



Signal Processing for Multiple-Input Multiple-Output Wireless Communications

Dr. Yue Rong

DATE/TIME: **2-3pm, Monday 20 July, 2009**

VENUE: **Billings Room 3.04** (3rd Floor)
School of Electrical, Electronic & Computer Engineering
Electrical Engineering Building
The University of Western Australia
Fairway Entrance 2 and 3, Crawley (Perth)

CONVENOR: **Dr. David Huang**
Tel: 6488 1543
E-mail: huangdf@ee.uwa.edu.au

ABSTRACT:

Multiple-input multiple-output (MIMO) wireless communication technique is one of the major breakthroughs in the past decade. A MIMO link enables a great enhancement of the channel capacity and the system reliability in an environment with rich scattering. Many coding and modulation techniques for point-to-point MIMO links have been developed in the past decade. These advances have now motivated a strong research interest in networking issues of MIMO links.

In this seminar, fundamental transceivers for point-to-point MIMO links are reviewed. Some practical issues such as channel estimation and robustness are investigated. Challenging problems in wireless networks with multiple MIMO nodes are discussed. Novel approaches and algorithms are presented.

ABOUT THE SPEAKER:

Dr. Yue Rong received the B.E. degree from Shanghai Jiao Tong University, China, the M.Sc. degree from the University of Duisburg-Essen, Duisburg, Germany, and the Ph.D. degree (summa cum laude) from Darmstadt University of Technology, Darmstadt, Germany, all in electrical engineering, in 1999, 2002, and 2005, respectively.

From February 2006 to November 2007, he was a Postdoctoral Researcher with the Department of Electrical Engineering, University of California, Riverside, USA. Since December 2007, he has been with the Department of Electrical and Computer Engineering, Curtin University of Technology, Perth, Australia, as a Lecturer.

His research interests include signal processing for communications, wireless communications, wire-less networks, applications of linear algebra and optimization methods, and statistical and array signal processing. He has published more than 30 papers in top-tier international journals and the proceedings of international conferences.