

NEWS

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Samuel Ginn
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Announcements

2023 SGCoe Faculty Colloquium Schedule

Wednesday, Sep. 6	New Faculty
Tuesday, Sep. 26	New Faculty
Wednesday, Oct. 18	Dr. Ernest L. Brothers, University of Tennessee, Knoxville
	Dean's Address, Dr. Mario Eden
Tuesday, Oct. 31	New Faculty
Wednesday, Nov. 15	

Center Spotlight

Center for Polymers and Advanced Composites



This week's spotlight is on the Center for Polymers and Advanced Composites, directed by Dr. Bryan Beckingham. "CPAC's mission," according to Beckingham, "is to bring together industry and university researchers in collaboration to generate, facilitate, and exchange fundamental and applied knowledge on topics of high relevance to the polymer and composites industries." To accomplish this mission, Beckingham calls attention to the meaning of a center: a place for community and engagement that "brings together faculty, students, and stakeholders in order to foster communication, education, and research that makes an impact."

Beckingham envisions CPAC extending its role as a center by partnering with researchers in polymer materials across Auburn, by engaging with researchers in biomedical applications, and through involvement with NASA and related industries in Huntsville.

CPAC's ongoing research projects include developing canine training aids with the [Auburn DC-SITE team](#), synthesizing and characterizing polymers of recycled clothing with an Ohio company, and recycling excess 3D printing filament into new filament through the [ReMake project](#). CPAC is also serving Auburn's campus and faculty through the establishment of the [CPAC Laboratory Service Center](#)—a testing facility A2LA accredited for a series of tests and equipment—and with the launch of the [Research AMplification Program \(RAMP\)](#), which will assist faculty by providing internal funding to obtain preliminary data and to conduct proof of concept studies.

"Critically," Beckingham concludes, "CPAC is a resource, and I'm really looking forward to all the faculty and student-led projects that utilize our facilities and contribute to the exciting polymer and composites research here at Auburn."

Funding Opportunities

Secure and Trustworthy Cyberspace (SaTC)

Due: Sep 29, 2023
National Science Foundation

Areas of interest: cybersecurity and privacy, computing, authentication control, cryptography, cyber-physical systems, machine learning and artificial intelligence

The goals of the SaTC program are to protect and preserve the growing social and economic benefits of cyber systems while ensuring security and privacy. This program focuses on research directly supporting a safe, privacy-aware, secure, resilient, and trustworthy cyberspace. Proposals that are transformative, forward-looking, and offer innovative or clean-slate approaches that provide defenders a distinct advantage are of special interest. Awards for transition to practice (TTP) and cybersecurity and privacy education (EDU) are also available.

Read more [here](#).

Carderock Research Projects

Due: Nov 14, 2023

Department of Defense

Areas of interest: additive manufacturing, energy storage, computational modeling and simulation, and more

This call features several areas of work, of which we have selected three areas of focus. These can be found in the [Partnering with Carderock document](#) under Codes 60, 70, and 80.

Code 60: Platform Integrity Department

- hypersonics
- additive manufacturing
- power & energy
- liquid waste
- modeling & simulation tools

Code 70: Ship Signatures Department

- real-time tactical decision aids and trainers
- signatures assessment, management, and measurement

Code 80: Naval Architecture & Engineering Department

- early-stage ship design
- unmanned systems and autonomy
- computational fluid dynamics (CFD) hydrodynamic support
- extreme motions and loads
- tactical submarine evolution plan

Read more [here](#).

Chips & Science Act

Adapted from the Research Development & Grant Writing Newsletter,
June 2023

See the full article [here](#).

In 2022, Congress passed the Chips & Science Act which commits more than \$50 billion to build chip plants, support semiconductor-related research and development, and fund workforce development.

Additionally, the act authorizes \$174 billion through FY 2027 to support the US science and technology base. However, this is just an authorization that sets a ceiling for the amount of funding Congress can later appropriate in spending bills.

So where is that money going, and what funding opportunities could become available in the near future? The chart below breaks down the authorization amounts, but please see the source [here](#) to read more.

Key Programs	Five-Year Authorization	Increase over Baseline
National Science Foundation (NSF)	\$81 billion	\$36 billion
• NSF Tech Directorate	\$20 billion	\$20 billion
• NSF Core Activities	\$61 billion	\$16 billion
Department of Commerce (DOC)	\$11 billion	\$11 billion
• Regional Technology Hubs	\$10 billion	\$10 billion
• RECOMPETE Pilot	\$1 billion	\$1 billion
National Institute of Standards and Technology (NIST)	\$10 billion	\$5 billion
• NIST Research	\$6.9 billion	\$2.8 billion
• Manufacturing USA	\$829 million	\$744 million
• Manufacturing Extension Partnership	\$2.3 billion	\$1.5 billion
Department of Energy (DOE)*	\$67.9 billion	\$30.5 billion
• DOE Office of Science	\$50.3 billion	\$12.9 billion
• Additional DOE Science and Innovation	\$17.6 billion	\$17.6 billion
Total	\$169.9 billion	\$82.5 billion
*Across all the DOE sections, there is: • A total of \$14.7 billion for infrastructure, equipment, and instrumentation across 17 DOE National Laboratories. • A total of \$16.5 billion in new or above baseline authorizations for research in the 10 technology areas identified in USICA across the Office of Science and DOE’s applied R&D offices in advanced energy and industrial efficiency technologies, artificial intelligence and machine learning, advanced manufacturing, cybersecurity, biotechnology, high performance computing, advanced materials, and quantum information science.		

- **National Science Foundation:** Funded programs supervised by NSF’s new Technology, Innovations and Partnerships (TIP) directorate. This directorate focuses on technology economy, translation, and workforce development. It also helps institutions of higher education develop infrastructure to move their research findings to the market and society.
- **Department of Energy:** Funding for fundamental research overseen by the Office of Science and new programs in areas such as energy security, technology transfer, clean energy, and low-emissions steel manufacturing, among others.
- **Department of Commerce:** Funding will be administered by NIST and EDA for proposals that involve facilities and equipment for semiconductor fabrication, interventions to spur economic activity in distressed communities, and the creation of regional technology hubs.
- **Department of State:** Will fund projects that promote development and adoption of secure and trustworthy telecommunications networks and those that ensure semiconductor supply chain security and diversification.
- **Department of Defense:** The act authorizes \$2 billion for a Microelectronics Commons, which is intended as a national network for onshore, university-based prototyping, lab-to-fab transition of semiconductor technologies, and semiconductor workforce training.

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