

Contributing Authors

Khoa Nguyen Le received his Ph.D. in October 2002 from Monash University, Melbourne, Australia. From April 2003 to June 2009, he was a Lecturer at Griffith University, Gold Coast campus, Griffith School of Engineering. From January to July 2008, Dr. Le was a Visiting Professor at Intelligence Signal Processing Laboratory, Korea University, Seoul, Korea. From January 2009 to February 2009, he was a Visiting Professor at the Wireless Communication Centre, University Technology Malaysia, Johor Bahru, Malaysia, working with Professor Tharek on antennas and related issues. He is currently a Senior Lecturer at School of Engineering, College of Health and Science, Kingswood, University of Western Sydney, Australia. His research interests are in wireless communications with applications to structural problems, image processing and wavelet theory. Dr. Le is the Editor-in-Chief of the *International Journal of Ad hoc, Sensor & Ubiquitous Computing (IJASUC)*. He is also on the Editorial Board of *International Research Magazine of Computer Science*.

Anthony C. K. Soong (S'88, M'91, SM'02) received the B.Sc. degree in animal physiology and physics from the University of Calgary, and the B.Sc. degree in electrical engineering, the M.Sc. degree in biomedical physics and the Ph.D. degree in electrical and computer engineering from the University of Alberta. He is currently a principal engineer for advance research and standards at Huawei Technologies Co. Ltd, in the US. From 2007–2009, he served as the chair for 3GPP2 TSG-C NTAH (the next generation radio access network technology development group). Currently, he is the vice chair for 3GPP2 TSG-C WG3 (the physical layer development group for CDMA 2000). Prior to joining Huawei, he was with the systems group for Ericsson Inc and Qualcomm Inc. His research interests are in statistical signal processing, robust statistics, wireless communications, spread spectrum techniques, multicarrier signalling, multiple antenna

techniques and physiological signal processing.

Dr. Soong is a senior member of the IEEE. He has published numerous scientific papers and has over 50 patents granted or pending. He received the 2005 award of merit for his contribution to 3GPP2 and CDMA 2000 development. He has served on the technical program committee and has chaired at numerous major conferences in the area of communications engineering. He has acted as a Guest Editor for the *IEEE Communications Magazine* and is a technical reviewer for the *EURASIP Journal on Wireless Communications and Networking*, *IEEE Transactions on Communications*, *IEEE Transactions on Wireless Communications*, *IEEE Transactions on Vehicular Technology*, *IEEE Transactions on Signal Processing* and *IEEE Communication Letters*.

Erchin Serpedin received the specialization degree in signal processing and transmission of information from Ecole Supérieure D'Electricité, Paris, France, in 1992, the M.Sc. degree from Georgia Institute of Technology, Atlanta, in 1992, and the Ph.D. degree in Electrical Engineering from the University of Virginia, Charlottesville, VA, in January 1999. In July 1999, he joined Texas A&M University in College Station, where he currently holds the position of Associate Professor. His research interests lie in the areas of signal processing and telecommunications. He received the NSF Career Award in 2001, the Outstanding Faculty Award in 2004, the TEES Award in 2005, and several best paper awards. He served as an Associate Editor for the *IEEE Communications Letters*, *IEEE Transactions on Signal Processing*, *IEEE Signal Processing Letters*, *IEEE Transactions on Wireless Communications* and *EURASIP Journal on Advances in Signal Processing*.

Dr. Serpedin served also as a technical co-chair of the Communications Theory Symposium at Globecom 2006 Conference, and for the VTC Fall 2006: Wireless Access Track Symposium. He is currently serving as Associate Editor for the journals *Signal Processing-Elsevier*, *IEEE Transactions on Communications*, *IEEE Transactions on Information Theory*, *EURASIP Journal on Advances in Signal Processing*, and *EURASIP Journal on Bioinformatics and Systems Biology*. Dr. Serpedin also co-authored the research monograph: *Synchronization in Wireless Sensor Networks*, Cambridge University Press.

Franco Mazzenga received the Dr. Ing. degree in electronics engineering cum laude from the University of Rome Tor Vergata, Italy in 1993. From 1993 to 1994 he was with Fondazione Ugo Bordoni making research on the propagation at millimeter waves. In 1997 he obtained the Ph.D. degree in telecommunications from the University of Rome Tor Vergata. From 1998 to 2000 he was a researcher in Consorzio di Ricerca in Telecomunicazioni (CoRiTel). From 2000 to 2006 he was a researcher in the Electronic Engineering Department of the University of Rome Tor Vergata. Currently he is an Associate Professor of communications in the same department. Since 2001 he is the technical director of the Consorzio Università Industria Laboratori di Radiocomunicazioni (Radiolabs). He is the author of more than 90 scientific publications on congress and scientific international journals. He is a co-author of a book on Radar Systems (in Italian). His main interests are in statistical signal processing, complex networks theory and mobile wireless transmission technologies.

Geoffrey Ye Li received his B.S.E. and M.S.E. degrees in 1983 and 1986, respectively, from the Department of Wireless Engineering, Nanjing Institute of Technology, Nanjing, China, and his Ph.D. degree in 1994 from the Department of Electrical Engineering, Auburn University, Alabama.

He was a Teaching Assistant and then a Lecturer with Southeast University, Nanjing, China, from 1986 to 1991, a Research and Teaching Assistant with Auburn University, Alabama, from 1991 to 1994, and a Post-Doctoral Research Associate with the University of Maryland at College Park, Maryland, from 1994 to 1996. He was with AT&T Labs – Research at Red Bank, New Jersey, as a Senior and then a Principal Technical Staff Member from 1996 to 2000. Since 2000, he has been with the School of Electrical and Computer Engineering at Georgia Institute of Technology as an Associate and then a Full Professor. He is also holding the Cheung Kong Scholar title at the University of Electronic Science and Technology of China since March 2006.

His general research interests include statistical signal processing and telecommunications, with emphasis on OFDM and MIMO techniques, cross-layer optimization, and signal processing issues in cognitive radios. In these areas, he has published about 200 papers in refereed journals or conferences and filed about 20 patents. He also has two books, entitled, *Blind Equalization and Identification* (co-authored with Z. Ding, published by Mercel Dekker, Inc. in 2000) and *OFDM for Wireless Communications* (co-

authored with G. Stüber, published by Springer in 2006). He is active in professional societies. He once served or is currently serving as an Editor, a member of editorial board, and a Guest Editor for 10 technical journals. He organized and chaired many international conferences, including technical program vice-chair of the *IEEE 2003 International Conference on Communications*. He has been awarded an IEEE Fellow for his contributions to signal processing for wireless communications in 2005 and selected as a Distinguished Lecturer from 2009–2010 by IEEE Communications Society.

Jian Mao is a senior staff system engineer and distinguished member of technical staff at MTI Laboratory, El Segundo, U.S.A. He was an Assistant Professor at Yangzhou University and the University of Electronic Science and Technology of China for 15 years and then worked as a researcher for Chalmers University of Technology in Sweden, the University of Limerick in Ireland and McGill University in Canada. He started his industry career in 2003, first with a start-up company, then joined SR Telecom and MTI Laboratory and represented the companies to WiMAX forum and 3GPP meetings as leading contributor. Dr. Mao received his M.S. degree from the University of Electronic Science and Technology of China and Ph.D. degree from the University of Limerick, both in Electrical Engineering. His research interests include spatial-temporal signal processing, channel estimation, OFDM, MIMO and beamforming applications for WiMAX and LTE.

Harry Leib was born in 1953. He received the B.Sc. (cum laude) and M.Sc. degrees in Electrical Engineering from the Technion—Israel Institute of Technology, Haifa, Israel in 1977 and 1984 respectively. In 1987 he received the Ph.D. degree in Electrical Engineering from the University of Toronto, Toronto, Canada. From 1977 to 1984 he was with the Israel Ministry of Defense, working in the area of Communication Systems. During his Ph.D. studies at the University of Toronto (1984–1987) he was a teaching and research assistant in the Department of Electrical Engineering, working in the areas of Digital Communications and Signal Processing. After completing his Ph.D. studies, he was with the University of Toronto as a Post-doctoral Research Associate in Telecommunications (September 1987 to December 1988) and as an Assistant Professor (January 1989–August 1989). Since September 1989 he has been with the Department of Electrical and Computer Engineering at McGill University in Montreal, initially as an Assistant Professor, then as an Associate Professor, and now as a Full Professor. He spent part of his sabbatical leave of absence at Bell Northern Research in Ottawa, Ontario, Canada (September 1995 to February 1996) working in a CDMA related project. During the other part of his Sabbatical leave of absence (March to August 1996) he was a Visiting Professor in the Communications Lab/Institute of Radio Communications at the Helsinki University of Technology in Espoo Finland, where he taught a condensed course on channel coding and modulation and worked with graduate students in the communications area. At McGill, he teaches undergraduate and graduate courses in Communications, and directs the research of graduate students. His current research activities are in the areas of Digital Communications, Wireless Communication Systems, and Information Theory. Dr. Leib has been an Editor for Communication and Information Theory for the *IEEE Transactions on Communications* since 2000, and an Associate Editor for the *IEEE Transactions on Vehicular Technology* during 2001–2007. During 2003–2005 he has been a guest co-Editor for a special issue of the *IEEE Journal on Selected Areas in Communication* on Differential and Noncoherent Wireless Communication.

Hongjie Hu received the B.Eng. degree from Northwestern Polytechnical University, Xi'an, China, in 2000, and M.Eng. degree from the National University of Singapore, Singapore, in 2003. He works at Wireless Research of Huawei Technologies, Shanghai, China, where he is currently responsible for physical layer technologies' architecture and review.

Hsao Hwa Chen (hshwchen@ieee.org) is currently holding a Distinguished Professor position in the Department of Engineering Science, National Cheng Kung University, Taiwan. He received B.Sc. and M.Sc. degrees with the highest honour from Zhejiang University, China, and a Ph.D. degree from the University of Oulu, Finland, in 1982, 1985 and 1990, respectively, all in Electrical Engineering. He worked with Academy of Finland as a Research Associate from 1991 to 1993, and the National University of Singapore as a Lecturer and then a Senior Lecturer from 1992 to 1997. He joined Department of Electrical Engineering, National Chung Hsing University, Taiwan, as an Associate Professor in 1997 and was promoted to a full-Professor in 2000. In 2001 he joined National Sun Yat-Sen University, Taiwan, as the founding Chair of the Institute of Communications Engineering of the University. Under his strong leadership the institute was ranked second in the country in terms of SCI journal publications and National Science Council funding per faculty member in 2004. In particular, National Sun Yat-Sen University was ranked the first in the world in terms of the number of SCI journal publications in wireless LANs technical papers during 2004 to mid-2005, according to a Research Report released by The Office of Naval Research, USA. He was a visiting Professor to Department of Electrical Engineering, University of Kaiserslautern, Germany, in 1999, the Institute of Applied Physics, Tsukuba University, Japan, in 2000, Institute of Experimental Mathematics, University of Essen, Germany in 2002 (under DFG Fellowship), the Chinese University of Hong Kong in 2004, and the City University of Hong Kong in 2007. His current research interests include wireless networking, MIMO systems, information security, and Beyond 3G wireless communications. He is the inventor of the next generation CDMA technologies. He is a recipient of numerous Research and Teaching Awards from National Science Council, Ministry of Education, and other professional groups in Taiwan.

Professor Chen has authored or co-authored over 400 technical papers in major international journals and conferences, six books and more than ten book chapters in the areas

of communications, including the book entitled “Next Generation Wireless Systems and Networks” (512 pages) and “The Next Generation CDMA Technologies” (468 pages), both by John Wiley in 2005 and 2007, respectively. He has been an active volunteer for IEEE various technical activities for over 22 years. Currently, he is serving as the Chair of IEEE Communications Society Communications & Information Security Technical Committee, and he served as the Chair for IEEE Communications Society Radio Communications Committee from 2007 to 2008. He served or is serving as symposium chair/co-chair of many major IEEE conferences, including *IEEE VTC 2003 Fall*, *IEEE ICC 2004*, *IEEE Globecom 2004*, *IEEE ICC 2005*, *IEEE Globecom 2005*, *IEEE ICC 2006*, *IEEE Globecom 2006*, *IEEE ICC 2007* and *IEEE WCNC 2007*. He served or is serving as Editorial Board Member or/and Guest Editor of *IEEE Communications Letters*, *IEEE Communications Magazine*, *IEEE Wireless Communications Magazine*, *IEEE JSAC*, *IEEE Network Magazine*, *IEEE Transactions on Wireless Communications*, and *IEEE Vehicular Technology Magazine*. He is the Editor-in-Chief of Wiley’s *Security and Communication Networks Journal* (www.interscience.wiley.com/journal/security), and the Special Issue Editor-in-Chief of *Hindawi Journal of Computer Systems, Networks, and Communications* (<http://www.hindawi.com/journals/jcsnc/>). He is also serving as the Chief Editor (Asia and Pacific) for Wiley’s *Wireless Communications and Mobile Computing (WCMC) Journal* and *Wiley’s International Journal of Communication Systems*. His original work in CDMA wireless networks, digital communications and radar systems has resulted in five US patents, two Finnish patents, three Taiwanese patents and two Chinese patents, some of which have been licensed to industry for commercial applications. He is an adjunct Professor of Zhejiang University, China, and Shanghai Jiao Tong University, China. Professor Chen is the recipient of the Best Paper Award in IEEE WCNC 2008, and the recipient of IEEE Radio Communications Technical Committee Outstanding Service Award in 2009. Professor Chen is a Fellow of IEEE, a Fellow of IET, and a Fellow of BCS.

Jie Zhang (jie.zhang@Beds.ac.uk, University of Bedfordshire) is a Professor of Wireless Communications and Networks and the Director of CWiND (Centre for Wireless Network Design, www.cwind.org) at the DCST (Department of Computer Science and Technology) of UoB (University of Bedfordshire). He joined UoB as a Senior Lecturer in 2002, and was promoted to Professor in 2006. Jie received his Ph.D. in Industrial

Automation from East China University of Science and Technology (www.ecust.edu.cn), Shanghai, China, in 1995. From 1997 to 2001, he was a postdoctoral Research Fellow (RF) with University College London (UCL), Imperial College London, and Oxford University. Since 2003, Dr. Zhang has been awarded more than 12 projects worth over €4.0 million (his share). He is the Co-Investigator of the first EPSRC-funded research project on femtocells—“Feasibility study for WiMAX based home Femtocell for indoor coverage”. He is one of the investigators of the UK-China Science Bridge project on 4G mobile communications. In addition, Professor Zhang is responsible for projects worth a few million Euros at his industrial partners. These projects are centred on new radio propagation models, UMTS/HSPA/WiMAX/LTE simulation, planning and optimization, indoor radio network design and femtocells. He is an expert evaluator and sits on the judging panels for both EPSRC (Engineering and Physical Science Research Council, equivalent to NSF of China; www.epsrc.ac.uk) and the EU Framework Program (FP). He has been involved in organising many international conferences. For example, he is a General Co-Chair of PlanNet 2009 (<http://www.beds.ac.uk/research/irac/cwind/PlanNet2009>), and a Publicity Chair (for Europe, Asia Pacific) of IEEE WCNC 2010. Dr. Zhang has been a Technical Program Committee member for many conferences such as *IEEE International Conference on Communications*, *IEEE Globecom* and *IEEE Vehicular Technology Conference*.

Kalid Qaraqe was born in Bethlehem. Dr. Qaraqe received the B.S. degree in Electronic Engineering from the University of Technology, Baghdad in 1986, with honours. He received the M.S. degree in Electronic Engineering from the University of Jordan, Jordan, in 1989, and he earned his Ph.D. degree in Electronic Engineering from Texas A&M University, College Station, TX, in 1997. From 1989 to 2004, Dr. Qaraqe has held a variety of positions in many companies and he has over 12 years of experience in the telecommunication industry. Dr. Qaraqe has worked for Qualcomm, Enad Design Systems, Cadence Design Systems/Tality Corporation, STC, SBC and Ericsson. He has worked on numerous GSM, CDMA, WCDMA projects and has experience in product development, design, deployments, testing and integration. Dr. Qaraqe joined the department of Electrical Engineering of Texas A&M University at Qatar, in July 2004, where he is now a senior Associate Professor. Dr. Qaraqe research interests include communication theory and its application to design and performance, analysis of cellular

systems and indoor communication systems. Particular interests are in the development of WCDMA and broadband wireless communications and diversity techniques.

Kar Lun (Clarence) Wong received the B.A.Sc degree in Electronics Engineering from Simon Fraser University, Canada, in 2003, and the M.Eng. degree in Electrical and Computer Engineering from McGill University, Canada, in 2007. While at McGill University, his research interests included wireless communications, estimation theory, and coding theory with concentration on multiple-antenna systems. Since 2006, he has been with Qualcomm Inc., San-Diego, U.S.A., working as a modem system engineer.

Long Qin received the B.Eng. degree from the Nanjing University, Nanjing, China, in 2002, and M.Eng. degree from the Southeast University, Nanjing, China, in 2005. Since then he works at Wireless Physical Research Department of Huawei Technologies, Shanghai, China, where he is currently responsible for research and design of advanced receiver algorithm in wideband wireless system including LTE and WiMAX.

Marco Vari received the Telecommunications Engineering degree at the University of Rome Tor Vergata in 2002. His thesis was focused on coexistence between WLAN (IEEE 802.11b) and Bluetooth devices. Since 2002 he has been working in RadioLabs and in 2003, he developed a WiFi network in the Tor Vergata Campus to provide internet connectivity to students. He participated to National and European projects principally concerning wireless networking and advanced mobile services. His activity also concerned the development both of indoor and outdoor channel models (WiFi at 2.4 GHz and 5.4 GHz and WiMax at 2.6 GHz and 3.5 GHz). Since 2003 he has been studying indoor localization techniques basing principally on radio fingerprint and involving heterogeneous devices such as WiFi, Bluetooth, zigbee and RFID. During his activity he also studied and analyzed the vulnerability of wireless networks operating in TDMA technique. In the last year he participated to a national project finalized to develop an integrated control system for the optimal energy management in hybrid vehicles. He is an author and co-author of some technical articles mostly published in IEEE Conferences.

Mugen Peng (pmg@bupt.edu.cn, Beijing University of Posts and Telecommunications) is an Associate Professor of Key Laboratory of Universal Wireless Communication (Ministry of Education) in Beijing University of Posts & Telecommunication (BUPT) and the Director of Networking Team at the Wireless Signal Processing & Network (WSPN) Lab. He joined BUPT as a Lecturer in 2005, and was promoted to Associate Professor in 2008. Mugen Peng received his M.Sc. and Ph.D. in Signal and Information System from BUPT in 2002 and 2005, respectively. He received the B.Sc. in computer science from the Nanjing University of Posts & Telecommunications (NJUPT) in 2000. His research interests span many areas including wireless networks, mobile computing, mobile communications, and network information. His current research interests include radio resource management, network planning and optimization, cooperative communication, network coding, wireless multi-hop and relay communication, cross-layer design of wireless networks, wireless mesh network, and the simulation and performance evaluation of the next generation wireless networks. Dr. Peng is a very active researcher. He is an Associate Editor of Wiley *International Journal of Communication Systems* journal. Meanwhile, he is the co-chair of a physical track in WICON 2010. He served or is serving as a Technical Program Committee (TPC) Member of many major IEEE conferences, including *IEEE ICC 2009*, *IEEE ChinaCom 2009*, *HPN2008* and *IWCMC 2009 Plan-Net*. He served or is serving as Editorial Board Member or/and Guest Editor of *Journal of Beijing University of Posts and Telecommunications*, *Journal of System Simulation*, *Journal of Electronics & Information Technology*, and *Chinese Journal of Electronics*. He has also served as the leading expert in the TD-SCDMA Industry Alliance and an expert member of Science & Technology Committee of Haidian District, Beijing.

Since 2005, as the Principal Investigator (or co-investigator), Dr. Peng has been awarded two research projects by Natural Science Foundation of China under Grant No. 60602058 and No. 60572120, the most prestigious research council in China. Meanwhile, he is the Principal Investigator of two research projects from the National Hi-Tech R&D 863 Program of China under Grant No. 2006AA01Z257 and 2009AA01Z244. He was awarded the Second Grade Award of Scientific & Technical Progress from China Institute of Communications for his excellent research work on the co-existence of multi-radio access networks and the spectrum management for the 3G licenses in China. In addition, the applicant has been awarded a number of research projects by the international famous wireless communication manufacturers and operators from the industry, such

as Nokia, Ericsson, Siemens, China Mobile Communication, China Telecommunication, Huawei and ZTE. Dr. Peng has published over 100 papers in refereed journals and conferences, edited 8 books and translated 3 books. Meanwhile, he has applied for more than 20 patents, and contributed more than 30 proposals to 3GPP and CCSA standards.

Pei Xiao received the Ph.D. degree in Electrical Engineering from Chalmers University of Technology, Sweden, in 2004. Prior to this he has held positions at Nokia Networks in Tampere, Finland. Following Ph.D. graduation, he worked as a Research Fellow at Newcastle University, and presently at the Institute of Electronics, Communications and Information Technology, Queen's University of Belfast. His research interests include channel estimation, iterative decoding, multiuser detection, OFDM, and MIMO.

Romeo Giuliano received the Telecommunication Engineering degree cum laude in 1999, the Master in Business Engineering in 2001 and the Telecommunications and Microelectronic Engineering Ph.D. degree in 2004 from University of Rome Tor Vergata, Rome, Italy. Since 2001 he joined the Consorzio Università Industria Laboratori di Radiocomunicazioni (RadioLabs), a research consortium specialized in wireless communication. Currently he is working on OFDM-based system analysis and Info-logistics systems. Other research interests are on mobile access systems, local area technologies, wireless sensor networks and UWB technology. Since 2005 he is also a contract professor in Wireless Transmission at University of Rome Tor Vergata. He is an author or co-author of more than 50 papers in international Journals and Conferences.

Sang-Do Lee received the B.S. and M.S. degrees in electronics and electrical engineering from Kyungpook National University, Daegu, Korea in 1999 and 2001, and the Ph.D. degree in electronics and computer engineering at Korea University, Seoul, Korea in 2010. From February 2001, he has been a senior engineer in the Digital Media and Communications (DMC) R&D Centre, Samsung Electronics, Suwon, Korea, where he was engaged in the design and development of wireless communication systems, such as, CDMA2000 1xRTT/EVDO and Mobile WiMAX systems. His research interests are on advanced technologies of wireless packet data systems, including resource management in multi-channel systems, cross-layer issues between MAC and PHY, IP-mobility and

self-organizing networks. He can be reached by email via sardor.lee@samsung.com.

Seokhyun Yoon received his B.S. and M.S. degrees in electronics engineering from Sung Kyun Kwan University, Suwon, Korea, in 1992 and 1996, respectively, and his Ph.D. degree in electrical and computer engineering from the New Jersey Institute of Technology, Newark, in 2003. In 1999, he was with the Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea. During 2003–2005, he was with the Telecommunications R&D Centre, Samsung Electronics Co., Ltd., Suwon, Korea, where he worked on technologies for wireless/mobile air interfaces. Currently, he is an Associate Professor in the Department of Electronics Engineering, Dankook University, Yongin-si, Kyunggi-do, Korea. His research activities are focused on wireless communications. Dr. Yoon was awarded the Hashimoto Prize in 2003 for his research achievements through the Ph.D. course.

Wan Choi has been an Assistant Professor of the Department of Electrical Engineering, Korea Advance Institute of Science and Technology (KAIST), Daejeon, Korea, since February 2007. He received his B.Sc. and M.Sc. degrees from the School of Electrical Engineering and Computer Science (EECS), Seoul National University (SNU), Seoul, Korea, in 1996 and 1998, respectively, and the Ph.D. degree in the Department of Electrical and Computer Engineering at the University of Texas at Austin in 2006. He was a Senior Member of the Technical Staff of the R&D Division of KT Freetel Co. Ltd., Korea from 1998 to 2003 where he researched 3G CDMA systems. He also researched at Freescale Semiconductor and Intel Corporation during 2005 and 2006 summers, respectively, where he collaborated with them on practical wireless communication issues. His research interests include areas of wireless communications, including interference management, MIMO communications, cooperative communications, cognitive radio, and advanced communications systems.

He is the recipient of IEEE Vehicular Technology Society Jack Neubauer Memorial Award in 2002. He also received IEEE Vehicular Technology Society Dan Noble Fellowship Award in 2006. While at the University of Texas at Austin, he was the recipient of William S. Livingston Graduate Fellowship from UT Austin, and Information and Telecommunication Fellowship from Ministry of Information and Communication (MIC), Korea. He received IEEE Communication Society Asia Pacific Young Researcher

Award as an outstanding young researcher in 2007. He serves as an Associate Editor for *IEEE Transactions on Wireless Communications*.

Wenbo Wang (wbwang@bupt.edu.cn, Beijing University of Posts and Telecommunications) is Dean of Telecommunication Engineering at Beijing University of Posts & Telecommunications (BUPT). He received the B.S. degree, the M.S. and Ph.D. degrees from BUPT in 1986, 1989 and 1992 respectively. Now he is the Assistant Director of academic committee of the Universal Wireless Communication Lab, which is the key laboratory of the Ministry of Education of China. Professor Wenbo Wang is a member of the council of China Institute of Communication and a standing member of the council of Beijing Institute of Communication. He is also the member of expert group of the TD-SCDMA research and industrialization which is organized by Ministry of Information and Industry. Currently, he chairs several projects funded by National Nature Science Foundation, National 863 Programming, and National 973 Programming. His research interests include radio transmission technology, wireless network theory, broadband wireless access and software radio technology. Professor Wenbo Wang has published more than 200 journal and international conference papers, held 12 patents and has published 6 books.

Xia Wang received the B.Eng. degree from Xi'an Jiaotong University, Xi'an, China, in 1987, the M.Eng. degree from Xidian University, Xi'an, China, and the Ph.D. degree from Xi'an Jiaotong University, Xi'an, China. She works at school of Electronic and Information Engineering, Xi'an Jiaotong University, Xi'an, China.

Xiang-Gen Xia (M'97, S'00, F'09) received his B.S. degree in mathematics from Nanjing Normal University, Nanjing, China, and his M.S. degree in mathematics from Nankai University, Tianjin, China, and his Ph.D. degree in Electrical Engineering from the University of Southern California, Los Angeles, in 1983, 1986, and 1992, respectively.

He was a Senior/Research Staff Member at Hughes Research Laboratories, Malibu, California, during 1995–1996. In September 1996, he joined the Department of Electrical and Computer Engineering, University of Delaware, Newark, Delaware, where he is the Charles Black Evans Professor. He was a Visiting Professor at the Chinese University of Hong Kong during 2002–2003, where he is an Adjunct Professor. Before 1995, he

held visiting positions in a few institutions. His current research interests include space-time coding, MIMO and OFDM systems, digital signal processing, and SAR and ISAR imaging. Dr. Xia has over 200 refereed journal articles published and accepted, and 7 U.S. patents awarded and is the author of the book *Modulated Coding for Intersymbol Interference Channels* (New York, Marcel Dekker, 2000).

Dr. Xia received the National Science Foundation (NSF) Faculty Early Career Development (CAREER) Program Award in 1997, the Office of Naval Research (ONR) Young Investigator Award in 1998, and the Outstanding Overseas Young Investigator Award from the National Nature Science Foundation of China in 2001. He also received the Outstanding Junior Faculty Award of the Engineering School of the University of Delaware in 2001. He is currently an Associate Editor of the *IEEE Transactions on Wireless Communications*, *IEEE Transactions on Signal Processing*, *Signal Processing (EURASIP)*, and the *Journal of Communications and Networks (JCN)*. He was a Guest Editor of Space-Time Coding and Its Applications in the *EURASIP Journal of Applied Signal Processing* in 2002. He served as an Associate Editor of the *IEEE Transactions on Signal Processing* during 1996 to 2003, the *IEEE Transactions on Mobile Computing* during 2001 to 2004, *IEEE Transactions on Vehicular Technology* during 2005 to 2008, the *IEEE Signal Processing Letters* during 2003 to 2007, and the *EURASIP Journal of Applied Signal Processing* during 2001 to 2004.

Dr. Xia served as a Member of the Signal Processing for Communications Committee from 2000 to 2005 and is currently a Member of the Sensor Array and Multichannel (SAM) Technical Committee from 2004 to 2009 in the IEEE Signal Processing Society. He serves as IEEE Sensors Council Representative of IEEE Signal Processing Society (from 2002) and served as the Representative of IEEE Signal Processing Society to the Steering Committee for *IEEE Transactions on Mobile Computing* during 2005 to 2006. Dr. Xia is the Technical Program Chair of the Signal Processing Symposium, Globecom 2007 in Washington D.C. and the General Co-Chair of ICASSP 2005 in Philadelphia.

XiaoShi Song (songxshi@gmail.com, Beijing University of Posts and Telecommunications) received his B.S. degree in computer science engineering from Dalian University of Technology, China, in 2008. In 2008 he started to work toward his M.S. and Ph.D. degrees in wireless communication technologies with a focus on radio resource management schemes of OFDM and OFDM-MIMO systems in Beijing University of Posts &

Telecommunications (BUPT), China. Now his research interests lie in the linear diversity of MIMO-OFDM systems and the cooperative diversity in the wireless relay networks.

Yi Zhou is currently working towards the Ph.D. degree in electrical engineering at Texas A&M University, College Station. His research interests lie in the areas of signal processing and wireless communications.

Yik-Chung Wu received the B.Eng. degree in electrical and electronic engineering and the M.Phil. degree from The University of Hong Kong, in 1998 and 2001, respectively, and the Ph.D. degree from TAMU-College Station, in 2005. Since September 2006, he has been an Assistant Professor at The University of Hong Kong. From August 2005 to August 2006, he was with Thomson Corporate Research, Princeton, NJ, as a member of the technical staff. His research interests include the general area of signal processing for communication systems and, in particular, receiver design, synchronization techniques, software radios, OFDM, MIMO, and Monte Carlo statistical methods.

Young-Chai Ko (S'97, M'01, SM'06) received the B.Sc. degree in electrical and telecommunication engineering from the Hanyang University, Seoul, Korea, and the M.S.E.E. degree and the Ph.D. degree in electrical engineering from the University of Minnesota, Minneapolis, MN, USA in 1999 and 2001, respectively. In March 2001 he joined the Texas Instruments, Inc. San Diego wireless center in San Diego, CA, where he worked on the WCDMA MODEM system design. Since March 2004, he has been with School of Electrical Engineering at Korea University where he is currently an Associate Professor. Dr. Ko has been an Editor of *IEEE Transactions on Wireless Communications*. His research interest is in the wireless system design and its performance analysis. He can be reached by email via koyc@korea.ac.kr.

Zihuai Lin Zihuai Lin received the M.S. (with distinction), Licentiate and Ph.D. degrees in Electrical Engineering from the Chalmers University of Technology, Gothenburg, Sweden, in 1999, 2003 and 2006, respectively. In 1999, he joined Ericsson Radio Systems AB, Stockholm, Sweden as a system designer, where he worked with European Wireless LAN standard—HiperLAN/2, Wireless Internet, etc. From November 2000 to January 2006, he was with the Department of Computer Science and Engineering, Chalmers University

of Technology, Gothenburg, Sweden, working with telecommunication theory, especially on trellis based joint source and channel coding, coded modulation, iterative decoding, etc. Since May 2006, he was appointed as an associate professor at the Department of Electronic Systems, Aalborg University, Denmark, working with MIMO, space time coding, cooperative communications, relay networks, etc. He also served as an external senior researcher for Nokia research center, Aalborg, Denmark, working with 3GPP EUTRA LTE standardization, and relay communications, etc. Currently, he works at the School of Electrical and Information Engineering, the University of Sydney, Australia. His research interests are digital communications, telecommunication theory, iterative decoding, joint source channel coding, coded modulation, radio resource management, MIMO, space time coding, cooperative communications, ad hoc networks, network coding, relay networks, wireless networking, etc.

Zhefeng Li received both the B.S. degree and the M.S. degree in electrical engineering from Shanghai Jiaotong University, Shanghai, China, in 2001 and 2004, respectively. He is currently pursuing the Ph.D. degree with the Department of Electrical and Computer Engineering, University of Delaware, Newark. His current research interests are space-time coding, and MIMO and OFDM systems.

He was awarded an National Science Foundation (NSF) Travel Grant in 2007.