

June 18, 2008

For approval at the BoG Meeting, July 2008:

Slate of Nominees for the Fall 2008 Election for the Board of Governors of the IEEE Information Theory Society

From the IT Society Nominations and Appointments Committee
(Bruce Hajek, Prakash Naryan, Alon Orlitsky, Bixio Rimoldi, David Neuhoff, Chair)

Helmut Bölcskei was born in Mödling, Austria on May 29, 1970, and received his MS and PhD degrees in electrical engineering from Vienna University of Technology, Vienna, Austria, in 1994 and 1997, respectively. In 1998 he was with the Vienna University of Technology. From 1999 to 2001 he was a postdoctoral researcher in the Information Systems Laboratory, Department of Electrical Engineering, Stanford University, Stanford, CA. He was in the founding team of Iospan Wireless Inc., a Silicon Valley-based startup company (acquired by Intel Corporation in 2003) specializing in multiple-input multiple-output (MIMO) wireless systems for high-speed Internet access. From 2001 to 2002 he was an Assistant Professor of Electrical Engineering at the University of Illinois at Urbana-Champaign. He has been with ETH Zurich since 2002, where he is Professor of Communication Theory.

He was a visiting researcher at Philips Research Laboratories Eindhoven, The Netherlands, ENST Paris, France, and the Heinrich Hertz Institute Berlin, Germany. His research interests are in communication and information theory, signal processing and quantum information processing.

He received the 2001 IEEE Signal Processing Society Young Author Best Paper Award, the 2006 IEEE Communications Society Leonard G. Abraham Best Paper Award, the ETH "Golden Owl" Teaching Award, and was an Erwin Schrödinger Fellow of the Austrian National Science Foundation. He was a plenary speaker at several IEEE conferences and served as an associate editor of the *IEEE Transactions on Signal Processing*, the *IEEE Transactions on Wireless Communications* and the *EURASIP Journal on Applied Signal Processing*. He is currently on the editorial board of *Foundations and Trends in Networking*, serves as an associate editor for the *IEEE Transactions on Information Theory* and is TPC co-chair of the 2008 IEEE International Symposium on Information Theory.

Ning Cai received the B.S. degree in mathematics from the Normal College of Beijing, Beijing, China in 1982, the M.S. degree in mathematics from Academia Sinica, Beijing, China, in 1984, and the Dr. degree 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, 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 Department of Information Engineering, the Chinese University of Hong Kong, Hong Kong. Since 2006, he is a distinguished professor in the State Key Lab. of Integrated Services Networks (ISN), the Xidian University, China.

Prof. Cai is a recipient of the 2005 IEEE Information Theory Society Paper Award.

He served as an IT Society Awards Committee member in 2008, a guest editor of joint Special Issue of IEEE Trans. on Information Theory and IEEE/ACM on Networking on Networking and Information Theory, a member of the International Advisory Committee of ISITA2008 (Auckland, New Zealand), a co-chair of IWNC2007 (Xian, China) and HPN2008 (Shanghai, China), and a TPC member of ISIT2006, ISIT2008, ITW06 (Chengdu, China), ITW08 (Porto, Portugal) and Net-Cod08 (Hong Kong, China), SIBIRCON-2008 (Novosibirsk, Russia), and ISITA2008 (Auckland, New Zealand).

His research interests include network coding, Shannon, theory, quantum information theory, and combinatorics and its applications in communication and

Suhas N. Diggavi received the B. Tech. degree in electrical engineering from the Indian Institute of Technology, Delhi, India, and the Ph.D. degree in electrical engineering from Stanford University, Stanford, CA, in 1998.

After completing his Ph.D., he joined the Information Sciences Center, AT&T Shannon Laboratories, Florham Park, NJ. where he was a Principal Member of Technical Staff. He is currently in the faculty of the School of Computer and Communication Sciences, EPFL, where he heads the Laboratory for Information and Communication Systems (LICOS). His research interests include wireless network communications, information theory, source coding and signal processing. He has over 100 publications in journals and conferences, as well as 6 issued patents on these topics; more information can be found at <http://licos.epfl.ch>.

He is a recipient of the 2006 IEEE Donald Fink prize paper award, 2005 IEEE Vehicular Technology Conference best paper award and the Okawa foundation research award. He has served as an associate editor for the IEEE Communication Letters, and on the technical program committee for several conferences including ISIT, ICC, ITW, Globecom.

Abbas El Gamal (S'71-M'73-SM'83-F'00) received his B.Sc Honors degree from Cairo University in 1972, the M.S. in Statistics and the PhD in Electrical Engineering from Stanford University in 1977 and 1978, respectively. From 1978 to 1980 he was an Assistant Professor of Electrical Engineering at USC. He joined the Stanford faculty in 1981, where is currently a Professor of Electrical Engineering and the Director of the Information Systems Laboratory. His research interests and contributions are in the areas of multiple user information theory, distributed information processing, networks, digital imaging, and integrated circuit design. He has contributed numerous papers and patents in these areas. He has received several honors and awards for his work including the Inform 2004 paper award. He served on several ISIT program committees and recently as Guest Editor for the *IEEE Transactions on Information Theory* special issue on Relaying and Cooperation. He has cofounded and served on the board of directors and advisory boards of several Silicon Valley companies.

Professor Meir Feder was born in Tel-Aviv, Israel, on October 27, 1955. He received the B.Sc. and M.Sc. degrees (Summa Cum Laude) in Electrical Engineering from Tel-Aviv University, Tel-Aviv, Israel, in 1980 and 1984, respectively. He received the Sc.D. degree from the Massachusetts Institute of Technology (MIT), Cambridge, MA., USA, and Woods Hole Oceanographic Institute, Woods Hole, MA in 1987.

From 1974 to 1982 he was a Senior Research Engineer, a Scientist and the head of a research group in the research laboratories of the Israeli Defense Force. In 1988-1989 he was a Lecturer in the department Electrical Engineering and Computer Science in MIT. On October 1989 he joined the department of Electrical Engineering - Systems, School of Electrical Engineering, Tel-Aviv University, where he is now a Professor. He was the head of the department, and the first head of the Advanced Communication Center (ACC) at the School of Electrical Engineering. In 1995-1996, he was a visiting Professor at MIT and in addition he had visiting positions at Bell laboratories and Scripps Institute of Oceanography.

Professor Feder's research interests are in the area of information theory, signal processing and communication. He worked extensively on problems of universal coding and universal prediction. His recent works include the development of "Low Density Lattice Codes" (LDLC), a universal solution for communication with feedback and rateless codes.

While serving in the Israeli defense Forces, Professor Feder was awarded the 1978 "creative mind" award of the chief Intelligence officer. He received the 1993 best paper award of the Information Theory Society. He was the recipient of the 1994 prize of Tel-Aviv University for excellent young scientists, the 1994 award of the Electronic Industry in Israel (awarded by the president of Israel), and the 1995 research prize in applied electronics of the Ex-Servicemen Association in London, awarded by Ben-Gurion University. In 1993-1996 he served as an Associate Editor for data compression for the *IEEE Transactions on Information Theory*. He is a Fellow of the IEEE for his contribution to universal data prediction and universal compression.

During his academic career, Prof. Feder was closely involved in the high-tech industry with numerous companies, including working with Intel on the MMX architecture and designing efficient multimedia algorithms for it. In 1998 he co-founded Peach Networks, a provider of server-based interactive TV

system via the cable network, which was acquired in 2000 by Microsoft. In 2000 he co-founded Bandwiz, a provider of massive content delivery systems for enterprise networks. In 2004 he co-founded Amimon, a fab-less ASIC company, the developer of "Wireless Home Digital Interface" (WHDI™) technology, and an emerging leading provider of ASICs for wireless high-definition A/V connectivity at the home. He is also on the board and advisory board of several start-up companies.

Alex Grant received the B.E. and Ph.D. degrees from the University of South Australia in 1993 and 1996 respectively. In 1997, he was a research fellow at the Swiss Federal Institute of Technology, Zurich. Since 1998 he has been with the Institute for Telecommunication Research, University of South Australia, where he is now Director and Research Professor of Information Theory.

His research concentrates on the application of information theory to communication networks. He has made original contributions in the areas of random matrix analysis and iterative decoding methods for wireless multiple-access channels. More recently, his work has focused on theoretical foundations for network coding.

Prof. Grant is co-founder of Cohda Wireless, an Adelaide-based mobile broadband company that is developing communications equipment for intelligent transport systems and municipal wireless networks.

Prof. Grant is a member of the Board of Governors of the IEEE Information Theory Society. He is also conference coordinator for the Society. He is Associate Editor for Communications for the *IEEE Transactions on Information Theory*. He is also an Associate Editor for the *IEEE Transactions on Wireless Communications*.

Prof. Grant served as Chairman (2000-3) for the Australian Chapter of the IEEE Information Theory Society. He was General Co-Chair for the 2005 IEEE International Symposium on Information Theory, and Technical Program Chair for the 2001 IEEE Information Theory Workshop. He is a foundation committee member for the Australian Communications Theory Workshop. Prof. Grant is an executive board member of the ARC Communications Research Network.

Ioannis Kontoyiannis 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, 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 he was awarded the prestigious Sloan Foundation Research Fellowship; in 2005 he was awarded an honorary Master of Arts Degree Ad Eundem by Brown University. He has published over 25 journal articles in leading international journals and over 50 conference papers in the top international conferences in his field. 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 has served on the editorial board of the American Mathematical Society's Quarterly of Applied Mathematics journal, and the online journal Entropy. He currently serves as an Associate Editor for the *IEEE Transactions on Information Theory* in the area of Shannon theory. He has also served 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.

Gerhard Kramer received the B.Sc. and M.Sc. degrees in electrical engineering from the University of Manitoba, Winnipeg, MB, Canada, in 1991 and 1992, respectively, and the Dr. sc. techn. (Doktor der Technischen Wissenschaften) degree from the Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, in 1998.

From July 1998 to March 2000, he was with Endora Tech AG, Basel, Switzerland, as a communications engineering consultant. Since May 2000 he has been with Bell Laboratories, Alcatel-Lucent, Murray Hill, NJ, USA. His research has been focused on information theory, communications theory, iterative decoding, and source coding.

Dr. Kramer has served as an editor for the *IEEE Transactions on Information Theory* in various capacities: he is currently an Associate Editor for Shannon Theory, he was Guest Editor-in-Chief for a Special Issue on Relaying and Cooperation in Communication Networks in 2006-2007, and was a Publications Editor during 2004-2005. He served as Co-Chair of the Technical Program Committee for the 2008 IEEE International Symposium on Information Theory, and as Co-organizer of the First Annual School of Information Theory in North America in 2008.

Dr. Kramer is a co-recipient of the IEEE Communications Society 2005 Stephen O. Rice Prize paper award, a Bell Labs President's Gold Award in 2003, and a recipient of an ETH Medal in 1998.

Paul H. Siegel was born in Berkeley, California in 1953. He received the B.S. degree in mathematics in 1975 and the Ph.D. degree in mathematics in 1979, both from the Massachusetts Institute of Technology. He held a Chaim Weizmann fellowship during a year of postdoctoral study at the Courant Institute, New York University.

He joined the research staff at IBM in 1980. From 1984 through 1993, he was manager of the Signal Processing and Coding project at the IBM Almaden Research Center in San Jose, California, and in 1994, he was named manager of the Mathematics and Related Computer Science department at Almaden. He was a Visiting Associate Professor at the University of California, San Diego (UCSD) while at the Center for Magnetic Recording Research during the 1989-90 academic year. He joined the faculty at UCSD in July 1995, and he is currently Professor of Electrical and Computer Engineering in the Jacobs School of Engineering. He is affiliated with the California Institute of Telecommunications and Information Technology (Calit2), the Center for Wireless Communications (CWC), and the Center for Magnetic Recording Research (CMRR), where he holds an endowed chair and currently serves as Director.

His primary research interest is the mathematical foundations of signal processing and coding, especially as applicable to digital data storage and communications. He holds several patents in the area of coding and detection for digital recording systems, and he was named a Master Inventor at IBM Research in 1994.

Prof. Siegel was co-recipient, with R. Karabed, of the 1992 IEEE Information Theory Society Paper Award for the paper "Matched Spectral Null Codes for Partial Response Channels," and shared the 1993 IEEE Communications Society Leonard G. Abraham Prize Paper Award with B. Marcus and J. K. Wolf for the paper "Finite-State Modulation Codes for Data Storage."

Prof. Siegel was a member of the Board of Governors of the IEEE Information Theory Society from 1991-1996. He served as co-Guest Editor of the May 1991 Special Issue on Coding for Storage Devices of the *IEEE Transactions on Information Theory*, Associate Editor for Coding Techniques from 1992 to 1995, and Editor-in-Chief from 2001 to 2004. He was also Guest Editor-in-Chief of the May/September 2001 double-issue of the *IEEE Journal on Selected Areas in Communications* on The Turbo Principle: From Theory to Practice.

Prof. Siegel is a member of Phi Beta Kappa and is a Fellow of the IEEE. He was elected to the National Academy of Engineering in 2008, "for the invention and development of advanced coding techniques for digital recording systems."

Emina Soljanin received the PhD and MS degrees from Texas A&M University, College Station, in 1994 and 1989, and the European Diploma degree from the University of Sarajevo, Bosnia, in 1986, all in Electrical Engineering. From 1986 to 1988, she worked in the Energoinvest Company, Bosnia,

developing optimization algorithms and software for power system control. After graduating from Texas A&M in 1994, she joined Bell Laboratories, Murray Hill, NJ, where she is now a Distinguished Member of Technical Staff in the Mathematical Sciences Research Center of Alcatel Lucent. Her research interests are in the broad area of communications, information and coding theory, and their applications. In the course of her thirteen year employment with Bell Labs, she has participated in a very wide range of research and business projects. These projects include designing the first distance enhancing codes to be implemented in commercial magnetic storage devices, first forward error correction for Lucent's optical transmission devices, color space quantization and color image processing, quantum computation, link error prediction methods for the third generation wireless network standards, and anomaly and intrusion detection. Her most recent activities are in the area of network and rateless coding. Dr. Soljanin served as the Associate Editor for Coding Techniques, 1997-2000, for the *IEEE Transactions on Information Theory*, and as a Co-Chair for the DIMACS Special Focus on Computational Information Theory and Coding 2001-2005. She is spending this year as a visiting researcher at Ecole Polytechnique Federale de Lausanne (EPFL), in Switzerland.

Venugopal V. Veeravalli (S'86--M'92--SM'98--F'06) received the Ph.D. degree in 1992 from the University of Illinois at Urbana-Champaign, the M.S. degree in 1987 from Carnegie-Mellon University, Pittsburgh, PA, and the B.Tech degree in 1985 from the Indian Institute of Technology, Bombay, (Silver Medal Honors), all in Electrical Engineering. He joined the University of Illinois at Urbana-Champaign in 2000, where he is currently a Professor in the department of Electrical and Computer Engineering, and a Research Professor in the Coordinated Science Laboratory. He served as a program director for communications research at the U.S. National Science Foundation in Arlington, VA from 2003 to 2005. He has previously held academic positions at Harvard University, Rice University, and Cornell University.

His research interests include information theory, detection and estimation theory, distributed sensor systems and networks, and wireless communications. He is a Fellow of the IEEE and was on the Board of Governors of the IEEE Information Theory Society from 2004 to 2007. He was an Associate Editor for Detection and Estimation for the *IEEE Transactions on Information Theory* from 2000 to 2003, and an associate editor for the *IEEE Transactions on Wireless Communications* from 1999 to 2000. Among the awards he has received for research and teaching are the IEEE Browder J. Thompson Best Paper Award, the National Science Foundation CAREER Award, and the Presidential Early Career Award for Scientists and Engineers (PECASE).

Sergio Verdú received the Telecommunications Engineering degree from the Universitat Politècnica de Barcelona in 1980, and the Ph.D. degree in Electrical Engineering from the University of Illinois at Urbana-Champaign in 1984. Since 1984 he has been a member of the faculty of Princeton University, where he is the Eugene Higgins Professor of Electrical Engineering.

Sergio Verdú is the recipient of the 2007 Claude E. Shannon Award and the 2008 IEEE Richard W. Hamming Medal. He is a member of the National Academy of Engineering and was awarded a Doctorate Honoris Causa from the Universitat Politècnica de Catalunya in 2005.

He is a recipient of several paper awards from the IEEE: the 1992 Donald Fink Paper Award, the 1998 Information Theory Outstanding Paper Award, an Information Theory Golden Jubilee Paper Award, the 2002 Leonard Abraham Prize Award, and the 2006 Joint Communications/Information Theory Paper Award. In 1998, Cambridge University Press published his book *Multiuser Detection*, for which he received the 2000 Frederick E. Terman Award from the American Society for Engineering Education.

Sergio Verdú served as President of the IEEE Information Theory Society in 1997 and as Associate Editor for Shannon Theory of the *IEEE Transactions on Information Theory*. He is currently Editor-in-Chief of *Foundations and Trends in Communications and Information Theory*.

Pramod Viswanath received the PhD degree in EECS from the University of California at Berkeley in 2000. He was a member of technical staff at Flarion Technologies until August 2001 before joining the ECE department at the University of Illinois, Urbana-Champaign, where he is now an Associate Professor.

He is a recipient of the Eliahu Jury Award from the EECS department of UC Berkeley (2000), the Bernard Friedman Award from the Mathematics department of UC Berkeley (2000), and the NSF CAREER Award (2003). He is an associate editor of the *IEEE Transactions on Information Theory* for the period 2006-2008.