

*Weldon School of Biomedical Engineering
Prospective Faculty Seminar*

Wednesday, February 9, 2022

9:30-10:20am

MJIS 1001 or Via Zoom:

<https://purdue-edu.zoom.us/j/95150439811?pwd=a3hOK0o0bmpkS3poTVBCbVhDNU9FZz09>

Electro-Fluidics for Health and Environmental Monitoring



Mehdi Javanmard, PhD

Associate Professor in Electrical and Computer Engineering
Rutgers University

Abstract: In this talk, I will discuss my group's work on fabricating micro- and nanosensing platforms for health and environmental monitoring. In the first part of my talk, I will discuss the fabrication of novel electronic sensing modalities both in vitro and in vivo and the role they can play in electroceutical applications for monitoring chronic inflammatory illnesses, wounds, and infectious diseases. I will also discuss domain specific use of machine learning to enable data-driven biosensors for improvement in accuracy and specificity. Finally, I will talk about my group's work in environmental monitoring.

Bio: Mehdi Javanmard is an Associate Professor in the Electrical and Computer Engineering Department at Rutgers University. He received the BS (2002) from Georgia Institute of Technology and the MS (2004) and PhD (2008) all in electrical engineering from Stanford University. During his time at Stanford, he worked on the development of electronic microfluidic platforms for low-cost genomic and proteomic biomarker detection, and later worked as a Senior Research Engineer at the Stanford Genome Technology Center. In Fall 2014, he joined the Electrical and Computer Engineering Department, Rutgers University as an Assistant Professor. His research interests include developing portable and wearable technologies for continuous health monitoring and understanding the effects of the environment on health. In 2017, he was recipient of the Translational Medicine and Therapeutics Award by the American Society for Clinical Pharmacology and Therapeutics for his group's work in point of care diagnostic tools for assessing patient response to cancer therapies. He has received various awards as a Principal Investigator from the National Science Foundation, National Institutes of Health, DARPA, and the PhRMA foundation to support his research. He was awarded the National Science Foundation CAREER Award for young faculty in 2019 and the DARPA Young Faculty Award in 2020. In 2018, he co-founded RizLab Health, a startup company dedicated to enabling point-of-care hematology analysis.

~BME Host: Hugh Lee~