Introducing the Trans-disciplinary Research Leadership Scholars of 2019

For the third year, the UC Office of Research has selected a group of investigators, hailing from various colleges, and recognized as promising future leaders in transdisciplinary research on campus.

Working with distinguished mentors, these scholars will become a research team this fall. The group is expected to work roughly five hours a week through the Fall 2019 and Spring 2020 semesters to identify a project or two that is best tackled through the lenses of multiple scholars and researchers and is related to UC's Urban Impact Platform. The mentors – outstanding UC faculty in their own right – will assist the team in framing the research project that will result, with the Office of Research providing financial resources for the cohort to initiate their transdisciplinary studies in Summer 2020.

"I'm looking forward to challenging my habits of mind," said Nathan Morehouse, an assistant professor in Biological Sciences; one of six scholars chosen this year. "Often, novel solutions to wicked problems come by looking from new perspectives."

Every cohort expressed excitement in learning what each member of the group can bring to the table, with guidance from mentors who are some of the best collaborators on campus.

Findings will circle back with them next year, but for now, here's a little more about each of these scholars.

Vittoria S. Daiello

College of Design, Architecture, Art, and Planning

Research Focus

Writing can be a powerful tool of inquiry and reflection, says Vittoria Daiello, interim director of UC's Master of Arts in Art Education Program. Thoughts, written down, become a part of broader dialogues surrounding our societies' complex cultural issues, she says, and, teaching writing in relation to art offers different ways of thinking about the world. That's why Daiello's research focuses on how writing can be better taught through artistic methods and how research can achieve greater societal impact through arts-based forms of inquiry. Daiello is currently working with Jiangnan University's School of Design (http://sodcn.jiangnan.edu.cn/ENGLISH/About_school.htm), in Wuxi, China, to develop new theories and practices around this area of art education.

Roman A. Jandarov

College of Medicine

Research Focus

As a statistical methodology researcher, Roman Jandarov is involved in a slew of biomedical projects. From complex computer experiments to space-time processes, the assistant professor is particularly interested in studying how air pollution and exposure to certain chemicals affect human health.

Prashant Khare

College of Engineering and Applied Science

Research Focus

Aerospace engineering assistant professor Prashant Khare's lab at UC uses high-fidelity numerical simulations and machine learning techniques to study energy conversion and propulsion devices, like rocket and gas-turbine engines, but also to better understand air, ocean and ice-sheet evolution, as well as gas dynamics phenomena in space. The goal at his lab is to contribute and improve the state of knowledge around these topics, and to develop theories and surrogate models to expedite accurate engineering design.

Nathan Morehouse

College of Arts and Sciences

Research Focus

Nate Morehouse (http://www.morehouselab.pitt.edu/), Assistant Professor in Biological Sciences, is fascinated by the biology of social interactions and the evolution of the traits involved in them. He studies insects and spiders to answer questions such as: How do color preferences shape the appearances of mates and prey? And how do females benefit from choosing a preferred mate? In his work, he draws from behavioral ecology, vision research, nutritional ecology, molecular evolution and comparative phylogenetics. Nate also has a strong interest in conversations between science and art.

Meera Rastogi

UC Clermont College

Research Focus

Rastogi is busy working with the American Art Therapy Association (https://arttherapy.org/) on a survey of undergraduate art therapy programs across the United States. Results will be published in coming months. She collaborated on a study on a digital app called Modes measuring the apps' effects on anxiety levels and heart rate. Her clinical work includes art therapy programs that pair undergraduate students either with adults with Alzheimer's Disease or mental and substance abuse issues to explore how art making enhances discovery and well-being.

Karla N. Washington

College of Allied Health Sciences

Research Focus

As a licensed speech and language pathologist, Karla Washington wants to better define what typical language development looks like in a preschooler, compared to classmates with language impairments. In her pediatric language, literacy and speech

lab, Washington tests methods and special equipment to better understand the underlying mechanisms of language development and different treatment outcomes to give every child a better chance at developing language.