

# Suhas Mathur

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- OBJECTIVE:** To find a challenging research intern position in the field of communications and wireless networks.
- RESEARCH INTERESTS** Wireless Networks & Communications, Security in Wireless Networks, Information Theory
- EDUCATION**
- WINLAB, Rutgers University, NJ, USA** October 2006  
M.S. Electrical Engineering Advisor: Dr. Narayan Mandayam  
Thesis: Coalitional Games in Cognitive Radio Networks GPA: 4.0
- Indian Institute of Technology Madras, INDIA** Graduated: July 2004  
B.Tech. Electrical Engineering Advisor: Dr. David Koilpillai  
Thesis: Adaptive Channel Tracking for Fading Mobile Radio Channels GPA: 8.93
- ACADEMIC AND WORK EXPERIENCE**
- Systems Engineering Intern, Corporate R&D, Qualcomm Inc.** June - August 2006
- System design issues in the cognitive radio MAC protocol for the IEEE 802.22 Wireless Regional Area Networks.
  - Study of detection algorithms for DTV signals under very low SNR conditions for enabling 802.22 cognitive radio technology. Performance evaluation of DTV signal detection techniques based on PN sequence detection under low SNR.
- Research Assistant, WINLAB, Rutgers University** July, 2005 - present
- Design and testing of a mobility emulation system on a wireless indoor testbed (ORBIT)
  - Information theoretic analysis of receiver cooperation in an interference channel model under the framework of cooperative game theory (M.S. research)
  - Study of incentives for cooperative coalitional behaviour in cognitive wireless networks (supported in part by grants from NSF and the Defense Spectrum Office (DSO) of the Defense Information Systems Agency)
- Visiting Researcher, Communications Networks, Rheinisch Westfälische Technische Hochschule (RWTH), Aachen, Germany** April 2003 - August 2003
- Performance evaluation of group services in the proposed GSM Phase 2+ standard - voice broadcast services (VBS), voice group call services (VGCS) and enhanced multi-layer precedence and preemption service (eMLPP) (as part of a Vodafone collaborative project)
  - Performance study of a field trial system of the European TETRA (Terrestrial Trunked Radio) proposed for German emergency services - compared critical parameters such as call setup time, push-to-talk time and group call setup time with equivalent measures offered by the group services in the GSM Phase 2+ solution.
- Teaching Assistant, ECE, Rutgers University** September, 2004 - June, 2005
- PUBLICATIONS**
- Coalitional Games in Receiver Cooperation for Spectrum Sharing: Suhas Mathur, Lalitha Sankaranarayanan and Narayan B. Mandayam *Conference on Information Sciences and Systems* (Invited Paper) March 2006, Princeton, NJ.
  - Coalitional games in Gaussian Interference Channels: Suhas Mathur, Lalitha Sankaranarayanan and Narayan B. Mandayam submitted to the *International Symposium on Information Theory, 2006*
  - Mobility Emulation Through Spatial Switching on a Wireless Grid: Kishore Ramachandran, Sanjit Kaul, Suhas Mathur, Marco Gruteser, and Ivan Seskar, Rutgers University. (Demo at *MobiSys 2005*)
  - Towards Large-Scale Mobile Network Emulation Through Spatial Switching on a Wireless Grid: Suhas Mathur, Kishore Ramachandran, Sanjit Kaul and Marco Gruteser (*ACM SIGCOMM 2005*)
- SKILLS**
- Software: MATLAB, NS2, Microsoft Office, TKGATE, SPICE, SCILAB, PTOLEMY  
Operating Systems: Windows, Linux, Solaris  
Standards: GSM, familiarity with the IEEE 802.11 and CDMA standards  
Languages: C, C++, Pascal, Basic, HTML, ITU-T SDL, GPSS