

RAMESH R. RAO

San Diego Division Director,
California Institute for Telecommunications and Information Technology
Professor, Department of Electrical and Computer Engineering
University of California, San Diego
9500 Gilman Drive ~ La Jolla, CA 92093-0436
858-822-4572 (voice) / 858-822-5197 (fax)
rrao@ucsd.edu
<http://cwc.ucsd.edu/~rao>

RESEARCH INTERESTS

Architectures, protocols, and performance analysis of wireless, wireline, photonic networks for integrated multimedia services, and sensor networks.

EDUCATION

Ph.D., Electrical Engineering, University of Maryland, College Park, 1984
M.S., Electrical Engineering, University of Maryland, College Park, 1982
B.E. (honors), Electronics and Communications, University of Madras, 1980

EMPLOYMENT

Director, San Diego Division, California Institute for Telecommunications and Information Technology, April 2001-Present
Director, Center for Wireless Communication, UCSD ECE Department, January 2000-July 2001
Professor, UCSD ECE Department, July 1998-Present
Associate Professor, UCSD ECE Department, July 1991-June 1998
Assistant Professor, UCSD ECE Department, July 1984-June 1991

PROFESSIONAL ACTIVITIES

Member, Board of Directors - San Diego Software Industry Council

Member, Board of Directors - Commexus San Diego

Member - ST Microelectronics Technology Council

Professional Society Activities:

IEEE Information Theory Society, Member of the Board of Governors 1997-1999, 2000-2002

IEEE Communications Society, Secretary, Technical Activities Council and Technical Committees Board 1990-1991

NAS Activities:

Chair, Study of Enhancement of Crisis Response: Improving the Use of Information Technology in Disaster Preparedness, Response, and Recovery for the NAS Computer Science and Telecommunications Board, June 2005-present

NSF Activities:

Participated in Architecture subgroup, NSF Mobile and Wireless Planning Group on "the Future Internet Architecture and Protocols, and Integration of Mobile/Wireless/Sensor Networks", July 2005

Co-organizer "The New Role of Science and Engineering in Risk Reduction," NSF Workshop, La Jolla, CA, February, 2003

Organizing committee of NSF Workshop "Network Research Testbeds," Chicago, IL, October 17-18, 2002

Participated in NSF workshop "Future Challenges of Signal Processing and Communications in Wireless Networks," Cornell University, Ithaca, NY, September 5-6, 2002

Participated in NSF workshop "Responding to the Unexpected," New York, NY, February 27-March 1, 2002

Editorial Responsibilities:

Web Editor of IEEE Information Theory Society 1995-1999

IEEE Transactions on Communications (Editor for Packet Multiple Access) 1997-2000

IEEE Journal of Selected Areas in Communications (Guest Editor, Special Issue on Multimedia Network Radios) 1998

IEEE Networks (Member, Editorial Board) 1997-1999

ACM/Baltzer Wireless Networks (Member, Editorial Board) 1997-1999

Publications Editor, IEEE Transactions on Information Theory 1999-2001

Reviewer for a variety of journals such as the IEEE Transactions on Computers, IEEE Transactions on Parallel and Distributed Systems, IEEE Networks, IEEE Journal of Selected Areas in Communications, Questa and the ACM/Baltzer Wireless Information Networks Journal.

Conference Activities:

General Chair, PIMRC 2001, Mobiquitous 2005

Technical Program Committee Chair ICUPC 97

Local Arrangements Chair, 1998 IEEE Information Theory Society Workshop

Local Arrangements Chair, 1990 International Symposium on Information Theory

Panel Chair, Mobicom 2001

Proceedings Chair, ICHPC 95, IPPS 94

Technical Program Committees: ICUPC 98, Mobicom 1998, WCNC 1999, Infocom 1999, Infocom 2000, WCNC 2000, Infocom 2001, ICC 2003, Mobicom 2003, Mobihoc 2003, ACM MobiCom 2004, INFOCOM 2005, Sigcomm Asia 2005, WiOpt 2005, MobiCom 2005, Infocom 2006

Reviewer for a variety of conferences on Communications and Computers such as: Infocom, International Conference on Communications, GLOBECOM, MILCOM, the International Symposium on Information Theory, AMC MobiCom, INFOCOM, Sigcomm Asia, WiOpt, WCNC, ICC, NSF NeTs Review Panel, NSF NeTs Prowin Review Panel

UNIVERSITY ACTIVITIES

University of California, Systemwide Academic Senate:

Member, Committee on Preparatory Education 1997-1998

University of California, San Diego, Universitywide:

Member, Vice Chancellor, External Relations Search Committee, 2005-present

University of California, San Diego, Academic Senate:

Chair, Committee on Preparatory Education 1997-1998

Member, Committee on Preparatory Education 1996-1997

Member, Committee on Undergraduate Scholarship and Honors 1996-1997

Vice-chair, Committee on Academic Computing 1989-1990

Member, Committee on Academic Computing 1988-1989

Member of ad-hoc committees for personnel review

OTHER ACTIVITIES

IEEE Senior Member, 1990-present

Testified before House Armed Services Committee on Cal-(IT)² research related to Homeland Security, February 2002

NSF Review Panels: Information Technology Research, Networking Research

STUDENTS

Current Doctoral Candidates:

Dilmaghani, Raheleh

Ergut, Salih

Zhou, Ping

Postdocs, past & present:

Aiken, Cahit (October 2003-September 2004)

Aiken, Ozdemir (April 2005-current)

Al-Harhi, Saleh (February 2002-February 2003)

Balakrishnan Nair Santhakumari Amma, Manoj (2005-current)

Blair, Paul (November 2002-May 2005)

Masters Students Graduated:

Kammer, Yvonne (1998)

Killen, Katherine (1999)

Mao, Jun (2000)

Yalamanchili, Pavana (2001)

Liu, Minkui (2001)

Jain, Ankur (2003)

Patel, Manishkumar (2004)

Doctoral Students Graduated:

Rodriguez, Manuel (1987)

Ho, Kelvin (1987)

Kwak, Kyung-Sup (1988)

Behroozi-Toosi, Amir (1989)

Dietrich, Paul Frederick (1995)

Legaspi, Albert Kitagawa (1996)

Chen, An Mei (1998)

Shauh, Jack Shyh-Hurng (1998)

Nuggehalli, Pavan (2003)

Srinivasan, Vikram (2003)

Chebrolu, Kameswari (2004)

Dhamdere, Ashay (2004)

Fang, Jennifer (2005)

Liu, Minkui (2005)

Wang, Kang (2005)

RECENT GRANTS

“BioNet System Design and Development Support.” \$1,300,000, September 2004-September 2005, SPAWAR (collaborative project with UCI, SDSU)

“Collaborative Research: Responding to the Unexpected.” \$3,541,999 at UCSD, \$12.5 Million in total, October 2003-September 2008, NSF (collaborative project with UCI, BYU, U of Maryland, U of Colorado, U of Illinois Urbana-Champaign, ImageCat Inc).

“NRT: Scalable Testbed for Next Generation Mobile Wireless Networking Technologies.” \$5,558,716, October 2003-September 2007, NSF (joint award with multiple other co-PIs).

“ResponSphere: An IT Infrastructure for Responding to the Unexpected.” \$900,795 (UCSD); \$1,801,590 in total, September 2004-August 2009, NSF (joint award with multiple other co-PIs).

“Communication, Command, and Control, and Sensor Concepts for Network Centric Operations.” \$15,000,000, October 2003-September 2008, SPAWAR.

“Wireless Internet Information System for Medical Response in Disasters.” \$4,065,027, October 2003-September 2006, NIH (joint award with multiple other co-PIs).

“‘Smart’ Sensor Networks for Visual Context Capture and Interactivity.” \$441,126, August 2003-August 2005, Ericsson, Hewlett-Packard, UC Discovery (joint award with 5 other co-PIs).

“Application and Network-Aware Multi-Layer Adaptation of Wireless Protocols and Architectures.” \$301,647, August 2003-August 2005, Ericsson, Intersil, Nokia, STMicroelectronics, UC Discovery (joint award with 2 other Co-PIs).

“Therapeutic Window for Acute Stroke Therapy,” \$6,131,542, May 2003-June 2008, NIH/NINDS (joint award with 4 other co-PIs).

“Region-Based Image Compression Subject to Energy and Bandwidth Constraints,” \$592,147, January 2003-December 2005, ONR (joint award with two other co-PIs).

“The New Role of Science and Engineering in Risk Reduction,” \$200,000, December 2002-April 2003, NSF (joint award with 2 other co-PIs).

“Adaptive Systems,” \$2,520,197, July 2002-June 2006, CoRe/Ericsson (joint award with 4 co-PIs).

“Scheduling and Power Control in Wireless Networks,” \$297,252, January 2002-August 2003, CoRe, AMCC, Ericsson, Fuji Electric, Hughes Network Systems, ideaEDGE Ventures (joint-award with 1 other co-PI).

“Power Management in Communication Devices,” \$192,000, March 2001-December 2004, Intersil Corporation.

“Research for Laser Communication System & Laser Communication Networks,” \$10,000, July 1998-Open, Astro Terra Corporation.

“Photonic Imaging Networks,” \$622,000, September 1995-November 1997, AFOSR (joint award with 7 other co-PIs).

“Broadband Wireless Multimedia Communication Systems, \$1,234,753, September 1995-June 1998, Army Research Office (joint award with 9 other co-PIs).

“Optimization of Delay Constrained Wireless Communication Networks,” \$880,313, September 1997-August 2000, NSF (joint award with 3 other co-PIs).

“Error Management for a High Speed Laser Link,” \$34,408, September 1997-June 1998, Astro Terra Corporation.