

## **Special Session on: Optical Wireless Communication Systems**

**Session organizers: Professor Z Ghassemlooy, The University of Northumbria at Newcastle, UK**

In recent years we have seen a growing interest in research and development in optical wireless communication system for both indoor and outdoor applications. However, there are still a number technical challenges facing researcher that need addressing. In indoor applications with diffused links roaming is a major problem, whereas in outdoor applications pointing, tracking, steering etc as well as atmospheric effects are major problems for laser transmission over free space medium. The aims of this Special Session is to provide a technical forum for researchers, devices and system engineers to discuss the latest research findings in optical wireless communication links.

Papers are solicited on the following and related topics:

- Devices for optical wireless links
- Advances in communication system design for optical wireless links
- Mathematical modeling of optical wireless links
- Modulation and coding schemes for optical wireless systems
- OFDM and CDMA used in optical wireless links
- Novel receiver designs
- High-speed indoor optical wireless links with tracking capability
- Multi-input multi-output (MIMO) – optical wireless systems
- Sub-carrier multiplexed optical wireless systems
- Optical wireless communication in 4G networks
- Optical wireless sensor networks
- Deep space and Inter-satellite optical links
- Adaptive optical wireless systems
- Artificial neural network application in optical wireless links
- Wavelet transform application in optical wireless systems
- Atmospheric effects on –speed outdoor optical wireless links
- Long wavelength free-space laser communications
- Underwater optical wireless systems and Optical transmission in Marine Environment
- Experimental systems

### **Submissions:**

Papers are invited from prospective authors with interest on the related areas.

Paper format: Is based on the IEEE format with title, author's names, affiliation, email addresses, an up to 150-word abstract, and a two-column body with 4 single-spaced pages and with font size at 10 points. All papers must be submitted electronically in

PDF format only and be mailed to  
[brchang@ntu.edu.tw](mailto:brchang@ntu.edu.tw).

**Important Dates:**

Deadline for paper submission ----- **March 1, 2009**

Notification of acceptance ----- **April 1, 2009**

Final camera-ready papers due ----- **May 1, 2009**