THE CHINESE UNIVERSITY OF HONG KONG
Department of Information Engineering
Seminar

Enhancing the Intelligence and Reliability of Cyber-Physical Systems for Smart Cities and Smart Healthcare
by

Mr. CHEN Hongkai
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Date : **24 April 2023 (Monday)**
Time : **11:00am to 12:00nn**
Venue : **Room 801, Ho Sin Hang Engineering Building, CUHK**

Abstract

Cyber-physical systems (CPS) are increasingly pervasive in the domains of smart cities and smart healthcare. However, ensuring their intelligence and reliability, particularly in safety-critical applications, remains a significant challenge. In this seminar, I will present our latest research on enhancing the intelligence and reliability of CPS through the use of data fusion and machine learning techniques. Specifically, I will highlight how to leverage uncertainty awareness to improve data fusion in our human identification system. Next, I will discuss our efforts to train control policies for medical CPS with model-based imitation learning. Finally, I will conclude by discussing possible directions for future research in CPS theory and system design.

Biography

Hongkai Chen is a Ph.D. candidate at Stony Brook University, where he is advised by Professor Shan Lin. His research interests span across cyber-physical systems, formal methods, the Internet of Things, and control theory. He aims to improve the intelligence and trustworthiness of cyber-physical systems, both in theory and practical applications. Hongkai has served as a reviewer for several prestigious conferences and journals and has been a member of the Artifact Evaluation Committee for conferences such as HSCC and MobiSys. His research contributions have been published in top-tier venues, including HSCC, FORMATS, IMWUT, MobiSys, ACC, and CDC. In recognition of his work, his paper was awarded the Best Paper Award at FORMATS 2022.

** ALL ARE WELCOME **