

## **Title: Wireless Sensor Network Information Processing**

### **Speaker:**

Dr. Yu Hen Hu  
Department of Electrical and Computer Engineering  
University of Wisconsin, Madison

**Date:** Thursday, 20 May 2010

**Time:** 3:00 pm – 4:00 pm

**Venue:** Room 603, Chow Yei Ching Building

### **Abstract:**

With the IEEE802.15.4 and corresponding ZigBee standards gaining popularity, wireless sensor network using low cost wireless sensors have found numerous new applications, such as remote ecological system monitoring, civil infrastructure monitoring, and security and public safety. A fundamental information processing challenge over a large scale wireless sensor network is to process sensor information to achieve desired performance goal while minimizing required resources in terms of bandwidth and energy reserve. In this presentation, recent progress in wireless sensor information processing will be reviewed. Topics that will be covered include (a) multi-shift sensor sleep scheduling, and (b) collaborative sensor data aggregation. If time permits, our previous works on collaborative target detection, localization, classification and tracking will also be briefly surveyed.

### **Biography of the speaker:**

Yu Hen Hu received BSEE from National Taiwan University, and MSEE and PhD degrees from University of Southern California. He was in the faculty of the Electrical Engineering Department of Southern Methodist University, Dallas, Texas. Since 1987, he has been with the Department of Electrical and Computer Engineering, University of Wisconsin, Madison where he is currently a professor.

Dr. Hu's has broad research interests ranging from design and implementation of signal processing algorithms, computer aided design and physical design of VLSI, pattern classification and machine learning algorithms, and image and signal processing in general. He has published more than 300 technical papers, edited or co-authored three books and many book chapters in these areas.

Dr. Hu has served as an associate editor for the IEEE Transaction of Acoustic, Speech, and Signal Processing, IEEE signal processing letters, European Journal of Applied signal Processing, and Journal of VLSI Signal Processing. He has served as the secretary and an executive committee member of the IEEE signal processing society, a board of governors of IEEE neural network council representing the signal processing society, the chair of signal processing society neural network for signal processing technical committee, and the chair of IEEE signal processing society multimedia signal processing technical committee. He was also a steering committee member of the international conference of Multimedia and Expo on behalf of IEEE Signal processing society.

Dr. Hu is a fellow of IEEE.

**Organizer:** Prof. S.C. Chan