



**CERIES**

Tohoku University Electro-Related Departments  
Global COE Program

*Center of Education and Research for Information Electronics Systems*

## **GCOE Seminar on Ad-hoc Network Technology**

Date: **February 2nd, 2012**

Place: **Conference Room 103**, 1F, South Lecture Room Building,  
Electrical, Information and Physics Engineering, Tohoku University

Sponsored by: Global COE Program

“Center of Education and Research for Information Electronics Systems”

**16:30 ~ 17:30**

Lecturer: **Dr. Te-Chun Teng (Der-Jiunn Deng), Professor**

(National Changhua University of Education, Taiwan)

Title & abstract:

**Slow-start Backoff Algorithm for Ad-Hock Networks**

**Abstract**

According to the latest version of the IEEE 802.11 standard, the backoff parameters of its collision avoidance mechanism are far from optimal, especially in a heavy load or error-prone WLAN environment. This strategy has a high collision probability and channel utilization is degraded in bursty arrivals or congested scenarios. Besides, the standard backoff mechanism may treat noise corruption as packet collisions. In this talk, the speaker will introduce a simple, but yet well-performing distributed backoff algorithm, that allows a station to dynamically adjust its contention window size based on turn-around-time measurement of channel status. In addition to theoretical analysis, simulations are conducted to evaluate its performance.

**17:30 ~**