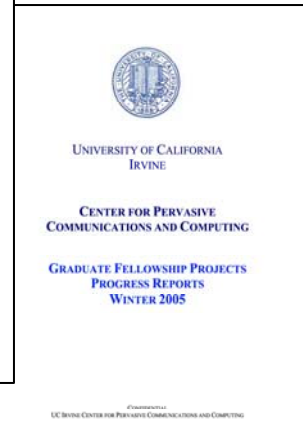
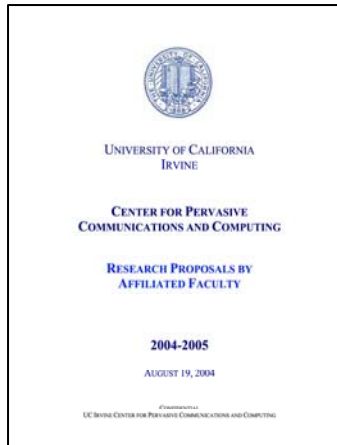


Center for Pervasive Communications and Computing

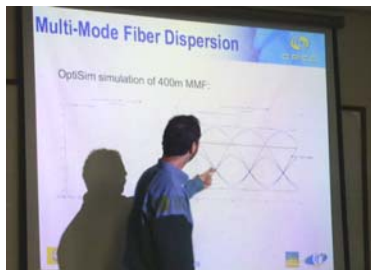
www.cpcc.uci.edu



Henry Samueli, CTO and Co-Founder, Broadcom;
Ralph J. Cicerone, Chancellor, UC Irvine; Dwight
Decker, Chairman and CEO, Conexant Systems
(6/2000)



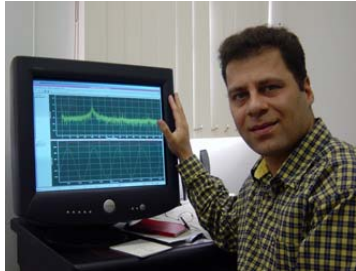
Graduate students in engineering and computer science from University of California, Irvine and University of California, San Diego, Center for Pervasive Communications and Computing (CPCC) and Cal-IT² programs will be on site to display their dissertation research topics. Visit with the students and learn about some of the exciting and innovative research being done at these universities.



UNIVERSITY of CALIFORNIA · IRVINE



Faculty Members CPCC Brought



Payam Heydari (2001)
Ph.D. USC '01
High-Speed Integrated Circuits



Hamid Jafarkhani (2001)
Ph.D. Maryland '97
Coding, Communication Theory
and Networks



Ender Ayanoglu (2002)
Ph.D. Stanford '86
Communication Systems,
Theory, Networks



Syed A. Jafar (2004)
Ph.D. Stanford '03
Communication and Information
Theory



Ahmed Eltawil (2005)
Ph.D. UCLA '03
Wireless System Integration



Athina Markopoulou (2006)
Ph.D. Stanford '02
Multimedia over Packet Networks
Network Reliability and Security



A. Lee Swindlehurst (2007)
Ph.D. Stanford '91
Detection and Estimation Theory

- **Founded 2000 for communications research. Since then 7 faculty members in communications and networking have been hired**
 - 4 NSF CAREER Awards
 - 1 ONR Young Investigator Award
 - 3 IEEE Fellows
 - 9 IEEE Best Paper Awards
 - Wide industry experience (Bell Labs, Broadcom, Cisco, Qualcomm, Innovics, Nokia, Sprint Labs, Arraycomm)
- **Several other UC Irvine faculty are affiliates and conduct joint research**

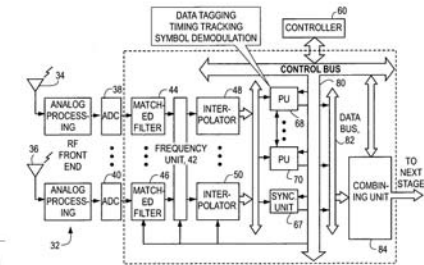
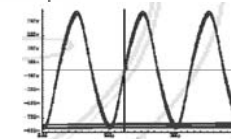
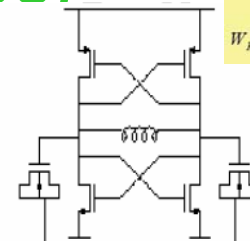
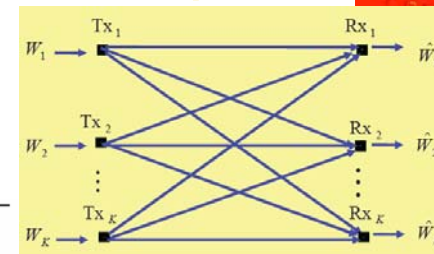
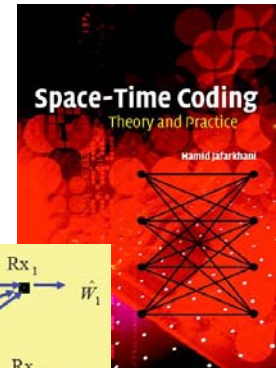
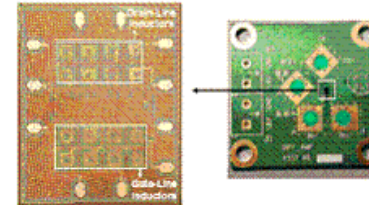


Basic Areas of Expertise: Whole Spectrum

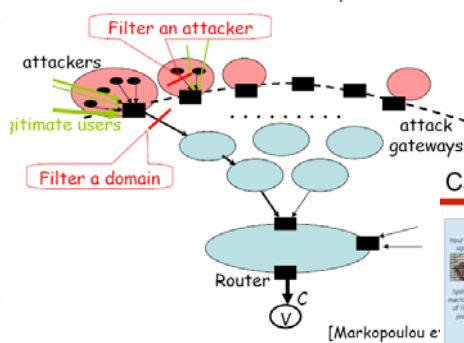
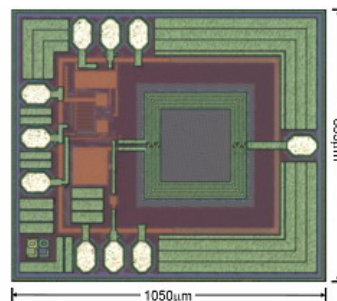
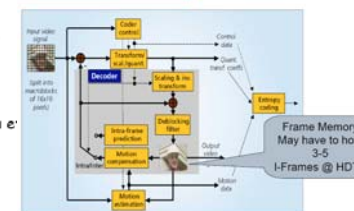


- **Chip Design (Analog, Digital, Mixed)**
- **VLSI**
- **Communications Algorithms (Wireless, Wired)**
- **Digital Signal Processing**
- **Networking (Wireless, Wired, QoS)**
- **Optical Communications**
- **RF and Antennas**
- **Security**
- **Software**

A Novel Broadband Non-Uniform Distributed Amplifier in 0.18μm CMOS



Case Study 2: H.264 Decoder



Sample CPCC Research Areas



- **MIMO, Multi-User MIMO, Network MIMO**
- **Space-Time Coding**
- **Network Coding Algorithms for Wireless Networks**
- **Quality-of-Service in Wireless Networks**
- **Mobile Ad-Hoc Networks**
- **Ultra-High Frequency Analog and RF ICs**
- **Broadband $\geq 10\text{Gb/s}$ Cu/Fiber Adaptive Equalization**
- **Highly Programmable and Versatile ASIC/FPGA Architectures**



Students and Contact



- Many former CPCC students are currently employed by Broadcom
- For past or future student projects, refer to the URL www.cpcc.uci.edu
- Or, contact the Director, ayanoglu@uci.edu

