

Gallogly College of Engineering

*The* UNIVERSITY *of* OKLAHOMA.

August 2023

## University, OU Engineering Break All-Time Records for Sponsored Research Growth

In FY23, the University of Oklahoma set a record for sponsored research awards on its Norman campus. OU researchers secured \$210.4 million in research funding, an increase of nearly 33% from the previous fiscal year. OU Engineering played a strong part in the record-setting year. In FY23, grants involving OU Engineering faculty totaled close to \$73 million, nearly doubling the previous year's figure of \$36 million. OU Engineering's preliminary estimate of research expenditures shows an approximate increase of 33% since FY22, says Zahed Siddique, OU Engineering's associate dean for research. Learn more.

Continuing the current momentum, in July, OU Engineering secured research awards totaling \$7.9 million that included:

A \$600,000 grant from the Department of Defense for the project "Transport of Multivalent lons in Thermoresponsive lonogel Electrolytes from Lyotropic Liquid Crystals."

A \$599,947 grant from the National Science Foundation for the project "SaTC: CORE: Small: Socio-Technical Approaches for Securing Cyber-Physical Systems from False Claim Attacks."

#### **SCBME Engineer Identifies 135 New Genes Behind Human Pigmentation**

The skin, hair and eye color of more than 8 billion humans are determined by the light-absorbing pigment known as melanin. An article in <u>Science</u> highlights research conducted by Vivek Bajpai, a faculty member in the OU School of Sustainable Chemical, Biological and Materials Engineering. Working with researchers from Stanford University, the study has successfully identified 135 new genes associated with pigmentation.



#### AME Engineer, TAFB Team Devise B-1B Aircraft Rudder Solution

In collaboration between OU's Oklahoma Aerospace and Defense Innovation Institute and the Oklahoma City Air Logistics Complex at Tinker Air Force Base, a novel solution is in the works to tackle rudder challenges on the B-1B aircraft. Led by Kuang-Hua Chang, a faculty member in the OU School of Aerospace and Mechanical Engineering, recent OU Engineering graduates Tristen Portis and Rick Lucio contributed to devising practical resolutions for a B-1B issue. Read more in <u>Stars and Stripes.</u>



#### **CS Engineer Studies Cas9 Protein Motifs**

Ji Hwan Park, a faculty member in the OU School of Computer Science, plays a key role in the latest research endeavors of three OU scholars who have secured \$310,000 from the U.S. Department of Defense's Congressionally Directed Medical Research Programs. Their aim is to pinpoint protein motifs within Cas9, which play an important part in the immunological defense of certain bacteria against DNA viruses and plasmids. Learn more.



### In the Lab and Beyond: OU Engineers Embrace Summer

#### Incoming Freshmen Dive Into OU Engineering's Summer Bridge

This summer, 53 incoming freshmen representing Oklahoma, Texas and Virginia, participated in the Summer Bridge Program hosted by OU Engineering. The intensive four-week on-campus program was designed to equip them with the skills and readiness needed to excel in their engineering studies. As part of this year's team-based engineering design project, student teams were tasked with designing and building a water treatment system for a specifically chosen water source and end-us. <u>Photo album here.</u>



#### SBME Students Stand Out in Coulter College Program

OU biomedical engineering students placed second in the 2023 Coulter College Program on Aug. 3-6 in Minneapolis. Presented by the Biomedical Engineering Society and Medtronic, the program focuses on bridging the gap between cutting-edge biomedical technologies and practical clinical applications. Adviser, Rebecca Scott, a faculty member in the Stephenson School of Biomedical Engineering, emphasized the competition's aim is to empower young engineers in addressing real-world medical needs. The OU team earned the "Best User Insights Award" for devising a tool to aid clinicians in identifying appropriate candidates for pain stimulators, ultimately contributing to the mitigation of chronic pain. <u>Read more.</u>



#### Building Knowledge: OU Engineers Lead Conferences

Conference attendance is about sharing research, building collaborations and getting to know scholars in the field. This summer, OU Engineers hosted and participated in a variety of conferences.

OU hosted the <u>14th International Precipitation Conference</u> on June 5-9 with 471 participants from 36 countries representing academia, industry, government agencies and non-profit research institutes. Pierre Kirstetter, School of Meteorology and School of Civil Engineering and Environmental Science, was conference chair.

The School of Civil Engineering and Environmental Science welcomed the <u>American Society of Civil Engineers</u> to the Oklahoma City Convention Center on Aug. 6-9. CEES faculty member Jason Vogel served as conference chair.

Rui Q. Yang, School of Electrical and Computer Engineering, served as conference chair for the <u>16th</u> <u>International Conference on Mid-Infrared Optoelectronics: Materials and Devices</u> held on the OU campus Aug. 6-10.



#### **OU Engineering Presents Dissertation Excellence Awards**

Eight OU Engineering students were selected as recipients of the summer 2023 Engineering Dissertation Award. The \$5,000 award, designed to foster excellence among doctoral students, supports scholars in the final stages of their Ph.D. studies. Learn more.

#### **OU Engineering Robotics Teams Excel in Competitions**

OU Engineering students demonstrated its robotics prowess through two successful teams earlier this year. The teams participated in the Intelligent Ground Vehicle Competition and the University Rover Challenge, both yielding victories. Notably, Sooner Competitive Robotics achieved one of the organization's highest scores in its 30-year history. Learn more.



#### **History Pages**

# 1963

In the summer of 1963, construction began on the new Engineering Center, along with a separate building on the North Campus for Aerospace Engineering. The Engineering Center, later named Carson Engineering Center, was located just north of Felgar Hall.

Source: OU College of Engineering: A 70-Year History. By Tom J. Love Jr., George Lynn Cross Professor Emeritus, OU School of Aerospace and Mechanical Engineering.

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