## Editorial Appointments for the 2013–2014 Term

am honored to accept to serve another term as the Editor-in-Chief of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATED (VLSI) SYSTEMS (TVLSI). Previous Editors-in-Chief of this journal have worked tirelessly to bring this journal to the very top. During my previous term the impact factor of TVLSI has moved up from 0.9 to 1.2, which is a significant improvement. I will work with the steering committee and the board to further improve the impact factor of TVLSI. I look forward to the whole community helping with this goal by submitting quality work, accepting reviews, giving valuable comments, and making suggestions. TVLSI had a back log in the acceptance to publication time because of a large number of submissions to the Journal. We have increased the number of pages of TVLSI from 1800 to 2400 and have not accepted any special issues resulting in a significant improvement in this backlog. We will continue this policy and find other ideas to completely eliminate the problem.

I am happy to announce the appointment of Professor Massimo Alioto of NUS as the Associate Editor-in-Chief of TVLSI. Dr. Alioto has a long editorial record and is a well-known scholar in the VLSI area. He will help with TVLSI to further solve any existing issues and further speed up the

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review time. In addition, the editorial board was finely tuned by adding associate editors in areas of more submissions and emerging areas. Otherwise, the editorial board remains largely unchanged.

I would like to thank the steering committee of TVLSI for their help with the board formation as well as their valuable advice and directions. I would also like to thank Ms. Mona Mittra, Ms. Michelle Gillespie, Ms. Sonal Parikh, Ms. Rebecca Szewczyk, and other staff members for all their efforts to keep TVLSI running smoothly.

Last, but not the least, I want to express my deep gratitude to the TVLSI Editorial Assistant, Ms. Stacey Weber Jackson, for her steady and extremely efficient service to TVLSI. I am happy that Stacey has agreed to continue working as the Editorial Assistant of TVLSI during my second term.

The biographies and photographs of the Associate Editors on the new editorial board are provided below.

PROF. YEHEA I. ISMAIL, *Editor-in-Chief*Director, Center of Nanoelectronics and Devices (CND)
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**Yehea Ismail** (M'00–SM'10–F'11) received the B.Sc. degree and the M.S. degree from Cairo University, Cairo, Egypt, in 1993 and 1996, respectively, and the M.S. and Ph.D. degrees from the University of Rochester, Rochester, NY, USA, in 1997 and 2000, respectively.

He is the Director of the Nanoelectronics Center, Zewail City, and the American University in Cairo, Cairo, Egypt. He was a tenured Professor with Northwestern University, Evanston, IL, USA, from June 2000 to May 2011. He is the distinguished lecturer of IEEE CASS. He has published over 200 papers in the top refereed journals and conferences and holds many patents. He co-authored three books: *On-Chip Inductance in High Speed Integrated Circuits* (Springer, 2001), *Handbook on Algorithms for VLSI Physical Design* (CRC Press, 2008), and *Temperature-Aware Computer Architecture* (Morgan Kaufmann, 2009). He holds many patents in the area of high performance circuit and interconnect design and modeling. His work is some of the most highly cited in the VLSI area and is extensively used by industry.

Dr. Ismail is the Editor-in-Chief of the IEEE TRANSACTION ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS (TVLSI) and the chair elect of the IEEE VLSI Technical Committee. He is on the editorial board of the *Journal of Circuits, Systems, and Computers*, was on the editorial board of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I: FUNDAMENTAL THEORY AND APPLICATIONS, and a guest editor for a special issue of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS on "On-Chip Inductance in High Speed Integrated Circuits". He has also chaired many conferences such as GLSVLSI, IWSOC, ISCAS. He is the Chief Scientist of the Innovation and Entrepreneurship Center of the Ministry of Communications and Information Technology, Egypt. He was a recipient of several awards including the USA National Science Foundation Career Award, the IEEE CAS Outstanding Author Award, Best Teacher Award at Northwestern University, many Best Paper Awards, and Teaching Awards.



**Massimo Alioto** (M'01–SM'07) was born in Brescia, Italy, in 1972. He received the laurea degree in electronics engineering and the Ph.D. degree in electrical engineering from the University of Catania, Catania, Italy, in 1997 and 2001, respectively.

In 2002, he joined the Dipartimento di Ingegneria dell'Informazione (DII), University of Siena, Siena, Italy, as a Research Associate and in the same year as an Assistant Professor. In 2005, he was appointed Associate Professor of Electronics, and was engaged in the same faculty in 2006. In the summer of 2007, he was a Visiting Professor at EPFL—Lausanne, Switzerland. In 2009–2011, he is Visiting Professor with BWRC—University of California at Berkeley, Berkeley, CA, investigating on ultra-low power circuits and wireless nodes. Since 2001, he has been teaching undergraduate and graduate courses on advanced VLSI digital design, microelectronics, and basic electronics. He has authored or coauthored more than 160 publications on journals (55+, mostly IEEE Transactions) and conference proceedings. Two of them are among the 25 most downloaded TVLSI papers in 2007 (respectively, 10th and 13th). He is coauthor of the book *Model and Design of Bipolar and* 

*MOS Current-Mode Logic: CML, ECL, and SCL Digital Circuits* (Springer, 2005). His primary research interests include the modeling and the optimized design of CMOS high-performance, low-power and ultra low-power digital circuits, arithmetic and cryptographic circuits, interconnect modeling, design/modeling for variability-tolerant and low-leakage VLSI circuits, circuit techniques for emerging technologies. He is the director of the Electronics Lab at University of Siena (site of Arezzo).

Prof. Alioto is a member of the HiPEAC Network of Excellence. He is the Chair of the "VLSI Systems and Applications" Technical Committee of the IEEE Circuits and Systems Society, for which he is also Distinguished Lecturer. He is regularly invited to give talks and tutorials to academic institutions, conferences, and companies throughout the world. He has served as a member of various conference technical program committees (ISCAS, ICCD, PATMOS, ICM, ECCTD, CSIE) and Track Chair (ISCAS, ICCD, ICECS, ICM). He was the Technical Chair of the conference ICM 2010. He serves as Associate Editor of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, as well as of the *Microelectronics Journal*, the *Integration—The VLSI Journal*, the *Journal of Circuits, Systems, and Computers*, the *Journal of Low Power Electronics and Applications*, and the *ACM Transactions on Design Automation of Electronic Systems*. He is Guest Editor of the Special Issue "Advances in Oscillator Analysis and Design" of the *Journal of Circuits, Systems, and Computers* (2010), and Technical Program Chair for the *ICM 2010* Conference.



**Paul Ampadu** (M'99–SM'11) received the Ph.D. degree from Cornell University, Ithaca, NY, USA, in 2004.

He is an Associate Professor with the Department of Electrical and Computer Engineering (ECE), University of Rochester, Rochester, NY, USA, and the 2011–2013 Dr. Martin Luther King, Jr. Visiting Associate Professor of the Department of Electrical Engineering and Computer Science (EECS), Massachusetts Institute of Technology, Cambridge, MA, USA. From 2001 to 2002 and in the summers of 1999 and 2000, he conducted research at the IBM T. J. Watson Research Center, Yorktown Heights, NY, USA, where he investigated energy-efficient VLSI implementation of complex signal processing functions. He and his team have authored three books on error- and temperature-control for networks-on-chip, as well as several dozen scholarly articles in prestigious IEEE/ACM journals and conference proceedings. His research interests include networks-on-chip error control, energy-efficient fault-tolerant circuits for emerging nanoelectronics, low-voltage/low-power VLSI, and efficient design of embedded communication

and signal processing functions.

Dr. Ampadu was a recipient of several international awards, including a Semiconductor Research Corporation (SRC) Master's Scholarship, an IBM Ph.D. Fellowship, a Provost Multidisciplinary Research Award, and many federal grants. He was selected for a NASA Summer Faculty Fellowship, a U.S. Black Engineer of the Year Special Recognition Award, a Charles Drew Professor's Choice Award for mentoring, and the Prestigious NSF CAREER Award. In addition, he and his research team were Best Paper finalists at the 2011 International Symposium on Networks-on-Chip (NOCS). He is an elected member of the IEEE Circuits and Systems Board of Governors and chairs its Ph.D./GoLD subcommittee. He serves on the IEEE Circuits and Systems Technical Committees on VLSI, Nano-Giga, and Circuits and Systems for Communication and has served on the organizing committees of several IEEE and ACM international conferences.



**Iris Bahar** received the B.S. and M.S. degrees in computer engineering from the University of Illinois, Urbana-Champaign, IL, USA, and the Ph.D. degree in electrical and computer engineering from the University of Colorado, Boulder, CO, USA.

From 1987 to 1992, she worked for Digital Equipment Corporation (in what is now the Intel Hudson facility), and was part of the NVAX Microprocessor Design Team. Since 1996, she has been with the Division of Engineering, Brown University, Providence, RI, USA, where she is currently an Associate Professor. Her research interests include power-aware computer architecture; computer-aided design for synthesis, verification, and low-power applications; and design, test, and reliability issues for nanoscale systems.



**Valeriu Beiu** (S'92–M'95–SM'96) received the M.Sc. degree in computer engineering from the "Politehnica" University of Bucharest, Bucharest, Romania, in 1980, and the Ph.D. degree with *summa cum laude* in electrical engineering from the Katholieke Universiteit Leuven, Leuven, Belgium, in 1994.

Upon graduation, for two years he has been working on high-speed CPUs and FPUs with the Research Institute for Computer Techniques, Bucharest, Romania, prior to returning to the "Politehnica" University of Bucharest. Since 1991, he has been on leave of absence as follows: Katholieke Universiteit Leuven (1991–1994, Leuven, Belgium), King's College London (1994–1996, London, U.K.), and Los Alamos National Laboratory (1996–1998, Los Alamos, NM, USA). In 1998, he cofounded RN2R (Dallas, TX, USA) a VLSI IP startup company, and was its Chief Technical Officer (1998–2001). In 2001, he joined the School of Electrical Engineering and Computer Science, Washington State University, Pullman, WA, USA, and in 2005 he became Visiting Professor with the School of Computing and Intelligent Systems, University of Ulster,

Ulster, U.K. Since 2006, he has been the Associate Dean for Research and Graduate Studies, Faculty of Information Technology, United Arab Emirates University, Al Ain, Abu Dhabi, UAE. He holds 11 patents, has given over 150 invited talks, and authored over 170 technical papers in journals and conferences. He has authored six chapters (out of which five invited), and is working on one book on emerging brain-inspired nano-architectures, and another one on the VLSI complexity of discrete neural networks. His main research interests include VLSI-efficient designs (low-power and highly reliable) and emerging nano-architectures (massively parallel, fault-tolerant, communication starved, adaptive/reconfigurable), as well as their optimal implementations inspired by neural networks and biological arrays.

Dr. Beiu was a recipient of five fellowships including: Fulbright (1991), Human Capital and Mobility (1994–1996) with King's College London ("Programmable Neural Arrays" Project), Director's Funded Postdoc (1996–1998) with Los Alamos National Laboratory ("Field Programmable Neural Arrays" Project, under the Deployable Adaptive Processing Systems initiative), and Fellow of Rose Research (1999–2001). He was the principal investigator (PI) or co-PI of over 60 research contracts totaling over US\$ 22M. He was a recipient of 7 Best Paper Awards. He is a founding member of the European Neural Network Society (ENNS), and a member of: the International Neural Network Society (INNS), the Association for Computing Machinery (ACM), and the Marie Curie Fellowship Association (MCFA). He was a member of the SRC-NNI Working Group on Novel Nano-architectures (2003–2006), of the IEEE CS Task Force on Nanoarchitectures (since 2005), and of the IEEE Emerging Technologies Group on Nanoscale Communications (since 2010). He has organized over 50 conferences/workshops and chaired over 40 conference sessions, was the Program Chairman of the IEEE Los Alamos Section (1997), was an Associate Editor of the IEEE TRANSACTIONS ON NEURAL NETWORKS (2005–2008), and since 2010 is an Associate Editor of the *Nano Communication Networks* (Elsevier).



**Sanjukta Bhanja** received the Bachelor's degree in electrical engineering from Jadavpur University, Calcutta, in 1991, the Master's degree from Indian Institute of Science, Bangalore, India, in 1994, and the Ph.D. degree in computer science and engineering from the University of South Florida (USF), Tampa, FL, USA, in 2002.

She is currently an Associate Professor with the Department of Electrical Engineering, USF. Her primary research focus is on non-CMOS nano-computing, exploring novel state variables, alternate computing paradigm with heterogeneous devices, VLSI design automation with emphasis on data-driven uncertainties, trade-off of error, power, and reliability at various levels of design abstractions. She has published over 60 publications in top-tier peer-reviewed journal and conferences in VLSI and nano-electronics area.

Dr. Bhanja is an Associate Editor of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS. She has served on the Technical Program Committee of various IEEE and ACM conferences. She is currently the "Emerging Technology track" co-chair in

IEEE DATE'11 and has served as Technical Program Co-Chair of IEEE ISVLSI, ACM GLSVLSI and as General Co-Chair of ACM GLSVLSI. She was a recipient of the New Researcher Award from the University of South Florida in 2002, the NSF CAREER Award (2007–2012), USF Tau Beta Pi "Outstanding Engineering Faculty Researcher" Award in 2007, the USF 2008 "Outstanding Faculty Research Achievement Award," the 2010 Florida Education Foundation (F.E.F) William Jones Outstanding Mentor Award, and the USF 09/10 Outstanding Undergraduate Teaching Award.



**Chirn Chye Boon** (M'09–SM'10) received the B.E. degree (Hons.) in electronics and the Ph.D. degree in electrical engineering from Nanyang Technological University (NTU), Singapore, in 2000 and 2004, respectively.

In 2005, he joined NTU as a Research Fellow and became an Assistant Professor in the same year. Before that, he was with Advanced RFIC, where he worked as a Senior Engineer. He specializes in the areas of radio frequency (RF) and MM-wave circuits and systems design for biomedical and communications applications. He has coauthored over 49 refereed publications and several patents in the fields of RF and MM-wave. He is a coauthor of the book *Design of CMOS RF Integrated Circuits and Systems* (World Scientific Publishing, 2010).

Prof. Boon serves as a committee member for various conferences and is an Associate Editor of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS. He is the Programme Director for RF and MM-wave research in the SG\$50 millions research centre of excellence, VIRTUS (NTU) since March 2010. He is the Principal/Co-Principal Investigator for re-

search grants of more than SG\$3,250,000.



**Chaitali Chakrabarti** received the B.Tech. degree in electronics and electrical communication engineering from the Indian Institute of Technology, Kharagpur, India, and the M.S. and Ph.D. degrees in electrical engineering from the University of Maryland, College Park, MD, USA.

She has been a Professor with Arizona State University (ASU), Tempe, AZ, USA, since 1990. Her research interests include the areas of specialized architectures for signal processing and wireless communications, software defined radio, algorithm-architecture co-design, low power algorithms, and energy-efficient embedded system design including those powered by fuel cells.

Dr. Chakrabarti is a member of the Consortium of Embedded Systems and the Sensor, Signal, and Information Processing Center, ASU. She was a recipient of the Research Initiation Award from the National Science Foundation in 1993, a Best Teacher Award from the College of Engineering and Applied Sciences in 1994, and the Outstanding Educator Award from the IEEE Phoenix section in 2001. She has been on the program committees of ICASSP, ISCAS, SiPS, ASAP, DAC, and ISLPED. She served as an Associate Editor (AE) of the IEEE TRANSACTIONS ON SIGNAL

PROCESSING (1999–2005) and also as an Associate Editor of the *Journal of VLSI Signal Processing Systems*. She is the Chair of the Technical Committee of Design and Implementation of Signal Processing Systems, IEEE Signal Processing Society.



**Chip-Hong Chang** (S'92–M'98–SM'03) received the B.Eng. (Hons.) degree from the National University of Singapore, Singapore, in 1989, and the M.Eng. and Ph.D. degrees from Nanyang Technological University (NTU), Singapore, in 1993 and 1998, respectively.

He served as a Technical Consultant in industry prior to joining the School of Electrical and Electronic Engineering (EEE), NTU, in 1999, where he is currently an Associate Professor. He holds joint appointments with the university as an Assistant Chair of Alumni of the School of Electrical and Electronic Engineering (EEE) since June 2008, the Deputy Director of the Center for High Performance Embedded Systems since 2000, and the Program Director of the Center for Integrated Circuits and Systems from 2003 to 2009. His current research interests include low power arithmetic circuits, residue number system, digital filter design, and digital watermarking for VLSI intellectual property protection. He has coedited one book, published three book chapters, and over 170 research papers in refereed international journals and conferences.

Dr. Chang has served as an Associate Editor of the IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I: REGULAR PAPERS in 2010–2011 and the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS since 2011, Editorial Advisory Board Member of the *Open Electrical and Electronic Engineering Journal* since 2007 and Editorial Board Member of the *Journal of Electrical and Computer Engineering* since 2008. He also served as a Guest Editor for the special issue of the *Journal of Circuits, Systems, and Computers* in 2010, and in several international conference advisory and technical program committees. He is a Fellow of the IET. He was the corecipient of two paper awards at PrimeAsia 2010 and the finalist of the Best Paper Award at VLSI'95.



**Jonathan Chang** (SM'06–M'93) received the B.S. degree in electrical engineering from National Taiwan University, Taiwan, in 1990, and the M.S. and Ph.D. degrees in electrical engineering from Stanford University, Stanford, CA, USA, in 1994 and 1998, respectively.

He joined Intel Corporation, Santa Clara, CA, in 1998 and since has been engaged in the design of several high-performance microprocessors with emphasis in large, high-speed, low power cache design. He was a Principal Engineer in the area of cache design in Enterprise Microprocessor Group. He joined TSMC, Hsin-Chu, Taiwan, in 2010 as a deputy director and is responsible for high speed embedded SRAM products. He is currently among the technical committee of 2011 VLSI symposium on circuits. He has published over 20 technical papers in IEEE conferences or journals.



**Robert Chen-Hao Chang** (S'91–M'95–SM'09) received the B.S. and M.S. degrees in electrical engineering from National Taiwan University, Taipei, Taiwan, in 1987 and 1989, respectively, and the Ph.D. degree in electrical engineering from University of Southern California (USC), Los Angeles, CA, USA, in 1995.

In 1996, he joined the faculty of the Department of Electrical Engineering, National Chung Hsing University, Taichung, Taiwan, where he is currently a Professor. He served as the Director of Meng Yao Chip Center from 2000 to 2004, the Director of Center for Research and Development of Engineering Technology of the College of Engineering from 2005 to 2006, and Chairman of the Electrical Engineering Department from 2006 to 2008. He has published over 90 technical journal and conference papers. His research interests include mixed-signal IC design, power management IC design, low-power circuits design, and baseband circuits design.

Dr. Chang was a recipient of the National Science Council Research Award in 1997 and 1998, the Distinguished Teaching Award, the Outstanding Research Project Award, and the Distinguished

Teacher Evaluation Award from National Chung Hsing University in 2004, 2006, and 2009, respectively. He was listed in the Marquis Who's Who in the World 2000. He is a member of Tau Beta Pi. He has been a Member of VLSI Systems and Applications Technical Committee, IEEE Circuits and Systems Society since 2004. He is an Associate Editor for the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS and the Chair of IEEE CASS Taipei Chapter. He also served as Technical Program Committee Member for many conferences.



**Deming Chen** received the B.S. degree in computer science from University of Pittsburgh, Pittsburgh, PA, USA, in 1995, and the M.S. and Ph.D. degrees in computer science from University of California at Los Angeles, Los Angeles, CA, USA, in 2001 and 2005, respectively.

He worked as a Software Engineer between 1995–1999 and 2001–2002. He has been an Assistant Professor with the Electrical and Computer Engineering Department, University of Illinois, Urbana-Champaign, IL, USA, since 2005. He is a Research Assistant Professor with the Coordinated Science Laboratory and an affiliate Assistant Professor with the Computer Science Department. His current research interests include high-level synthesis, nano-systems design and nano-centric CAD techniques, FPGA synthesis and physical design, microarchitecture and SoC design under parameter variation, and reconfigurable computing.

Dr. Chen is a technical committee member for a series of conferences and symposia, including FPGA, ASPDAC, ICCD, ISQED, DAC, ICCAD, and DATE, etc. He also served as session chair, panelist, panel organizer, or moderator for some of these and other conferences. He is the TPC

subcommittee chair for ASPDAC'09–2011 and the CAD Track co-chair for ISVLSI'09 and ISCAS'10–2011. He is the program chair for SLIP'11. He is an Associated Editor for IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS (TVLSI), IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS—PART I: REGULAR PAPERS (TCAS-I), *Journal of Circuits, Systems and Computers* (JCSC), and *Journal of Low Power Electronics* (JOLPE). He was a recipient of the Achievement Award for Excellent Teamwork from Aplus Design Technologies in 2001, the Arnold O. Beckman Research Award from UIUC in 2007, the NSF CAREER Award in 2008, the ASPDAC'09 Best Paper Award, and the SASP'09 Best Paper Award. He is included in the List of Teachers Ranked as Excellent in 2008. He received the ACM SIGDA Outstanding New Faculty Award in 2010.



**Poki Chen** (M'05) was born in Chia-Yi, Taiwan, in 1963. He received the B.S., M.S., and Ph.D. degrees in electrical engineering from National Taiwan University (NTU), Taipei, Taiwan, in 1985, 1987, and 2001, respectively.

During 1998–2001 and 2001–2006, he was a Lecturer and an Assistant Professor correspondingly with the Electronic Engineering Department, National Taiwan University of Science and Technology (NTUST), Taiwan. He is currently an Associate Professor with the same department. Since 2010, he was selected as the director of System-on-Chip Research Center, NTUST. His research interests include analog/mixed-signal integrated circuits and systems with a special interest focused on time-domain signal processing circuits, such as time-domain smart temperature sensor, time-to-digital converter, digital pulse generator, digital pulse width modulator, and duty cycle corrector. He is also interested in creating innovative analog applications for FPGA platforms, such as FPGA smart temperature sensor, FPGA digital-to-time, and time-to-digital converters.



**Pasquale Corsonello** was born in Cosenza, Italy, on May 4, 1964. He received the Master's degree in electronics engineering from the University of Naples "Federico II", Naples, Italy, in 1988.

He joined the Institute of Research on Parallel Computers, National Council of Research of Italy, Naples, Italy, where he was working on the design and modelling of electronic transducers for high precision measurement, receiving a post-graduate two-years grant. In 1992, he joined the Department of Electronics, Computer Science, and Systems, University of Calabria, Rende, Italy, as a Research Associate. In 1997, he was appointed an Assistant Professor of electronics with the Department of Electronics Engineering and Applied Mathematics, University of Reggio Calabria, Reggio Calabria, Italy, where he also served as the Director of the Microelectronics Laboratory. In 2001, he was appointed an Associate Professor of electronics and Chair of the Ph.D. Program in electronics engineering at the University of Reggio Calabria. In the summer 2004, he was a Visiting Researcher with the Department of Electrical and Computer Engineering, University of Rochester, NY, USA. In 2005, he was appointed as Adjunct Associate Professor with

the same Department. He is currently an Associate Professor of electronics with the Department of Electronics, Computer Science, and Systems of the University of Calabria, Rende, Italy. His main research interests include high-performance arithmetic circuits, low-power design, VLSI architecture for image processing and multimedia, reconfigurable systems. He has coauthored over 120 technical papers and holds two patents in these fields. One of these papers is among the 25 most downloaded TVLSI papers in 2007.

Prof. Corsonello was a recipient of the Best Paper Award at the 2010 IEEE Conference on Advances in Circuits, Electronics and Micro-Electronics, CENICS 2010. He has also received several grants from both private industries and government agencies for projects in these areas. He serves on technical committees of several VLSI conferences and as a peer reviewer for several VLSI journals. He is an Associate Editor of the *Journal of Low Power Electronics and Applications*.



**Vivek De** (F'11) received the Bachelor's degree from the Indian Institute of Technology, Madras, India, the Master's degree from Duke University, Durham, NC, USA, and the Ph.D. degree from Rensselaer Polytechnic Institute, Rensselaer, NY, USA, all in electrical engineering.

He is an Intel Fellow and Director of Circuit Technology Research with Intel Labs, Hillsboro, OR, USA. He joined Intel in 1996 as a Staff Engineer in Intel's Circuits Research Lab (CRL). Since that time, he has led research teams in CRL focused on developing advanced circuits and design techniques for low-power and high-performance processors. In his current role as Director of CRL, he is responsible for providing strategic directions for research in future circuit technologies and aligning Intel's circuit research with technology scaling challenges. He has 193 publications in refereed international conferences and journals, and 172 patents, with 31 more patents filed (pending).

Dr. De was a recipient of an Intel Achievement Award for his contributions to a novel integrated voltage regulator technology.



**Robert Dick** (S'95–M'02) received the B.S. degree from Clarkson University, Potsdam, NY, USA, in 1996, and the Ph.D. degree from Princeton University, Princeton, NJ, in 2002.

He is an Associate Professor with the Department of Electrical Engineering and Computer Science, University of Michigan, Ann Arbor. He worked as a Visiting Professor with the Department of Electronic Engineering, Tsinghua University, in 2002, as a Visiting Researcher at NEC Labs America in 1999, and was on the faculty of Northwestern University from 2003 to 2008. He has published in the areas of embedded operating systems, data compression, embedded system synthesis, dynamic power management, low-power and temperature-aware integrated circuit design, wireless sensor networks, human perception aware computer design, reliability, embedded system security, and behavioral synthesis.

Prof. Dick was a recipient of an NSF CAREER Award and won his department's Best Teacher of the Year Award in 2004. In 2007, his technology won a Computerworld Horizon Award and his paper was selected as one of the 30 in a collection of high-impact DATE papers appearing during

the past 10 years. His 2010 work won a Best Paper Award at DATE. He is an Associate Editor of the IEEE TRANSACTIONS ON VERY LARGE SCALE INTEGRATION (VLSI) SYSTEMS, a Guest Editor for *ACM Transactions on Embedded Computing Systems*, was selected as Technical Program Committee Co-Chair of the 2011 International Conference on Hardware/Software Codesign and System Synthesis, and serves on the technical program committees of several embedded systems and CAD/VLSI Conferences.



Nikil D. Dutt (F'08) received the Ph.D. degree in computer science from the University of Illinois at Urbana-Champaign, Urbana-Champaign, IL, USA, in 1989.

He is currently a Chancellor's Professor with the University of California, Irvine, with academic appointments in the Computer Science and Electrical Engineering and Computer Science Departments. His research interests include embedded systems design automation, computer architecture, optimizing compilers, system specification techniques, and distributed embedded systems.

Dr. Dutt was a recipient of Best Paper Awards at CHDL89, CHDL91, VLSIDesign2003, CODES+ISSS 2003, CNCC 2006, and ASPDAC-2006. He was an ACM SIGDA Distinguished Lecturer during 2001–2002, and an IEEE Computer Society Distinguished Visitor for 2003–2005. He has served on the steering, organizing, and program committees of several premier CAD and Embedded System Design conferences and workshops, including ASPDAC, CASES, CODES+ISSS, DATE, ICCAD, ISLPED, LCTES, RTAS, and RTSS. He serves or has served on the advisory boards of ACM SIGBED and ACM SIGDA and is Vice-Chair of IFIP WG 10.5.



of micro power sources.

**Ibrahim (Abe) Elfadel** received the Ph.D. degree from Massachusetts Institute of Technology (MIT), Cambridge, MA, USA, in 1993.

He is a Professor of Microsystems Engineering with the Masdar Institute of Science and Technology, Abu Dhabi, UAE, where he is a lead principal investigator in TwinLab/3DSCI, a joint collaborative research center on 3-D integrated circuits between the Technical University of Dresden, Germany, and the Masdar Institute of Science and Technology. Between 1996 and 2010, he was with the corporate CAD organizations at IBM Research and the IBM Systems and Technology Group, Yorktown Heights, NY, USA, where he was involved in the research, development, and deployment of CAD tools and methodologies for IBM's high-end microprocessors. Between 2000 and 2004, he was an adjunct Associate Professor of electrical engineering with Columbia University, New York City, NY, USA. In addition to 3-D integrated circuits, his current research interests include power and thermal management of multi-core processors; variation-aware, low-power digital systems design; embedded, low-power digital-signal processing; and modeling and integration

Dr. Elfadel was a recipient of six Invention Achievement Awards, one Outstanding Technical Achievement Award, and one Research Division Award, all from IBM, for his contributions in the area of VLSI CAD. He is inventor or co-inventor on more than 50 issued and pending patents. He is currently serving as an Associate Editor of the IEEE TRANSACTIONS ON COMPUTER-AIDED DESIGN OF INTEGRATED CIRCUITS AND SYSTEMS.



**Maged Ghoneima** (M'97) received the B.Sc. degree in electronics and communications engineering with Honors and the M.Sc. degree in electronics from Ain Shams University, Cairo, Egypt, in 1997 and 2000, and the Ph.D. degree in computer engineering from Northwestern University, Evanston, IL, USA, in 2006.

In 1997, he was appointed as a Teacher Assistant with the Department of Electrical and Computer Engineering, Ain Shams University. In 2002, he was with OEA International and with the Circuit Research Lab, Intel Corporation, from 2003 to 2005. He is currently a Senior Circuit Design Engineer with the VLSI Circuit Design Group, NVIDA Corporation, Santa Clara, CA, since 2006 developing on-chip memory structures for the Tesla and Fermi GPUs. He has authored and coauthored over 25 technical papers in refereed international conferences and journals. He also holds two patents and more than five filed in the area of low-power and high performance circuit design. His research interests include on-chip interconnect architectures, on-chip memory structures, low power circuit design, and related circuit level issues in high performance VLSI circuits.

Dr. Ghoneima was a recipient of the Walter Murphy and Capbell Fellowship Awards from Northwestern University in 2001 and 2005, in addition to the Intel Ph.D. Fellowship Award in 2004.



**Patrick Girard** (SM'09) received the M.S. degree in electrical engineering and the Ph.D. degree in microelectronics from the University of Montpellier, Montpellier, France, in 1988 and 1992, respectively.

He is currently Research Director with French National Center for Scientific Research (CNRS), and Head of the Microelectronics Department, Laboratory of Informatics, Robotics and Microelectronics of Montpellier—France (LIRMM). His research interests include all aspects of digital testing and memory testing, with emphasis on critical constraints such as timing and power. He is a co-editor of the book *Power-Aware Testing and Test Strategies for Low Power Devices* (Springer, 2009) and a coauthor of the book *Advanced Test Methods for SRAMs—Effective Solutions for Dy-namic Fault Detection in Nanoscale Technologies* (Springer, 2009). He has supervised 26 Ph.D. dissertations and has published 6 books or book chapters, 36 journal papers, and more than 130 conference and symposium papers on these fields.

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