

NEWS FROM THE UNDERGRADUATE RESEARCH CENTER

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National Conference on Undergraduate Research (NCUR) Remains Virtual in 2022

The Council on Undergraduate Research has been working diligently on preparing an amazing, interactive, and meaningful experience for all students and mentors. Due to the increase levels and community spread of the Delta variant and campus travel restrictions, NCUR will remain virtual. This year, however, will be planned out a little differently.

Some of the many new offerings:

- NCUR will be providing programming spread out over a week's time that includes primary education taking place in learning discipline-specific cohorts.
- All accepted students, including those poster and visual art image submissions, will have the opportunity to present to a cohort group for 10-15 minutes.
- This year, NCUR will take place on a new platform integrated with Zoom.
- A new addition this year is adding an opt-in competitive element for presentations.
- Registration options for family and friend's passes will be available.
- Graduate Fair meet-up hours will be separate from presentation times to prevent conflicts. There will also be interactive game activities with prizes.

Story continued on page 2.

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.



UPCOMING DEADLINES TO NOTE

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September 15, 2021 | Abstract Submissions Open

October 20, 2021 | Early-Bird Abstract Submissions and Opt-in for Competition Deadline

Week of November 15, 2021 | Early-Bird Abstract Submission Decision Notifications

Week of November 15, 2021 | Registration Opens

November 19, 2021 | Regular Abstract Submission Deadline
(Not eligible for competition aspect)

Week of January 10, 2022 | Regular Abstract Submission Notifications Sent

January 31, 2022 | Discounted Registration Deadline for Accepted Abstracts Submitted
During Regular Submission Round

April 1, 2022 | NCUR 2022 @home Orientation

April 4-8, 2022 | Main NCUR 2022 @home event

April 11, 2022 | Celebratory Reflection and Award Ceremony



REMEMBER: If you intend to graduate with Scholar Distinction in Undergraduate Research, a presentation at NCUR is one of the requirements. Please see next page for more specifics.

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 to the right)

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 Letter of support from 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 Letter of support from URECA faculty mentor.

SAVE THE DATE!

Fall Research Open House

November 4, 2021

Science Building Atrium | 11-1pm

The Undergraduate Research Center presents our 4th Annual Open House on November 4 from 11-1pm in the Science Building atrium, 2nd floor. This event is an informal poster session that showcases a sampling of current undergraduate research and creative projects at MTSU. All students, particularly new students and transfer students, are invited to attend.

This event presents the following opportunities for students:

- Introduction to undergraduate research and the importance of dissemination;
- Experience a variety of academic poster presentations representing an array of majors and disciplines;
- Present questions to current researchers about how they became involved in undergraduate research, how they balance coursework and research, and how they selected a faculty mentor;
- Find out more about our spring & summer URECA grants; and
- Learn about SOAR from current members.

FACULTY: We invite you to feature this event as an extra credit opportunity for your students. Attendees will be required to talk with a minimum of 5 student presenters, which will be verified by the presenter initialing their program. I will sign off on the program once all requirements are met. Students can then submit the program to you for extra credit.

SIGN-UP HERE!



To sign-up as a **PRESENTER**, please click [HERE](#).

***Max capacity: 25.**

To sign-up as an **ATTENDEE**, please click [HERE](#).

***Max capacity: 50.**

Presenters and attendees receive free lunch from Jason's Deli. Please select your lunch choice when signing up!



DID YOU KNOW?

The URC has a facebook page!

Follow us :

Undergraduate Research Center
at MTSU or click the facebook icon
for updates and stories.

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



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

SOAR's Mission

To enhance student's research capacity through increased awareness, collaboration and skill building.

Why Join?

- SOAR will enhance a student's research capacity through increased awareness, collaboration and skill building by offering workshops and trainings to fulfill the needs of undergraduate researchers.
- SOAR will assist students in the preparation of poster presentations and development of abstracts to increase conference presence on a national level, encourage students to attend the National Conference on Undergraduate Research, and facilitate travel preparations.
- SOAR will provide peer mentoring to students new to undergraduate research.



FEATURED SOAR STUDENT



HUNTER BRADY

Major: Biology

Faculty Mentor: Dr. Anthony Newsome

Current Research Focus: Chlorine Dioxide Gas: Potential for Use as an Anti-viral Agent

Project Description: Middle Tennessee State University is in a unique position for assessing the antimicrobial properties of ClO₂ gas. Previous studies have been conducted at MTSU to evaluate the antibacterial properties of chlorine dioxide gas. Studies at MTSU and other facilities have adeptly demonstrated the antibacterial properties of chlorine dioxide gas. Since the emergence of the novel SARS-CoV-19 virus and subsequent events, there is an increasing need to identify antiviral agents for human use. However, currently, little is known about chlorine dioxide gas's potential to serve as an antiviral agent for use to benefit humans. The purpose of this research is to assess the antiviral properties of ClO₂ gas and its potential use to disinfect indoor facilities.

Why does this topic interest you?

Because of the current pandemic we find ourselves in, this topic allows me to know that the research I am conducting has real world application implications that would directly impact my world.

What are your professional aspirations?

I aspire to go to medical school to become a physician that does medical missions work in countries that offer limited health care and limited access to religion.



Do you have any advice for future researchers?

Get started now! Reach out to your professors now! I guarantee there is a faculty member that could use students in their lab or in their work that you would be interested in.

Join us!

**WANT TO
LEARN
MORE
ABOUT
SOAR?**

**Check out our [website](#) and
current [SOAR student
profiles](#)!**

PRESENTATION OPPORTUNITIES



POSTERS AT THE CAPITOL

Wednesday, February 16th, 2022

Applications Open October 15th, 2021
Due by October 29th, 2021

Posters are limited to STEM disciplines.
A tour of the TN State Capitol, time to meet with your
respective legislator, and lunch will be provided.

THANK YOU

For a successful
SOAR luncheon!
We hope to see you again at future
SOAR events and workshops!



*Soar President Zachary Sanchez, left, and
Peer Mentor Jared Frazier, right.*

Posters on the Hill | Spring 2022

Posters on the Hill 2022 will take place virtually. In January 2022, the dates for Posters on the Hill will be announced once the congressional agenda is released. More specific details on the event will be released in the coming months. Please note the outlined deadlines below:

October 15, 2021 | Submissions Open
December 13, 2021 | Submissions Deadline
Week of January 31, 2022 | Abstract Notifications

It is more important than ever that the voice of undergraduate researchers and their mentors are heard on Capitol Hill. This prestigious event celebrates the impressive work of the accepted students and supports the messages of the importance of undergraduate research at the federal level.



STUDENT SPOTLIGHT

➔ Creative Activity



HOW UNDERPRIVILEGED COMMUNITIES CAN ENRICH HIGHER EDUCATION

Ahmad Thomas
Aspiring Filmmaker

"This title came to me whilst on-site in the Brazilian Amazon Rainforest. I was there to document the process of collaborating on a documentary film with the local environmental activists.

Over the course of my month-long journey in Brazil, I managed to conduct interviews entirely in Portuguese, film religious ceremonies, learn and practice regional music, as well as immerse myself in a foreign culture in a variety of other ways.

We did all this with a community of people who had probably never seen a professional video camera before."

"Having taken numerous flights, slept in several hotels, and traveled through countless cities and states, I had much time to reflect on our purpose for coming all the way to South America. I thought about all of the study abroad trips I had heard about where students would travel to poor, subaltern, or even indigenous communities and how they had come back changed. And then I was there. Surrounded by a community that spoke no English, knew relatively nothing of filmmaking, and had no idea who I was. Yet despite our vast differences, we developed a respect and a rapport with one another. Day after day we were confronted with the harsh realities that went hand-in-hand with their everyday routine, and even still we witnessed so much kindness, fellowship, and perseverance. The theme of my project came from me recognizing that we had just as much to learn from them, as they did from us."



THANK YOU

TO OUR 2021-2022
URECA COMMITTEE

Justin Miller, Chair | Chemistry

Sean Foley | History

Meg Brooker | Theatre & Dance

Misty Jones Simpson | Recording Industry

Hanna Terletska | Physics and Astronomy

Kim Evert | Educational Leadership

Yixiang Wu | Mathematics

Keely O'Brien | Agriculture

Tiffany Rogers | Psychology

Without these outstanding faculty, URECA would not be possible. The URC is grateful for their time, service, and passion for undergraduate research and creative activity.

MARK YOUR CALENDARS!

SPRING URECA DEADLINE

THURSDAY, JANUARY 27, 2022 BY 4:30PM



UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS FALL 2021

ASSISTANT AWARDS

Marissa Gray - The Effects of Lifetime Physical Activity on Working Memory in Older Adults
Faculty Mentor: Vaughn Barry, Health and Human Performance

Lillian Hickman - Arista Book Project, 1990-1999
Faculty Mentor: Denise Shackelford, Recording Industry

Pranathi Shanker - Can priming information about body odor affect perceptions of competence in a virtual interview?
Faculty Mentor: Jessica Gaby, Psychology

Janelle Valdez - Designing STEM Outreach Activities Manual for K-12 Students
Faculty Mentor: Hanna Terletska, Physics

SILVER AWARDS

Maria Hite - Determining the effect of Cryptococcus neoformans infection on the phosphorylation and subcellular localization of CITED1 in macrophages
Faculty Mentor: David Nelson, Biology

DaVonté Lewis - Harnessing Disorder Effects in Superconductors
Faculty Mentor: Hanna Terletska, Astronomy and Physics

Marie McCord - Applying Machine Learning to Identify Autism Spectrum Disorder Using rs-fMRI Datasets Parsed by Age and Gender
Faculty Mentor: Xin Yang, Computer Science

Jessikah Riley - (dis)Connected: A Series of Interviews on Society and Spirituality in the Modern World
Faculty Mentor: Rebekka King, Philosophy

Merry Young - When Does Sex Lead to Guilt Versus Regret?
Faculty Mentor: Rebecca Oldham, Human Sciences

GOLD AWARDS

Rija Asim - Changes in Social Motivation Following Oxytocin Receptor Inhibition
Faculty Mentor: Tiffany Rogers, Psychology

Hunter Brady - Chlorine Dioxide Gas: Promising Potential for Use as an Anti-viral Agent
Faculty Mentor: Anthony Newsome, Biology

UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARDS FALL 2021

GOLD AWARDS

Anika Chowhurdy - Cross-Breeding Industrial Hemp (*Cannabis sativa*) Varieties to Assess Changes in Cannabinoid Content and Seed Yield

Faculty Mentor: John Dubois, Biology

Jack Crowley - Classical Guitar Transcriptions and Recordings of Minecraft Volume Alpha

Faculty Mentor: William Yelverton, Music

Danny Harp - Commemorations on the Landscape: Seven African American Women Who Helped to Define R&B and Country Music

Faculty Mentor: Martha Norkunas, History

Angayla Maxwell - Influence of Land Management Practices and Population Density on Soil Hydraulic and Thermal Properties

Faculty Mentor: Samuel Haruna, Agriculture

Zachary Sanchez - Beliefs and Attitudes on Working with Older Adults: Data Collection and Scale Testing

Faculty Mentor: Shelley Moore, Nursing

Carina Vazquez - Electrical Analog of a Ring Resonator Structure and an Acoustic Demultiplexe

Faculty Mentor: William Roberston, Physics

Dara Zwemer - Child-level Reading Variables and Gist-Based Memory: An Interactive Model

Faculty Mentors: Emily Farris, Tennessee Center for the Study and Treatment of Dyslexia

TEAM AWARDS

Madeline Aadnes, Chloe Bowen, and Laine Matthews - Understanding COVID19 Related Experiences and Communication of Black Undergraduate Biology Students

Faculty Mentor: Liz Barnes, Biology

Level: Silver

Karolin Abouelyamin & Sylvia Zakher - Investigating Classroom Discourse in an Active Learning POGIL Based General Chemistry Class

Faculty Mentors: Joshua Reid, Biology; Gregory Rushton, Chemistry

Michelle Moore & Erika Rosenzweig - Assessment of the Relationship Between Hydrologic Conditions and the Appearance of Springs on Satellite Images of Biere, Switzerland

Faculty Mentor: Mark Abolins, Geosciences

INTERNSHIPS & RESEARCH OPPORTUNITIES

Check out the following opportunities for fall research !

- **Spring 2022 Science Undergraduate Laboratory Internships (SULI)**, US Dept of Energy | Deadline October 6, 2021
- **Naval Research Enterprise Internship Program** | Deadline November 1, 2021
- **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
- **Various Fall Internships**, American Civil Liberties Union | Applications considered on a rolling basis

Virtual UR Presentation & Paper Opps

- **Call for Papers**, 12th National Conference on Earthquake Engineering | Deadline October 15, 2021
- **Call for Proposals**, "History Unmasked," 2022 Virginia Forum | Deadline October 15, 2021
- **Call for Proposals**, International Academic Conference on the Sustainable Development Goals, Utah Valley University | Deadline November 1, 2021
- **Call for Abstracts**, April 2022 Technical Meeting, Rubber Division, American Chemical Society | Deadline November 6, 2021
- **Call for Abstracts**, 2022 Indigenous Borderlands in North America Symposium, University of New Mexico | Deadline November 10, 2021
- **Call for Proposals**; "Literary Geographies: Space, Place, and Environments," Conference on Christianity and Literature, Biola University | Deadline November 15, 2021
- **Call for Submissions**, Second Railroads in Native America Gathering and Symposium | Deadline December 15, 2021
- **Call for Papers**, The Reed Undergraduate Journal of Existentialism, St. Olaf College | Deadline January 31, 2022
- **Call for Papers**, 2022 Virtual International Conference on Social Media and Society | Deadline January 31, 2022
- **Call for Submissions**, JOSHUA: Journal of Science and Health, University of Alabama | Deadline February 28, 2022
- **Call for Papers**, Young Journal of European Affairs, Ludwig-Maximilians-Universität Munich | Submissions accepted on a rolling basis



National Science Foundation Opportunities

- Development grants, the Predictive Intelligence for Pandemic Prevention Initiative | Deadline October 1, 2021
- Competition for the Management of Operations and Maintenance of the National Ecological Observatory Network (NEON) | Deadline October 1, 2021
- Dear Colleague Letter: Towards an Equitable National Cyberinfrastructure | Deadline October 11, 2021
- Ecology and Evolution of Infectious Diseases | Deadline November 24, 2021
- Partnerships for Research and Education in Physics (for minority-serving institutions) | Deadline January 21, 2022
- Community Facility Support: Synchrotron-Based Analytical Capabilities Advancing Earth and Environmental Sciences Research and Training | Deadline March 4, 2022
- 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

- Genome Research Experiences to Attract Talented Undergraduates into the Genomics Field to Enhance Diversity | Deadline October 1, 2021
- 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 Wendi.Watts@mtsu.edu for more information.