science Education and Physical Organic Chemistry at the “other” USC—the University of South Carolina. His group has current projects in both K–12 STEM education and in higher education, which are funded by the National Science Foundation, the Institute of Education Sciences, and the Howard Hughes Medical Institute.

**Thank you to everyone who joined us for the Qualitative and Quantitative Research Methods Workshop presented by SAGE Publishing on Nov. 22. We had a great turnout at both the faculty and student sessions.**



**Jamie Burriss, Ph.D.,  
Program Manager**

On behalf of the Office of Research and Sponsored Programs (ORSP), I would like to introduce our new program assistant, Casey Penston. She has a decade of experience in the fields of environmental compliance and permitting, administration, and ecological restoration. Penston holds a Bachelor of Science in Biology and has completed graduate coursework in coral reef research. The ORSP is pleased to bring her passion for inspiring exploration of the human relationship with nature into our work with students and faculty. Penston and her family have made Murfreesboro their home since 2012.

She will be assisting with URECA, FRCAC, GEP, trainings and workshops, and communications, as well as Undergraduate Research Center activities including Posters at the Capitol, Scholars Week, and SOAR.

## UNDERGRADUATE RESEARCH CENTER

### URECA Grant Funding

**Did you know that your students can get paid to do research?** The Office of Research and Sponsored Programs administers University funds to directly support mentored undergraduate research through Undergraduate Research Experience and Creative Activity (URECA) grants. Awards range from \$500 for beginners to \$3,500 for experienced researchers.

**Spring 2020 Deadline: Thursday, Jan. 30, by 4:30 p.m.**

Check out [mtsu.edu/urc/ureca/index.php](https://mtsu.edu/urc/ureca/index.php) for more information.

### News from SOAR



The founding members of the newly formed student organization known as SOAR (Student Organization for the Advancement of Research) hosted their first business meeting in the MT Center on Nov. 20. David Butler, vice provost for research, and Jeff Porter, director of the Office of Research and Sponsored Programs, joined the members for lunch and a conversation surrounding the importance of undergraduate research and creative activity.

## News from SOAR (continued)



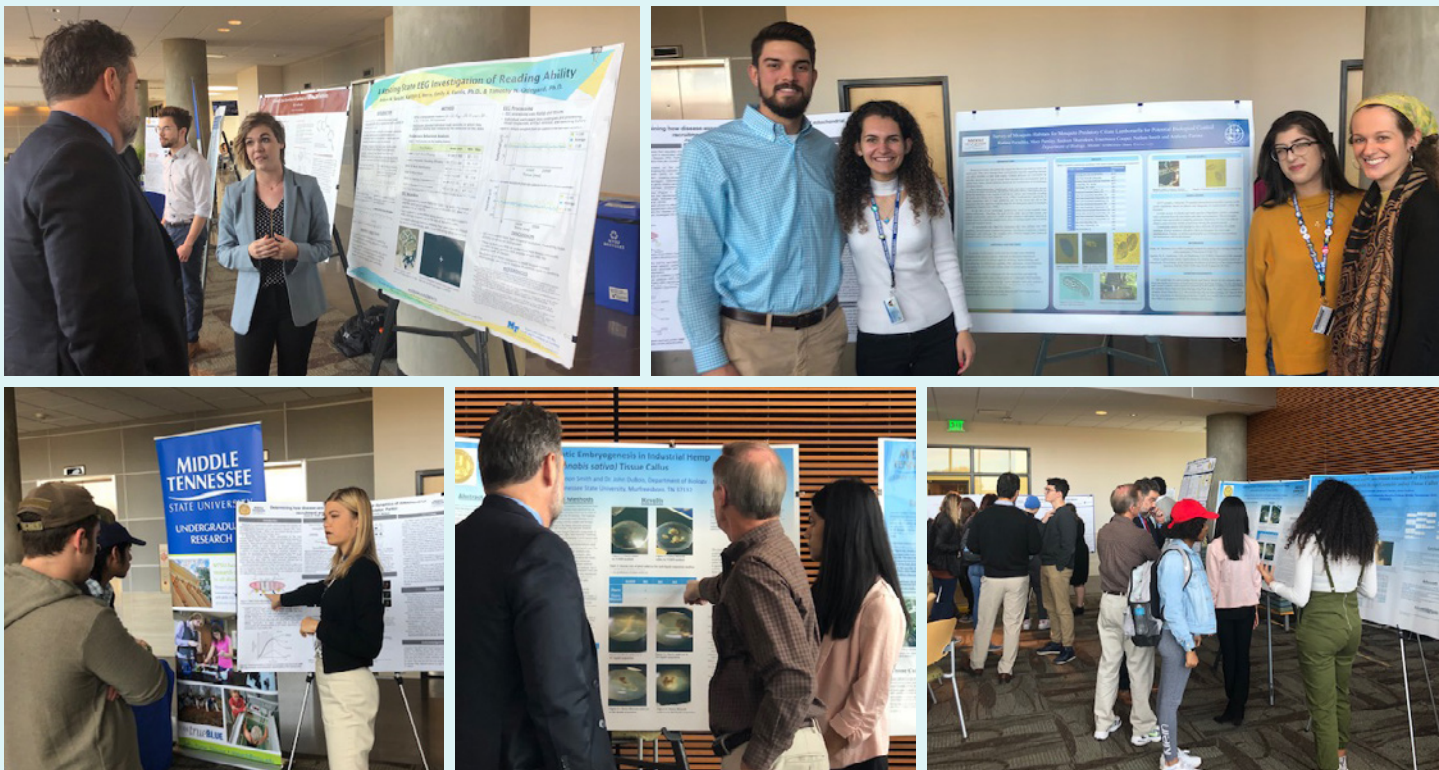
Top row (l-r), Jeff Porter, Jewel Galloway, Kaitlyn Berry, Jiwoo Park, Jared Frazier, Nathan Smith, Gabriella Morin, Mary Parsley, Radina Porashka, David Butler, and Jamie Burriss; bottom row, Robyn Sessler, Javier Hernandez, Kayley Stallings, and Sauleen Shamdeen

SOAR members also hosted their first event, Snacks and Abstracts, on Nov. 22. Undergraduate students crafted their abstract submissions for the National Conference on Undergraduate Research, which takes place in Bozeman, Montana, in Spring 2020. Heather Dray with SAGE Publishing joined the group for fine-tuning and feedback.

If you have a student interested in joining SOAR, please contact Jamie Burriss at [Jamie.Burriss@mtsu.edu](mailto:Jamie.Burriss@mtsu.edu).

## Fall Undergraduate Research Open House

The Undergraduate Research Center hosted its second annual Open House on Nov. 15, showcasing poster presentations by recent Undergraduate Research Experience and Creative Activity (URECA) recipients. Attendees had an opportunity to talk one-on-one with student researchers and learn about their experiences in mentored research.



# Posters at the Capitol

## **SAVE THE DATE! Posters at the Capitol will take place on Wednesday, Feb. 26.**

Posters at the Capitol is the Undergraduate Research Center's most prestigious annual event, during which selected MTSU students present their research to state legislators at the state capitol alongside undergraduate representatives from other participating Tennessee universities.

Mentoring a student who is interested in presenting? Please visit [mtsu.edu/urc/posters.php](https://mtsu.edu/urc/posters.php) to sign up.

### **Important Dates:**

Applications close: Dec. 8

Committee reviews applications: Dec. 9–15

Selected participants informed: Dec. 16

### **Checklist of information needed to submit an abstract for Posters at the Capitol:**

- Presenter's major, classification, hometown
- Faculty mentor's name
- Poster title
- Abstract (150–200 words)

To submit an abstract, please visit our application site at [mtsuorsp.awardsplatform.com](https://mtsuorsp.awardsplatform.com).

Participating Universities include Austin Peay State University, East Tennessee State University, Middle Tennessee State University, Tennessee State University, Tennessee Technological University, University of Memphis, the University of Tennessee–Chattanooga, the University of Tennessee–Knoxville, and the University of Tennessee–Martin.

## **TRAVEL SUPPORT FOR UNDERGRADUATE RESEARCH**

The Undergraduate Research Center strives to support students in dissemination of their research. Undergraduates who are accepted to present their research at a regional, state, national, or international conference are eligible to receive travel funding. Support includes:

- \$400 yearly maximum for domestic travel and \$500 yearly maximum for international travel
- Awarded travel funds payable on a **reimbursable basis only**

Visit [mtsu.edu/urc/travel.php](https://mtsu.edu/urc/travel.php) for more information.