

NEWS

ENGINEERING RESEARCH
ADMINISTRATION



AUBURN
UNIVERSITY

Samuel Ginn
College of Engineering

October 30, 2024

Vol. 2 No. 20

Announcements

Mandatory Multifactor Authentication for Research.gov

On October 27, 2024, NSF implemented a **multifactor authentication (MFA)** with Research.gov. **All external users must complete a one-time MFA enrollment process and use the selected MFA method to sign into Research.gov.** Users with financial or administrative roles must use a phishing-resistant MFA method, while all other users may choose between a phishing-resistant or regular MFA method.

Training resources including **how-to guides** and **frequently asked questions (FAQs)** are available on the new [Getting Started page](#).

Updated Fringe Benefit Rates

AU's Office of Sponsored Programs (OSP) published an [FY 2025 Rate Agreement](#) that reflects the new fringe benefits as of October 1, 2024. Please make note of the following rates when submitting proposals from this point forward:

- Full-time employee – 28.70%
- Part-time employee – 10.60%
- Graduate student – 3.40%

Funding Opportunities

Development of Modern Active Transportation Research Roadmap

American Association of State Highway and Transportation Officials (AASHTO)

Proposals Due: December 5, 2024 (4:00 p.m. CT)

Areas of Interest: transportation planning, safety, and research

Total Award Amount: \$250,000

Proposals must be submitted [via Dropbox](#).

AASHTO is seeking to develop a modern active transportation research roadmap to help state departments of transportation (DOTs) discover research gaps, assess current needs, and support

advancements in the field.

Research topics should identify factors that are barriers to achieving uniformity for active transportation. To fulfill the project's objective, proposers must complete 9 tasks categorized under Phase I (Planning) and Phase II (Execution).

At minimum, project deliverables should include the following:

- A literature review report
- A Research Roadmap
- A summary PowerPoint presentation
- A conduct of the research report documenting the research effort
- A technical memo titled "Implementation of Research Findings and Products"

Read more about this funding opportunity [here](#).

Process Systems, Reaction Engineering, and Molecular Thermodynamics

National Science Foundation (NSF)

Proposals accepted anytime

Areas of Interest: process, reaction, and systems engineering; thermodynamics; sustainable chemical manufacturing

Total Award Amount: \$4,900,000

The goal of this program is to support fundamental research on the rates and mechanisms of **chemical reactions, systems engineering, and molecular thermodynamics** as they relate to the design and optimization of chemical reactors and the production of specialized materials. Proposals should focus on the following research areas:

- Chemical reaction engineering
- Process modeling, design, control, and optimization theory and algorithms
- Reactive polymer processing to tune macroscopic scale properties
- Molecular thermodynamics to develop efficient chemical processes; improve environmental sustainability and water quality; and design functional materials with tailored properties

Read more about this funding opportunity [here](#).

Center Spotlight

The SGCOE Makerspace

In the Brown-Kopel Makerspace, creativity knows no boundaries.

Laser-engraved pumpkins, 3D print resin ghosts, embroidered clothing, and custom cutting boards and guitars are just a few of the many [projects](#) designed by SGCOE students since the center opened its doors in Fall 2020.

"We serve over 2,000 students per semester here, and we are teaching them how to use modern engineering tools; we're teaching them how to problem-solve," Dr. Bob Ashurst, director of SGCOE's Design and Innovation Center, said. "We are directly touching undergraduate education [and] workforce development. Everything that engineering is about, we do here."



Photo provided by Dr. Bob Ashurst, director of SGCOE's Design and Innovation Center

The 11,000-square-foot space features top-of-the-line fabrication equipment, including basic hand and power tools, Prusa 3D printers, Trotec laser cutters, heavy-duty sewing machines, and—among the more popular items—a waterjet cutter, which uses up to 50,000 psi of water and natural abrasive to cut through tougher materials. “It’s probably one of the closest things to magic you’ll ever see,” Dr. Ashurst added.

Adjacent to the main work area is a prototype shop, a digital prototyping laboratory—featuring AI video recognition and Augmented Reality technology—a machine shop, metalworking shop, wood shop, electronics shop, a bakery for high-temperature processing, and a wet lab for chemical processing.

According to Dr. Ashurst, the prototype shop's latest addition is a Form Fuse 1+ powder SLS 3D printer, which was acquired through a competitive grant from the DENSO North America Foundation (DNAF). Contrary to resin and filament 3D printers, which require support structures and often produce brittle parts, the SLS powder printer can stand alone and utilize more durable materials such as nylon and polypropylene to withstand engineering stress.

“The more that we can [expose students] to these kinds of tools, we feel the more successful they will be in their careers and the better off all the rest of us will be because of it,” Dr. Ashurst said.

To ensure safe use of the Makerspace, all students, faculty, and staff must complete a Basic Safety Training, followed by [shop-specific training demonstrations](#). General operating hours for the Makerspace are Monday – Friday from 9 am to 4 pm. For more information on available trainings, equipment, and how to acquire access to the Makerspace, visit the [Getting Started page here](#).

This email was sent to .

To continue receiving our emails, add us to your address book.

emma®

[Subscribe](#) to our email list.