



University of Pavia

**Ph.D. School of Electrical and Electronics Engineering and Computer Science
Ph.D. School in Microelectronics**

Short Course

Current and future short-range channel access

***Prof. K.R. Chowdhury
Northeastern University, Boston, MA***

November 10th, 2015, h 14.00 – 18.00, room E8

Abstract: . Wireless access to other devices as well as to network resources is becoming the preferred solution in many cases for its easy set up process. The increasing demand for wires access conflicts with the constraints given by scarce radio resources and by the distributed access scheme. We therefore present the main characteristics of the standards and provide tools to understand their performance. Topics covered:

- Introduction to WiFi, Bluetooth
- Principles of CSMA/CA and differences with Ethernet and CSMA/CD
- IEEE 802.11b standard, backoff, contention resolution
- Analytical model for 802.11b
- Other existing variants: 802.11a, 802.11g/n
- Emerging variants: 802.11ac and ad
- Bluetooth – classical and low energy variants
- Ultra Wide Band

Bio: Kaushik Chowdhury is Associate Professor in the Electrical and Computer Engineering Department at Northeastern University, Boston, MA, USA since 2009. He graduated with B.E. in Electronics Engineering with distinction from VJTI, Mumbai University, India, in 2003. He received his M.S. in Computer Science from the University of Cincinnati, OH, in 2006, and Ph.D. from the Georgia Institute of Technology, Atlanta, GA in 2009. His M.S. thesis was given the outstanding thesis award jointly by the ECE and CS departments at the University of Cincinnati. He received the Best Paper Award at the IEEE ICC Conference in 2009, 2012, 2013, as well as the Best Paper award in the ICNC Conference in 2013. His expertise and research interests lie in wireless cognitive radio ad hoc networks, energy harvesting, and intra-body communication. He is currently an area editor for the Elsevier Ad Hoc and Computer Communications journals, and the Chair for the IEEE Technical Committee on Simulation. He is the recipient of the 2015 NSF CAREER award.

Organizer

Prof. L. Favalli

Ph.D. Coordinator

Prof. P. Di Barba

Prof. Franco Maloberti

Seminar in English

For more information: lorenzo.favalli@unipv.it