

COLLEGE OF ENGINEERING

# Control Seminar



Honoring Elmer Gilbert (1930-2019) and his contributions to Control Systems

## Applications of Data Sciences for Clinical Decision Support Systems: Challenges and Opportunities



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3:30 – 4:30 pm 1500 EECS

**ABSTRACT:** In this talk some major challenges of using Data sciences, including Artificial Intelligence (AI) and Machine Learning (ML), for medicine and healthcare are reviewed. These include technical issues such as data-related and/or algorithmic challenges. In addition, medical/health related challenges as well as socioeconomic, cultural and policy-related challenges will be briefly discussed. The speaker then presents some potential solutions in form of novel algorithmic approaches as well as policy-related changes that can at least partially address some of these challenges.

**BIO:** Dr. Kayvan Najarian is a Professor at departments of Computational Medicine and Bioinformatics, Emergency Medicine, and Electrical Engineering & Computer Science at the University of Michigan. He received his PhD in Electrical and Computer Engineering from University of British Columbia, Canada. He is currently an Associate Director of Michigan Institute for Data Sciences (MIDAS) as well as an Associate Director of Michigan Center for Integrative Research on Critical Care (MCIRCC). He is also Director of Biomedical and Clinical Informatics Lab.

The focus of Dr. Najarian's research is on using advanced signal/image processing and machine learning methods to design computer-assisted medical decision-making systems that improve patient care, reduce the costs of healthcare, and provide guidance when medical experts are not immediately available. Dr. Najarian has designed support systems to manage traumatic brain injury, traumatic pelvic injury, and hemorrhagic shock. Dr. Najarian's research has been funded by agencies such as NSF, NIH and DoD.