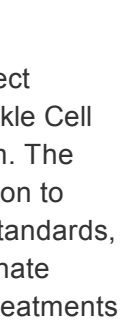
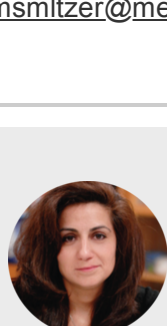


RESEARCH





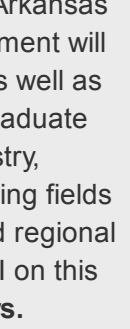
UoM Receives First Major CDC Funding
Smeltzer will lead project


The University of Memphis has received a three-year grant from the Centers for Disease Control and Prevention (CDC) to establish a sickle cell disease (SCD) surveillance program for the State of Tennessee. This statewide collaboration is led by an executive committee including **Matthew Smeltzer, PhD** (University of Memphis), Jane Hankins MD (St. Jude Children's Research Hospital), Robert Davis MD (University of Tennessee Health Science Center), and William Cooper MD (Vanderbilt University).

CDC will fund nine states to collect essential data on SCD in the Sickle Cell Data Collection (SCDC) program. The project aims to provide information to improve policy and healthcare standards, inform best practices, and illuminate pathways to deliver innovative treatments and cures in ways that can help address health disparities in SCD. Learn more about the SCDC [here](#)>

For more information on this award, contact Smeltzer at msmeltzer@memphis.edu.

INNOVATION

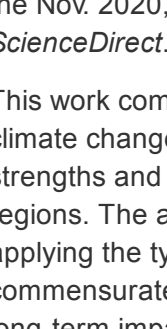




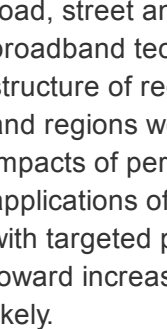
Zhao Receives Award for Acquisition of a Single Crystal X-ray Diffractometer
Regional resource for research and education

Supported by the Major Research Instrumentation and the Chemistry Research Instrumentation programs and awarded from National Science Foundation (NSF), the University of Memphis is acquiring a single crystal X-ray diffractometer equipped with a copper source to support the research of the Pls and other colleagues from Arkansas State University, University of Central Arkansas and Rhodes College. This instrument will be an integral part of teaching as well as research and training of undergraduate and graduate students in chemistry, biochemistry and other engineering fields at the University of Memphis and regional partners in the Memphis area. PI on this award is **Dr. Xuan Zhao, and Drs. Timothy Brewster, Kensha Clark and Charles Garner** will serve as co-PIs.

For more information on this project, contact Zhao at xzhao1@memphis.edu.

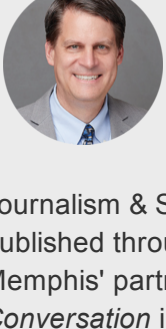


Sabri and Ivey to Lead NASA Grant
STEM engagement



Dr. Firouzeh Sabri, professor and chair of Physics and Materials Science and FIT Research Fellow, and **Dr. Stephanie Ivey**, associate dean for Research, Herff College of Engineering and professor, Civil Engineering, will receive a grant from NASA Office of STEM Engagement, to incorporate elements of Materials Physics in K-12 science curriculum. The 2020-21 NASA Next Gen STEM National Innovation Partnership Award was a competitive bid to identify and award grants to help achieve NASA's goals. Sabri's research in phosphor thermometry was recently selected for investigation on board the International Space Station National Laboratory (ISSNL) and awarded a grant by ISSNL to conduct the work. Her project is currently scheduled for a February launch.

For more information on this initiative, contact Sabri at fsabri@memphis.edu.



Gopalakrishnan receives DOE award
Studying chemical recombination of gas-phase ions

Dr. Ranganathan Gopalakrishnan, assistant professor in the Department of Mechanical Engineering, received a grant from the U.S. Department of Energy Office of Science for his research project, "Langvin Dynamics modeling of gas-phase ion-ion recombination."

The recombination of ions in the gas-phase plays an important role in the chemical composition, energy and charge balance of partially ionized gas environments such as flames, plasmas, inter-planetary gas clouds and ultra-cold (~few K) systems like cryogenics and quantum computers. Motivated by the lack of robust theoretical models of gas-phase ion-ion recombination, this computational research project will develop robust theoretical models of gas-phase ion-ion recombination that take into account the gas density (pressure and temperature), ion structure, ion-specific potential interactions and ion number concentration to describe the chemical physics of ion recombination. The developed models will be validated against published experimentally measured recombination rate constants.

To learn more about this research award, read the [project abstract](#)>

Full [press release](#)>

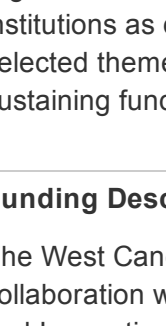
Urban Planning and Pandemics
UoM faculty published in *ScienceDirect*

Dr. Reza Banai, professor of City and Regional Planning in the School of Urban Affairs and Public Policy and FIT SMART Cities Research Fellow, is being published. Banai's research focuses on how pandemics act as change agents and the effects they can have on urban planning. "Pandemic and the planning of resilient cities and regions" will appear in the Nov. 2020, Vol. 106, edition of *ScienceDirect*.

This work compares coronavirus with climate change as both reveal the strengths and vulnerabilities of cities and regions. The article makes a case for applying the type of urban planning that is commensurate with the wide-ranging, long-term impacts of pandemics in cities and regions. The morphology of urban resilience is characterized inclusively from density to the region, with variability of density, access to resources in the public realm--the infrastructure of water, sewer, road, street and open space, and broadband technologies--and the structure of regional economy. With cities and regions worldwide experiencing impacts of persistent pandemics, applications of comprehensive planning with targeted policy recommendations toward increasing urban resilience are likely.

For more information on this research, contact Banai at rbandai@memphis.edu, or visit his [website](#)>

Read full [article](#)>



Eviction Bans and Staying Safe in the Pandemic
Two UoM researchers reach 200,000+ readers in September

Professor Katy Ramson, Law School, and **Dr. Tom Hrach**, professor of Journalism & Strategic Media, were published through the University of Memphis' partnership with *The Conversation* in September for two articles addressing the challenges around Covid-19. The articles (linked below) reached readership in 10 countries and were included in publications such as *The Chicago Tribune* and *Fast Company*.

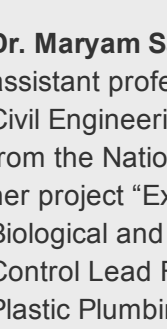
[What the CDC eviction ban means for tenants and landlords: 6 questions answered](#)

[How to read coronavirus news and learn what you actually need to know about staying safe in the pandemic](#)

[Charlie Hebdo shooting served as an extreme example of the history of attacks on satirists](#)

The *Chicago Tribune* also ran a commentary on "What the CDC eviction ban means: 6 questions answered." Read [here](#)>

For more information on this service or to inquire on pitching an article for publication, email researchdev@memphis.edu.



COVID-19 FAQs



Research Awards
September 2020

Dr. John Sabatini, distinguished research professor in the Institute for Intelligent Systems, was awarded \$1,399,882 from the U.S. Department of Education for his project "Developing and implementing a technology-based, reading comprehension instruction system for adult literacy students."

Dr. Esra Ozdenorol, associate professor in the Department of Earth Sciences, director of GIS Certificate program and Spatial Analysis and Geographic Education Laboratory, was awarded \$1,000,000 from the National Science Foundation for her project "ASPIRED: Adaptations for Sustainable Policies and Increased Recruitment Excellence in Diversity."

Dr. Lin Zhan, dean and professor in the Loewenberg College of Nursing and Wharton Executive Fellow, was awarded \$972,435 from the Health Resources and Services Administration for her project "Rural Nurses Leading Eldercare Advancement through Diversity (RN-LEAD) Project."

Dr. Deepak Venugopal, assistant professor in the Department of Computer Science, was awarded \$413,482 from the National Science Foundation for his project "R1: Small: Investigating techniques that couple Markov Logic and Deep Learning with applications to discovering strategies to improve STEM learning."

Dr. Maryam Salehi Esfandarani, assistant professor in the Department of Civil Engineering, was awarded \$329,655 from the National Science Foundation for her project "Exploring Coupled Physical, Biological and Chemical Processes that Control Lead Fate and Transport through Plastic Plumbing Materials."

Dr. Xuan Zhao, associate professor in the Department of Chemistry, was awarded \$251,990 from the National Science Foundation for his project "MRI: Acquisition of a Single Crystal X-ray Diffractometer as a Regional Resource for Research and Education."

Dr. Matthew Smeltzer, assistant professor in the Division of Epidemiology, Biostatistics and Environmental Health, was awarded \$249,404 for Year 1 from the Center for Disease Control for his project "Tennessee Sickle Cell Disease Surveillance Program (Core Component)."

Dr. Sabyasachee Mishra, associate professor and Faudree professor in the Department of Civil Engineering, was awarded \$149,600 from the Tennessee Department of Transportation for his project "Connecting demand response transit with fixed service transit."

Dr. James McCutcheon, associate professor and graduate coordinator in the Department of Criminology and Criminal Justice, was awarded \$103,725 from the City of Memphis Police Department with the U.S. Department of Justice for his project "Law Enforcement--Based Victim Specialist Program."

Dr. Damon Fleming, dean and professor in the Department of Accountancy, was awarded \$73,012 from the Economic Club of Memphis for his project "ECON CLUB contract."

Dr. Susan Elswick, associate professor in the Department of Social Work, was awarded \$45,000 from the Rotary-Family Youth Initiative, Inc for her project "Memphis Rotary- FYI and Clarity Wellness," and she was awarded \$5,000 from the Refugee Empowerment Program for her project "COVID-19 and Trauma: The Need for Continued and Additional Supportive Services Through a Telehealth Framework."

Dr. Todd Zoblotsky, research professor in the Center for Research in Educational Policy, was awarded \$22,761 from the Shelby County Office of ReEntry with the U.S. Department of Justice for his project "Project Inspiring New Concepts (INCK)."

Dr. Russell Deaton, Kanuri professor in the Department of Electrical and Computer Engineering and associate dean of Academic Affairs and Administration, was awarded \$9,338 by Smith & Nephew Incorporated for a student internship with the company.

Dr. Bernie Daigle, assistant professor in the Department of Biological Sciences, was awarded \$4,524 from the U.S. Army Research Office for his project "Identification of Prognostic and Diagnostic Biomarkers for PTSD."

Correction from last month:

Dr. Jamein Cunningham, assistant professor in the Department of Economics and **Dr. Joaquin Lopez**, assistant professor in the Department of Economics, were awarded \$74,000 from the Washington Center for Equitable Growth for their project "The Evolution of Civil Rights Enforcement and Economic Prosperity of Minorities."

* Data reported the 18th of each month. Awards finalized after the 18th will be reported the following month.

Announcing West Cancer Foundation Initiative
2020 Call for Proposals

The University of Memphis (UoM) Division of Research & Innovation is pleased to introduce the West Cancer Foundation Initiative. Established in fall 2020, the West Cancer Foundation Initiative was created to cultivate research across the UoM campus in areas that advance cancer treatment, promote community health and wellness, and/or provide supportive patient care. The researcher/research team is encouraged to involve research partners from area community organizations and/or other regional institutions as deemed appropriate to the selected theme. An identified plan for sustaining funding is required.

Funding Description:

The West Cancer Foundation, in collaboration with the Division of Research and Innovation and the UoM Foundation, will provide seed funding for research teams investigating four key areas identified by West Cancer Foundation as concerns in our community. In priority order, these key areas are:

- Closing the disparity gap in breast cancer screening
- Health equity
- Community outreach including uninsured/underserved and HPV
- Smoking cessation

The award is designed to promote new lines of research and provide seed money to give rise to future external funding pursued in collaboration with West Cancer Foundation. It is not intended as bridging funds or a mechanism to extend ongoing funded research.

The full call for proposal details available [here](#)>. Please contact CFR@memphis.edu with questions.

Submission Deadline: Friday, Oct. 30 at 5 P.M.

Limited Submission Pre-Proposal Competition
NSF Major Research Instrumentation

The Division of Research and Innovation is pleased to announce the pre-proposal competition for submissions to the **NSF Major Research Instrumentation (MRI) Program**. The University is limited to two track #1 submissions (\$100,000-\$1M) and one track #2 submission (\$1M-\$4M). In alignment with the effort to increase our research expenditures and achieve our institutional goal of Carnegie R1 status, we would like to work with faculty to maximize our applications to the MRI program. Interdisciplinary teams that engage inter-institutional collaborators will be prioritized. Please be sure to fully review the call in the link above.

In order to evaluate potential proposals for this year's call, **interested teams should provide the following information in a single word document or PDF via email** (researchdev@memphis.edu; subject: MRI Submission) no later than close of business, Oct. 23:

- Name of the instrument to be acquired;
- Approximate cost (quote not necessary, estimate is sufficient);
- Proposed location of instrument;
- Name of proposed PI and name of the individual(s) who will have day-to-day responsibilities for the instrument, if different;
- Brief description of the NSF fundable research enabled if this instrument is acquired (provide a 1-3 sentence layman's description of the research to be enabled and identify the academic units and faculty associated with each major research thrust that will be included in the proposal);
- List of current/ongoing or recently completed research funded by NSF related to the proposed research thrusts;
- List of external collaborators who may be involved (we understand this may not yet be confirmed);
- For proposals that are resubmissions from a prior year, please include a copy of the review comments from the prior submission and a statement (up to 1 page) as to how the team will address the primary issues raised by reviewers.

Pre-proposals will be reviewed by a committee of faculty researchers. Please reach out if you have questions, or want to discuss an application idea at research@memphis.edu.

Research Development
October Training

Offered training opportunities by the Division of Research and Innovation, dates, times, descriptions and Zoom links for each session are included below. If you would like a calendar invite to any sessions, please complete this [form](#) (includes all fall scheduled trainings). All sessions will be recorded and available at the [Division Training archive](#) - UoM credentials required for access. September workshops are also available at that link.

Practical Proposal Training

Nobody likes to rush at the last minute. Join us as we walk through developing a research plan, timelines, when to gather documents, etc.

Instructor: Janet Wiens
Oct. 6 | 2:30 PM | [Link to participate here](#)>

First-time PI Bootcamp

If you have never applied for external funding before and aren't sure where to start, join us for this rapid-fire introduction session.

Instructor: Dr. Cody Behles
Oct. 7 | 2:30 PM | [Link to participate here](#)>

Compliance Overview

The UoM compliance office covers IRB, IACUC, Export Control, and all compliance points in between.

Instructor: Dr. Cody Behles
Oct. 15 | 2:30 PM | [Link to participate here](#)>

Navigating the NIH

NIH is the second largest source of external funding for research at the UoM after NSF. Learn about the process of navigating these funding opportunities

Instructor: Ashley Yacoubian
Oct. 19 | 1 PM | [Link to participate here](#)>

Fun with Federal Grant Budgets

Understanding effort, navigating forms, understanding rates and solving the riddle of a good budget.


Instructor: Laura Wright
Oct. 22 | 2:30 PM | [Link to participate here](#)>

Spooky Ancillary Documents

Letters of support, biosketches, current and pending support, collaborators and other affiliations and other ancillary documents. Halloween style.

Instructor: Dr. Cody Behles
Oct. 30 | 1 PM | [Link to participate here](#)>

If you need individual assistance, contact researchdev@memphis.edu.



2020 IEP Award Finalist
Initiatives from FedEx Institute of Technology secure UoM as a finalist for an APLU innovation award

APLU's Innovation and Economic Prosperity Award celebrates dynamism and ingenuity of universities that have addressed challenges facing not only their local communities, but the larger higher education landscape. Given these unprecedented times, this award is more salient now than ever. The University of Memphis' IEP award application highlights three case studies rooted in a culture that defines itself not only through innovative solutions to big challenges, but also with resilience in the face of real need. As the only comprehensive research university in a city of more than 1 million people consistently ranked among the poorest in the nation, the University of Memphis is creating outsized impacts through innovative solutions.

To learn more about these initiatives - **UMRF Ventures**, **UMRF Research Park** and the **Patents to Products (P2P)** Deep Science Fellowship Program - read full blog [here](#)>

FEDEx INSTITUTE OF TECHNOLOGY
CALENDAR



Hackathon: SOL SATURDAY
Oct. 3 | All-day | Virtual
[Code Together](#) | [Hacktoberfest Kickoff Event](#)
Oct. 3 | 1-3 PM | Virtual
[Code Connector Networking](#)
Oct. 5 | NOON-1 PM | Virtual
[DevMemphis](#)
Oct. 6 | 6-7:30 PM | Virtual
[Machine Learning/Data Sciences/R](#)
Oct. 6 | 7-8 PM | Virtual
[Memphis_Net](#)
Oct. 8 | 6-7:30 PM | Virtual
[MemPASS/Power BI](#)
Oct. 8 | 5:30-7:30 PM | Virtual
[Code Together](#) | [A free community coding session](#)
Oct. 11 | 1-3 PM | Virtual
[Corporate Training: DevSecOps](#)
Oct. 12-14 | 8:30 AM-2:30 PM | Virtual
[Code Connector Networking](#)
Oct. 12 | NOON-1 PM | Virtual
[Memphis Web Workers](#)
Oct. 13 | 6-8 PM | Virtual
[Memphis Game Developers](#)
Oct. 14 | 6-8 PM | Virtual
[Character Modeling and Animation System of Daz3D](#)
Oct. 14 | 6-8 PM | Virtual
[Memphis M365](#)
Oct. 15 | 3-5 PM | Virtual
[Code Connector Networking](#)
Oct. 19 | NOON-1 PM | Virtual
[Memphis Python](#)
Oct. 19 | 6:30-8:30 PM | Virtual
[Corporate Training: SAFE Lean Portfolio Mgmt](#)
Oct. 19-23 | NOON-5 PM | Virtual
[TECH Webinar: Telehealth Series: Mindfulness Moments: Embedding Regulating Activities into PreK-12th Classrooms](#)
Oct. 22 | 11 AM-NOON | Virtual
[Memphis_Net](#)
Oct. 22 | 6-8 PM | Virtual
[Memphis Agile](#)
Oct. 22 | 6-7:30 PM | Virtual
[Code Connector Networking](#)
Oct. 26 | NOON-1 PM | Virtual
[Intro to Synchron Essential Studio](#)
[Memphis Xamarin](#)
Oct. 27 | 6-8 PM | Virtual
[Code Co-op](#) | [A free coding help & hack night](#)
Oct. 27 | 6:30-8 PM | Virtual
[MemphisPHP](#)
Oct. 27 | 6:30-8 PM | Virtual
[Intro to Synchron Essential Studio](#)
[Memphis Xamarin](#)
Oct. 27 | 6-8 PM | Virtual

RESEARCH COMPLIANCE



Clinical Trials

In 2014, the National Institutes of Health (NIH) redefined their definition of a clinical trial:

A research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include placebo or other control) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes.

In order to improve NIH's clinical trial stewardship, NIH-funded studies are required to register clinical trials at clinicaltrials.gov.

For additional information about clinical trial compliance, please visit the NIH [website](#)>

For more information or if you have questions, email researchcompliance@memphis.edu.

RESEARCH CLUSTERS



Learn more about the FedEx Institute of Technology Research Clusters [here](#)>

QUICK GUIDE
TO RESEARCH AND SPONSORED PROGRAMS

Reviewing, Submitting and Accepting Funded Research
A resource for faculty and staff

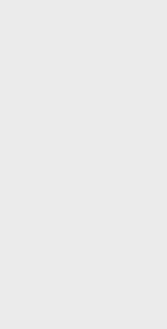
Research Development and Sponsored Programs are the central research support teams responsible for the review and submission of proposals (grants, contracts, cooperative agreements, non-monetary) to external sponsors and for the review and acceptance of any sponsored project funds. The team includes Pre-Award Services, Contract and Award Services, Electronic Research Administration and Research Development. They are located in 315 Administration Building.

The Quick Guide is available [here](#).

NEWS TO FEATURE IN THE RESEARCH+ INNOVATION NEWSLETTER?

We welcome the opportunity to highlight the research infrastructure and innovation capabilities at the University of Memphis. Email us major award notifications, honors, research talks, publications, initiatives, conferences to be held at the UoM, etc., for inclusion in an upcoming issue of the newsletter. We look forward to sharing the world-class accomplishments taking place at the University of Memphis.

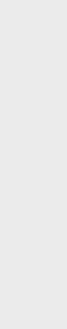
[CONTACT US](#)



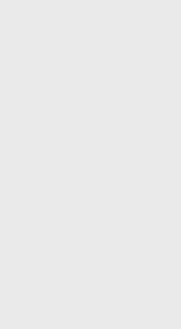
UMRF
Research Park

For the latest news and economic development initiatives at the research park visit the [website here](#)>

University of Memphis Research + Innovation Magazine
Leading Through Innovation
[Read Here >](#)

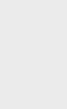
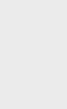
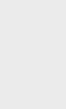


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