ECE Speaker Series

Department of Electrical and Computer Engineering

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Opportunities and Challenges in Global Network Cameras

Millions of network cameras have been deployed. Many of these cameras provide publicly available data, continuously streaming live views of national parks, city halls, streets, highways, and shopping malls. A person may see multiple tourist attractions through these cameras, without leaving home. Researchers may observe the weather in different cities. Using the data, it is possible to observe natural disasters at a safe distance. News reporters may obtain instant views of an unfolding event. A spectator may watch a celebration parade from multiple locations using street cameras. Despite the many promising applications, the opportunities of using global network cameras for creating multimedia content have not been fully exploited. The opportunities also bring forth many challenges. Managing the large amount of data would require fundamentally new thinking. The data from network cameras are unstructured and have few metadata describing the content. Searching the relevant content would be a challenge. Because network cameras continuously produce data, processing must be able to handle the streaming data. This imposes stringent requirements of the performance.

October 3, 2016 at 10:00am in Egr Bldg 2, Rm W122

Yung-Hsiang Lu is an associate professor in the School of Electrical and Computer Engineering of Purdue University. He is an ACM distinguished scientist and ACM distinguished speaker. He is a member in the organizing committee of the IEEE Rebooting Computing Initiative. He is the lead organizer of the first Low-Power Image Recognition Challenge in 2015-2016, the chair (2014-2016) of the Multimedia Communication Systems Interest Group in IEEE Multimedia Communications Technical Committee. He obtained the Ph.D. from the Department of Electrical Engineering at Stanford University.
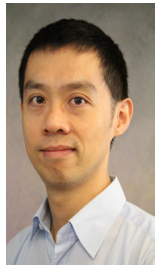
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