



# FULTON FORGE

FALL 2024

**Student  
Research  
Expo**

[forge.engineering.asu.edu](https://forge.engineering.asu.edu)

**ASU** Ira A. Fulton Schools of  
**Engineering**  
Arizona State University

# About the **Fulton Forge Student Research Expo**

Learn about more than 115 research projects spanning seven research themes presented by students in the Fulton Undergraduate Research Initiative (FURI) program, Master's Opportunity for Research in Engineering (MORE) program and Grand Challenges Scholars Program (GCSP) research stipend.

## Research opportunities

### Fulton Undergraduate Research Initiative

The Fulton Undergraduate Research Initiative enhances an undergraduate student's engineering experience and technical education by providing hands-on lab experience, independent and thesis-based research, and travel to national conferences.

### Master's Opportunity for Research in Engineering

The Master's Opportunity for Research in Engineering program enriches a graduate student's engineering and technical curriculum with hands-on lab experience and independent and thesis-based research.

### Grand Challenges Scholars Program research stipend

The Fulton Schools Grand Challenges Scholars Program combines an innovative curriculum and cutting-edge research experiences into an intellectual fusion that spans academic disciplines and includes entrepreneurial, global and service learning opportunities. Students supported by the GCSP research stipend conduct research in a grand challenges theme and are invited to present their findings at Fulton Forge.

### Sponsored research

Select FURI and MORE students are chosen to receive research funding from industry or other sponsors for one semester. This allows companies to connect with students conducting research aligned with their industries and provides students the opportunity to work with a company in their field. Alternatively, alumni or other sponsors can help students get the important opportunity to pursue research. Learn more about this semester's sponsors and sponsored students on page 12.



Learn about all of this expo's student researchers online at [forge.engineering.asu.edu](https://forge.engineering.asu.edu)



**Scan the QR code** or use the link to learn more about the Fulton Forge Student Research Expo and find in-depth information about our student researchers and their projects. Browse summer and fall research projects by student, research program, theme, student degree program, faculty mentor and more. Read the research abstracts and explore students' posters online at any time.

**At Fulton Forge, students will have QR codes on their research posters that attendees can scan to view digital posters and learn more about their projects.**



On the cover

## Sofia Vargas

GCSP research stipend student

Major: Computer science

Graduation: Spring 2027

Hometown: San Diego, California

### ► IMPACT STATEMENT

**A computer program will use graph coloring algorithms to determine where captive-bred endangered species should be reintroduced to the wild.**

### Using Graph Coloring to Optimize Species Reintroduction

**MENTOR** XIAOFAN YUAN

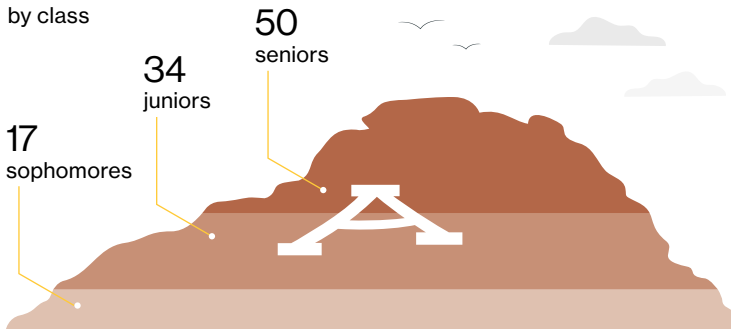
This project aims to use a graph coloring algorithm to identify optimal sites for reintroducing endangered species bred in captivity. Past reintroduction efforts have faced mixed results due to environmental factors such as predators and food availability. By translating environmental conditions and species locations into a graph, the graph can be assigned a certain amount of colors such that no adjacent vertices share the same color. The coloring algorithm will then color the graph such that species will not be adjacent to unfit environmental conditions. This approach will help improve the chances of successful species reintroduction and long-term survival.

# Snapshot Summer and fall 2024

Get to know this expo's participants. ▶ ▶ ▶



FURI students by class



12 MORE students

11 MORE mentors

5 GCSP research stipend students

5 GCSP research stipend mentors

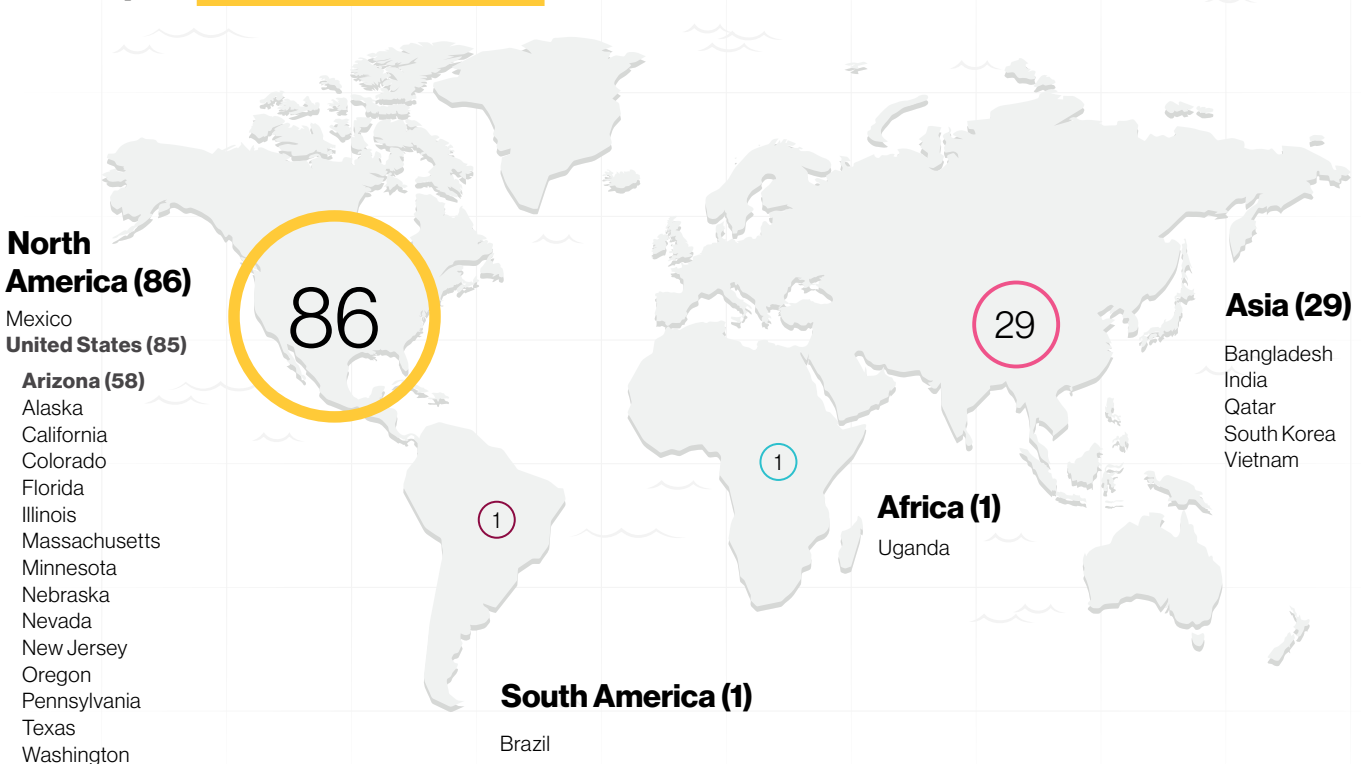
\* One student was supported by both FURI and the GCSP research stipend.

## Fulton Forge Fall 2024 Student Research Expo

**CONTENTS**

|                             |    |
|-----------------------------|----|
| Data                        | 5  |
| Education                   | 6  |
| Energy                      | 7  |
| Health                      | 8  |
| Security                    | 9  |
| Semiconductor manufacturing | 10 |
| Sustainability              | 11 |
| Sponsored research          | 12 |
| Mentors                     | 14 |
| Participants                | 15 |

## This expo's student researchers are from...



# How do you **get started?**

- 1 Explore your research interests.
- 2 Identify possible research mentors.
- 3 Prepare to talk with faculty.
- 4 Contact faculty members.
- 5 Make a decision.

**FURI** Fulton Undergraduate Research Initiative

✉ Contact the Fulton Schools Student Success and Engagement office at [furi@asu.edu](mailto:furi@asu.edu) with questions or advice on next steps.



“FURI was my gateway to the world of research — speak to your professors and see if the opportunity is a good fit for you!”

— Kelvin Tan, FURI  
Spring '21 – Summer '21

For more information, visit [furi.engineering.asu.edu](http://furi.engineering.asu.edu)

# Ready to solve society's **biggest challenges?**

The Grand Challenges Scholars Program, recognized by the National Academy of Engineering, will prepare you when you complete the five program components:

- » Complete research or creative project(s).
- » Gain multicultural awareness.
- » Develop an interdisciplinary systems perspective.
- » Engage in entrepreneurship.
- » Give back to the community through service learning.



**Grand Challenges Scholars Program**

✉ For more information, please contact Natalia Thompson Revoner at [natalia.thompsonrev@asu.edu](mailto:natalia.thompsonrev@asu.edu).



Apply today at [gcsp.engineering.asu.edu/apply](http://gcsp.engineering.asu.edu/apply)

# Experience **MORE** during your graduate education

The Master's Opportunity for Research in Engineering program is designed to provide research experiences for graduate students who do not have other research opportunities. Develop an idea under the mentorship of a Fulton Schools faculty member and apply for funding!

**MORE** Master's Opportunity for Research in Engineering

✉ **Grad students:** Curious about MORE? Contact [more@asu.edu](mailto:more@asu.edu) if you have questions about getting started.



Learn more at [students.engineering.asu.edu/graduate/research/more](http://students.engineering.asu.edu/graduate/research/more)

# Data



In an increasingly digital world, data collection is growing at a rapid pace. Fulton Schools faculty and student researchers devise innovative approaches and tools that will help us better process, analyze, use, manage and access data. New computational tools, algorithms and data analysis techniques, including hardware and software approaches, machine learning, data analytics, data-driven decision-making and more, will help advance scientific discoveries and collaborations across multiple fields where data use and capture is ubiquitous.

## ► IMPACT STATEMENT

**Understanding the movement of soft robotic arms will improve safety and usability in human-robot interactions across various industries.**



## Raj Kodithyala

FURI student researcher

**Major:** Engineering (robotics)

**Graduation:** Spring 2026

**Hometown:** Portland, Oregon

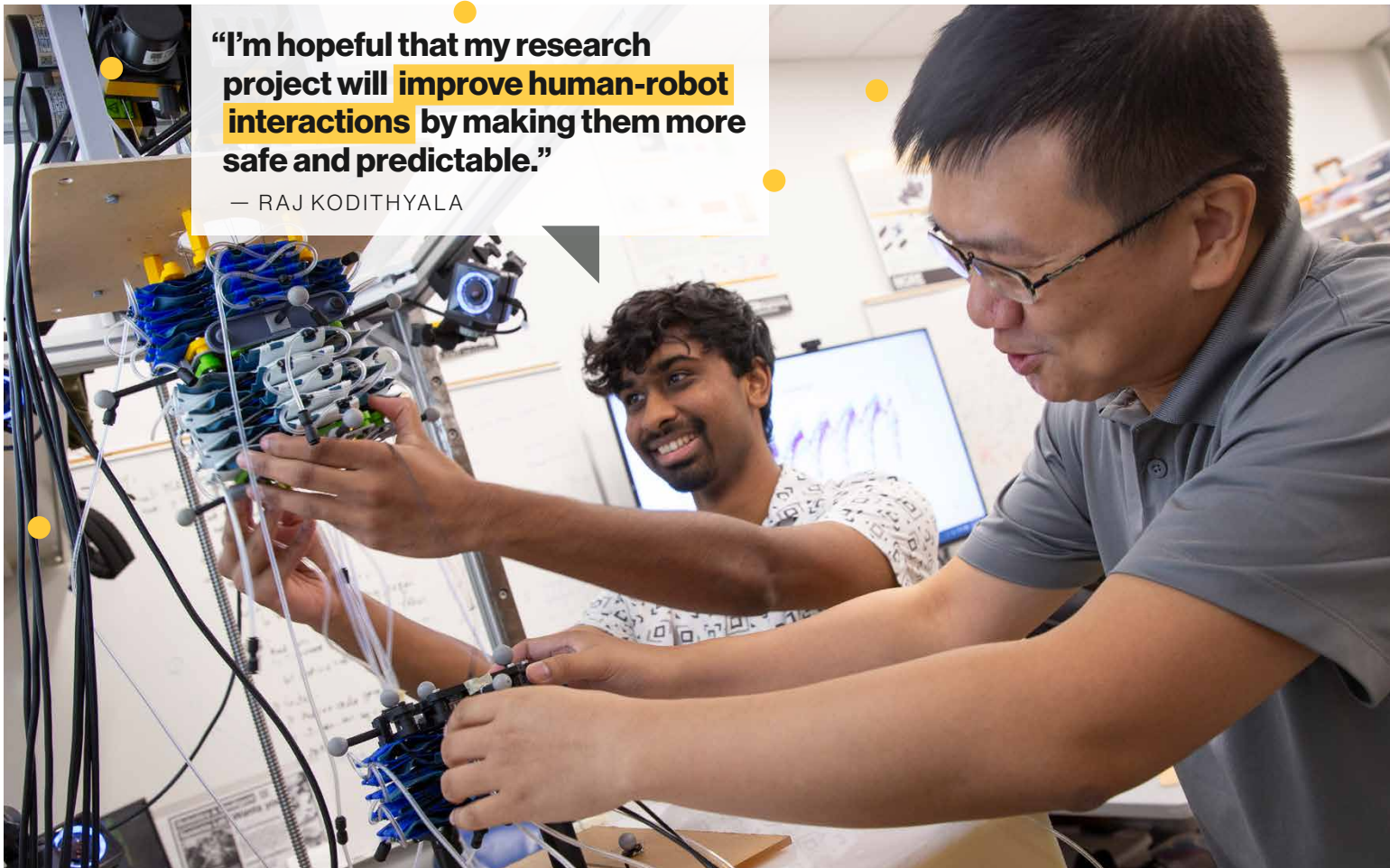
### Post Estimation of Soft Arm Using Motor Wire Encoders

**MENTOR** WENLONG ZHANG

Soft robotics offers enhanced safety, adaptability and flexibility over traditional rigid manipulators. This research focuses on soft robotic manipulators, which use compliant materials like fabrics to achieve motion through stretching and elongation. Accurately modeling these manipulators is essential for applications in manufacturing, human interaction and medicine, yet remains challenging due to their nonlinear behavior. By utilizing extensive testing and sensor data, the study aims to predict soft arm motion based on key parameters such as arc length and orientation, advancing the field's practical applications.

**“I’m hopeful that my research project will improve human-robot interactions by making them more safe and predictable.”**

— RAJ KODITHYALA





**“My project is concentrated on improving teaching methods for software engineers.”**

— DEVANSHI TUSHAR PRAJAPATI

# Education



We are advancing the ways we educate engineering students. Fulton Schools research focuses on learning methods, cognitive theory and best teaching practices, as well as the integration of engineering concepts in K-12 educational programs to engage students early and educate our community about the impact engineering has on everyday life.

## ► IMPACT STATEMENT

**Enhancing coding through student work analysis will empower instructors to teach industry practices and prepare students for jobs.**



## Devanshi Tushar Prajapati

**MORE** student researcher

**Major:** Software engineering

**Graduation:** Spring 2025

**Hometown:** Vadodara, Gujarat, India

### Educational Data Mining to Assess Code Quality in Programming Courses

**MENTOR** RUBEN ACUNA

This research aims to enhance automated assessment (AA) capabilities in programming courses by integrating educational data mining techniques with the autograder in a Data Structures & Algorithms course. The study will analyze performance metrics and code quality indicators using Python libraries and static analysis tools to evaluate nonfunctional requirements. By identifying trends, correlating measures with grades, and tracking code quality evolution, the project seeks to provide instructors with valuable insights. These findings will enable more effective assessment and teaching of code quality, better preparing students for software engineering careers. Future work will explore applying these techniques to other courses.

# Energy

The urgency to discover and deploy new forms of carbon-reducing energy technologies has become an indispensable part of our economic and environmental landscape. Fulton Schools research in renewable and alternative energy sources is multifaceted, with efforts in solar energy, biotechnology, low- and high-power energy storage, power electronics, electric power systems, batteries and hydrogen fuel cells.

## ► IMPACT STATEMENT

**Studying variable emittance coatings in cold space environments will optimize thermal control energy use, improving spacecraft efficiency.**



## Chloe Stoops

**FURI** student researcher

**Major:** Aerospace engineering

**Graduation:** Spring 2025

**Hometown:** Gilbert, Arizona

### **Cryothermal Measurements of Variable Emittance Coatings with Optical Heating**

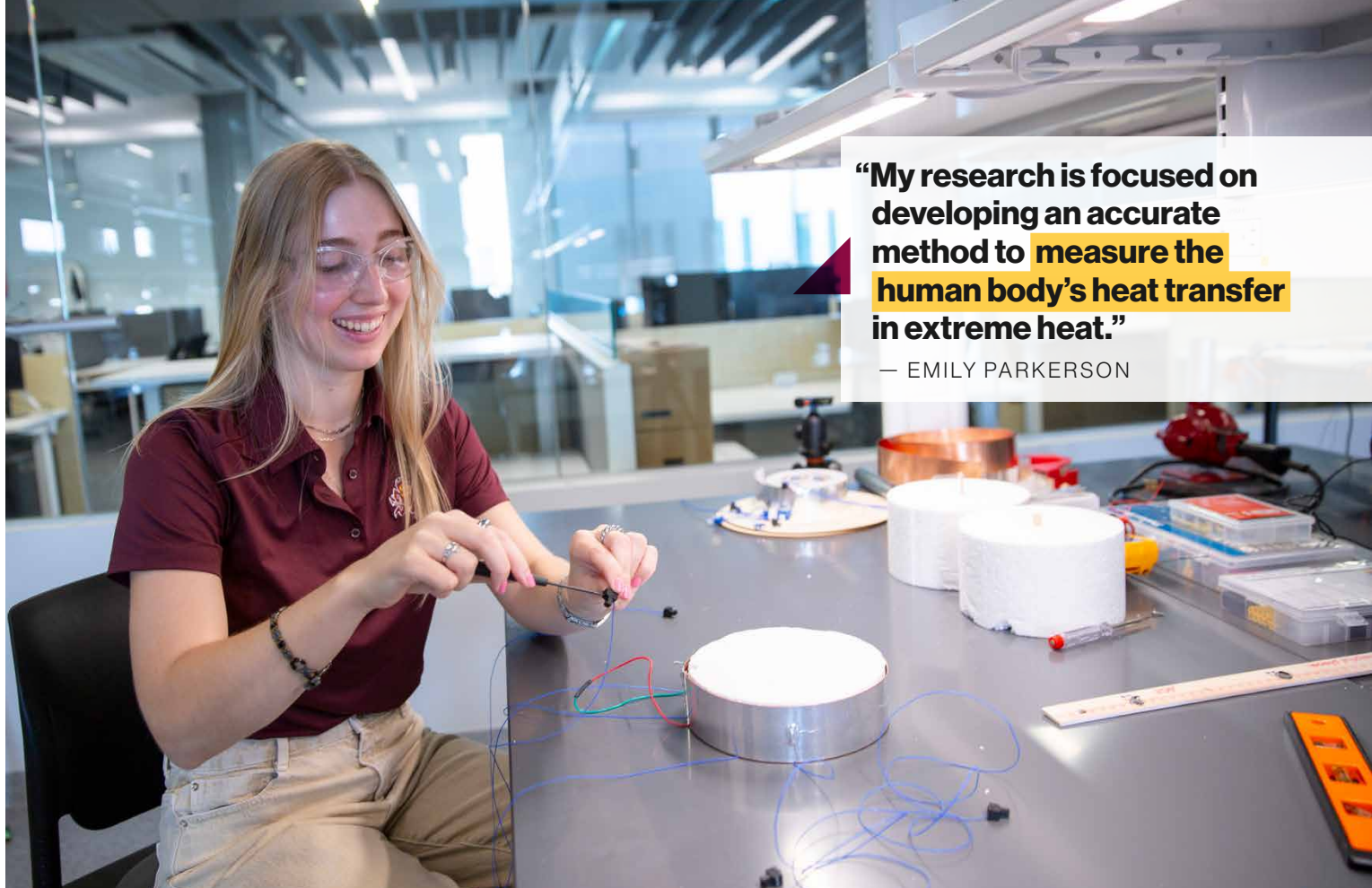
**MENTOR** | LIPING WANG

The purpose of this experiment is to determine how a variable emittance coating behaves in a cold space environment with constant heating by sunlight and variable internal heating, as well as how tungsten doping affects its performance with lower phase transition temperature ranges. The results of this experiment will show how a variable emittance coating performs under cryostat testing conditions in order to determine its radiative cooling properties. By optimizing the performance of radiative cooling materials, energy originally used to provide thermal control can be preserved.

**“As sustainable space flight becomes more of a reality, my project sheds light on another possible pathway toward this innovation.”**

— CHLOE STOOPS





**“My research is focused on developing an accurate method to measure the human body’s heat transfer in extreme heat.”**

— EMILY PARKERSON

## Health



Fulton Schools efforts in health innovation range from understanding the causes behind Alzheimer’s disease and improving methods for predicting epileptic seizures to developing advanced biosensors, bioassays and lab-on-a-chip devices for clinical diagnostics. Additional areas of research exist in novel biological materials, neural engineering, biomedical informatics, drug-delivery systems, health care systems analysis and modeling, health monitoring devices and human rehabilitation technologies.

### ► IMPACT STATEMENT

**A personal biometeorological station to measure extreme human heat exposure can improve health by enabling informed behavioral decisions.**



## Emily Parkerson

**FURI** student researcher

**Major:** Aerospace engineering

**Graduation:** Spring 2025

**Hometown:** Boston, Massachusetts

### **Personal Bio-Meteorological Station Based on Cylindrical Radiation Thermometers and Turbulence Accounting Anemometers**

**MENTOR** KONRAD RYKACZEWSKI

This project seeks to develop accurate and affordable sensors to measure radiative and convective exposure that humans face in extreme heat. Many sensors exist that solely quantify radiation exposure, but accounting for convective exposure is more difficult because of the effect of turbulence characteristics including wind speed, turbulence intensity (TI), and turbulence length scale (Lt). A setup composed of multiple metal cylinders developed with readily available materials is proposed. One larger reflective cylinder will simulate the human body to measure convection only. Three cylinders of varying diameters will quantitate turbulence characteristics in outdoor flow to assess effects on convection. Radiation will be accounted for using another three-cylinder setup with varied absorption properties and constant diameters.



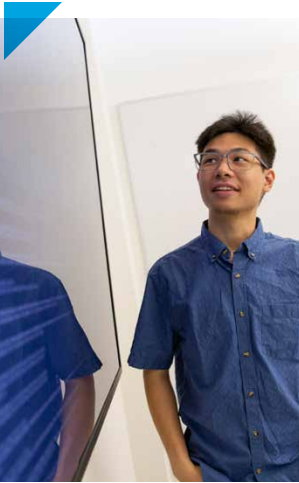
# Security



As technology develops at a faster rate, there is a growing need to develop engineering systems to keep people and infrastructure safe, including securing cyberspace, advancing secure communications, developing self-healing systems resilient to attack and identifying, monitoring and reducing threats. Fulton Schools faculty and student researchers address issues of national defense, homeland security, border security, cyberwarfare and more, devising technology solutions and addressing legal, policy and social implications.

## ► IMPACT STATEMENT

**Current AI is limited to being black boxes. If we can generate understandable code, we can then use it to advance AI in security contexts.**



## Alexander Ng

**FURI** student researcher

**Degree:** Computer science

**Graduation:** Spring 2025

**Hometown:** Los Altos, California

### Synthesizing Interpretable Agents for Cybersecurity Contexts with Code Evolution of Augmenting Topologies

**MENTOR** STEPHANIE FORREST

The objective is to create a model for evolving code that is more interpretable than conventional neural nets and can be used for the same reinforcement learning tasks. Researchers have been able to synthesize functions for test problems with basic integer operations. At a small scale, this demonstrates parity with existing neural-net-based solutions on simple tasks. Next steps will be moving on to bigger reinforcement learning tasks, and implementing more capabilities like external function calls and control flow. Interfacing with external functions would allow for solving cybersecurity-related tasks.



**“In critical and security infrastructure, we must limit our use of AI-driven agents to those we actually understand.”**  
— ALEXANDER NG



“I want to see if there is a new way to characterize aging in semiconductor materials that hasn’t been used yet.”

— DANIEL ABREU

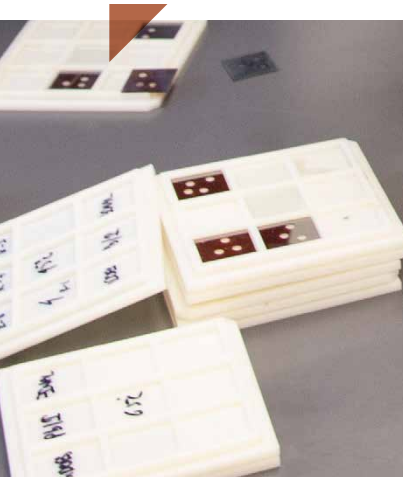
## Semiconductor manufacturing

Semiconductor devices are part of our everyday lives, and the demand for techniques and processes to promote them continues to grow. Fulton Schools researchers drive innovation forward through advances in areas such as power electronics, wireless and mixed-signal circuit design, memory devices and architectures, solar energy and batteries, advanced packaging and new semiconductor materials. Expansive industry collaborations and unique facilities at ASU center Arizona as a hub for the American semiconductor revolution.



### ► IMPACT STATEMENT

This research will help find a new way to interpret and understand material diffusion throughout semiconductor devices.



## Daniel Abreu

FURI student researcher

**Degree:** Electrical engineering

**Graduation:** Spring 2025

**Hometown:** Chandler, Arizona

### Quantifying Elemental Diffusion Within Semiconducting Diodes Due to Thermal Stresses

**MENTOR** NICK ROLSTON

This research aims to find a new way of characterizing material diffusion caused by aging within semiconductor devices. Glass slides coated with oxide-based semiconductor materials are aged via high temperatures to see how the composition of the samples changes over relatively extended periods of time. Elemental diffusion and relative composition of the material are measured using Glow Discharge Optical Emission Spectrometer (GD-OES) and diode properties are measured with capacitance-voltage scans. Additionally, results between aging in air and aging in nitrogen gas will also be compared.

# Sustainability

The central thrust behind sustainability is the capacity of metropolitan areas to grow and prosper without destroying or depleting natural resources. Fulton Schools research focuses on restoring and improving urban infrastructure, access to clean water and air, advanced construction techniques and management, environmental fluid dynamics, transportation planning as well as geotechnical and geoenvironmental engineering.

## ► IMPACT STATEMENT

**Studying the effects of best management practices will help determine the most efficient ways to mitigate water quality impacts.**



## Antonio Blair

**FURI** student researcher

**Major:** Civil engineering

**Graduation:** Fall 2024

**Hometown:** Sacramento, California

### Assessing the Impacts of Best Management Practices on Water Quality in the Southwestern United States – Is the Nonpoint Mitigation Strategy Working?

**MENTOR** SAURAV KUMAR

Best management practices (BMPs) are often designed to restore the water quality of impaired bodies of water. Their installation and maintenance is expensive, and they have limited post-installation analysis. There is a gap in the knowledge of long-term, real-world efficiency of such systems, as their dynamics are complex, poorly understood and have limited data. The research team looks at water quality changes pre- and post-BMP implementation from sites in the Southwestern United States. This allows for a better understanding of the impacts BMPs have on nutrient concentrations within the watershed. Future work would include expanding the study area nationwide.



**“Water quality is a big issue and, if not monitored, can eventually harm marine life.”**

— ANTONIO BLAIR

# Sponsored research



## What are research sponsorships?

Industry companies or endowments sponsor select students presenting at Fulton Forge. These sponsors recognize the importance of undergraduate research in helping students learn and build knowledge through experience as well as the effect student projects can have in advancing society through technological developments.

## What are the benefits?

Connect with top undergraduate students interested in research aligned with your industry. More than 150 students participate in undergraduate research each year. Funding support provides project supplies as well as faculty and student connections for \$500 per project per semester.



To learn more about sponsorship, contact **David Wahls** at [david.wahls@asu.edu](mailto:david.wahls@asu.edu)

## TSMC

TSMC is a global leader in the semiconductor foundry business. The company's industry-leading process technologies and portfolio of design enablement solutions help its customers and partners unleash semiconductor innovation. With its recent expansion into Phoenix, TSMC sees the benefit of a strong partnership with ASU faculty and student researchers. TSMC supports the FURI program by providing additional funding for exceptional research projects related to the semiconductor industry. FURI student researchers who pursue a project related to the semiconductor manufacturing research theme are eligible for this sponsorship. TSMC-supported FURI students receive a \$2,600 stipend and \$400 to use for materials. Exceptional research proposals that align with the research theme of semiconductor manufacturing will be considered for this additional funding.

### TSMC SPONSORED STUDENTS SUMMER AND FALL 2024

- Daniel Abreu**  
Electrical engineering
- William Boutin**  
Mechanical engineering
- Nguyen Michael Do**  
Electrical engineering
- Ryan Flaherty**  
Mechanical engineering
- Fuad Hossain**  
Electrical engineering
- Sean Lowe**  
Computer systems engineering
- David McComas**  
Electrical engineering
- Jay Schroeder**  
Chemical engineering
- Max Westby**  
Mechanical engineering



**Learn all about this semester's TSMC sponsored projects.**

## Ahmad Family Fulton Undergraduate Research Initiative Fund

Jalal U. and Syeda F. Ahmad and their children – Jaheen N., Raisa N. and Nafisah N., all of whom attended the Fulton Schools – established a fund to give back and support undergraduate students in their pursuit of knowledge and the advancement of research. Their endowment, which funds materials science, mechanical, chemical, biomedical or electrical engineering students, was created to help more students have the life-changing experience of conducting research through FURI.

### AHMAD FAMILY SPONSORED STUDENTS SUMMER AND FALL 2024

- Alondra Davila**  
Biomedical engineering
- Jenna Materna**  
Biomedical engineering
- Avijit Jutla**  
Electrical engineering
- Connor Moyaerts**  
Chemical engineering



**Learn all about this semester's Ahmad Family sponsored projects.**




## W. L. Gore & Associates

W. L. Gore & Associates is a uniquely creative product leadership enterprise that has served a variety of global markets for more than 60 years and provides innovative solutions that its associates stand behind. Gore established funds to support undergraduate students in the Fulton Undergraduate Research Initiative program and graduate students in the Master's Opportunity for Research in Engineering program, and values student-driven research and developing relationships with students in the two programs.

### W. L. GORE SPONSORED STUDENTS SUMMER AND FALL 2024


**Alexander Egan**  
Biomedical engineering

 **Emily Mahadevan**  
Biomedical engineering


**Solenne Norvor-Davis**  
Biomedical engineering

 **Mohan Chellarao Pentakota**  
Chemical engineering

**Aislinn Varela**  
Chemical engineering

 **Jay Jivan**  
Chemical engineering



 **Learn all about this semester's W. L. Gore & Associates sponsored projects.**



**“Complex injuries remain a significant health care challenge despite millions of cases and substantial costs.”**

—SOLENE NORVOR-DAVIS

### W. L. Gore & Associates sponsored research

## Solenne Norvor-Davis

### Biomaterial-Mediated Controlled Release of Inflammasome Modulators for Diabetic Tissue Repair

**MENTOR** JORDAN YARON

Complex wounds are a significant health and economic burden affecting one in 38 adults in the U.S. at a \$20 billion annual cost. Chronic wounds such as diabetic ulcers exhibit delayed healing and increased risk of infection and amputation, and a five-year survival of only 30% – the same as the average of all cancers. Sustained inflammasome-driven inflammation in diabetic wounds represents a druggable target to promote healing. This research project focuses on biomaterial engineering of silk fibroin-based wound dressings to generate a controlled, sustained release platform to deliver the inflammasome pathway inhibitor A438079 to augment healing in diabetic wounds.

FURI student researcher

**Major:** Biomedical engineering

**Graduation:** Spring 2026

**Hometown:**  
Chandler, Arizona



### ► IMPACT STATEMENT

**Expediting the wound healing process reduces the burden on health care systems, enhances patient quality of life and lowers complications.**

# Mentors

## What is a faculty mentor?

Fulton Schools faculty members guide students through the research process in their role as FURI and MORE research program mentors. Mentors meet with their student researchers one-on-one and in lab settings for training, professional etiquette coaching and to serve as their students' guide for writing abstracts and designing research posters. Faculty mentors provide advice and professional development opportunities, including submitting research to conferences, applying for travel grant funding, submitting papers for publication and discussing career goals.

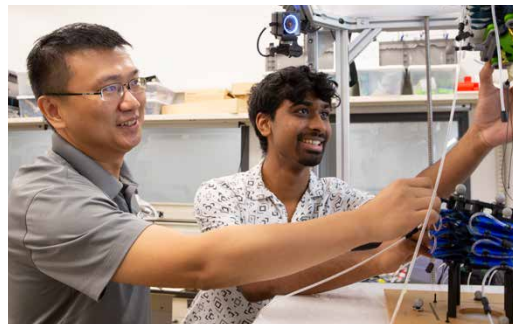
## How to get involved

Do you have students conducting research in your lab? Encourage them to apply for FURI or MORE research funding. Faculty members can mentor up to five students in each program per semester.

Each student will submit their research proposal, five research references, timeline, budget, personal statement, resume and unofficial transcript in their FURI or MORE application. Then faculty mentors are prompted to submit a Faculty Mentor Proposal Support Letter. If the faculty committee accepts the application, the student and faculty member will receive FURI or MORE funding for the semester. If you don't currently have undergraduate or graduate student researchers and would like to find qualified researchers, you can post your research opportunity for students to connect with you.

## Meet this semester's outstanding mentors

Each semester, the FURI, MORE and GCSP research stipend programs select an outstanding faculty mentor from student nominations. These mentors share expertise, empower growth and autonomy, and support student success in a variety of research endeavors. Learn more about this semester's awardees and other exemplary mentors at [forge.engineering.asu.edu/featured-mentors](https://forge.engineering.asu.edu/featured-mentors).



**“Prof. Wenlong Zhang’s mentorship also helped me submit a research paper to one of the most prestigious conferences in our field.”**

— YOGESH KUMAR, ROBOTICS AND AUTONOMOUS SYSTEMS MORE STUDENT



**“Dr. P is the perfect mentor who is passionate about the work he does and radiates that energy to me.”**

— ADITI RAO, BIOMEDICAL ENGINEERING GCSP RESEARCH STIPEND STUDENT

Find out more at [faculty.engineering.asu.edu/mentor-students](https://faculty.engineering.asu.edu/mentor-students)



### FURI SUMMER OUTSTANDING MENTOR

#### Mark Wang

Assistant Professor, School of Biological and Health Systems Engineering

**Expertise:** Molecular and cellular bioengineering, nanomedicine, mechanobiology

🔬 Nanotherapeutics & Molecular Engineering Laboratory

### FURI FALL OUTSTANDING MENTOR

#### Paul Grogan

Associate Professor, School of Computing and Augmented Intelligence

**Expertise:** Modeling and simulation, information systems, game theory and systems engineering

🔬 Collective Design Lab

### MORE OUTSTANDING MENTOR

#### Wenlong Zhang

Associate Professor, School of Manufacturing Systems and Networks

**Expertise:** Robot control and autonomy; human-robot interactions; soft robotics; unmanned aerial vehicles

🔬 Robotics and Intelligent Systems Laboratory

### GCSP RESEARCH STIPEND OUTSTANDING MENTOR

#### Vin Pizziconi

Associate Professor, School of Biological and Health Systems Engineering

**Expertise:** Bioresponsive and biomimetic materials

🔬 Laboratory of Biolnspired Complex Adaptive Systems



## Q&A with summer and fall outstanding faculty mentors

### What made you want to get involved as a faculty mentor?

**PAUL GROGAN** I did not pursue any research experiences as an undergraduate student; it was only in graduate school that I discovered a passion for research, which has turned into a fulfilling lifelong career. I want to help others determine as early as possible if a research career is a good fit so they can help structure plans for graduate school and beyond.

**“Dr. Wang has made an effort to ensure his students are able to keep pushing toward where they want to be.”**

— ALEXANDER EGAN, BIOMEDICAL ENGINEERING FURI STUDENT

### What is your favorite part about seeing your students conduct research?

**MARK WANG** My favorite part of mentorship is assisting students in identifying key questions, proposing solutions, and designing and executing experiments to address the challenges they encounter. It's incredibly rewarding to guide them through this process and witness their growth as researchers.

### Have your students come up with any research surprises or proposed new directions for your lab?

**WENLONG ZHANG** Oh yeah, all the time. For example, I had a FURI student, Jonathan Bush, who started a new research topic for an autonomous bicycle. He has been working on this topic for the past several years, and now he is a PhD student in my lab working on a National Science Foundation project to continue exploring this exciting direction!

### What have you gained from being a FURI, MORE and GCSP research stipend mentor?

**VIN PIZZICONI** Mentoring highly motivated FURI, MORE and GCSP students is reassuring

that the next generation STEM workforce will be well prepared to take on the daunting 21st century challenges, which brings much satisfaction to me.



**“Dr. Grogan has helped me in my research by patiently explaining each and every concept as well as helping me assess the possible scope of research areas for my project.”**

— SHASHWAT RAJ, COMPUTER SYSTEMS ENGINEERING FURI STUDENT

## SUMMER AND FALL 2024 STUDENT RESEARCHERS


Daniel Abreu  
Ruben Aguilera  
Munia Ahmed  
Jamie Akbari-Carpenter  
Clara Azevedo  
Alma Babbitt  
Sai Grishma Basikala  
Sri Ujjwal Reddy Beereddy  
Pranav Bhavaraju  
Antonio Blair  
William Boutin  
Brianna Branson  
Hunter Bridges  
Jackson Burdorf  
Siva Surya Venkat Busi  
Jacob Cagan  
Ethan Chang  
Timothy Chase  
Vedant Choudhary  
Adrian Ciotinga  
Garrett Combes  
Ryan Connolly-Kelley  
Meaghan D'Arcy  
Alondra Davila

Izaan de Bruyn  
Anthony De Luz  
Nguyen Michael Do  
Alexander Egan  
Fatima Eldessouki  
Emma Estrada  
Ryan Flaherty  
Cindy Furukawa  
Shyam Ganatra  
Neel Garde  
Ana Girish  
Daniel Graves  
Yasoa Habbaba  
Andrew Hampson  
Fuad Hossain  
Luke Houtz  
Yingao Hu  
Daniel Hur  
Rayna Hylden  
Shatakshi Iksha  
Abraham Istanbuly  
Jay Jivan  
Avijit Jutla  
Aryan Vinod Keluskar

Aryan Khanna  
Sahajpreet Singh Khasria  
Raj Kodithyala  
Nishtha Kukreja  
Yogesh Kumar  
Gabriel Larsen  
Sean Lowe  
Jaden Lynch  
Emily Mahadevan  
Katherine Malloy  
Anirudh Manjesh  
Emma Mast  
Jenna Materna  
David McComas  
Connor Moyaerts  
Nivedh Mudiam  
Mohammed Shaan Nadaf  
Henry Nakaana  
Vishnu Tejaa Nandam  
Alexander Ng  
Han Nguyen  
Dustin Nguyen  
Phong Nguyen  
Arick Nitzsche

Solenne Norvor-Davis  
Abdalla Osman  
Arshtegh Pannun  
Natalie Pargmann  
Emily Parkerson  
Mohan Chellarao Pentakota  
Devanshi Tushar Prajapati  
Narendiran Raghu  
Kelly Raines  
Shashwat Raj  
Sriman Rajamani  
Dushyant Rana  
Aditi Rao  
Eron Ristich  
Tristan Rodriguez  
Namir Sabuwala  
Srikar Samavedam  
Jay Schroeder  
Dylan Serrao  
Shubham Shah  
Kannak Sharma  
Shreya Sharma  
Meir Shimunov  
Ryan Smith

Gursparsh Singh Sodhi  
Patricio Solana Bustamante  
Jun Song  
Vardaan Sood  
Chloe Stoops  
Ansh Tiwari  
Mitchell Todd  
Muhammed Topiwala  
Nguyen Phuong Thao Tran  
Collin Travis  
Anh Quan Truong  
Lyudmil Valkov  
Aislinn Varela  
Sofia Vargas  
Karthik Viyyapu  
John Walling  
Eric Weissman  
Max Westby  
Luke Williams  
Connor Williamson  
Minju Yoo



**“I strongly believe you cannot have a great city without a great school of engineering.”**

**— Ira A. Fulton**

## **Fueling innovation, building engineers**

AT ARIZONA STATE UNIVERSITY, We've been educating engineers for Arizona and the world for nearly 60 years. With more than 30,000 students, we are building the engineers of the future and pursuing the discoveries and solutions to challenges facing society.

In 2003, Ira A. Fulton, founder and CEO of Arizona-based Fulton Homes, established an endowment of \$50 million

in support of ASU's College of Engineering and Applied Sciences.

His investment served as a catalyst, enabling the development of a dynamic portfolio of strategic initiatives that benefit our students and faculty and the communities where they live and work.

Throughout the years, Ira A. Fulton has been an active supporter of the school that bears his name.