

# NEWS FROM THE UNDERGRADUATE RESEARCH CENTER

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## You are Invited! Join us for the Research and Creative Activity Exposition featuring an Exciting Announcement from Vice Provost, Dr. David Butler

All students, faculty, and staff are invited to join us for the 16th annual Research and Creative Activity Exposition on Friday, March 25, from 10:30am-3:00pm in the Student Union Ballroom.

The event will feature more than 160 research posters will be presented by over 250 students representing a variety of academic disciplines. There will be two poster sessions, one in the morning, and one in the afternoon to accommodate schedules.

The lunch reception will showcase several creative performances from students in recording industry, music, and theatre from 12:00-1:00pm.

Dr. David Butler, Vice Provost for Research, will be sharing a special announcement at 2:30pm, prior to the awards ceremony. Please join us as we celebrate our many successes in research!

Be sure to check our [website](#) for the most up-to-date timeline and listing of events.



**SCHOLARS  
WEEK 2022**

## URC'S MISSION

The Undergraduate Research Center's (URC) mission is to be the central hub for communication about undergraduate research grant programs and other related opportunities on and off campus, to distribute university funds for undergraduate research and creative projects, and to promote dissemination of results through travel grants and by offering opportunities for students to present their research findings.

# OUT NOW: THE URC LAB DIRECTORY

**State of the Art MTSU Laboratories, all in one place.**

The URC is proud to announce our new laboratory directory. This resource will allow students to learn about excellent MTSU labs across several disciplines. Both new and experienced student researchers can utilize this document to find research positions, set up collaborations with other labs, or to establish a specific thesis mentor.

This directory is also a resource for faculty members seeking student researchers. Each lab's accomplishments, publications, and goals are detailed within the pages of this directory.

This directory contains laboratory descriptions, the key skills necessary for each lab position, and semester openings for several labs, divided by specific college. To access the directory, click the button on the right or scan the QR code.

PDF copies of the directory are also available to print.

Email Dara Zwemer, the URC Secretary and Social Media Ambassador, with questions about the directory or for a PDF: [duz2a@mtmail.mtsu.edu](mailto:duz2a@mtmail.mtsu.edu)



[CLICK HERE](#)



# Posters at the Capitol MTSU Cohort 2022



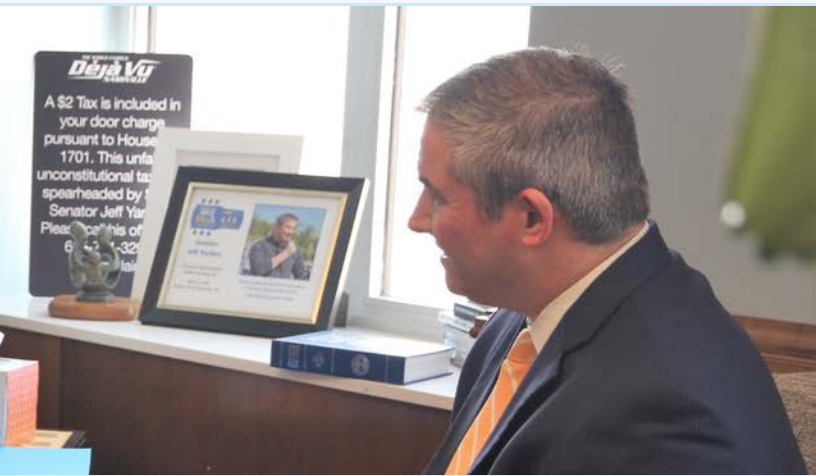
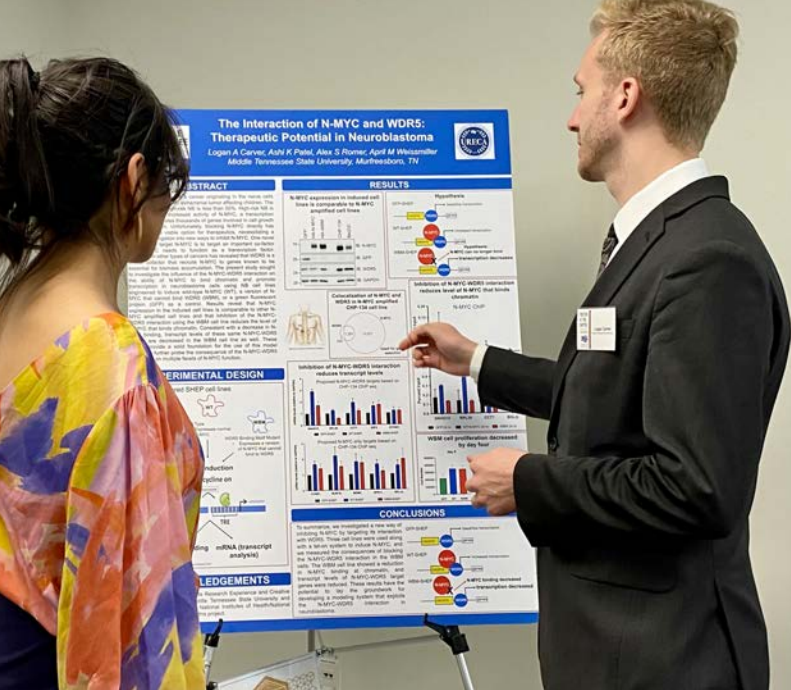
## We are so proud of our student representatives at Posters for the Capitol!

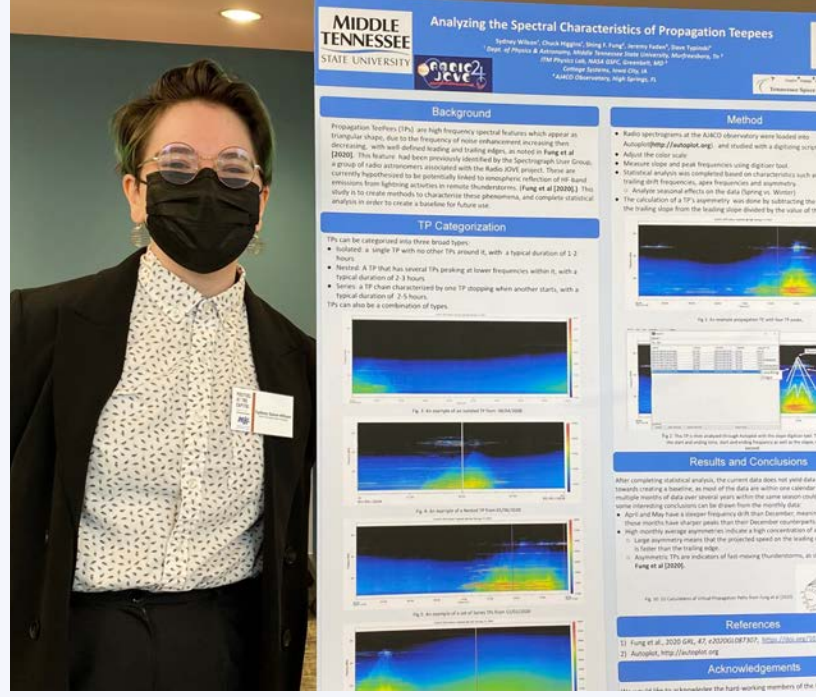
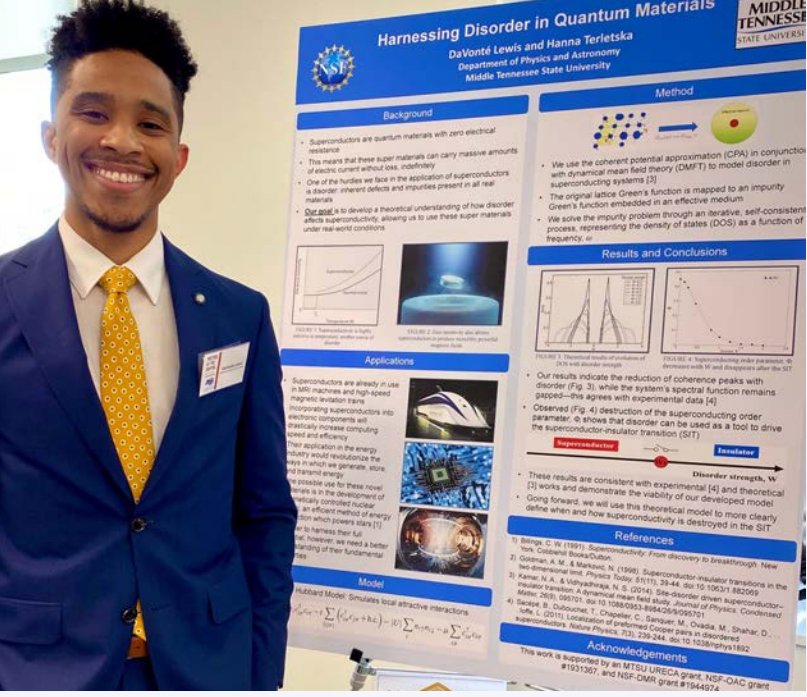
We were well represented by Hunter Brady, Logan Carver, Maria Clark, Davonte Lewis, Sophia Taylor, Carina Vazquez, and Quinn Wilson, who all traveled to the state capitol alongside select students from Universities in Tennessee.

These students were able to present to and meet with Tennessee Representatives. Our presenters spoke on topics ranging from cancer treatments, superconductors, radio astronomy, and more!

The following pages show just a few highlights from this prestigious poster session! [CLICK HERE](#) to read an article about the event.







**POSTERS AT THE CAPITOL**

# What is the Student Organization for the Advancement of Research? AKA "SOAR"



SOAR is a student organization comprised of students who are committed to developing and sustaining an active and successful undergraduate research environment at MTSU.

## Why Join?

1. It is a super cool group of students!
2. Sometimes we have snacks. If we are really lucky, we get lunch.
3. We host fun and educational events.
4. You will meet other students who are passionate about research and creative activity at MTSU.
5. Lots of opportunities for growth and professional development.
6. The option to graduate with distinction in undergraduate research!
7. And many more reasons....

*Thank You*

## FOR A SUCCESSFUL SPRING MEETING!

### SPRING MEETING UPDATES:

- We are looking for volunteers for Scholars Week. Contact Casey [ [Casey.Penston@mtsu.edu](mailto:Casey.Penston@mtsu.edu) ] if interested.
- SOAR Ambassador applications will open in April!
- Don't forget to submit your application for graduation distinction.



# FEATURED SOAR STUDENT



## PRANATHI SHANKAR

**Major:** Psychology

**Faculty Mentor:** Dr. Jessica Gaby

### **Current Research Focus:**

Can priming information about body odor affect perceptions of competence in a virtual interview?

### **Project Description:**

This project is about observing how providing information about someone could impact their perception of the person. We essentially aim to identify if just by suggesting someone has a certain type of body odor, people's perception about them could be impacted in a virtual interview setting.

### **Why does this topic interest you?**

The idea of learning that before we even know a person, we have a certain type of image about them which could impact our interaction with them, was very interesting to me. This project has also allowed me to learn how much details we unconsciously observe about a person when we know nothing about them to create a mental database about the person.

### **What are your professional aspirations?**

I'm currently applying to doctoral programs in Counseling Psychology, and I hope to become a counseling psychologist after completing that.



### **Do you have any advice for future researchers?**

My one advice would be to not be discouraged no matter what results your research yields. Every piece of data you receive tells you something, it may be not what you were investigating but it still useful information.

# UNDERGRADUATE RESEARCH GRADUATION DISTINCTION



## LEVELS OF RECOGNITION

### Distinction in Undergraduate Research

- Students receive a dark blue, light blue, and white cord

### Scholar Distinction in Undergraduate Research

- Students receive a dark blue, light blue and white cord AND a medallion (see image in the upper right corner)

## DISTINCTION CRITERIA

### Distinction in Undergraduate Research

\*Students must fulfill all requirements

- 1 Successful completion of an Assistant level URECA project - 50 hours of research or more.
- 2 Poster presentation or creative performance at one of the URC's signature events: Fall Open House, Scholars Week, or Summer Research Celebration.
- 3 Active participation for at least one academic year in the Student Organization for the Advancement of Research (SOAR).
- 4 Endorsement by URECA faculty mentor.

### Scholar Distinction in Undergraduate Research

\*Students must fulfill all requirements

- 1 Successful completion of a Scholar level URECA project - 100 hours of research or more.
- 2 Poster presentation or creative performance at one of the URC's signature events: Fall Open House, Scholars Week, or Summer Research Celebration.
- 3 Active participation for at least one academic year in the Student Organization for the Advancement of Research (SOAR).
- 4 Poster or presentation at the National Conference on Undergraduate Research or published in a peer-reviewed academic journal.
- 5 Endorsement by URECA faculty mentor.

**Graduating in May?**

**Deadline to apply: April 29, 2022**

**Access the application [HERE](#).**

**It will take you about 5 mins to complete!**



# Seniors!!

Graduating this spring?  
We would love to hear about your  
post graduation plans!

To fill out our short survey,



or scan the QR code on your device!



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CONGRATULATIONS!

# UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2022

## ASSISTANT AWARDS

**Dominic Marcoaldi** - The Chuj Language: Awareness and the Development of ESL Materials

*Faculty Mentor: Amanda Swenson, English*

**Hanna Kolwyck** - Noise Exposure: How it Affects Music Majors Versus Non-Music Majors

*Faculty Mentor: Rebecca Fischer, Health and Human Performance*

**Tyler Massaro** - The behavior of drosophila affected by Huntington's Disease.

*Faculty Mentor: Kiel Ormerod, Biology*

**Leslie Gonzalez Salazar** - Sex estimation of Korean population using CT images

*Faculty Mentor: Yangseung Jeong, Biology*

**Marcus Luciano** - Sex and Ancestry Estimation Based on the Asymmetry of Limb Bones Using CT Images

*Faculty Mentor: Yangseung Jeong, Biology*

**Greta Muller** - Pionír

*Faculty Mentor: Mary Evins, History*

**Miranda Fain** - Exploring Scavengers in Murfreesboro, Tennessee.

*Faculty Mentor: Yangseung Jeong, Biology*

**Connor Prim** - Musicality Explored Through Mahler's Fifth Symphony.

*Faculty Mentor: Michael Arndt, Music*

**Hursha Kondee** - Regulation of BCL2A1 and CCL2 expression by CITED1 in C. neoformans-infected macrophages.

*Faculty Mentor: David Nelson , Biology*

**Casey Tomlin** - Age estimation of Korean population using CT images.

*Faculty Mentor: Yangseung Jeong, Biology*

**Rachel Pickles** - Comparing Waste Management Practices in Terms of Greenhouse Gas Emissions and Energy Savings Using Waste Reduction Model (WARM).

*Faculty Mentor: Mina Mohebbi, Engineering Technology*

# UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2022

## ASSISTANT AWARDS

**Adam Blythe** - 3D Imaging of the Weed Cell Structure for Effectiveness of UV Light Weed Removal.

Faculty Mentor: Hongbo Zhang, Engineering Technology

**Angel Durrani** - A Predictive Model for predicting the Stock Price.

Faculty Mentor: Ramchandra Rimal, Mathematics

**Kacie Leonard** - The Effects of a Powdered Post Dip Compared to a Liquid Post Dip on Teat End Conditions in correlation to Somatic Cell Count During the Winter

Faculty Mentor: Jessica Carter, ABAS

## SILVER AWARDS

**Jesse Scobee** - Investigating the Significance of N-MYC-WDR5 Interaction in Neuroblastoma

Faculty Mentor: April Weissmiller, Biology

**Kap Paul** - A Creative Exploration of Somatic Movement Practices

Faculty Mentor: Margaret Brooker, Theatre

**Kaylee Enis** - Detection of Mercury Ions Using an Aurone-based Small Molecular Fluorescent Probe

Faculty Mentor: Scott Handy, Chemistry

**Isaiah Osborne** - Graphs and Invertibility

Faculty Mentor: Dong Ye, Mathematics

**Rachel Booher** - Can Eco-poetry Save the Earth? A Creative Pathway to Environmental Literacy

Faculty Mentor: Philip Phillips, English

**Jialin Zhang** - Application of Machine Learning Techniques for Insurance Fraud Detection

Faculty Mentor: Don Hong, Mathematics

**Gavin Strawn** - Using Science to Enrich Art in Nick Payne's Constellations

Faculty Mentor: Lauren Shouse, Theatre

# UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS SPRING 2022

## SILVER AWARDS (continued)

**Xinpeng Hua** - Investigating two parameter composite models and their applications in actuarial science

Faculty Mentor: Vajira Manathunga, Mathematics

**Erika Rosenzweig** - Assessment of the Relation between Hydrology and the Appearance of Bons near Tuiliere, Switzerland

Faculty Mentor: Mark Abolins, Geosciences

## GOLD AWARDS

**Lillian Bergman** - Mechanistic interactions between a host, microbiome, and fungal pathogen *Faculty Mentor: Donald Walker, Biology*

**Yaseen Ginnab** - Analyzing the Ability of *Astragalus tennesseensis* to Accumulate Selenium *Faculty Mentor: Frank Bailey, Biology*

**Ernesha Heath** - Optical Farm: Use of Light to Increase Soybean Yield  
*Faculty Mentor: Hongbo Zhang, Engineering Technology*

**Khadijah Alnassari** - *Evaluation of Organic Fertilizer in the Production of Romaine Lettuce* *Faculty Mentor: Ying Gao, School of Agriculture*

## TEAM AWARDS

**Nelson Torres, Shelby Mayhunt, and Kody Patterson** - Laser trapping for measurement of the Radio-sensitivity of BT20 breast cancer cells treated by Ginsenosides bioactive compound *Faculty Mentors: Daniel Erenso and Ying Gao, Physics*

**Alexa Summersill and Madeline Aadnes** - Understanding current climate change communication habits of undergraduate biology students  
*Faculty Mentors: Maryann Barnes, Biology*

**Hailey Keilman and Blake King** - Structural controls on cave passage orientation, Snail Shell Cave Preserve, central Tennessee *Faculty Mentors: Mark Abolins, Geosciences*

# SUMMER URECA GRANTS

**APPLICATION DEADLINE:  
THURSDAY, APRIL 7, 2022 BY 4:30PM**



*Want to get paid to do research  
or work on a creative project?*

THEN CHECK OUT OUR  
UNDERGRADUATE RESEARCH AND  
CREATIVE ACTIVITY GRANTS



To support our vision of nurturing a culture of research and creative activity at MTSU, the URC offers Undergraduate Research Experience and Creative Activity (URECA) grants to students three times a year. Awards range from \$500 for beginners to \$3,500 for experienced researchers.

Team applications are now being offered during the fall, spring, and summer semester. More information about the team structure can be found [here](#).

To learn more about URECA grants and how to submit proposals, check out our [website](#).

**NEW!!** Need assistance finding a mentoring or figuring out which level grant is best for you? Contact our Peer Mentor Scholar, Jared Frazier, at [jf5s@mtmail.mtsu.edu](mailto:jf5s@mtmail.mtsu.edu). Jared can also help with proposal development, budget and justification, creating a timeline, and proposal review. More info on the next page about our new SOAR Ambassadors!

STUDENTS MAY  
APPLY FOR THE  
FOLLOWING  
LEVELS:

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Assistant - beginners,  
one semester  
project, \$500 stipend

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Silver Scholar -  
experienced student  
researcher, one  
semester project,  
\$1000 stipend

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Gold Level -  
experienced student  
researcher, 2  
semester project (fall  
& spring), \$2,400  
stipend

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Platinum Level -  
experienced student  
researcher, full-time  
summer project, \$3,500  
stipend

# Looking to start your student research journey?

The URC's guide for upcoming student researchers, *Research Guide: How to Start your Student Research Journey*, is a great resource for undergraduates seeking to enter the world of research! This guide covers when to start research, how to find a project, student experiences, helpful advice, URC resources, and SOAR resources at MTSU.

The next time you are asked how to get involved in research, direct that student to this resource!

[Click Here to View the Student Research Guide](#)

This guide was initiated, compiled, and formatted by current SOAR Secretary and URC Communications and Social Media Ambassador, Dara Zwemer.

Stories were provided by SOAR students, including Cassandra Perrone, Leah Piccirillo, Javier Hernandez, Robert Conner, Charlotte Daigle, Madeline Aadnes, Maria Fernanda Clark, Kylie C. Moe, Miquellie Bonner, Merry Young, Kaitlyn Berry, Zachary Sanchez, Kap Paull, and Christopher Hall.



## Tell Us About Your Publication!

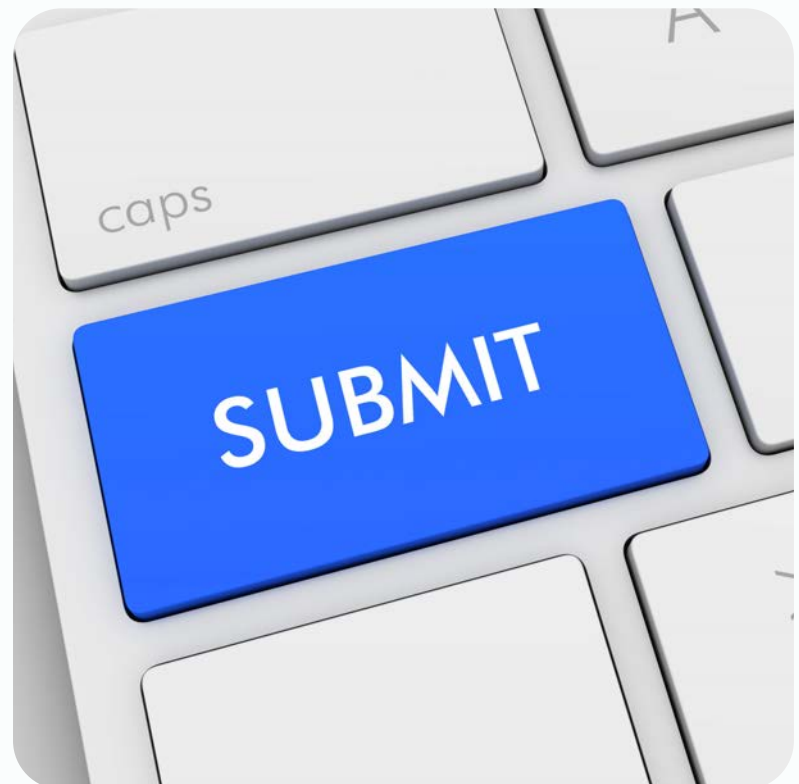
**Have you recently published your research?**

**Get the recognition you deserve!**

**[CLICK HERE](#)**

To Submit Your Work!

Publications will be featured on the Undergraduate Research Center's website! View our students' prior publications by [clicking here.](#)



# INTERNSHIPS & RESEARCH OPPORTUNITIES

Check out the following opportunities for fall research !

- Summer Research Experience for Underrepresented Students, West Virginia University | Deadline March 1, 2022
- REU: Computing for Health and Well-Being, University of Iowa | Deadline March 31, 2022
- REU: Urban Ecology and the Environment, Brooklyn College, CUNY | Deadline April 1, 2022
- Minority Educational Institution Student Partnership Program, Department of Energy | Deadline March 31, 2022
- Various internships, US Environmental Protection Agency | Summer and fall deadlines
- Visiting Scientist Program, Counterterrorism, and Forensic Science Research Unit, FBI | Applications reviewed on a rolling basis

## Virtual UR Presentation & Paper Opps

- IMAGE 2022, International Meeting for Applied Geoscience and Energy | Deadline March 17, 2022
- Pharmaceutical Microbiology Conference 2022, Parenteral Drug Association | Deadline March 31, 2022
- 96th Annual School Health Conference, American School Health Association | Deadline April 1, 2022
- Call for Papers: Innovations in Science Diplomacy, Journal of Science Policy & Governance | Deadline April 3, 2022
- Call for Papers: Special Issue on New Visions for Teaching Chemistry Laboratory, Journal of Chemical Education | Deadline April 12, 2022
- Call for Abstracts: Leveraging Experience to Manage Diverse Lakes, Landscapes, and People, North American Lake Management Society | Deadline April 14, 2022
- Problematizing Whiteness in Public Administration Theory, Administrative Theory & Praxis | Deadline April 15, 2022



## National Science Foundation Opportunities

- **Dear Colleague Letter, Opportunities for Collaboration between CISE and SBE Researchers**
- **Computational and Data-Enabled Science and Engineering | Various fall deadlines**
- **Tribal Colleges and Universities Program | Various deadlines**
- **Dear Colleague Letter, Advancing Discovery with AI-Powered Tools (ADAPT) in the Mathematical and Physical Sciences**
- **Dear Colleague Letter, Envisioning the Future of NSF EBSCoR (Established Program to Stimulate Competitive Research)**



## National Institutes of Health Opportunities

- **Listening sessions cohosted by NIH and the White House Office of Science and Technology Policy on the proposed Advanced Research Projects Agency for Health that will seek to speed health research. Search Upcoming Dates and Times.**

**STUDENTS!** Are you presenting at a virtual conference this fall and would like assistance in paying for your travel? The URC can help!



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 financial assistance for registration fees.

Awarded travel funds are payable on a reimbursable basis only.

Please contact [Casey.Penston@mtsu.edu](mailto:Casey.Penston@mtsu.edu) for more information.