A Tennessee Flagship Carnegie R1 Research Institution

RESEARCH +
INNOVATION
NEWSLETTER

2025 University of Memphis Research Celebration

Celebrating research achievements, first-time PIs and new PI millionaires at the University of Memphis.
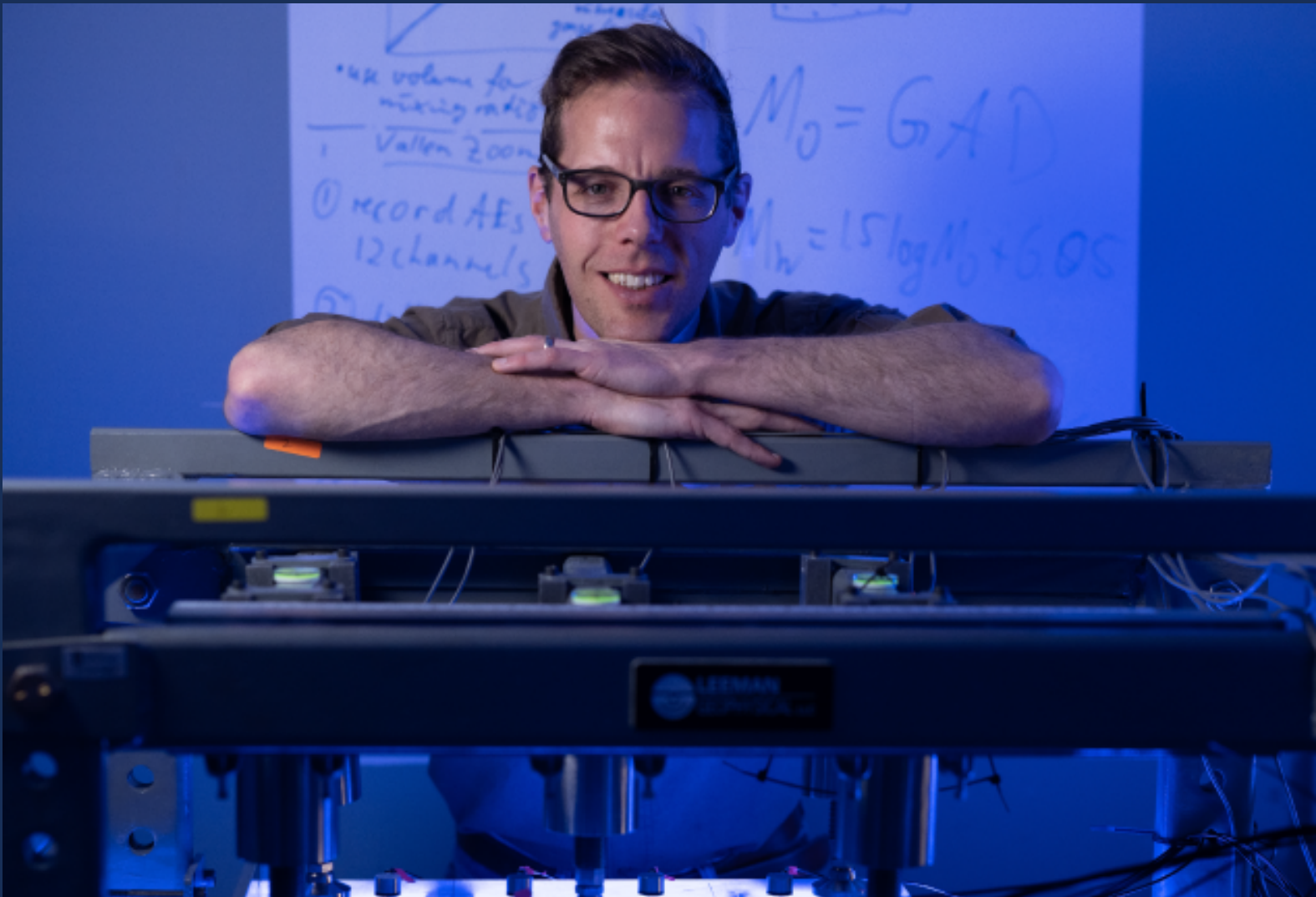
Read Full Story

AI-Powered Prediction of Dementia Risk in Aging Adults

Exploring social determinants and genetic disparities across ethnicity and socioeconomic status.

Read Full Story

Improving Community Resilience and Management Methods

Impact of solid waste on soil-water in underserved rural communities of the deep South.

Read Full Story

Environmental Humanities Research Cluster Launched at FIT

The FedEx Institute of Technology is launching a new research cluster on environmental issues and humanity.

Read Full Story

Mindful Integration of AI with Advanced Tools

AI-driven innovation in software design empowers developers to maintain the balance between automation and human oversight.
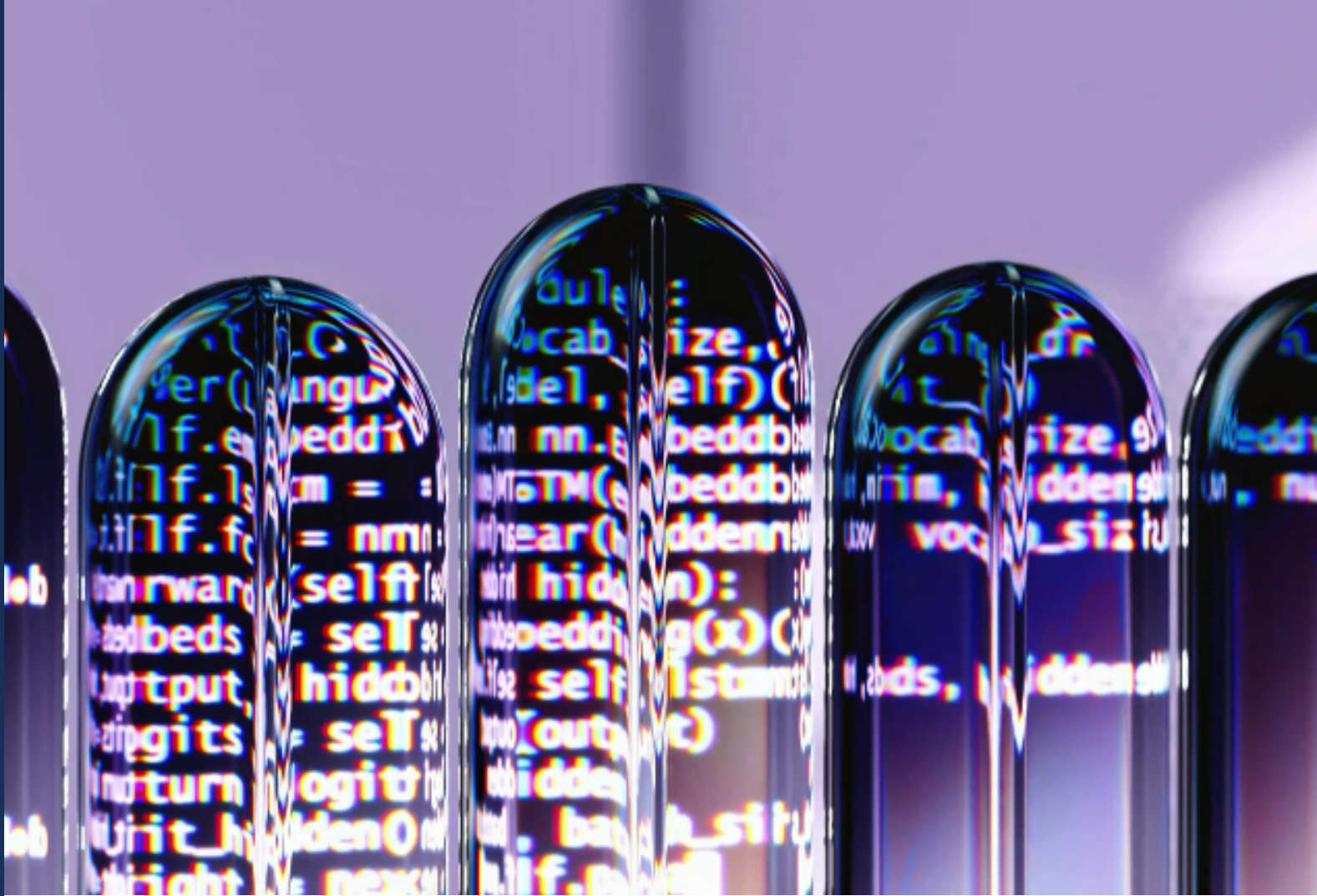
Read Full Story

Advancing Water Research and Climate Resilience

Expanding collaborative networks in water resources and climate change, and promoting NSF IUSE-EDU-based initiatives.

Read Full Story

AI-Driven Medication Reconciliation for Patient Safety

Innovative discharge solutions: Leveraging artificial intelligence for effective medication use and counseling.

Read Full Story

Proactive Groundwater at the West Tennessee Megasite

Hydro studies protect groundwater resources, while recognizing long-term protection of region's water resources.

Read Full Story

E-Commerce and the Importance of Consumer Online Reviews

Dr. Jha's Harvard Business Review article highlights research on factors that persuade consumers in reviews.

Read Full Story

Research in a Minute: Automotive Cybersecurity Research

This month's spotlight features Dr. Christos Papadopoulos and his automated cybersecurity research.

Read Full Story

Glacial Retreat and Polar Biodiversity

Investigating the impacts of glacial retreat and environmental change on Antarctic insect biodiversity.

Read Full Story

NSF I-Corps Hub: Research to Impact

University of Memphis hub to offer training to accelerate research innovation and commercialization.

Read Full Story

NIH, NSF, NEH and Notices of Special Interest

Learn more about recent funding opportunities from federal agencies, outlining upcoming grants.

See Full List

Calendar of Events:
March 2025

Learn more about research, UMRF Research Park and FedEx Institute of Technology events.

See Full List

Research Awards February 2025

Dr. Eddie Jacobs awarded $1,360,000 from United States Army Research Laboratory.

Dr. Mitchell Withers awarded $792,001 from U.S. Geological Survey.

Dr. Daniel Foti awarded $415,000 from the Office of Naval Research.

Dr. James Murphy awarded $294,990 from the National Institutes of Health.

Dr. William Thompson awarded $226,245 from the Tennessee Department of Education.

Mary Tucker awarded $138,325 and $129,295 from the U.S. Department of Education.

Dr. Latrice Pichon awarded $101,724 from National Institutes of Health.

Dr. Jeffrey Marchetta awarded $50,000 from the U.S. Department of Energy.

Dr. Carolyn Kaldon awarded $30,000 from the Women's Foundation for a Greater Memphis.

Dr. Matthew Smeltzer awarded $20,095 from National Institutes of Health.

Dr. Leigh Boardman awarded $14,884 from The Tennessee Corn Promotion Board.

Michael Hagge awarded $10,698 from Tennessee Department of Commerce and Insurance.

Dr. Youngsang Kwon awarded $10,000 from Protect Our Aquifer.

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

Full project and award details available here.

Upcoming Events & Announcements

Research Funding Update
Message from U.S. National Science Foundation

On Wednesday, March 5, 2025, a Federal Court issued a preliminary injunction prohibiting certain actions related to Executive Orders 14187 and 14168, which is effective immediately. Review the court's order and the Executive Orders.

The Order prevents NSF employees from withholding federal funding because a health care entity or health professional provides gender-affirming care.

The Court's Order also prevents NSF from implementing the requirements contained in Sections 3(e) and 3(g) of Executive Order 14,168, Defending Women from Gender Ideology Extremism and Restoring Biological Truth to the
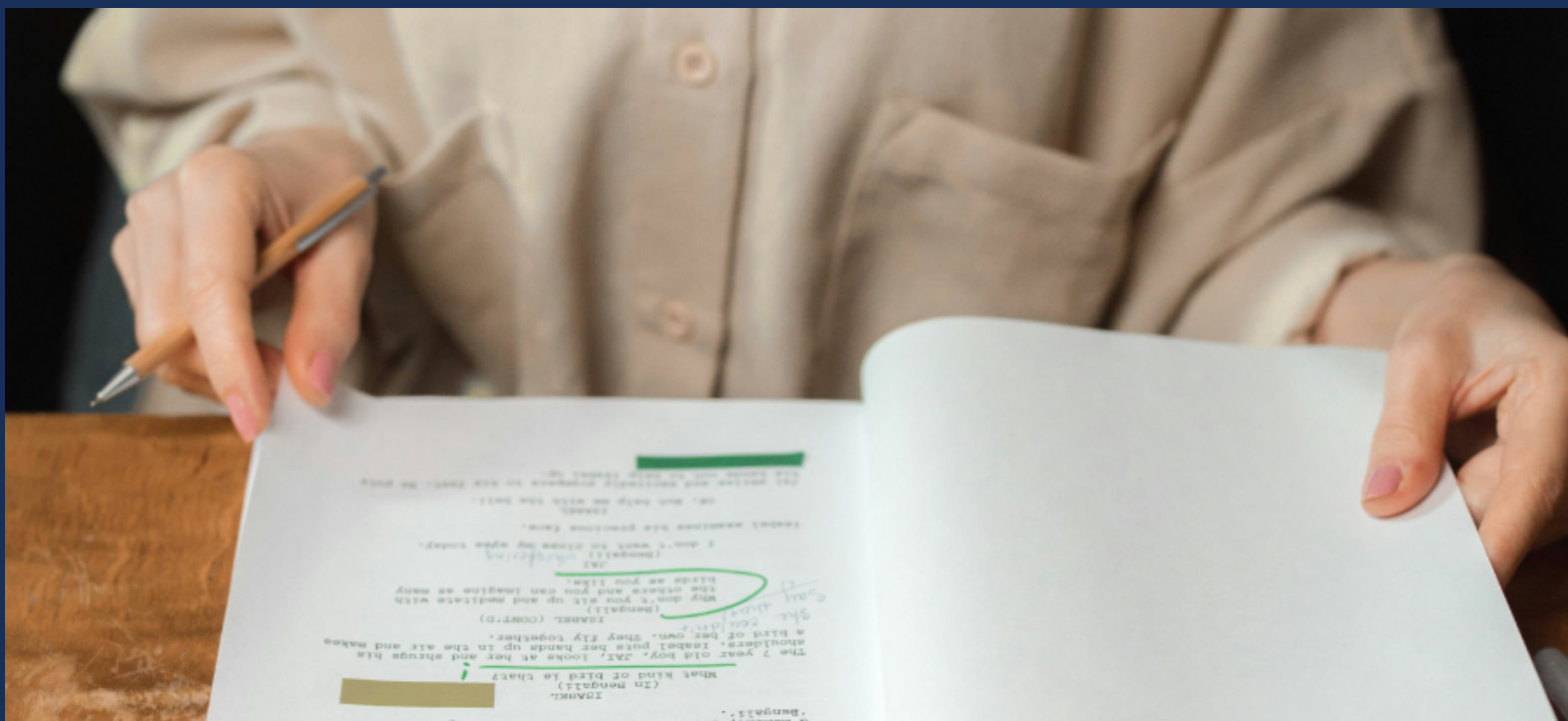
Federal Government.

Pursuant to the Court's directive this notice is being provided "to all Defendants, and agencies and their employees, contractors and grantees."

Sethuraman Panchanathan
Director

Peer Review Process & Review Panels
Workshop

This workshop will cover what the review process entails with a deep dive into the peer review process for a variety of federal agencies considering recent changes in the federal funding landscape. It will also cover best practices for incorporating grant specific review processes and criteria to enhance the quality of proposals and the likelihood of successfully attaining an award will also be incorporated into the overall discussion. Furthermore, the process to become a participant and the benefits of participating in review panels for various funding agencies will be outlined.

This is part of a series of sessions for new faculty, but all interested faculty across campus are encouraged to attend.

Friday, March 7 | 9-10 AM
FedEx Institute of Technology | Fishbowl (203/205)

RSVP

MEMSEC – DEFCON901
Memphis InfoSec Social
Capture the Flag Challenge

Crack the mysteries of The Secret Farm, a re-release of our first-ever CTF challenge, set in the most suspicious ostrich farm you've ever seen. Behind the fences lie hidden exploits, cryptic puzzles and a few feathered surprises. Think you can outsmart the keepers and uncover what's really going on? Test your skills and see if you can make it out with more than just a trail of feathers. To take on this challenge, you'll need two things:

- a laptop
- your sharpest problem-solving skills

After the contest, we'll walk through the full puzzle, breaking down every twist and turn. But first — can you uncover the truth on your own? As always, MEMSEC is very easy for beginners or new users and someone here can certainly answer whatever questions you may have!

This meetup is FREE and open to the public with Garibaldi's pizza!

Friday, March 7 | 5 PM
FedEx Institute of Technology | Innovation Classroom (225)

REGISTER

FedEx Institute of Technology's 901 AI Series
& the 50th Anniversary of the
Master of City and Regional Planning Program
University of Memphis
welcomes
Sridhar Sunkara
CEO, eBiz Solutions

Join us as we welcome Sridhar Sunkara, CEO of eBiz Solutions for his talk, "AI as a Tool to Advance the Work of City Planners and Urban Designers." This talk delves into how AI-driven models enhance decision-making, optimize resource allocation and create human-centric, sustainable urban environments. Discover how city planners and designers can harness Generative AI to shape smarter, more adaptive cities for the future.

Friday, March 21 | 3:30-5 PM
FedEx Institute of Technology | The Zone & Virtual

RSVP

Seventh Annual Mid-South Data Conference
and
Introduction to Large Language Models

The Mid-South Data Science 2025 Conference features research paper presentations, panels and two keynote speakers. A pre-conference workshop is also offered for local professionals: Introduction to Large Language Models (LLMs) - see details below. Registration to the LLMs workshop offers full access to the conference. We hope to see you at the conference and the LLM workshop! Important: attendees must bring their own device. The conference is a one (1) day conference at the FedEx Institute of Technology.

Friday, March 28 | All Day
FedEx Institute of Technology | Fishbowl 225, 226

REGISTER

Introduction to Large Language Models (*as part of the Seventh Annual Mid-South Data Science Conference*) is a one and a half day workshop for professionals.

Generative Artificial Intelligence (Gen-AI) and particularly large language models (LLMs) have taken the world by storm. Gen-AI's potential across many domains seems to be transformative and its true potential in various domains is yet to be fully understood, explored, and realized.

The Introduction to LLMs workshop is a two-day intensive LLM training program designed to provide attendees with a solid introduction to LLMs concepts and hands-on training on using LLMs through prompting and other strategies. The workshop is meant for business analysts, marketing experts and other professionals with minimal or no computer programming experience. More advanced analysts that possess computer programming experience will benefit from exposure to methods for eventual use of LLMs through an Application Programming Interface (API). The Data Science Research Cluster is organizing this workshop to meet a critical need among

corporations and nonprofits to explore the use of AI and in particular LLM to meet the rising challenges faced by all organizations.

Course Requirements: Attendees are not required to have previous programming experience.

Important: Attendees must bring their own device.

Topics to be covered:

- Overview of LLMs
- Foundations
- LLM Trustworthiness: Emergent Capabilities, Fine-Tuning, Risks and Biases
- Prompting Overview, Intro to Prompt Engineering
- Prompting Strategies, Advanced Prompting
- Fine-tuning, Retrieval Augmented Generation
- Multi-modal Prompting for Broader Generative AI

Thursday and Friday, March 27-28
The University of Memphis

REGISTER

February Professional Development Sessions
Recorded Learning Opportunities for Faculty

The Division of Research & Innovation hosts a variety of workshops, networking events and other professional development throughout the year, and any events that can be are recorded and uploaded to the training archive

(UofM log-in required). Below are the events from February 2025 that have been recorded and uploaded to the archive:

- [Specific Aims Effectiveness for NIH](#) (Feb. 13)
- [Research Roundtable: SOAR Faculty Projects](#) (Feb.14)
- [Discover & Protect Your Innovations! The Office of Technology Transfer Townhall on End-to-End Services for Faculty](#) (Feb. 25)
- [NIH R15 Cohort Kickoff Meeting](#) (Feb. 27)
- [SBIR/STTR Workshop](#) (Feb. 28)

Upcoming professional development and other events can be found on the calendar [here](#). If you have any questions about the recorded events or have difficulty accessing any of the materials, please contact [research@memphis.edu](#).

UofM Faculty Expert List
Topics Across Various Subjects, Areas and Fields

Calling all University Partners:

As UofM marketing finalizes the new look of our UofM Newsroom, they are creating a **University Faculty Expert** list to connect faculty members with the media on news and trending topics across various subjects, areas and fields.

Please share this survey with faculty who would be interested in engaging with media requests and are open to discussing their research and insights. The ultimate goal is to create a centralized list across the University and begin to proactively pitch our experts.

Thank you for your assistance with this project.

UofM FACULTY EXPERT LIST SURVEY

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