ALON ORLITSKY

ECE and CSE Departments, University of California, San Diego

Office: (858) 822-0228 Home: (858) 412-5585 Cell: (619) 865-4888

alon@ucsd.edu

EDUCATION

1982 - 1986 Ph.D., Electrical Engineering, Stanford University
1981 - 1982 M.Sc., Electrical Engineering, Stanford University
1977 - 1981 B.Sc., Electrical Engineering, Ben-Gurion University, Israel, Cum Laude
1977 - 1980 B.Sc., Mathematics, Ben-Gurion University, Israel, Magna Cum Laude

EMPLOYMENT

2007 - present Qualcomm Professor, University of California, San Diego
Inaugural Qualcomm Endowed Chair in Information Theory and Applications

2006 - present Director, Information Theory and Applications Center
Principal involvement in the formulation, foundation, and administration of the Center and its "research and resource" concept

1997 - present Professor, University of California, San Diego
Faculty member in the departments of Electrical and Computer Engineering and Computer Science and Engineering. Research areas: communications, data compression, data modeling, computational learning, speech recognition

1996 - 1997 Quantitavie Analyst, D. E. Shaw and Company
Responsibilities: trading algorithms for fixed-income instruments

1986 - 1996 Member of Technical Staff, AT&T Bell Laboratories
Member of the Communication Analysis and Research Department in the Mathematical Sciences Research Center. Research areas: information theory, communication, data compression, hardware complexity, probability

1992 - 1993 Adjunct Associate Professor, Columbia University
Class taught: graduate error-correction course

1981 - 1986 Research Assistant, Information Systems Laboratory, Stanford University
Research areas: communication complexity, interactive data compression, communication with secrecy constraints, spectral analysis of circuits

1983 - 1985 Consultant, Transaction Sciences, Inc.
Pattern recognition: development of a character- and signature-recognition system

1980 - 1981 Teaching Assistant, Ben-Gurion University
Classes taught: probability theory and linear algebra

1980 - 1981 Senior Year Project, Ben-Gurion University
Biomedical engineering: apnea prediction in premature infants

HONORS

2009 - present **Distinguished Lecturer**
IEEE Information Theory Society, one of three inaugural lecturers

2007 **Distinguished Visiting Fellow**
The Royal Academy of Engineering, United Kingdom

2006 **IEEE Information Theory Paper Award**
For "Universal compression of memoryless sources over unknown alphabets" A. Orlitsky, N.P. Santhanam, and J. Zhang, IEEE Transactions on Information Theory, IT-50:7 (July 2004), pp. 1469-1481.

2005 **IEEE Fellow**
For contributions to zero-error information theory

1992 **IEEE W.R.G. Baker Best Paper Award**
For "Worst-case interactive communication I: Two messages are almost optimal" A. Orlitsky, IEEE Transactions on Information Theory, IT-36:5 (September 1990) pp. 1111-1126. (Awarded to "the most outstanding paper in the Transactions, Journals, and Magazines of the IEEE Societies or the Proceedings of the IEEE".)

1981 - 1982 **ITT International Fellowship**
Awarded to one student per country each year

1981 **Prize for Best Final Engineering Project at Ben-Gurion University**
"Apnea prediction in premature infants"

1977 - 1981 **University Excellence Award**
Yearly, graduating (Mathematics) with highest GPA in the University

KEYNOTE & PLENARY PRESENTATIONS

2010 **Information Theoretic Method in Probability Estimation**
Workshop on Information Theoretic Methods in Science and Engineering, Tampere, Finland

2008 **Information Theory and Machine Learning**
The Learning Workshop, Snowbird, Utah

2008 **Information theory for large alphabets**
IEEE International Symposium on Information Theory, Toronoto, Canada

2007 **Predicting the unlikely**
IEEE Information Theory Workshop, Lake Tahoe, CA

2004 **Good-Turing estimation and its applications**
Uncertainty in Artificial Intelligence (UAI), Banff, Canada

SHORT COURSES & TUTORIALS

2010 **Information Theory and statistics**
Invited course at the IEEE Information Theory Summer School

2008 **Information theory**
Week-long course, University of Buenos Aires Winter School

2006 **Compression and probability estimation**
Week-long course, Chinese University of Hong Kong

2005 **Universal compression**

Week-long course, Summer Research Institute, Ecole Polytechnique Federal Lausanne

2005 Data compression, Good-Turing estimation, and language modeling
3-hour Tutorial, Int. Conf., Acoustics, Speech, & Signal Processing (ICASSP), Philadelphia

INVITED WORKSHOP & CONFERENCE TALKS

2010 Information Theory Workshop, Cairo, Egypt
Stochastic Processes in Communication Sciences, Newton Institute, Cambridge, UK

2009 Center for Mathematics of Information, 5th Aniversary Workshop, Caltech, CA
CSL Student Conference, University of Illinois, Urbana, IL

2008 46th Allerton Conference, Monticello, IL

2007 45th Allerton Conference, Monticello, IL

2006 44th Allerton Conference, Monticello, IL
2nd Kailath colloquium, Stanford, CA
Information Theory Workshop, Punta del Este, Uruguay

2005 43rd Allerton Conference, Monticello, IL

2004 Information Theory Workshop, San Antonio, TX
42nd Allerton Conference, Monticello, IL

2003 DIMACS Workshop on Coding and Information Theory, New Brunswick, NJ
41st Allerton Conference, Monticello, IL
3rd Asian European Workshop, Kamogawa, Japan

COLLOQUIA & DEPARTMENTAL SEMINARS

Texas A&M, Leaders and Innovators Lecture Series, March
Stanford University, Statistics Colloquium, January

2009 University of Maryland, Booz Allen Hamilton Distinguished Colloquium, September

2006 Priceton University, Applied Math, November
University of Maryland, Electrical and Computer Engineering, November
MIT, LIDS, February
USC, Electrical Engineering, February
UCSD, Department of Mathematics, January
University of Michigan, January

2005 University of Indiana, Mathematics, November
UCLA, EE Department, October
Tel Aviv University, Electrical Engineering, June
Institute for Advanced Studies, Princeton, March
Georgia Tech, College of Computing, March
Universidad Catolica de Peru, February

2004 UCSD, Computer Science and Engineering, November
EPFL, Electrical Engineering, August
Caltech, Electrical Engineering, April
UC Berkeley, Electical and Computer Engineering, February
University of Illinois, ECE, Urbana, IL, January
Stanford University, Information Systems Laboratory, January

2003 University of Buenos Aires, Electrical Engineering, December
Cornell University, Electrical Engineering, September

GOVERNMENT AGENCY TALKS

2004 National Security Agency, Washington, DC, June
Institute for Defense Analysis, Princeton, NJ
Institute for Defense Analysis, La Jolla, CA

PROFESSIONAL SERVICE

2011 TPC Member, Inter. Symp. on Information Theory, Saint Petersburg, Russia
2009 TPC Co-Chair, Inter. Symp. on Information Theory, Seoul, Korea
TPC Member, Information Theory Workshop, Volos, Greece
2008 TPC Member, Inter. Symp. on Information Theory, Toronto, Canada
2007 General Co-Chair, CWC Colloquium, UCSD
TPC Member, data compression area leader, Int. Symp. on Information Theory, Nice, France
General Co-Chair, Information Theory and Applications Workshop, UCSD
2206 TPC Member, Inter. Symp. on Information Theory, Seattle, Washington
TPC Member, Information Theory Workshop, Punta del Este, Uruguay
TPC Co-Chair, Information Theory and Applications Workshop, UCSD
2005 TPC Member, Inter. Symp. on Information Theory, Adelaide, Australia
2004 TPC Co-Chair, Information Theory Workshop, San Antonio, TX
TPC Member, Computational Learning Theory Workshop, Banff, CA
TPC Member, Inter. Conference on Communications Systems, Singapore
2003 TPC Member, Inter. Symp. on Information Theory, Yokohama, Japan

ONGOING SERVICE

2006 - 2009 Board of Governors Member
IEEE Infomration Theory Society
2004 - present Editorial Board Member
Foundations and Trends in Communications and Information Theory

DEPARTMENTAL SERVICE

2006 - present Calit divisional council, member
2005 - present Faculty recruitment committee, member
2002 - 2004 Graduate affairs committee, member
1998 - present Graduate admissions committee, member, some of that time chair
1998 - present CTS graduate admissions, coordinator

AGENCY STUDY GROUPS

2010 Future of communication and signal processing, NSF
2006 Data taming, DARPA, ISAT
2005 Information theory beyond Shannon, State of Florida
2003 Interface between information theory and computer science, NSF
1999 Source-channel coding, NSF