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THE CHINESE UNIVERSITY OF HONG KONG

Department of Information Engineering

Seminar

Physical and Physiological Sensing with Computational Fabrics

By

Mr. SHAO Qijia

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Date : 24 January 2024 (Wednesday)

Time : 2:00pm – 3:00pm

Venue : Rm 801, Ho Sin Hang Engineering Building, CUHK

Abstract

Accurate, continuous monitoring of human physical and physiological signals is critical to enhancing healthcare, personalizing education, and facilitating human interaction with the ambient environment. Current methods to acquire such data, however, either necessitate heavy instrumentation of the environment, or demand extensive manual inputs, or require wearable sensors that are often rigid or adhesive and lead to discomfort over prolonged use. In this talk, I will discuss the development of novel sensing systems and robust data analytic techniques to lower the barrier to collecting and interpreting human physical and physiological signals. I will highlight our transformation of everyday fabrics into a natural, pervasive sensing platform, reducing manual involvement and offering unobtrusive monitoring capabilities for both physical (e.g., human joint and finger motion) and physiological (ECG and EMG) sensing in real-world settings.

Biography

Qijia Shao is a Ph.D. candidate in computer science at Columbia University, where he is advised by Prof. Xia Zhou and Prof. Fred Jiang. His research interest lies broadly in mobile and ubiquitous computing, with a particular focus on healthcare applications and interactive technologies. Qijia's work has been recognized with the Best Demo Award at MobiCom 2023, HotMobile 2020, and Best Teaser Award at UbiComp 2023. Qijia has worked at Philips Research, Snap Research, and Samsung Research, where several of his proposed algorithms are being deployed to real-world products (e.g., Snapchat, Samsung TVs).

**** ALL ARE WELCOME ****

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