TOP STORY

Chandra Kothapalli Funded for Tissue Regeneration Research

Dr. Chandra Kothapalli, an associate professor in the Department of Chemical and Biomedical Engineering (CBE), has been awarded $299,873 by the National Science Foundation (NSF) for research on polymer nanoparticles to support repair of injured human tissues. The project, titled "Design and development of a multifunctional nanoplatform for augmented elastic matrix repair," is a collaborative research effort in partnership with Anand Ramamurthi from the Cleveland Clinic’s Lerner Research Institute (LRI). LRI has received a separate funding award for its portion of the work.

Drs. Kothapalli and Ramamurthi will investigate the use of surface-functionalized polymer nanoparticles to assist with the formation of elastic fibers during the healing process. Adult cells often have difficulty generating these elastic fibers, which are critical to providing tissue stretch and recoil. This is a particular issue with conditions such as abdominal aortic aneurysms, which are localized expansions of the aorta wall.

FUNDING NEWS

Wenbing Zhao and FIU Win Award for Cybersecure Sensors

Dr. Wenbing Zhao, a professor in the Department of Electrical Engineering and Computer Science (EECS), has received funding from the U.S. Department of Energy to develop cybersecure sensors for fossil power generation plants. The two-year, $400,000 award is a partnership between Dr. Zhao and research staff from Florida International University’s Applied Research Center (ARC) in Miami, Florida.

During the project, titled “Secure Data Logging and Processing with Block-chain and Machine Learning,” the research team will develop data logging and data aggregation methods that utilize machine learning algorithms and blockchain technology. The overall result will be a system that can verify the reliability of data shared among power system components and that can securely store that data.
MEET CSU'S NEW FACULTY

Brian Davis, Mechanical Engineering

Dr. Brian L. Davis is the Interim Associate Dean of the Washkewicz College of Engineering (MCE). Dr. Davis joined Cleveland State in February 2019 from the University of Akron, where he was Chair of the biomedical engineering department. Previously, he served as Vice Chair of Biomedical Engineering at the Cleveland Clinic, playing a key role in developing the Doctoral Program in Applied Biomedical Engineering partnership between the Cleveland Clinic and CSU. He received a bachelor's degree in mechanical engineering and a master's degree in medicine (specializing in biomedical engineering) at the University of Cape Town in South Africa, and holds a Ph.D. in exercise and sport science from Pennsylvania State University.

Over his career, Dr. Davis has attracted over $25M in research funding for applications ranging from sensor instrumentation that was later used on the International Space Station to rehabilitation technology and instrumentation for assessing a patient's risk for diabetic foot ulceration. More recently, he has received funding from the National Science Foundation for initiatives related to STEM outreach to under-represented students and from Akron Children’s Hospital to pursue pediatric research.

FEATURED ALUMNI RESEARCHER

David Avanesian

David Avanesian has worked at NASA Glenn Research Center (GRC) for over 11 years, where he currently works on electrified aircraft propulsion hardware. Earlier in his career, he developed high-power flywheel energy storage systems and a miniature heart pump to treat children born with a missing ventricle.


If you know a former Cleveland State student researcher who has gone on to career success, please email Dan Simon or Joy Yard to let us know.

RESEARCH FUNDING

FIRE Up Your Research!

The Office of Research introduced the Faculty Innovative Research and Engagement (FIRE) Initiative, a new funding mechanism to invest in collaborative, innovative, multi-disciplinary graduate faculty research in high-risk and high-reward areas.

The 12-month grants have a budget limit of $20,000, and FIRE funding will support new research directions or programs, new research efforts that extend or build on current faculty scholarship, pilot studies, or the establishment of new research partnerships.

URA Deadline Approaching: Also, the deadline to apply for spring 2020 funding through the Undergraduate Research Award (URA) program is November 25.

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CSU SCHOLAR NEWS

Rosie Tighe, Urban Studies

Dr. J. Rosie Tighe is an associate professor in the Maxine Goodman Levin College of Urban Affairs, where she pursues collaborative and engaged research on housing, racial segregation, gentrification, and inequality. She holds an M.A. in urban policy from Tufts, and a PhD in Community & Regional Planning from the University of Texas at Austin.

Dr. Tighe’s research has evolved from a focus almost exclusively on housing affordability and public opinion to one that more broadly engages issues of racial and class equity in American cities. All of her work attempts to achieve two main goals:

- To bridge the gap between academic research and practice through sound research methods and data analysis techniques; and
- To promote an emphasis on racial and class equity among policy makers and planners.

With Associate Professor Stephanie Ryberg, Dr. Tighe recently co-edited the book Legacy Cities, which brings together research from the Levin College and beyond to understand the complexity of Rust Belt cities like Cleveland. She is currently working on a sole-authored book focusing on the exclusion, control, and displacement of people of color in metropolitan America, with a focus on Cuyahoga County.

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INSPIRED CREATIVITY

The Galleries at CSU Host Art Faculty and Recent Alumni Exhibits

The Galleries at CSU are hosting the Studio Art Faculty Exhibition and the Recent Alumni Exhibition through November 23. The Studio Art Faculty Exhibition, housed in the North and Center galleries, includes large scale works by David Hicks, an assistant professor of drawing in the Department of Art and Design, among other faculty members’ pieces. The Recent Alumni Exhibition is located in the South gallery and includes works by alumni Yiyun Chen, Benji Diaz, Aja Grant, Heather Molecke, Dantè Rodriguez, Omid Tavakoli, and Josh Usmani.

The Galleries at CSU are located at 1307 Euclid Avenue, in the historic Cowell and Hubbard building, at the corner of East 13th Street.

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NEWS FROM THE TECHNOLOGY TRANSFER OFFICE

Invention Disclosure Pipeline

The CSU Patent Review Committee has approved the invention disclosure of Dr. Girish Shukla, a professor in the Department of Biological,

CSU Teams Complete the 2019 I-Corps@Ohio Program

Two CSU research teams completed focused entrepreneurial and commercialization training though the 2019 I-Corps@Ohio Program to advance the translation of their fundamental
Geological and Environmental Sciences (BGES) and a member of the Center for Gene Regulation in Health and Disease (GRHD), titled "Methods for the treatment of prostate cancer."

The microRNA-based drug candidate downregulates multiple cellular pathways that promote the transition of normal cells to cancerous cells, and works cooperatively with the castration-resistant prostate cancer drug Enzalutamide to elicit a profound therapeutic anti-tumor response in prostate cancer animal models.

Contact Jack Kraszewski for assistance with a disclosure to begin the process of protecting your invention or intellectual property.

Research to commercial markets.

From Left: Wei Fan, Michael Cantwell, Geyou Ao (PI), and Venkateswara Kode

Macroscopic Assembly and Processing of Boron Nitride Nanotubes for Multifunctional Nanomaterials Applications

From Left: Zavier McLean, William Matcham (PI), and Wenbing Zhao (Co-PI)

Technology-Enhanced Human Patient Simulations

**RESEARCH GUIDANCE**

**Emerging Federal Guidance on Foreign Influence of Research**

In recent months, the U.S. Government has expressed growing concern regarding the influence of foreign governments, entities, and individuals over federally funded research. The National Institutes of Health (NIH) has already referred 18 allegations related to foreign influence of U.S. funded research to investigators and contacted more than 60 research institutions about such concerns.

Cleveland State University values international collaborations and is committed to academic freedom and the ability of our researchers and scholars to communicate, exchange ideas, and collaborate with their counterparts around the world. However, given recent federal statements and guidance documents regarding U.S. research and the potential of foreign influence, the Office of Research has provided information and collected resources located on the Office of Research webpage here. In addition, the Association of Public and Land Grant Universities (APLU) and Association of American Universities (AAU) have released an Effective Policies and Practices document to mitigate threats to the integrity of the U.S. research enterprise.
Advanced Manufacturing Faculty Meetup November 8

As part of our mission to enhance collaboration across the University and promote engaged research activities, the Office of Research launched a new series of faculty meetups for the 2019-2020 academic year. Meetup topics can be found here.

On November 8 at 12:00 p.m., Dr. Tushar Borkar will lead the meetup discussion on the topic of advanced manufacturing. All panels are held in PH-200, the Office of Research conference room.

Additional Upcoming Research Events

Chemical and Biomedical Engineering Seminars All are held at 11:30 a.m. in Washkewicz Hall 405
October 17: Kevin Hinkle, University of Dayton
October 31: Shawn Ryan, Cleveland State University
November 14: Rebecca Kuntz Williams, University of Akron

Mathematics Colloquium All are held at 3:00 p.m. in Rhodes Tower 1516
October 18: Steven Scheirer, Ashland University
October 25: Alicia Prieto Langarica, Youngstown State University

RESEARCH INITIATIVES

Office of Research Welcomes Ohio Sea Grant to Campus

Faculty from the Washkewicz College of Engineering, College of Sciences and Health Professions (COSHP), and Levin College of Urban Affairs met with Dr. Christopher Winslow, Director of the Ohio Sea Grant College Program, to learn about the 2019 Ohio Department of Higher Education Harmful Algal Bloom Research Initiative (HABRI) request for proposals. HABRI seeks solutions from Ohio’s colleges and universities to address the causes, mechanisms, and remedies of toxic harmful algal bloom events.

Ohio Sea Grant, located at Ohio State University’s Columbus campus, is part of NOAA Sea Grant, a network of 33 Sea Grant Programs dedicated to the protection and sustainable use of marine and Great Lakes resources. For more information about Ohio Sea Grant’s funding opportunities, click here. To get connected to water researchers at CSU, please contact Ben Ward.

RESEARCH SUPPORT SERVICES

CSU Research Corporation Taps Industry Leaders, Grows Research Partnerships and Technology Transfer

Established in 2006, the Cleveland State University Research Corporation (CSURC) is a not-for-profit corporation supporting Cleveland State University (CSU) by promoting, advancing and facilitating the research and technology transfer operations and activities of the University.

The Research Corporation receives invaluable guidance from a board of
directors that includes leaders from Greater Cleveland’s most influential companies, and serves as a single point of contact for industrial partners seeking promising technologies and research projects from Cleveland State University. CSURC manages the University’s intellectual property rights, including its patents and copyrights, and provides efficiency and flexibility for industry engagement with CSU.

RESEARCH ENGAGEMENT

CSU Hosts Panel at UIDP 29

Office of Research staff hosted a panel discussion at UIDP 29 in Columbus, Ohio last month focused on innovative ways to match industry with technology expertise at universities, and business leadership with university spinoff companies. The panel, titled “Match Game,” included moderator Ben Ward, and Technology Transfer Director Jack Kraszewski from the Office of Research, Mariam Gorjian from the University of Kentucky, and Jeff Agnoli from the Ohio State University. The panel highlighted online portals like CSU’s Innovation Portal and the State of Ohio’s Ohio Innovation Exchange (OIEx), as well as the University of Kentucky’s Executives on Roster (XOR) service.

UIDP is an organization of universities and companies who seek to build stronger university-industry relationships. UIDP was created with support from the U.S. National Academy of Sciences prior to establishing itself as a 501(c)3 nonprofit entity. CSU joined UIDP in 2019.

Please share with us important news or updates on your research, scholarly, or creative activities. Updates may be related to a paper that has been accepted for publication in a high-impact journal, a book you've just published, your work that will be exhibited at a prominent institution, or other updates you wish to share with our office. Send details to j.yard@csuohio.edu and d.j.simon@csuohio.edu.

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