COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

FACULTY RESEARCH TALKS

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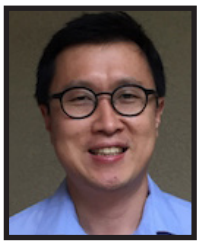
Zoom talk | Friday, July 29, 2022 | Noon to 1 p.m.



PRESENTER 1:
YEONWOONG "ERIC" JUNG
Assistant Professor, Materials Science and Engineering, NanoScience Technology Center, Electrical and Computer Engineering

Near-Atom Thickness Electronic Materials for Mechanically Reconfigurable Device Technologies

This presentation introduces ongoing efforts in Dr. Jung's research lab, which center on developing emerging nanoscale materials and their translation to transformative device technologies. The primary focus is on near atom-thickness 2-D semiconducting/metallic materials beyond graphene, and their applications for electronics and opto-electronics devices in unconventional forms.

Dr. Jung received his B.S. from Seoul National University, M.S. from the University of Illinois Urbana-Champaign, and Ph.D. from the University of Pennsylvania, all in materials science and engineering. He joined UCF as a tenure-track assistant professor in 2016 after completing his post-doctoral training at Yale University. He has authored more than 100 papers receiving a career citation number greater than 8000 and many of these works have been published in high-impact journals, including *Nature's* sister journals and *Science*. His research at UCF has been supported by several federal agencies including the NSF, EPA and DoE-AFRL. He is a recipient of the NSF CAREER award.

PRESENTER 2:
YOGESH RAWAT
Assistant Professor, Center for Research in Computer Vision, Computer Science

Deep Learning for Computer Vision and Multimedia

In this talk, Dr. Rawat will discuss his group's efforts in deep learning for video understanding and multimedia analysis. In particular, he will talk about recent progress in video understanding, where he will cover works in action detection, video synthesis and robustness. He will also discuss an ongoing IARPA effort, the Biometric Recognition & Identification at Altitude and Range program, where UCF is developing a real-time online gait recognition algorithm for biometrics.

Dr. Rawat's research interests lie at the intersection of computer vision, deep learning and multimedia. He received his Ph.D. from the National University of Singapore (NUS). His dissertation was focused on enhancing the photography experience of users utilizing social media and camera sensors. He did his postdoctoral training at the Center for Research in Computer Vision at UCF. Dr. Rawat obtained his B.Tech in computer science and engineering from the Indian Institute of Technology (IIT-BHU) Varanasi. Before joining NUS, he worked at Mentor Graphics in India.

PRESENTER 3:
WEN SHEN
Assistant Professor, Mechanical and Aerospace Engineering, NanoScience Technology Center

Biomimetic Sensors and Applications

Implantable and wearable devices must be both biologically and mechanically compatible with host environments to overcome foreign body reactions. To achieve this goal, Dr. Shen will introduce natural materials based devices for neural interfacing and transcutaneous sensing. Moreover, wireless interrogation is desirable to minimize sensor footprints for many healthcare and environmental applications. Towards this goal, Dr. Shen will introduce microsensors featuring magnetoelastic sensing modality to support in-situ and wireless sensing.

Prior to joining UCF, Dr. Shen was an assistant professor at the University of Texas at Arlington (UTA). Her research interests lie in the development of functional materials-based microelectronics for biomedical interfacing, agricultural sensing and structural health monitoring. Dr. Shen's research at UTA was funded by the USDA and the University of Texas Systems.

ZOOM LINK: https://bit.ly/3ILqC1l | PREVIOUS TALKS: www.cecs.ucf.edu/faculty-research-talks