



TOP STORY

Moo-Yeal Lee Wins EPA Toxicity Testing Challenge Award



Dr. Moo-Yeal [Lee](#), an assistant professor in the Department of Chemical and Biomedical Engineering ([CBE](#)), has been awarded \$100,000 from the U.S. Environmental Protection Agency (EPA) as a winner of Stage Two of the Transform Toxicity Testing [Challenge](#).

The EPA and the National Institutes of Health (NIH) initiated the Transform Toxicity Testing Challenge in 2016 to improve high throughput screening

(HTS) chemical testing methods, which currently do not account for how the human body metabolizes chemicals. Metabolic reactions can potentially result in a more toxic form of a chemical.

Dr. Lee has developed 3D bioprinting [technology](#) that creates cell tissue structures that contain multiple layers of human cells.

These miniature tissue blocks can be used to mimic human metabolic reactions, creating conditions in a laboratory that are comparable to what happens in the human body. His high-

precision, robotic bioprinting technology uses a 384-pillar plate design, which allows for a large number of tests to be efficiently completed. Dr. Lee's technology can be retrofitted to current toxicity test systems, improving their accuracy.

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MEET CSU'S NEW FACULTY

Kevin Mueller, Biological, Geological, and Environmental Sciences

Dr. Kevin [Mueller](#) is an assistant professor in the Department of Biological, Geological, and Environmental Sciences ([BGES](#)). His research centers on the functional ecology of temperate grasslands and forests. In collaboration with CSU students, local land managers, and scientists from other Cleveland-area institutions, he is developing new research avenues in urban ecology and the ecological impacts of shifting precipitation patterns.

Dr. Mueller joined CSU in fall 2016 after two appointments as a postdoctoral research associate, one with the USDA Agricultural Research Service ([ARS](#)) and the other with the University of Minnesota. He has worked with chemists, ecologists, and geologists to pursue both basic and applied research, often with a focus on environmental change and the role of plants in mediating beneficial



ecosystem functions. In the classroom, Dr. Mueller has focused on re-designing an introductory environmental science course to build students' skills in information literacy and to embrace learning opportunities afforded by the new active learning classroom on campus.

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FEATURED RESEARCHER VIDEO SERIES

Zhiqiang Gao, EECS



Research by Dr. Zhiqiang [Gao](#), an associate professor in the Department of Electrical Engineering and Computer Science ([EECS](#)) and Director of the Center for Advanced Control Technologies ([CACT](#)), is the focus of this month's Featured Research Video. Dr. Gao is developing advanced control methods for industrial applications. Click [here](#) to watch.

RESEARCH FUNDING OPPORTUNITY

NASA Glenn Fellowship

[NASA](#) has announced a funding opportunity for a summer residency at NASA Glenn Research Center ([GRC](#)).



The ten-week 2018 NASA Glenn Faculty Fellowship Program (NGFFP) is a residential research program which is open to full-time STEM faculty members who are U.S. citizens teaching at accredited U.S. universities and colleges. Proposed faculty research must align with NASA mission goals and GRC's technical competencies.

The fellowship will provide a stipend of up to \$19,000 to support the faculty researcher. Details of the program, including NASA GRC's core competencies, can be found in the [application form](#). Applications must be submitted by January 16, 2018.

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CSU SCHOLAR NEWS

Joan Thoman, Nursing

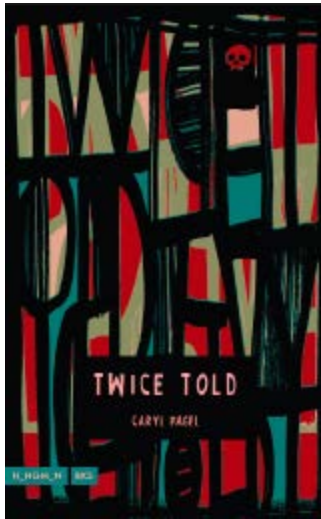
Dr. Joan [Thoman](#) is an associate professor in the School of [Nursing](#). Her research is focused on diabetes with comorbid conditions, community health, home health, hospice and problem-based learning using simulation. She has been a registered nurse for over 25 years, with clinical experience in hospital medical surgical units, public health, visiting home care, and as a diabetes program coordinator.

Dr. Thoman is co-leading the **Improved Health Outcomes and Programs through Education (I-HOPE)** program, funded by the Medicaid Technical Assistance and Policy Program ([MEDTAPP](#)). I-HOPE empowers low-income residents with a high prevalence of chronic disease by creating a sustainable support network of community health workers. In addition, through the support of the McGregor [Foundation](#) and other philanthropic funding, she and her colleagues are developing interactive online simulation environments using problem based learning for home health and hospice care. In 2016, Dr. Thoman received the CSU Distinguished Faculty Award for Service for her work with these initiatives and their impact on the community.



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Caryl Pagel's Essays and Poetry



Twice Told, by Prof. Caryl Pagel

Caryl [Pagel](#), an assistant professor in the Department of [English](#), was awarded an artist's residency at the [Headlands Center for the Arts](#) in Sausalito, California last summer in support of her collection of essays in process, *The Reality of the Unseen*. These essays explore contemporary and outsider art, travel narratives, regional vacancies, Midwestern politics, and twice told tales, and have appeared in *AGNI*, [Entropy](#), *The Mississippi Review*, [Wave Composition](#), and [Essay Press](#)' chapbook series. She received an Ohio Arts Council Individual Excellence Award in support of her nonfiction, and an essay from the collection was recently listed as a "notable" work in the *2016 Best American Essays* anthology.

Prof. Pagel is also the author of two full length collections of poetry, *Twice Told* (H_NGM_N Books, 2014) and *Experiments I Should Like Tried At My Own Death* (Factory Hollow Press, 2012). She is the co-founder and editor of *Rescue Press*, a poetry editor at *jubilat*, and the Director of the Cleveland State University [Poetry Center](#).

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NEWS FROM THE TECHNOLOGY TRANSFER OFFICE

I-Corps@Ohio 2018 Request for Proposals

The Ohio Department of Higher Education ([ODHE](#)) has announced the release of the 2018 [Request for Proposals](#) for the fourth year of the [I-Corps@Ohio](#) Program.

I-Corps@Ohio incorporates Lean Startup, Customer Discovery, and Business Model Canvas methodologies to accelerate commercialization of technologies from Ohio universities and colleges while expanding the business acumen and networks of faculty and students across the state. The resulting companies will drive sustainable, technology-based economic development in Ohio. The registration deadline is January 16, 2018.

For more information on applying to the I-Corps@Ohio Program, contact Jack [Kraszewski](#).



Password Protection in Augmented Reality



The Technology Transfer Office ([TTO](#)) is processing the invention disclosure for a three dimensional password scheme based on augmented reality. The password scheme will authenticate a user of an augmented reality platform through a series of common item moves by the user, such as pouring a specific cream

Treating Autism with a Virtual Coach

The TTO has also reviewed the invention disclosure for an avatar based virtual life coach software platform to enhance communication with autistic children.

Different from other systems, the invention proposes that the life coaching materials be



into a coffee mug then filling it with coffee. The disclosure was submitted by Associate Professor Ye [Zhu](#) from the Department of Electrical Engineering and Computer Science ([EECS](#)). The invention is titled: *A Multi-Dimensional Authentication Scheme Based on Augmented Reality*.

aligned closely with the intense interests of individuals with autism. The disclosure was submitted by Professor Wenbing [Zhao](#) from [EECS](#), and Associate Professor Xiongyi [Liu](#) from the Department of [Curriculum and Foundations](#). The invention is titled: *Buddy: A Virtual Life Coaching System for Children and Adolescents with High Functioning Autism*.

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INTERNAL RESEARCH AWARDS

Internal Funding Deadline is February 1

The Office of Research is pleased to announce the call for proposals for the 2018-2019 internal funding programs.

[Undergraduate Summer Research Award \(USRA\)](#)

[Graduate Student Research Award \(GSRA\)](#)

[Faculty Research and Development \(FRD\)](#)

[Faculty Scholarship Initiative \(FSI\)](#)

submission deadline February 1, 2018

submission deadline February 1, 2018

submission deadline February 1, 2018

submission deadline February 1, 2018

Strategic changes have been made to several programs and to the proposal guidelines. Of particular note, the Dissertation Research Award (DRA) is now the Graduate Student Research Award ([GSRA](#)). Students who are pursuing a doctoral dissertation or a master's thesis may apply for GSRA support.

To assist in the preparation of successful applications, the forms that will be used to evaluate the proposals are included at the above web sites. For more information please contact Joy Yard, 687-9364, j.yard@csuohio.edu or Dan Simon, 687-5171, d.j.simon@csuohio.edu.



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RESEARCH EVENTS

Multidisciplinary Research Seminar with Geoff Vince



Dr. Geoffrey Vince, the Virginia Lois Kennedy Chair of the Department of Biomedical Engineering at the Cleveland Clinic's Lerner Research Institute, will be featured at the next Multidisciplinary Research [Seminar](#), hosted by the Office of Research on [Friday, December 8, 2017](#). Dr. Vince will explore the importance of close interaction of creative minds and the positive effects of combining ideas from many points of view in his presentation *Innovation Occurs Where Fields Collide*. The seminar will take place from 12:00-1:15 pm in PH-104. Lunch will be provided.

Upcoming Research Seminars Across Campus:

[Tuning Ion Solvation, Conduction And Charge Density Of Ionic Liquids For Electrochemical Energy Storage Devices](#), Dr. Burcu Gurkan, Case Western Reserve University

November 16, 3:20-4:20 pm in FH 103

[Smart Cities for Promoting Global Sustainability](#), Dr. Mohammad Shahidehpour, Illinois Institute of Technology

November 16, 2:30-3:30 pm in MC 201

[Polyelectrolyte-Based Soft Materials for Wet Adhesion, Controlled Release And Beyond](#), Dr. Yakov Lapitsky, University of Toledo

November 30, 3:20-4:20 pm in FH 103

[Undergraduate Digital Research Showcase, Digital CSU](#)

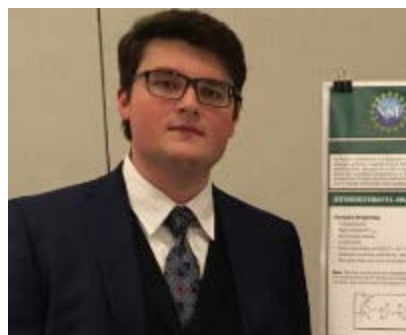
December 5, 11:30 am-1:00 pm, Location TBD (updates [here](#))

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UNDERGRADUATE RESEARCH NEWS

NSF REU Students Disseminate Research at National Conferences

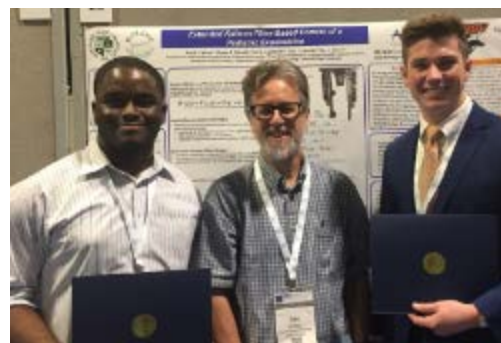
This summer, CSU hosted the first student cohorts for two National Science Foundation ([NSF](#)) Research Experiences for Undergraduates (REU) Sites: the Synthesis, Assembly and Characterization of Soft Matter Systems ([Soft Matter REU](#)) Site and the Rehabilitation Engineering at CSU ([RE@CSU](#)) Site. Participants for these REUs were recruited from across the nation, including CSU undergraduates Tony Dobrila and Alonte Garnett.



Tony Dobrila: Soft Matter REU

Tony Dobrila was selected by the Council on Undergraduate Research ([CUR](#)) to present his work at the CUR's REU Symposium in Alexandria, Virginia. Tony was advised by Associate Professor of [Physics](#) Kiril [Streletzky](#), who leads the Soft Matter REU Site, and Associate Professor and Chair of the Department of Physics Petru [Fodor](#).

Alonte Garnett and David Maher from Duquesne University won 2nd place in the Undergraduate Student Poster Competition at the International Mechanical Engineering Congress and Exposition ([IMECE](#)) in Tampa, Florida. They were supervised by CSU doctoral student Curt Laubscher, Mechanical Engineering Professor Jerzy [Sawicki](#), and EECS Professor Dan [Simon](#).



Alonte Garnett, Dr. Dan Simon, and David Maher: RE@CSU

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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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