



**THE CHINESE UNIVERSITY OF HONG KONG**  
Department of Information Engineering

*Seminar*

**Distributed Detection in Sensor Networks**

by

**Dr. Shan-Yuan Ho**  
**École Polytechnique Fédérale de Lausanne**

**Date : 16 April, 2009 (Thur.)**  
**Time : 4:30 – 5:30pm**  
**Venue : Room 833, Ho Sin Hang Engineering Building**  
**The Chinese University of Hong Kong**

*Abstract*

This talk will discuss the distributed detection of a noisy binary source through a parallel sensor network. The relays are only allowed to forward partial information about their observation to a fusion point, which must detect the binary source with minimum probability of error. Some counter-intuitive examples, optimality of randomized strategies, the conditions of optimality for the general case, and the solution to the additive Gaussian noise channel will be presented.

*Biography*

Shan-Yuan Ho received the S.B. in Mathematics, and the S.B., S.M. and Ph.D. in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology. She joined the Department of Mathematics at MIT in 2005, EPFL in September 2007, and was a visiting faculty at Stanford in Fall 2008.

**\*\* ALL ARE WELCOME \*\***