

2010 IEEE INFORMATION THEORY SOCIETY BOG ELECTION
For a Three-Year Term Ending 31 December 2013

ERDAL ARIKAN (S'84-M'86-SM'93) was born in Ankara, Turkey in 1958. He was the first in the national university entrance exam in Turkey in 1976. He received the B.S. degree from the California Institute of Technology, Pasadena, CA, in 1981, and the S.M. and Ph.D. degrees from the Massachusetts Institute of Technology, Cambridge, MA, in 1982 and 1985, respectively, all in Electrical Engineering. He was the recipient of Henry Ford II Scholar Award at Caltech (1980), and Vinton Hayes Fellowship in Communications at MIT (1981).

Dr. Arikan was an Assistant Professor in the Department of Electrical and Computer Engineering and the Coordinated Science Laboratory of the University of Illinois at Urbana-Champaign during 1986-1987. Since 1987, he has been with the Electrical-Electronics Engineering Department of Bilkent University, Ankara, Turkey, where he is at present a Professor. He served as Associate-Editor-at-Large of the *IEEE Transactions on Information Theory* (1993-1995), Region 8 Representative for IEEE Individual Benefits and Services Committee (2000-2002), and a Member of Technical Program Committee, ISIT (1994, 2002, 2003, 2004). He was the Founding Chairman of the IEEE Communications Society Turkey Chapter (1994). He is the General Co-Chair of ISIT 2013, to be held in Istanbul, Turkey. He is the author of several papers on sequential decoding and guessing. His more recent work is on source and channel polarization.

ALEXANDER BARG (A'94-AM'00-SM'01-F'08) has been a Professor of ECE at the University of Maryland, College Park, since 2003. Previously he spent a number of years at Bell Labs Research, Murray Hill, NJ. His research interests are in the theory of error-correcting codes, information theory, and their interactions with computer science and discrete mathematics. He received his Ph.D. degree in EE from the Institute for Information Transmission Problems of the Russian Academy of Sciences (1987), where he is presently a senior researcher (on leave) of the Dobrushin Mathematical Laboratory.

Dr. Barg has been involved in many activities of the Information Theory Society. He is currently a member of the Board of Governors. He was Co-Chair of the Technical Program Committees of the ISIT 2006 and ITW 2010, and was an Associate Editor for Coding Theory of the *IEEE Transactions on Information Theory* (1997-2000). He is a member of the editorial board of *Problems of Information Transmission* and of *Advances in Mathematics of Communications*, as well as of other journals.

JOÃO BARROS (S'94-M'04) is an Associate Professor at the Department of Electrical and Computer Engineering of the University of Porto and the coordinator of the Porto Laboratory of the Instituto de Telecomunicações. He is also a Research Affiliate with the Massachusetts Institute of Technology (MIT). In February 2009, Dr. Barros was appointed National Director of the CMU-Portugal Program, a five-year international partnership between Carnegie Mellon University and 12 Portuguese universities and research institutions, with a total budget of 56M euros.

Dr. Barros received his undergraduate education in Electrical and Computer Engineering from the Universidade do Porto (UP), Portugal and Universität Karlsruhe, Germany through 1999, and the Ph.D. degree in Electrical Engineering and Information Technology from the Technische Universität München (TUM), Germany, in 2004. From 2005 to 2008, he was an Assistant Professor in the Department of Computer Science of the University of Porto. His research lies in the general areas of information theory, communication networks and data security, with a current focus on network coding, physical-layer security and vehicular networks.

Dr. Barros received a Best Teaching Award from the Bavarian State Ministry of Sciences, Research and the Arts, as well as scholarships from several institutions, including the Fulbright Commission and the Luso-American Foundation. He has held visiting positions at Cornell University and MIT, where he spent a sabbatical in 2008. He served as Secretary of the Board of Governors of the IEEE Information Theory Society (2006-2009), co-chaired the 2008 IEEE Information Theory Workshop (ITW) in Porto, Portugal, and collaborates regularly on a number of Technical Program Committees, including ICC 2010, ITW 2009, WiOpt (2008, 2009), ISIT 2007, and Globecom (2007 and 2008). He is a technical program co-chair of ITW 2011 in Paraty, Brazil, and is a member of the Conference Committee of the IEEE Information Theory Society.

MICHELLE EFFROS (S'93-M'95-SM'03-F'08) received the B.S. degree with distinction, the M.S. degree, and the Ph.D. degree from Stanford University, all in electrical engineering. Her interests include information theory, network coding, data compression, and communications.

She received Stanford's Frederick Emmons Terman Engineering Scholastic Award (for excellence in engineering) in 1989, the Hughes Masters Full-Study Fellowship in 1989, the National Science Foundation Graduate Fellowship in 1990, the AT&T Ph.D. Scholarship in 1993, the NSF CAREER Award in 1995, the Charles Lee Powell Foundation Award in 1997, the Richard Feynman-Hughes Fellowship in 1997, an Okawa Research Grant in 2000, and was cited by Technology Review as one of the world's top 100 young innovators in 2002. She and her co-authors received the 2009 IEEE Joint ComSoc/IT Best Paper Award for their paper "A Random Linear Network Coding Approach to Multicast," which appeared in the *IEEE Transactions on Information Theory* in October 2006.

Dr. Effros is a member of Tau Beta Pi, Phi Beta Kappa, and Sigma Xi, and is a Fellow of the IEEE. She served as the Editor of the *IEEE Information Theory Society Newsletter* from 1995 to 1998, and as a Member of the Board of Governors of the IEEE Information Theory Society from 1998 to 2003, and again from 2008 to the present. She has been a member of the Advisory Committee for the Computer and Information Science and Engineering (CISE) Directorate at the National Science Foundation from 2009 to the present. She served on the IEEE Signal Processing Society Image and Multi-Dimensional Signal Processing (IMDSP) Technical Committee from 2001 to 2007. She was an Associate Editor for the joint special issue on Networking and Information Theory of the *IEEE Transactions on Information Theory* and the *IEEE/ACM Transactions on Networking*, and as Associate Editor for Source Coding for the *IEEE Transactions on Information Theory* from 2004 to 2007. She is currently serving as an Associate Editor for the upcoming special issue honoring Professor Ralf Koetter. She will serve as Co-Chair of the Technical Program Committee for the 2012 IEEE International Symposium on Information Theory in Cambridge, MA.

ELZA ERKIP (S'93-M'96-SM'05) received her B.S. degree in Electrical and Electronics Engineering from Middle East Technical University, Ankara, Turkey in 1990, and her M.S. and Ph.D. degrees in Electrical Engineering from Stanford University, Stanford, CA in 1993 and 1996, respectively. Currently, she is an Associate Professor of Electrical and Computer Engineering at Polytechnic Institute of New York University, Brooklyn. In the past, she has held visiting positions at Rice University, Houston, TX, and at Princeton University, Princeton, NJ. Her research interests are in multi-user information theory, communication theory, and wireless communications.

She received the National Science Foundation (NSF) CAREER Award in 2001. She won the 2004 IEEE Communications Society Stephen O. Rice Prize in the Field of Communications Theory for the papers "User Cooperation Diversity - Part I: System Description" and "User Cooperation Diversity - Part II: Implementation Aspects and Performance Analysis." She also won the 2007 IEEE International Conference on Communications (ICC) Communication Theory Symposium Best Paper Award. She was co-author of a paper that received the 2007 IEEE International Symposium on Information Theory (ISIT) Student Paper Award.

Dr. Erkip has served the Information Theory Society and the IEEE in various capacities. She is currently an Associate Editor of the *IEEE Transactions on Information Theory*, and a member of the Information Theory Society Awards Committee. She will serve as the General Co-Chair of the 2013 ISIT in Turkey. She was a Publications Editor of the *IEEE Transactions on Information Theory* during 2006-2009, the Publications Chair of the 2009 Information Theory Workshop (ITW) in Taormina, Sicily, and a member of several ISIT and ITW technical program committees. She was an Associate Editor of the *IEEE Transactions on Communications* during 2006-2009, and a Guest Editor of the *IEEE Signal Processing Magazine* in 2007. She served as the Co-Chair of the 2009 IEEE Global Communications Conference (GLOBECOM) Communication Theory Symposium, the MIMO Communications and Signal Processing Technical Area Chair of the 2007 Asilomar Conference on Signals, Systems, and Computers, and the Technical Program Co-Chair of the 2006 IEEE Communication Theory Workshop.

J. NICHOLAS LANEMAN (S'94–M'02–SM'07) is an Associate Professor of Electrical Engineering and Founding Director of the Wireless Institute at the University of Notre Dame. He received B.S. degrees (*summa cum laude*) in Electrical Engineering and in Computer Science from Washington University, St. Louis, MO, in 1995, and S.M. and Ph.D. degrees in Electrical Engineering from the Massachusetts Institute of Technology (MIT), Cambridge, MA, in 1997 and 2002, respectively.

Dr. Laneman's research interests are in communications architecture—a blend of information theory, error-control coding, signal processing for communications, network protocols, and hardware design—with current emphasis on wireless systems. He is author or co-author on over 80 publications and co-inventor of 5 U.S. patents.

Dr. Laneman received a 2006 Presidential Early-Career Award for Scientists and Engineers (PECASE), a 2006 National Science Foundation (NSF) CAREER Award, a 2003 Oak Ridge Associated Universities (ORAU) Ralph E. Powe Junior Faculty Enhancement Award, and the 2001 MIT EECS Harold L. Hazen Graduate Teaching Award. He is an IEEE Senior Member, is serving as an Associate Editor for the *IEEE Transactions on Communications* and as the first Online Editor for the IEEE Information Theory Society, and has served as a Guest Editor for Special Issues of the *IEEE Transactions on Information Theory* and the *IEEE Journal on Selected Areas in Communications*.

AMIN SHOKROLLAHI (M'00-SM'06-F'08) was born in Tehran, Iran in 1964. He received a Diplom (equivalent to an M.Sc.) from the University of Karlsruhe in 1988, and a Ph.D. in Computer Science from the University of Bonn in 1991. He completed a Habilitation in Basic Sciences at the University of Karlsruhe in 1998. He was a lecturer at the University of Bonn between 1991 and 1995, a senior researcher at the International Computer Science Institute in Berkeley from 1995 to 1998, Member of the Technical Staff at Bell Laboratories between 1998 and 2000, Chief Scientist of Digital Fountain, Inc. between 2000 and 2009, and Professor of Mathematics and Computer Science at the École Polytechnique Fédérale de Lausanne since 2003. He is a member of the Research Council of the Swiss National Science Foundation, Fellow of the IEEE, and a member of various other professional organizations. His research interests include coding theory, cryptography, computational number theory, computational algebra, algebraic complexity theory, and signal processing. He has over 100 publications, including co-authorship of the definitive book on algebraic complexity. He also has 20 patents in the areas of coding theory and wireless communications. Within the coding community he is best known for his work on iterative decoding of graph-based codes. He is the co-inventor of Tornado codes and the inventor of Raptor codes, a class of fountain codes that has been standardized by several standardization bodies in wireless, satellite, and wired communications.

He has served as a Member of Technical Program Committee of ISIT (2001, 2002, 2003, 2004, 2006, 2009), ICC (2002), ITW (2006), LATIN (2006), RANDOM (2005), Turbo Coding Conference (2008), IMA Conference on Cryptography and Coding (2007, 2009), ICALP (2000), and many others. He was Co-Chair of the the Technical Program Committee of ISIT 2007, the Co-Chair of the Oberwolfach workshop on coding theory in 2007, the Co-Chair of the Dagstuhl conference on group testing in 2008, and co-organizer of the DIMACS special year on computational information theory in 2001.

Dr. Shokrollahi was the co-recipient of the 2002 IEEE IT Best Paper Award, the co-recipient of the 2008 IEEE Eric E. Sumner Award, the recipient of the 2008 IEEE Joint ComSoc/IT Best Paper Award, and the recipient of a European Research Council Advanced Research Grant in 2008.

DAVID TSE (M'96-SM'07-F'09) received the B.A.Sc. degree in systems design engineering from the University of Waterloo, Canada in 1989, and the M.S. and Ph.D. degrees in electrical engineering from the Massachusetts Institute of Technology in 1991 and 1994, respectively. From 1994 to 1995, he was a postdoctoral member of technical staff at AT&T Bell Laboratories. Since 1995, he has been with the Department of Electrical Engineering and Computer Sciences at the University of California at Berkeley, where he is currently a Professor.

He received a 1967 NSERC 4-year graduate fellowship from the government of Canada in 1989, a NSF CAREER award in 1998, the Best Paper Awards at the Infocom 1998 and Infocom 2001 conferences, the Erlang Prize in 2000 from the INFORMS Applied Probability Society, the 2001 IEEE Joint ComSoc/IT Best Paper Award, the IT Society Best Paper Award in 2003, and the 2009 Frederick Emmons Terman Award from the American Society for Engineering Education. He has given plenary talks at international conferences such as ICASSP in 2006, MobiCom in 2007, CISS in 2008, and ISIT in 2009. He was the Technical Program Co-Chair of the International Symposium on Information Theory in 2004, an Associate Editor of the *IEEE Transactions on Information Theory* from 2001 to 2003, and served on the IEEE Information Theory Society's Board of Governors from 2003-2008. He is co-author with Pramod Viswanath of the text *Fundamentals of Wireless Communication*, which has been used in over 60 institutions around the world.

ALEXANDER VARDY (S'88-M'91-SM'94-F'99) was born in Moscow, USSR, in 1963. He earned his B.Sc. (*summa cum laude*) from the Technion, Israel, in 1985, and Ph.D. from Tel-Aviv University, Israel, in 1991. During 1992 and 1993 he was a Visiting Scientist at the IBM Almaden Research Center, San Jose, CA. From 1993 to 1998, he was with the University of Illinois at Urbana-Champaign, as an Assistant Professor and Associate Professor. He is now a Professor in the Departments of Electrical Engineering, Computer Science, and Mathematics at the University of California San Diego (UCSD). While on sabbatical from UCSD, he has held long-term appointments with CNRS in France, the EPFL in Switzerland, and the Technion in Israel.

Dr. Vardy's research interests include error-correcting codes, algebraic and iterative decoding algorithms, lattices and sphere packings, coding for digital media, computational complexity theory, and fun math problems.

Dr. Vardy received an IBM Invention Achievement Award in 1993, and NSF Research Initiation and CAREER awards in 1994 and 1995. In 1996, he was appointed a Fellow in the Center for Advanced Study at the University of Illinois, and received the Xerox Award for faculty research. In the same year, he became a Fellow of the Packard Foundation. He received the IEEE Information Theory Society Paper Award (jointly with Ralf Koetter) for the year 2004. In 2005, he received the Fulbright Senior Scholar Fellowship, and the Best Paper Award at the IEEE Symposium on Foundations of Computer Science (FOCS). During 1995-1998, he was an Associate Editor for Coding Theory of the *IEEE Transactions on Information Theory*, and during 1998-2001 he was Editor-in-Chief. He has also been an Editor for the *SIAM Journal on Discrete Mathematics*. He is a Fellow of the IEEE, and was a member of the Board of Governors of the IEEE Information Theory Society from 1998 to 2006.

EMANUELE VITERBO (M'95-SM'05) was born in Torino, Italy in 1966. He received the degrees of Laurea in 1989 and Ph.D. in 1995 from the Politecnico di Torino, Torino, Italy, both in Electrical Engineering. From 1990 to 1992, he was with the European Patent Office, The Hague, The Netherlands, as a patent examiner in the field of dynamic recording and error-control coding. From 1995 to 1997, he held a post-doctoral position in the Dipartimento di Elettronica of the Politecnico di Torino. In 1997-98 he was a post-doctoral research fellow in the Information Sciences Research Center of AT&T Research, Florham Park, NJ. He became Assistant Professor in 1998 and Associate Professor in 2005 in the Dipartimento di Elettronica of the Politecnico di Torino, and since 2006 he has been Full Professor in Dipartimento di Elettronica, Informatica e Sistemistica at the University of Calabria, Italy. He has held visiting appointments in the Communications Department of DLR, Oberpfaffenhofen, Germany, in the École Nationale Supérieure des Télécommunications (ENST), Paris, in the Math Department of EPFL, Lausanne, Switzerland, in the Telecommunications Department of UNICAMP, Campinas, Brazil, and in the Institute for Telecommunications Research of the University of South Australia, Adelaide, Australia. In 2007 he was a visiting fellow at the Nokia Research Center, Helsinki, Finland.

Dr. Viterbo has been an ISI Highly Cited Researcher since 2009. He is an Associate Editor of the *IEEE Transactions on Information Theory*, the *European Transactions on Telecommunications*, and the *Journal of Communications and Networks*, and Guest Editor for the *IEEE Journal of Selected Topics in Signal Processing* special issue on managing complexity in multiuser MIMO systems. He was General Co-Chair of the 2009 IEEE Information Theory Workshop in Taormina, Italy, Publications Chair of the 2000 IEEE International Symposium on Information Theory in Sorrento, Italy, and the 2004 International Symposium on Information Theory and its Applications in Parma, Italy.

Dr. Viterbo was awarded a NATO Advanced Fellowship in 1997 by the Italian National Research Council. His main research interests lie in the broad areas of information theory, communications and signal processing, with a focus on lattice codes for the Gaussian and fading channels (lattice sphere decoding), algebraic coding theory, algebraic space-time coding (Golden code), digital terrestrial television broadcasting, digital magnetic recording, optical communications, and irregular sampling.

EN-HUI YANG (M'97-SM'00-F'08) received the B.S. degree in applied mathematics from Huaqiao University, Qianzhou, China, and the Ph.D. degree in mathematics from Nankai University, Tianjin, China, in 1986 and 1991, respectively. Since June 1997, he has been with the Department of Electrical and Computer Engineering, University of Waterloo, ON, Canada, where he is currently a Professor and Canada Research Chair in information theory and multimedia compression. He held a Visiting Professor position at the Chinese University of Hong Kong, Hong Kong, from September 2003 to June 2004; positions of Research Associate and Visiting Scientist at the University of Minnesota, Minneapolis-St. Paul, the University of Bielefeld, Bielefeld, Germany, and the University of Southern California, Los Angeles, from January 1993 to May 1997; and a faculty position (first as an Assistant Professor and then as an Associate Professor) at Nankai University, Tianjin, China, from 1991 to 1992. He is the founding Director of the Leitch-University of Waterloo Multimedia Communications Lab, and a Co-Founder of SlipStream Data Inc. (now a subsidiary of Research In Motion). His current research interests include multimedia compression, multimedia watermarking, multimedia transmission, digital communications, information theory, source and channel coding including distributed source coding, Kolmogorov complexity theory, and applied probability theory and statistics.

Dr. Yang is a recipient of several research awards, including the 1992 Tianjin Science and Technology Promotion Award for Young Investigators, the 1992 third Science and Technology Promotion Award of Chinese National Education Committee, the 2000 Ontario Premier's Research Excellence Award, Canada, the 2000 Marsland Award for Research Excellence, University of Waterloo, the 2002 Ontario Distinguished Researcher Award, the Inaugural (2007) Premier's Catalyst Award for the Innovator of the Year, and the 2007 Ernest C. Manning Award of Distinction, one of Canada's most prestigious innovation prizes. Products based on his inventions and commercialized by SlipStream received the 2006 Ontario Global Traders Provincial Award. With over 170 papers and many patents/patent applications, products that use his inventions are used daily by tens of millions people worldwide. He is a Fellow of the Canadian Academy of Engineering, and a Fellow of the Royal Society of Canada.

Dr. Yang currently serves as an Associate Editor for the *IEEE Transactions on Information Theory*, and is on the IT Society Awards Committee. He has also served as General Co-Chair of the 2008 IEEE International Symposium on Information Theory, Technical Program Vice-Chair of the 2006 IEEE International Conference on Multimedia & Expo (ICME), Chair of the selection committee for the 2004 Canadian Award in Telecommunications, Co-Editor of the 2004 Special Issue of the *IEEE Transactions on Information Theory*, Co-Chair of the 2003 US National Science Foundation (NSF) workshop on the interface between information theory and computer science, and Co-Chair of the 2003 Canadian Workshop on Information Theory.

AYLIN YENER (S'91-M'00) received the B.Sc. degrees in Electrical and Electronics Engineering and in Physics (with honors) from Bogazici University, Istanbul, Turkey in 1991, and the MS and the PhD degrees in Electrical and Computer Engineering from WINLAB, Rutgers University, in 1994 and 2000, respectively. She was a P.C. Rossin Assistant Professor at Lehigh University between September 2000 and December 2001, and then an Assistant Professor in Electrical Engineering at Penn State University starting in January 2002. Since July 2006, she has been an Associate Professor of Electrical Engineering at Penn State. During 2008-2009, she was a Visiting Associate Professor of Electrical Engineering at Stanford University. Her research interests are in information theory, communication theory and network science, with emphasis on fundamental limits of wireless ad hoc networks, and on information-theoretic security.

Dr. Yener received the National Science Foundation CAREER award in 2003, the Penn State Engineering Alumni Society Outstanding Research Award in 2010, and the IEEE International Conference on Communications Best Paper Award in 2010. Her service to IEEE includes involvement in Technical Program Committees of various annual conferences since 2002. She chaired the Communications Track in the Asilomar Conference on Signals, Systems and Computers in 2005 and 2008. She served as the Technical Program Co-Chair for the Communication Theory Symposium of the 2009 IEEE International Conference on Communications (ICC) and for the Wireless Communications Symposium of the 2008 ICC. She serves as an Associate Editor for the *IEEE Transactions on Wireless Communications* and the *IEEE Transactions on Communications*.

Dr. Yener's service to the IEEE Information Theory Society includes chairing the Student Committee since September 2007. She is the co-founder of the Annual School of Information Theory in North America, and has been the General Co-Chair of the First Annual School of Information Theory at Penn State University, University Park, PA in June 2008, the Second Annual School of Information Theory at Northwestern University, Evanston, IL, in August 2009, and the Third Annual School of Information Theory at the University of Southern California, Los Angeles, CA in August 2010.