CoCo Seminar Series
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The Promises of Human-Centered Mobile Sensing

Dr. Congyu (Peter) Wu
Assistant Professor, Systems Science and Industrial Engineering, Binghamton University

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Hybrid (EB-T1 & Zoom; meeting link available on http://coco.binghamton.edu/)

As smart devices become ever more sensor-rich, portable, and ubiquitous, data captured from them are allowing observations into users' daily lives with unprecedented comprehensiveness and ecological validity. Numerous human-centered sensing studies have been conducted resulting in multi-modal data that promise rich insights into human behavioral patterns and health outcomes. In this talk, the speaker will share several research projects utilizing this type of data for novel health informatics, including (1) improving negative mood detection using social exposure patterns extracted from smartphone-based Bluetooth data; (2) estimating bedroom air quality and sleep health using smart home and consumer grade wearable sensors, and (3) characterizing mobility pattern change within college students during the COVID-19 pandemic using smartphone GPS traces. He will then discuss the current shortage of ubiquitous computing research on interpersonal behavior modeling and his current work to address it in mental healthcare applications.

Dr. Peter Wu is an Assistant Professor in the Department of Systems Science and Industrial Engineering at Binghamton University. His recent and ongoing work targets the methods of mining mobile sensing data to improve mental health detection and intervention. He is passionate about using ubiquitous technology and data science to decode personal, interpersonal, and collective human behavior. He has a PhD in systems engineering from the University of Virginia and a prior stint of postdoctoral fellowship in psychology at the University of Texas at Austin. He publishes in smart and connected health, human-computer interaction, and computational social systems.

For more information, contact Hiroki Sayama (sayama@binghamton.edu).
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