RICHARD DALE WESEL

ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT AND OFFICE OF ACADEMIC AND STUDENT AFFAIRS

HENRY SAMUELI SCHOOL OF ENGINEERING

UNIVERSITY OF CALIFORNIA, LOS ANGELES

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EDUCATION

1991 – 1996, Stanford University, Stanford, CA

Ph.D. in Electrical Engineering

Trellis Code Design for Correlated Fading and Achievable Rates for Tomlinson-Harashima Precoding.

1984 – 1989, Massachusetts Institute of Technology, Cambridge, MA

S. M. and S. B. in Electrical Engineering

Thesis: Adaptive Equalization for Modem Constellation Identification.

EMPLOYMENT

1996 – present, University of California, Los Angeles, Los Angeles, CA

- Associate Dean of Academic and Student Affairs for the Henry Samueli School of Engineering and Applied Science since July 2007
- **Acting Director** HSSEAS MS Online Program, July 2007 July 2008 (inaugural year of operation admitting students and offering classes)
- Professor of Electrical and Computer Engineering since July 2006
- **Associate Professor** of Electrical Engineering 2002-2006
- Assistant Professor of Electrical Engineering 1996-2001

1991 – 1996, **Stanford University**, Stanford, CA, Research Assistant and Teaching Assistant.

1986 – 1994, AT&T Bell Laboratories, Holmdel, NJ

- Member of Technical Staff summer 1994
- Member of Technical Staff 1989-1991
- Intern 1986-1989, two summer internships and a culminating 6-month internship.



AWARDS

- Fellow of the Institute of Electrical and Electronics Engineers (IEEE)
- Qualcomm Faculty Award
- Selected for the National Academy of Engineering Frontiers of Engineering Program
- TRW Excellence in Teaching Award (UCLA School of Engineering)
- Okawa Foundation Award for Excellence in Telecommunications Research
- National Science Foundation CAREER Award
- AT&T Foundation Ph.D. Fellow.
- Tau Beta Pi MIT chapter president 1987-1988, Eta Kappa Nu, Sigma Xi, National Merit Scholar.

ACADEMIC SERVICE

- Associate Dean, Leading Office of Academic and Student Affairs, including admissions and counseling for all engineering majors, July 2007 to present
- Chair, Samueli COVID-19 Task Force 2020-2021
- Member, UCLA COVID-19 Academic Continuity Task Force 2020-2021
- Member, HSSEAS SEASnet review committee, November 2018 to 2020
- Chair, Summer Sessions Faculty Advisory Committee, Sept. 2018 to present.
- Member, Advisory Committee on Immigration Policy, 2017 to 2021
- HSSEAS Strategic Planning Committee for Education, Jan. 2017-June 2018
- Member, Center for the Integration of Research, Teaching, and Learning at UCLA, Steering Committee, January 2017-present
- Member, Classroom Advisory Committee, November 2016 to present
- Chair, UCLA Special Programs Task Force, Feb. 2013- Sept. 2014
- Member, UCLA Enrollment Planning Committee October 2011-present
- Member, UCLA Undergraduate Non-Resident Implementation Task
 Force August 2010 July 2011
- Member of UCLA Undergraduate Council July 2006- July 2008.
- Member of the Committee on Undergraduate Admissions and Relations with Schools July 2006- July 2008
- Electrical Engineering Department Vice Chair for Undergraduate Affairs
 July 2005 July 2007. Successfully managed the 2006 ABET Accreditation visit
 for EE.
- Member of the School of Engineering Faculty Executive Committee 2003-2006.



- Chair of the Electrical Engineering Department Courses and Curriculum Committee 2003-2005.
- Chair of the Communications Major Field in the Electrical Engineering Department at the University of California, Los Angeles, 1999-2004.
- Chair of the Cubicle Allocation Committee for the Electrical Engineering Department at UCLA, managing the allocation of 150 student cubicles among approximately 20 professors who share this space, 1998-2005.
- Chair of 2002 Annual Research Review (annual departmental research symposium). Also Vice Chair of 2001 Annual Research Review.
- Member of 2001 UCLA EE Annual Report Committee.
- Elected Member of the Legislative Assembly of the UCLA Academic Senate, 1997-2001.
- Chair for quarterly Seminar Series in Signals and Systems. Established this seminar series in spring 1997. Recruit a professor each quarter to organize speakers for the series. Personally organized speakers for four of these quarters.
- Local Exhibits Chair, 1997 UCLA EE Research Symposium

GRADUATED PH.D. STUDENTS

- 1. Christina Fragouli, Ph.D. Sept. 2000, Dissertation: *Turbo Code Design for High Spectral Efficiency*, 2000-2001 UCLA EE Dept. Best Ph.D. Student 2001. **Professor at UCLA.**
- 2. Christos Komninakis, Ph.D. Dec. 2000, Dissertation: *Joint Channel Estimation and Decoding for Wireless Channels*, Senior Director of Technology, Qualcomm.
- 3. Xueting Liu, Ph.D. Dec. 2000, Dissertation: Trellis Code Design for Periodic Erasures and Adaptive Coded, Modulation Schemes for Time-Varying Channels, Apple Inc., CA
- 4. Wei Shi, Ph.D. Dec. 2000, Dissertation: New Results in Wireless Communications, Qualcomm
- 5. Tom Sun, Ph.D. Dec. 2002, Dissertation: Error Protection Techniques for Source and Channel Coding, Qualcomm, San Diego, CA
- 6. Chris Jones, Ph.D. Dec. 2003, Dissertation: *Constructions, applications, and implementations of low-density parity-check codes,* Co-founder Chilicon Power, Los Angeles, CA
- 7. Adina Matache, Ph. D. June 2004, Dissertation: Coding Techniques for High Data Rates in Wireless Multiple-Input Multiple-Output Communications, Aerospace Corp.
- 8. Cenk Kose, Ph.D. Dec. 2004, Dissertation: Universal trellis codes and concatenated trellis-coded modulations for the compound linear vector Gaussian channel
- 9. Aditya Ramamoorthy, June 2005, Generalized ACE Codes and Theoretic Results in Network Coding, Associate Professor at Iowa State University
- 10. Jun Shi, Ph.D. Sept. 2005, Dissertation: Universal Channel Codes and Trellis State-Diagram Reduction, Senior Principle Scientist at the Broadcom Corporation
- 11. Wen-Yen Weng, Ph.D. March 2007, Dissertation: Universal Serially Concatenated Trellis Coded Modulations and Rate-Compatible High-Rate LDPC Codes



- 12. Esteban Valles (Primary Advisor John Villasenor), Ph.D. March 2007, Dissertation: Timing Recovery Using Soft Information Feedback and Efficiency of Array Codes, Aerospace Corporation.
- 13. Andres Vila Casado, Ph.D. December 2007, Dissertation: *Improving LDPC Decoders: Informed Dynamic Message-Passing Scheduling and Multiple-Rate Code Design*
- 14. Herwin Chan (Primary Advisor Ingrid Verbauwhede), Ph.D. December 2007, Dissertation: Accelerating Applications Through Cross-Layer Co-Design
- 15. Miguel Griot, Ph.D. Sept. 2008, Dissertation: Nonlinear Codes for Multiple Access to Binary Channels and Higher-Order Modulations over the AWGN Channel, Qualcomm Corporation.
- 16. Bike Xie, Ph.D. June 2010, Dissertation: Encoding for Degraded Broadcast Channels and Resource Allocation for content Distribution in Peer-To-Peer Networks, Senior Staff Engineer-Manager at Marvell Corp
- 17. Thomas Courtade, Ph.D. June 2012, Dissertation: *Two Problems in Multiterminal Information Theory*, **Assistant Professor at UC Berkeley**.
- 18. Jiadong Wang, Ph.D. June 2012, Dissertation: Absorbing Set Analysis of LDPC Codes and Read-Channel Quantization in Flash Memory, Senior Engineer at Qualcomm.
- 19. Tsung-Yi Chen, Ph. D. September 2013, Dissertation: Achieving Low-Latency Communication with Feedback: from Information Theory to Practical System Design, SpiderCloud Wireless.
- 20. Adam Williamson, Ph. D June 2014, Dissertation: Reliability-output Decoding and Low-latency Variable-Length Coding Schemes for Communication with Feedback, Northrop Grumman Corp.
- 21. Kasra Vakilinia, Ph. D June 2014, Dissertation: Coding Schemes to Approach Capacity in Short Blocklength with Feedback and LDPC Coding for Flash Memory, Huawei Technologies.
- 22. Haobo Wang, Ph. D Decembner, 2018, Dissertation: Optimizing Flash-Based Storage Systems, SK Hynix.
- 23. Sudarsan V.S. Ranganathan, Ph. D December, 2018, Dissertation:, Advances in Protograph-Based LDPC Codes and a Rate Allocation Problem, Post Doctoral Scholar and Lecturer at the Massachusetts Institute of Technology.

RESEARCH FUNDING SOURCES 1996 - PRESENT

- Mercury Systems
- Qualcomm
- Zeta Corporation
- Physical Optics Corporation
- SA Photonics
- Micron Semiconductor
- National Science Foundation
- Western Digital Corporation
- INPHI Corporation
- Rockwell Collins
- The Broadcom Foundation



- Boeing
- Texas Instruments
- Conexant
- ST Microelectronics
- Northrop Grumman
- Skyworks
- Xetron Corporation
- Pacific Bell
- Honeywell

COURSES TAUGHT 1996 - PRESENT

- EE131A Probability
- EE132A Communications Systems
- EE231A Information Theory
- EE231E Channel Coding
- EE232A Stochastic Processes

PROFESSIONAL ACTIVITIES

- Associate Editor, IEEE Transactions on Information Theory, March 2020-present
- **Presenter** of half-day tutorial on Incremental Redundancy at Globecom 2019, December 2019.
- Panel member for National Science Foundation Proposal Review Panels.
- **Invited Speaker** half-day tutorial on Incremental Redundancy at the 2018 European School of Information Theory, Bertinoro, Italy, May 2018
- Invited Speaker at IEEE UCSD ITA Workshop, annually 2006-present
- Reviewer for various IEEE conferences and journals. Regularly reviewing submissions to Trans. on Information Theory, Trans. on Communications, Journal on Selected Areas of Communications, Communications Letters, Globecom, and International Conference on Communications, 1994-present.
- Technical Program Committee Member, numerous times for Globecom, ICC, and ISIT.
- Organizer and lecturer for UCLA Extension course on Error Control Coding (2000-2006). Received an award for being among the top 10% of UCLA extension lecturers.
- **Associate Editor**, *IEEE Transactions on Communications* 1999-2005.



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