

**IEEE INFORMATION THEORY SOCIETY ELECTION**  
**For a Three-Year Term Ending 31 December 2012**

**ERDAL ARIKAN** (S'84-M'86-SM'93) was born in Ankara, Turkey, on 18 July 1958. He received the B.S. degree from the California Institute of Technology, Pasadena, in 1981, and the S.M. and Ph.D. degrees from the Massachusetts Institute of Technology, Cambridge, in 1982 and 1985, respectively, all in Electrical Engineering. He was the recipient of a Henry Ford II Scholar Award at Caltech (1980), and a Vinton Hayes Fellowship in Communications at M.I.T. (1981). He was an assistant professor at 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 the IEEE Individual Benefits and Services Committee (2000-2002), and a Member of the Technical Program Committee, ISIT (1994, 2002, 2003, 2004). He was the Founding Chairman of the IEEE Communications Society Turkey Chapter (1994). His research interests have been mainly in coding theory, in particular sequential decoding and related problems, and more recently polar coding.

**JOÃO BARROS** (S'98-M'04) is an Associate Professor in the Department of Electrical and Computer Engineering of the University of Porto (UP), 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. He received his undergraduate education in Electrical and Computer Engineering from UP, Portugal and Universität Karlsruhe, Germany, until 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 UP. The focus of his research lies in the general areas of information theory, communication networks and data security.

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 held visiting positions at Cornell University and the Massachusetts Institute of Technology, where he spent a sabbatical in 2008. Beyond his duties as Secretary of the Board of Governors of the IEEE Information Theory Society, his service has included co-chairing the 2008 IEEE Information Theory Workshop in Porto, Portugal, and participating in several Technical Program Committees, including ITW 2009, WiOpt (2008 and 2009), ISIT 2007, IS 2007, and IEEE Globecom (2007 and 2008).

**MARTIN BOSSERT** (AM'94-M'95-SM'03) received his Dipl.-Ing. Degree in Electrical Engineering from the Technical University of Karlsruhe, Germany in 1981, and the Ph.D. from the Technical University of Darmstadt, Germany in 1987. After a one-year DFG scholarship at Linköping University, Sweden, he joined AEG Mobile Communication, where he was, with others, involved in the specification and development of the GSM system. Since 1993 he has been a Professor at the University of Ulm, Germany, presently as Director of the Institute of Telecommunications and Applied Information Theory. He is the author of several textbooks. His research interests are in reliable and secure data transmission. His main focus has been on decoding with reliability information of algebraic codes and coded modulation. Another of his research interests is information theory in molecular biology.

In 2007, Dr. Bossert received the Vodafone Innovation Award. He was Treasurer and Co-Chair of the 1997 IEEE International Symposium on Information Theory in Ulm, Germany. From 1998 to 2003 he was Chairman of the Germany Chapter on Information Theory. In 2004 the Germany Chapter received the Best Chapter Award from the IT Society. He has served on the program committee of numerous IEEE conferences.

**NING CAI** (M'08) received the B.S. degree in mathematics from the Normal College of Beijing, China in 1982, the M.S. degree in mathematics from Academia Sinica, Beijing, China, in 1984, and the doctorate in mathematics from the University of Bielefeld, Bielefeld, Germany, in 1988. During 1984-1986, he worked in the Institute of Systems Sciences, Academia Sinica, Beijing, China. During 1988-1989, he was with the Department of Mathematics, Statistics and Computer Science at the University of Illinois, Chicago, USA. From 1989 to 1998, he was a Miss. Mitarbeiter in the Department of Mathematics, the University of Bielefeld, Germany and from 1998 to 1999, he was with the School of Computing, the National University of Singapore, Singapore. From 2000 to 2001, he was with the Department of Information Engineering, the Chinese University of Hong Kong, Hong Kong. From 2002 to 2004 he was with the Department of Mathematics, the University of Bielefeld, Germany. In 2005 he visited the Department of Information Engineering of the Chinese University of Hong Kong, Hong Kong. Since 2006, he has been a Distinguished Professor in the State Key Laboratory of Integrated Services Networks (ISN) at the Xidian University, China. From January through March 2008, he visited the University of South Australia.

Dr. Cai received the 2005 IEEE Information Theory Society Paper Award. He has served as an IT Society Awards Committee member during 2008-2009, and as a Guest Editor of a joint Special Issue of the *IEEE Trans. on Information Theory* and the *IEEE/ACM Transactions on Networking* in 2006. He has served on the TPC of a number of information theory symposiums and workshops. He was Co-Chair of the International Workshop on Network Coding (IWNC) in the 36th International Conference on Parallel Processing 2007 (ICPP 2007), Xi'an, China; the First Workshop on High Performance Networks (HPN2008) in the IFIP International Conference on Network and Parallel Computing, 2008 (NPC2008), Shanghai, China; and the Information and Coding Theory Symposium, in ChinaCom, Xi'an, China, 2009. He was a member of the International Advisory Committee of the International Symposium on Information Theory and Applications (ISITA2008), Auckland, New Zealand, 2008. His research interests include network coding, Shannon theory, quantum information theory, and combinatorics and its applications in communication and computer science. Currently, he is mainly working on network coding.

**MAX H. M. COSTA** (S'75-M'82-SM'94) graduated as an Electrical Engineer at the University of Brasília in 1974. He received his Master Degree in Electrical Engineering from the University of Campinas (Unicamp) in 1977, the Master in Statistics from Stanford University in 1979, the Ph.D. in Electrical Engineering from Stanford University in 1983, and the "Livro Docência" in Electrical Engineering from Unicamp in 1998. He was a Researcher at the Brazilian National Institute of Space Research (INPE) in São José dos Campos, SP, Brazil, from 1983 to 1988, and at the General Electric Corporate Research and Development Center in Schenectady, NY, USA, from 1988 to 1993. From 1993 to 1994 he was a Senior Research Associate at NASA's Jet Propulsion Laboratory in Pasadena, CA, USA. Since 1995, he has been a Faculty Member at Unicamp, where he is currently an Associate Professor and the Director of the School of Electrical and Computer Engineering (FEEC). His research interests are in the areas of information theory and digital signal processing, with emphasis in source and channel coding, and in digital television. He is a Senior Member of the IEEE, and a Senior Member of the Brazilian Telecommunications Society (SBrT). He is known for his paper "Writing on dirty paper" (1983), which has received over 1200 citations.

**ROLF JOHANNESON** (S'72-M'75-SM'96-F'98) was born in Hässleholm, Sweden, on July 3, 1946. He received the M.S. and Ph.D. degrees in 1970 and 1975, respectively, from Lund University, Lund, Sweden, and the honorary degree of Professor, honoris causa, from the Institute for Information Transmission Problems, Russian Academy of Sciences, in 2000.

Since 1976, he has been a faculty member at Lund University, where he was the Chair of Information Theory. From 1976 to 2003 he was Head of Department, and during 1988-1993 he was Dean of the School of Electrical Engineering and Computer Sciences. During 1990-1995, he served as a member of the Swedish Research Council for Engineering Sciences. Since 1998, he has been Associate Editor for the *International Journal of Electronics and Communications*. During 1983-1995, he co-chaired seven Russian-Swedish Workshops, which were the chief interactions between Russian and Western scientists in information theory and coding during the final years of the Cold War.

His scientific interests include information theory, error-correcting codes, and cryptography. In addition to papers in the area of convolutional codes and cryptography, he has authored two textbooks on switching theory and digital design (both in Swedish), and one on information theory (in both Swedish and German). He coauthored *Fundamentals of Convolutional Coding*, IEEE Press, 1999, and *Understanding Information Transmission*, IEEE Press/Wiley-Interscience, 2005. He became a Fellow of the IEEE in 1998, and an elected member of the Royal Swedish Academy of Engineering Sciences in 2006.

**GRIGORY KABATIANSKY** (M'09) was born in Moscow, Russia in 1949. He received the M.Sc. (summa cum laude) and Ph.D. degrees in mathematics from Moscow State University and Moscow Institute for Aviation in 1971 and 1979, respectively. Since 1990, he has been with the Institute for Information Transmission Problems, Moscow, Russia, of the Russian Academy of Sciences, and is currently a leading scientific researcher at this institute. His research interests lie mainly in coding theory and its applications to cryptography.

For two years (1993-95 and 1998-99), Dr. Kabatiansky worked at the Department of Mathematics of the Texas A&M University. He spent the year of 2001 as a Visiting Professor at the Institut National de Recherche en Informatique et en Automatique (INRIA), France, and has been an Adjunct Professor at INRIA since 2003. He has also worked as a visiting professor or researcher at the number of other universities, including Lund University (Sweden), the Technical University of Darmstadt (Germany), the University of Bergen (Norway), the Technology University of Eindhoven (the Netherlands), Pohang University of Science and Technology (Republic of Korea), the University of California at Riverside (USA), and the University of Maryland at College Park (USA).

Dr. Kabatiansky has also organized a number of scientific symposia and workshops. Most recently, he has served as Program Co-Chair at the 10th (2006, Russia) and 11th (2008, Bulgaria) International Workshops on Algebraic and Combinatorial Coding Theory, and as Program Co-Chair (2003, France) of the International Workshops on Coding and Cryptography.

**IOANNIS KONTOYIANNIS** (S'94-M'98-SM'08) was born in Athens, Greece, in 1972. He received the B.Sc. degree in mathematics in 1992 from Imperial College (University of London), and in 1993 he obtained a distinction in Part III of the Cambridge University Pure Mathematics Tripos. In 1997 he received the M.S. degree in statistics, and in 1998 the Ph.D. degree in electrical engineering, both from Stanford University. Between June and December 1995 he worked at IBM Research, on a NASA-IBM satellite image processing and compression project. From June 1998 to August 2001 he was an Assistant Professor with the Department of Statistics at Purdue University (and also, by courtesy, with the Department of Mathematics, and the School of Electrical and Computer Engineering). Between August 2000 and January 2005 he was an Assistant Professor, then Associate Professor (tenured), with the Division of Applied Mathematics and with the Department of Computer Science at Brown University. Since March 2005, he has been an Associate Professor in the Department of Informatics at the Athens University of Economics and Business.

In 2002 he was awarded the Manning endowed assistant professorship, in 2004 the Sloan Foundation Research Fellowship, and in 2005 an honorary Master of Arts Degree Ad Eundem, all by Brown University. He has published over 25 journal articles in leading international journals, and over 50 conference papers in top international conferences. He also holds two U.S. patents. He has been a plenary speaker in several conferences, and has given invited lectures in many international meetings as well as in various departments in leading institutions around the world. He currently serves on the editorial board of the American Mathematical Society's journal *Quarterly of Applied Mathematics*, and as an Associate Editor for the *IEEE Transactions on Information Theory*, in the area of Shannon theory. He has served on the editorial board of the online journal *Entropy*, and as a chair or member of the program committee of numerous IEEE conferences. He is a Senior Member of the IEEE, and a Member of the American Mathematical Society, the Institute of Mathematical Statistics, the London Mathematical Society, and the Society for Industrial and Applied Mathematics. His research interests include data compression, applied probability, information theory, statistics, and mathematical biology.

**HANS-ANDREA LOELIGER** (S'85-M'90-SM'03-F'04) was born in 1961. He received a diploma in electrical engineering in 1985 and a Ph.D. in 1992, both from ETH Zürich. From 1992 to 1995, he was with Linköping University, Sweden. From 1995 to 2000, he was a full-time technical consultant and co-owner of a consulting company in Basel, Switzerland. Since 2000, he has been a full professor at ETH.

His research interests lie in the broad areas of signal processing, information theory, communications, system theory, and electronics. He is a Fellow of the IEEE, and he is presently Associate Editor for Coding Techniques of the *IEEE Transactions on Information Theory*.

**MURIEL MÉDARD** (S'91-M'95-SM'02-F'08) received B.S. degrees in EECS and Mathematics (1989), a B.S. in Humanities (1990), a M.S. in EE (1991), and a Sc. D. in EE (1995), all from MIT. She was at MIT Lincoln Laboratory during 1995-1998. She served on the faculty of the University of Illinois Urbana-Champaign during 1998-2000. She is currently a Professor in the Electrical Engineering and Computer Science Department at MIT.

Dr. Médard's interests are in network coding, channel capacity and reliable communications for optical and wireless networks. She was awarded the IEEE Leon K. Kirchmayer Prize Paper Award 2002 for "The effect upon channel capacity in wireless communications of perfect and imperfect knowledge of the channel," *IEEE Transactions on Information Theory*, May 2000. She won the Best Paper Award at the International Workshop on the Design of Reliable Communication Networks, October 2003. She received an NSF Career Award (2001), the MIT 2004 Edgerton Faculty Achievement Award, and a 2007 Gilbreth Lectureship from the National Academy of Engineering. She won the 2009 ComSoc/Information Theory Society Joint Paper Award for "A random linear network coding approach to multicast," *IEEE Transactions on Information Theory*, October 2006, and the 2009 IEEE William R. Bennett Prize in the field of Communications Networking for "XORs in the air: Practical wireless network coding," *IEEE/ACM Transactions on Networking*, June 2008.

She has actively volunteered for the Information Theory Society and IEEE. She has served for three years as Treasurer for the IT Society, and as Member of the Board of Governors for three years. She has served on several TPCs for ISIT and ITW, as TPC Co-Chair for ISIT 2007, and will serve as Co-Chair for ISIT 2012. She is TPC Co-Chair of IEEE/IFIP WiOpt 2009. She has served on the IEEE Alexander Graham Bell Medal Committee. She was an Associate Editor for the IT Transactions, and was a Guest Editor for the 2006 Special Issue on Networking and Information Theory of the IT Transactions and the *IEEE/ACM Transactions on Networking*. She has served an Associate Editor for the Optical Communications and Networking Series of the *IEEE Journal on Selected Areas in Communications*, and serves as an Associate Editor of the *IEEE Journal of Lightwave Technology*. She has been a Guest Editor for the *IEEE Journal of Lightwave Technology* and an Associate Editor for the Optical Society of America *Journal of Optical Networking*. She has served as guest Editor-in-Chief for the Special Issue on Statistical Methods for Network Security and Forensics of the *IEEE Transactions on Information Forensics and Security*.

As a member of the IT Society Board of Governors for the last three years, she has led the new Outreach Committee. The Outreach Committee has provided panels at conferences of interest to our Society on such topics as balancing career and family, and establishing good mentoring relationships. It has also established a mentoring network in which members of our Society are mentored by more senior ones. If re-elected to the Board of Governors, she will seek to continue and expand this effort.

**LI PING** (S'88-M'90-SM'05) received the B. Sc. degree from Nanjing Institute of Post and Telecommunications, China, the M. Sc. degree from Shanghai Jiao Tong University, China, and the Ph.D degree from Glasgow University, UK, in 1990. He was a lecturer at Melbourne University, Australia, from 1990 to 1992, and a research staff member at Telecom Australia Research Laboratories from 1993 to 1995. He has been with the Department of Electronic Engineering, City University of Hong Kong, since January 1996, where he is now a Professor of Information Engineering. He has served on technical and organizing committees of a number of IEEE conferences. In particular, he served as the Technical Co-Chair of the 2003 IEEE Information Theory Workshop (ITW'03) in Hong Kong, China, which was canceled at the last moment due to SARS. He served subsequently as the Technical Co-Chair of the 2006 IEEE Information Theory Workshop (ITW'06) in Chengdu, China. His current research interests are in multi-user information theory and iterative information processing. He received the IEE J J Thomson Premium in 1993 for his contributions to mixed analog/digital filter design, and a Croucher Foundation Award in 2005 for his contributions to interleave-division multiple-access.

**AYLIN YENER** (S'91-M'00) received the B.Sc. degree with honors in Electrical and Electronics Engineering and in Physics from Bogazici University, Istanbul, Turkey, and the MS and the Ph.D. degrees in Electrical and Computer Engineering from WINLAB, Rutgers University, in 1991, 1991, 1994 and 2000, respectively. She was a P.C. Rossin Assistant Professor at Lehigh University between September 2000 and December 2001, prior to joining the Department of Electrical Engineering at Penn State University in January 2002 as an Assistant Professor. Since July 2006, she has been an Associate Professor of Electrical Engineering at Penn State. In the academic year 2008-2009, she has been a Visiting Associate Professor of Electrical Engineering at Stanford University. Her research interests are in information theory, communication theory and networking, with emphasis on fundamental limits of wireless *ad hoc* networks, multiuser and cooperative communications, and information-theoretic security.

She received the National Science Foundation CAREER award in 2003. 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 in 2008. She served as the Technical Program Co-Chair for the Communication Theory Symposium of the IEEE International Conference on Communications (ICC) 2009, and for the Wireless Communications Symposium of the IEEE International Conference on Communications (ICC) 2008. She currently serves as an editor for the *IEEE Transactions on Wireless Communications* and for the *IEEE Transactions on Communications*.

Her 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 served as the General Co-Chair of the First Annual School of Information Theory that was held at Penn State University, University Park, PA in June 2008, and the Second Annual School of Information Theory which will be held at Northwestern University, Evanston, IL, in August 2009.

**RAM ZAMIR** (S'89-M'95-SM'99) was born in Ramat-Gan, Israel in 1961. He received the B.Sc., M.Sc. (summa cum laude) and D.Sc. (with distinction) degrees from Tel-Aviv University, Israel, in 1983, 1991, and 1994, respectively, all in electrical engineering. In the years 1994-96, he spent a post-doctoral period at Cornell University, Ithaca, NY, and at the University of California, Santa Barbara. In 2002 he spent a sabbatical year at MIT. Since 1996, he has been with the department of Electrical Engineering and Systems at Tel Aviv University. Dr. Zamir has consulted in the areas of radar and communications, mainly in developing algorithms and in the design of signals, and has taught information theory, data compression, random processes, communications systems and communications circuits at Tel Aviv University.

Dr. Zamir received the Israel Ministry of Communications Award in 1993, and the Wolfson Post-Doctoral Research Award in 1994. He visited the Technical University of Budapest under a joint program of the Israeli and Hungarian Academies of Science in summer 1995. He served as an Associate Editor for Source Coding in the *IEEE Transactions on Information Theory* (2001-2003), and headed the IEEE Information Theory Israel Chapter (2000-2005). His research interests include information theory, communication and remote sensing systems, and signal processing.