Xiang-Gen Xia

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Citizenship

U.S.A.

Education

12/1992	**Ph.D.** in **Electrical Engineering** Communication Sciences Institute, EE-Systems University of Southern California, Los Angeles, CA
12/1989	**M.S.** in **Applied Mathematics** University of Cincinnati, Cincinnati, OH
7/1986	**M.S.** in **Mathematics** Nankai University, Tianjin, P.R.China
7/1983	**B.S.** in **Mathematics** Nanjing Normal University, Nanjing, P.R.China

Experience

9/2007 –	**Charles Black Evans Professor** (endowed)
9/2002 –	**Professor** (tenured)
9/1999 – 8/2002	**Associate Professor** (tenured)
9/1996 – 8/1999	**Assistant Professor** Department of Electrical and Computer Engineering University of Delaware, Newark, DE
12/2002 –	**Professor** (joint) Department of Mathematical Sciences University of Delaware, Newark, DE
6/2017 –	**Visiting Professor** Beijing Institute of Technology, Beijing, China
1/2018 – 12/2020	**Visiting Professor** Xidian University, Xi'an, China
9/2016 – 8/2019	**Distinguished Professor** (visiting) Shenzhen University, Shenzhen, China

9/2015 – 8/2019   **Visiting Professor**
Southeast University, Nanjing, China

1/2014 – 12/2016   **Adjunct Professor**
Hefei University of Technology, He Fei, China

1/2014 – 12/2016   **1000 People Plan Professor** (visiting)
Xidian University, Xi'an, China

2/2010 – 1/2013   **Chang Jiang Chair Professor** (visiting)
Xidian University, Xi'an, China

4/2009 – 8/2013   **Chair Professor** (visiting) in the World Class University (WCU)Program
Chonbuk Nantional University, South Korea

3/2009 – 3/2012   **Kumar's Chair Professor Group (Guest) Professor**
Department of Electronic Engineering
Tsinghua University, China

1/2004 – 12/2013   **Adjunct Professor**
8/2002 – 7/2003   **Visiting Professor**
Department of Electronic Engineering
The Chinese University of Hong Kong, Hong Kong

4/2008 – 3/2011   **Guest Professor**
Huazhong University of Science and Technology, China

10/2006 – 9/2009   **Adjunct Professor**
University of Electronic Science and Technology of China, China

1/2003 – 12/2007   **Adjunct Research Professor**
Applied Math Center
Delaware State University, Dover, DE

9/1997 – 8/1998   **Consultant**
Hughes Network Systems, Germantown, MD

1/1996 – 8/1996   **Senior Research Staff**
3/1995 –12/1995   **Research Staff Member**
Hughes Research Laboratories, Malibu, CA

11/1993 – 2/1995   **Research Scientist**
Department of Electrical and Computer Engineering
Air Force Institute of Technology, Wright-Patterson Air Force Base, OH

6/1993 – 10/1993 **Research Associate**
Department of Electrical Engineering-Systems
University of Southern California, Los Angeles, CA

2/1993 – 5/1993 **Visiting Scholar**
Department of Mathematical Sciences
University of Delaware, Newark, DE

9/1990 – 1/1993 **Research Assistant**
Department of Electrical Engineering-Systems
University of Southern California, Los Angeles, CA

9/1988 – 6/1990 **Teaching Assistant**
Department of Mathematical Sciences
University of Cincinnati, Cincinnati, OH

9/1986 – 7/1988 **Lecturer**
9/1983 – 7/1986 **Research Assistant**
Department of Mathematics
Nankai University, Tianjin, P.R.China

Awards and Honors

2019 – The 2019 Information Theory Outstanding Overseas Chinese Scientist Award,
  The Information Theory Society of Chinese Institute of Electronics
2010 – Chang Jiang Chair Professorship (visiting), China
2009 – World Class University (WCU) Professorship (visiting), South Korea
2009 – Kumar's Group Professorship in Wireless Communications (guest),
  Tsinghua University, China
2009 – Fellow of IEEE
2007 – Named Professorship, College of Engineering, University of Delaware
2001 – The Outstanding Overseas Young Investigator Award,
  the National Natural Science Foundation of China
2001 – The Outstanding Junior Faculty of Engineering Award,
  the College of Engineering, University of Delaware
1998 – The Office of Naval Research Young Investigator Program (**ONR YIP**) Award
1997 – The National Science Foundation Faculty Early Career Development (**NSF CAREER**)
  Award
1992 – Travel Grant from the 1993 IEEE International Symposium on Information Theory,
  San Antonio, Texas
1988 – The National Natural Science Foundation Young Investigator Award of China
1989 – Summer Fellowship in the University of Cincinnati
1983 – Best Thesis Award in Nanjing Normal University

Research Grants

- Co-PI, NeTS: Medium: Collaborative Research: In-Band Full-Duplex Underwater Acoustic Networks, National Science Foundation (NSF), PI: Len Cimini, and other Co-PIs, Aijun Song and C.-C. Shen, total $600,000, June 1, 2017 to May 31, 2021.

- PI, Design and Optimization on Flexible Duplexing based Wireless Communication Systems, Huawei, Inc., $70,000, 2016 – 2017.

- Co-PI, Fundamental Limits of Wireless Data Transmission over Interference Channels Australian Research Council Discovery, AU$360,000, PI: Wei Zhang, the University of New South Wales, 2016-2018. This fund is located in the University of New South Wales, Australia.

- Co-PI, Massive MIMO Systems, Key International Collaborative Research Program, National Natural Science Foundation of China, over 3,000,000 Chinese Yuan, Jan. 1, 2014 – Dec. 31, 2018, PI: Xiqi Gao, other Co-PIs: Chengshan Xiao and Kit Wong. This fund is located in Southeast University, Nanjing, China.

- PI, Robust Modulo Remaindering and Applications in Radar and Sensor Signal Processing, the Air Force Office of Scientific Research (AFOSR), $237,390, 2012 – 2015.

- PI, Coding and Modulation for Broadband Multiple Antenna Systems, National Natural Science Foundation of China, 200,000 Chinese Yuan (about $32,000), 1/1/2012–12/31/2013. This is an international collaborative research grant and located in Tsinghua University, China.

- PI, CIF: Medium: Collaborative Research: Explicit Codes for Efficient Operation of Wireless Networks, National Science Foundation (NSF), $242,479, 8/2010 – 7/2014.

- Co-PI, Anomaly Pattern Analysis, Michelin, PI: Javier Garcia-Frias, Co-PI: Gonzalo Arce, $100,000, 4/2011-3/2012.

- PI, Space-Time Codes for Interference Alignment, Huawei Technologies, $80,000, 1/2010 – 12/2010.

- PI, Mitigation of Radar Clutter Using Algorithmic Techniques, MDA Phase II, subcontracted from Signal Processing, Inc., $134,999, 7/2009 – 12/2011.

- Co-PI, Efficient signal transmission techniques for future wireless communications systems, the Austrailian Research Council, (The PI is Wei Zhang at The University of New South Wales, Australia), AU$150,000, 1/2010 – 12/2012. This grant is located in Australia.

- Co-PI, Distributed Space-Time Coding for Cooperative Communication Systems, HK$549,318, RGC grant, Hong Kong, (The PI is P. C. Ching, The Chinese University of Hong Kong, also Co-PI with Wei Zhang at The University of New South Wales, Australia), 2010 – 2012. This grant is located in Hong Kong.

- Co-PI, Adaptive resource allocation in high speed wireless transmissions, Ministry of Science and Technology of China (MOST), about $500,000, (The PI is Jiangzhou Wang, Southeast University, China), 1/2009 – 6/2013. This grant is located in Southeast University, Nanjing, China.

- Co-PI, Space Time MIMO-OFDM Coded Cooperative Wireless Networks, World Class University (WCU) Program, South Korea, about $2,000,000, 2009 – 2013. The PI is Prof. Moon Ho Lee, The Chonbuk National University, South Korea. This grant is located in South Korea.

- PI, Low complexity receiver based space-time codes for broadband wireless communications, the Air Force Office of Scientific Research (AFOSR), $204,406, 3/2008 – 11/2010.

- PI, A novel and high performance framework for detecting, tracking, and identifying dim targets, MDA Phase I, subcontracted from Signal Processing, Inc., $20,998 2008.

- Co-PI, Inverse scattering theory for MIMO radar with applications in wall penetration, the Army Research Office, PI is Fengshan Liu at the Delaware State University. Total $500,000 (my part/budget is $200,000), 6/2007 – 5/2010.

- PI, Advanced Coding and Modulation for MIMO-OFDM Systems, Huawei Technologies, $80,000, 2008.

- PI, Space-time coding using algebraic number theory for broadband wireless communications, the Air Force Office of Scientific Research (AFOSR), $269,897, 3/2005 – 2/2008.

- PI, ITR Collaborative Research: Achieving the Rate-Diversity Tradeoff in Space-Time Codes, ITR Medium, the National Science Foundation, $420,000, 9/2003-8/2008. (Leading PIs are Vijay Kumar and Zhen Zhang at USC and another PI is Roger Hammons at the John Hopkins Univ. The total award for 4 PIs is $1,680,000).

- Co-PI, Co-Existence of Broadband Wireless Systems, Intel Beijing Communications Research Lab., $90,000, 1/2006-12/2008, (PI is Zhisheng Niu at Tsinghua University and the grant is located at Tsinghua University, China).

- Co-PI, A New Vector Orthogonal Frequency Division Multiplexing for Broadband Communication Systems, RGC, Hong Kong, HK$410,000, 9/2003-8/2005. (PI is P. C. Ching at the Chinese University of Hong Kong (CUHK) and the grant is located at the CUHK).

- Co-PI, DoD for an Applied Mathematics Research Center at DSU, $4,000,000, 9/2003-8/2008. (There are several Co-PIs and the PI is Fengshan Liu at the Delaware State University (DSU) and the grant is located at the DSU).

- PI, Space-Time Code Designs for Broadband Wireless Communications, the Air Force Office of Scientific Research (AFOSR), $261,452, 3/2002 – 2/2005.

- PI, Modulated Coding for Frequency-Selective Multipath Channels, the National Science Foundation, $299,100.00, 9/2001-8/2006. + $12,000 REU.

- PI, SAR and ISAR Imaging of Moving Targets, the Outstanding Overseas Young Investigator Award of China, the National Nature Science Foundation of China, 400,000 Chinese Yuan (about US$50,000), 1/2002-12/2004. (The grant is located at Tsinghua University, China).

- PI, Space-time code designs, Collaborative Technology Alliances, Army Research Lab., $150,000, 9/2001 - 9/2004.

- CO-PI, Vector multiresolution inverse scattering and target detection in multifrequency ground penetrating radar imaging, Sponsored by the Army Research Office, $180,000, 8/2001-7/2004. (PI is Fengshan Liu at the Delaware State University and the grant is located at the DSU).

- PI, Adaptive discrete chirp-Fourier transform with applications in over-the-horizon radar, Sponsored by the Office of Naval Research, $300,000.00, 10/2000-9/2004.

- PI, Modulated coding for digital communication systems under ISI/Multipath fading and jamming, Sponsored by the Air Force Office of Scientific Research (AFOSR), $153,963, 1/2000-12/2001.

- PI, Noise analysis and reduction for joint time-frequency/time-scale transformations with applications in ISAR/SAR imaging, Sponsored by the Office of Naval Research (ONR) Young Investigator Program (YIP), $349,000, 6/1998-5/2001.

- PI, Modulated coding: a new digital communication system, Sponsored by the University of Delaware Research Foundation, $30,000, 6/1999-5/2000.

- PI, Modulated coding: a new digital communication system, Sponsored by the University of Delaware Research Foundation, $30,000, 6/1998-5/1999.

- PI, Modulated coding for digital communication systems under ISI/Multipath fading and jamming, Sponsored by the Air Force Office of Scientific Research (AFOSR), $136,961, 1/1998-12/1999.

- PI, Intersymbol/interchannel interference cancellation using multirate filterbanks, Sponsored by the National Science Foundation Career Program, $212,665, 6/1997-5/2001.

- PI, Two dimensional Malvar wavelets and their applications in image/video compression, Sponsored by the Air Force Office of Scientific Research (AFOSR), $67,084, 1/1997-12/1997.

- PI (Lon Sunshine) and AI (Gonzalo Arce, Charles Boncelet and Xiang-Gen Xia), Multimedia image compression for the Army needs, Sponsored by the Army Research Laboratory through the Advanced Telecommunications and Information Distribution Research Program (ATIRP), 8/1998-7/1999, $150,000.

- PI (Richard Graveman) and COPI (Gonzalo Arce, Charles Boncelet and Xiang-Gen Xia), Image and Video Watermarking, Sponsored by the Army Research Laboratory through the Advanced Telecommunications and Information Distribution Research Program (ATIRP), 4/1997 - 9/1999, $260,000.

Pending Research Grants

- PI, Collaborative Research: CIF: Small: Multidimensional Robust Remaindering Theory and Applications, National Science Foundation, $250,000, 2021 – 2024.

Courses Taught

- ELEG 834, Advanced Topics in Signal Processing. This is a new course for graduate students in the ECE Dept.

- ELEG 667, Detection and Estimation. This is a new course for graduate students in the ECE Dept.

- ELEG630, Information Theory. This is a foundation course for graduate students in the ECE Dept.

- ELEG636, Statistical Signal Processing. This is a foundation course for graduate students in the ECE Dept.

- ELEG635, Digital Communications. This is a foundation course for graduate students in the ECE Dept.

- ELEG867, Advanced Topics in Communications, Wireless Digital Communications

- ELEG867, Digital Wireless Communications

- ELEG631, Digital Signal Processing. This is a foundation course for graduate students in the ECE Dept.

- EE 340, Analog and Digital Communications in Noise, Chinese University of Hong Kong.

- ELEG306, Signal Processing II

- ELEG867, Wavelets and Filter Banks.

Research Supervision

Current Graduate Students

- **Mohammad Towliat** (from 9/2018), joint with Len Cimini and Chien-Chung Shen.

- **Haiyue Jing** (from 11/2019 to 10/2021), visiting from Xidian University, China.

Visiting Professors/Scholars/Students and Post-Doctoral Researchers

- **Pei Ye** (from 9/2018 to 9/2020), visiting from Xidian University, China.

- **Caixia Cai** (from 9/2017 to 9/2019), visiting from Donghua University, China.

- **Xuejing Zhang** (from 9/2017 to 9/2019), visiting from University of Electronic Science and Technology of China, China.

- **Jingfeng Zhang** (from 12/2017 to 12/2018), visiting from Shenzhen University, China.

- **Qin Wang** (from 9/2017 to 9/2018), visiting from Huazhong National University, China.

- **Dan Bao** (from 3/2017 to 3/2018), visiting from Xidian University, China.

- **Gaogao Liu** (from 1/2017 to 1/2018), visiting from Xidian University, China.

- **Cai Liu** (from 12/2016 to 11/2017), visiting from Xidian University, China.

- **Guozhen Liu** (from 9/2015 to 10/2017), visiting from University of Electronic Science and Technology of China.

- **Kai Liu** (from 10/2016 to 10/2017), visiting from Beijing Jiaotong University, China.

- **Xuefei Xu** (from 9/2016 to 9/2017), visiting from Xidian University, China.

- **Fuli Zhong** (from 9/2015 to 9/2017), visiting from University of Electronic Science and Technology of China.

- **Ran Tao** (from 12/2016 to 3/2017), visiting from Beijing Intitute of Technology.

- **Hao Huan** (from 12/2016 to 12/2017), visiting from Beijing Intitute of Technology.

- **Mingfeng Lu** (from 12/2016 to 12/2017), visiting from Beijing Intitute of Technology.

- **Feng Zhang** (from 12/2016 to 12/2017), visiting from Beijing Intitute of Technology.

- **Xuan Rao** (from 12/2016 to 12/2017), visiting from Nanchang Hangkong University.

- **Mingwei Shen** (from 9/2016 to 8/2017), visiting from Hehai University.

- **Lingyun Xu** (from 9/2016 to 8/2017), visiting from Nanjing University of Aeronautics and Astronautics.

- **Zhigang Chen** (from 9/2016 to 8/2017), visiting from Xian Jiao Tong University.

- **Lei Wang** (from 9/2016 to 8/2017), visiting from Xian Jiao Tong University.

- **Lihua Xu** (from 1/2016 to 12/2016), visiting from Southwest Jiao Tong University.

- **Yingying Yu** (from 9/2015 to 8/2016), visiting from Southeast University.

- **Qiang Sun** (from 2/2016 to 8/2016), visiting from Nantong University.

- **Yanling Shi** (from 9/2015 to 5/2016), visiting from Nanjing University of Post and Telecommunications.

- **Yuanyuan Gao** (from 9/2015 to 8/2016), visiting from Nanjing University of Post and Telecommunications.

- **Xiaoyan Lin** (from 9/2015 to 8/2016), visiting from Harbin Univ. of Technologies.

- **Lin Mei** (from 9/2015 to 8/2016), visiting from Harbin Institute of Technology (BIT).

- **Wei Peng** (from 9/2014 to 8/2016), visiting from University of Electronic Science and Technology of China.

- **Beiyu Wei** (from 12/2015 to 5/2016), visiting from Nanjing University of Aeronautics and Astronautics.

- **Fangqing Wen** (from 10/2015 to 2/2016), visiting from Nanjing University of Aeronautics and Astronautics.

- **Min Wu** (from 9/2014 to 9/2015), visiting from Xidian University.

- **Xin Meng** (from 9/2014 to 9/2015), Large MIMO systems, visiting from Southeast University.

- **Dejin Kong** (from 9/2013 to 9/2015), visiting from Huazhong University of Science and Technology.

- **Qi Feng** (from 9/2014 to 9/2015), visiting from Nanjing University.

- **Jinhua Sun** (from 10/2014 to 9/2015), visiting from Xidian University, China.

- **Xiaoping Li** (from 12/2013 to 1/2015), visiting from Xi'an Jiao Tong University.

- **Tianxian Zhang** (from 11/2012 to 10/2014), visiting from University of Electronic Science and Technology of China.

- **Da Chen** (from 9/2013 to 8/2014), visiting from Huazhong University of Science and Technology.

- **Xiangbin Yu**, (from 3/2014 to 2/2015), Nanjing University of Aeronautics and Astronautics.

- **Yunhe Cao** (from 12/2013 to 12/2014). Xidian University.

- **Zujun Liu** (from 3/2013 to 2/2014), Xidian University.

- **Mang Liao** (from 2/2013 to 1/2014), Beijing University of Aeronautics and Astronautics.

- **Xiangdong Huang** (from 1/2013 to 12/2013), Tianjin University

- **Weiliang Han** (from 9/2012 to 8/2013), Xidian University.

- **Yong (Mark) Li** (from 1/2012 to 12/2012), Nanjing University of Aeronautics and Astronautics.

- **Shengbo Zhang** (from 11/2012 to 10/2013) Southeast University

- **Jun Shi** (from 10/2011 to 4/2012), Harbin Institute of Technology.

- **Yi Lu** (12/2011 to 2/2012), the University of New South Wales.

- **Guoquan Li** (from 5/2010 to 4/2011), Chengqing University.

- **Yi Liu** (from 4/2011 to 3/2012), Xidian University.

- **Wenjie Wang** (from 11/2009 to 10/2010), Xi'an Jiao Tong University.

- **Long Shi** (12/2010 to 2/2011), the University of New South Wales.

- **Wei Zhang** (from 2/2010 to 1/2011), University of Electronic Science and Technology of China.

- **Harya Wicaksana** (2009-2010), Nanyang Technological University.

- **Jianchao Mu** (from 12/2008 to 11/2009), Beijing Institute of Technology.

- **Hong Liang** (from 4/2008 to 3/2009), Xi'an Polytechical University.

- **Weiwei Cui** (from 2/2008 to 1/2009), Tsinghua University.

- **Genyuan Wang** (from 5/1998 to 11/2004), Villanova University.

- **Haiquan Wang** (from 4/2001 to 8/2002), Zhe Jiang University.

- **Guangcai Zhou** (from 4/1997 to 8/1997), Lincom.

- **Pingyi Fan** (from 5/1998 to 9/1999), Tsinghua University.

- **Xiao Ma** (from 6/2000 to 10/2000), Zhong Shan University.

Former Graduate Students

- **Li Xiao** (Graduated with Ph.D. in 2017), Tulane University, New Orleans, LA.

- **Yuansheng Jin** (Graduated with Ph.D., 2017), Marvell, San Jose, CA.

- **Ze Qu** (Graduated with MS, 2017)

- **Tianyuan Qiu** (Graduated with MS, 2017)

- **Tianyi Xu** (Graduated with Ph.D., 2013), InterDigital, San Diego, CA.

- **Cheng Wang** (Graduated with M.S., 2011), Samsung, Shanghai, China.

- **Xiaowei Li** (Graduated with Ph.D., 2011), KLA and Tencor, San Jose, CA.

- **Zheng Li** (Graduated with Ph.D., 2011), Coats & Bennett PLLC.

- **Zhefeng Li** (Graduated with Ph.D., 2010), AT & T Research Lab., Morristown, NJ

- **Huiming Wang** (Graduated with Ph.D. at Xi'an Jiao Tong University, 2010, Winner of the **Best 100 Ph.D. Thesis Award in China**), Co-advised with Prof. Qin-Ye Yin at Xi'an Jiao Tong University, Associate Professor, Xi'an Jiao Tong University, Xi'an, China.

- **Xiaoyong Guo** (Graduated with Ph.D., 2009), Alcatel-Lucent, Shanghai, China.

- **Feng Tian** (Graduated with Ph.D., 2009, at The Chinese University of Hong Kong), Co-advisored with Prof. P. C. Ching at The Chinese University of Hong Kong, CUHK, Hong Kong.

- **Yue Shang** (Graduated with Ph.D., 2008), MathWorks, Boston.

- **Gang Li** (Graduated with Ph.D., 2007, at Tsinghua University), Co-advisored with Prof. Yingning Peng at Tsinghua University, Faculty Member, Tsinghua University.

- **Huiyong Liao** (Graduated with Ph.D., 2006), Bloomberg, New York.

- **Shengli Fu** (graduated with Ph.D., 2005), Tenured Associate Professor, University of North Texas, TX.

- **Dong Wang** (graduated with Ph.D., 2005), Philips Research Labs., New York.

- **Yabo Li** (Graduated with Ph. D., 2005), Associate Professor, Zhe Jiang University, Hangzhou, China.

- **Wei Zhang** (Graduated with Ph.D. in Chinese University of Hong Kong, co-advisored with Prof. P. C. Ching, 2005), Tenured Associate Professor, The New South Wales University, Australia.

- **Haiquan Wang** (graduated with Ph.D., 2005), Professor, Hangzhou Dianzi University, China

- **Aijun Song** (graduated with Ph.D., 2004), Tenure Track Assistant Professor, University of Alabama

- **Hong Zhang** (graduated with Ph.D., 2004), Broadcom, LA.

- **Weifeng Su** (graduated with Ph.D., 2002), Tenured Associate Professor, SUNY, Buffalo, NY.

- **Xubin Liang** (graduated with Ph.D., 2001), Tenured Associate Professor, the Louisiana State University.

- **Guoliang Fan** (graduated with Ph.D., 2001), Tenured Full Professor, the Okalahoma State University.

- **Yongjun Zhang** (graduated with Ph.D., 2001), Oki Semiconductors, Pittsburgh, PA.

- **Qian Xie** (graduated with Ph.D., 2001), Broadcom, CA. Won the Young Alumni Achievement Award at the Department of Electrical and Computer Engineering, University of Delaware, in 2013.

- **Zhiquan He** (from 9/2006 to 8/2007),

- **Kai Bao** (from 9/1997 to 8/1998).

- **Kai Xiao** (graduated with M.S.), Ericsson, CA.

- **Yishan Yang** (graduated with M.S., joint with Ih)

- **Zhongxin Li** (graduated with M.S.), MathWorks, MA.

- **Rong Peng** (graduated with M.S.), NC State Univ.

Professional Activities and Service

- **General Co-Chair** of the ICASSP 2005, Philadelphia.

- **Technical Program Chair** of the Signal Processing Symp., Globecom 2007, Washington, D.C., Nov. 2007.

- **Technical Committee Member** of the *Signal Processing for Communications* Technical Committee in IEEE Signal Processing Society (Jan. 2000 – Dec. 2005).

- **Technical Committee Member** of the *Sensor Array and Multi-channel* Technical Committee in IEEE Signal Processing Society (Jan. 2004 – Dec. 2009).

- **Technical Committee Member** of the *Communication Theory* Technical Committee in IEEE Communications Society.

- **IEEE Sensors Council Representative** (Jan. 2002 – Dec. 2011), IEEE Signal Processing Society.

- **Representative of IEEE Signal Processing Society to the Steering Committee** (2005-2006) for IEEE Transactions on Mobile Computing.

- **Associate Editor** (Dec. 2012 – present), *Science China – Information Sciences.*

- **Associate Editor** (Jan. 2016 – present), *Chinese Journal of Electronics*

- **Associate Editor** (Jan. 2019 – present), *Journal of Radars*

- **Associate Editor** (Jan. 2012 – present), *Journal of Signal Processing* (China)

- **Associate Editor** (Jan. 2017 – present), *Chinese Journal on Internet of Things*

- **Associate Editor** (2005 – present), *Journal of Communications and Networks (JCN).*

- **Associate Editor** (2006 – present), *Journal of Communications (JCM).*

- **Senior Editor** (Jan. 2016 to Dec. 2019), *IEEE Wireless Communications Letters.*

- **Associate Editor** (Jan. 2009 – Aug. 2013), *IEEE Transactions on Signal Processing.*

- **Editor** (Feb. 2007 – June 2012), *IEEE Transactions on Wireless Communications.*

- **Associate Editor** (May 2008 – Jan. 2012), *Signal Processing* (EURASIP).

- **Associate Editor** (Jan. 2005 – Aug. 2008), *IEEE Transactions on Vehicular Technology.*

- **Associate Editor** (Jan. 2003 – Feb. 2008), *IEEE Signal Processing Letters.*

- **Associate Editor** (Dec. 2001 – Mar. 2005), *IEEE Transactions on Mobile Computing.*

- **Associate Editor**, (Jan. 2001 – Jan. 2005), *EURASIP J. on Applied Signal Processing.*

- **Associate Editor** (Dec. 1996 – Jan. 2004), *IEEE Transactions on Signal Processing.*

- **Guest Editor**, (2002), Special Issue on Space-Time Coding and Its Applications in *EURASIP J. on Applied Signal Processing.*

- **Guest Editor**, (2010), Special Issue on Coding and Modulation for Cooperative Communications, *Journal of Communications.*

- **Guest Editor**, (2010), Special Issue on Coordinated and Distributed MIMO, *IEEE Wireless Communications Magazine.*

- **Guest Editor**, (2010-2011), Special Issue on DBWC, *IEEE J. on Selected Areas Communications.*

- **Guest Editor**, (2012-2013), Special Issue on Virtual MIMO Systems, *IEEE J. on Selected Areas Communications.*

- **Finance Chair**, the 2001 IEEE -EURASIP Workshop on Nonlinear Signal and Image Processing, Baltimore, 2001.

- **Technical Program Co-Chair**, The International Conference on Wireless Communications and Signal Processing (WCSP)
Nanjing, China, Nov. 13-15, 2009
Suzhou, China, Oct. 20-23, 2010
Nanjing, China, Nov. 9-11, 2011
Nanjing, China, Oct. 15-17, 2015
Yangzhou, China, Oct. 2016
Nanjing, China, Oct. 2020

- **Technical Program Chair**, Wireless Communications Symp., ICCCAS 2009, San Jose, CA, July, 2009.

- **Track Co-Chair**, ChinaSIP for Communications and Networks Track, ChinaSip 2013, Beijing, China, July 6-10, 2013.

- **Track Co-Chair**, ChinaSIP for Multi-channel and Array Signal Processing Track, ChinaSip 2014, Xi'an, China, July 9-13, 2014.

- **Track Chair**, ChinaSIP for Multi-channel and Array Signal Processing Track, ChinaSip 2015, Chengdu, China, July 11-14, 2015.

- The National Science Foundation Panel Member (numerous times).

- The National Natural Science Foundation of China Panel Member, 2002, 2012, 2013, 2014, 2016, 2017.

- The Portugal Foundation of Science and Technology Panel Member, Lisbon, Portugal, 2000 and 2007.

- The Korea Research Foundation, Panel Member for WCI Program, Seoul, Nov. 23, 2009.

- The (Electrical, Electronic, and Computer Science and Engineering) School Evaluation Committee Member, Shanghai Jiaotong University, China, June 2009.

- The College of Electronic and Information Engineering **International On-Site Evaluation Committee Member**, Beijing Institute of Technology, Nov. 2017.

- **Conference Technical Program Committee Member**

  - *Communications Theory Symp. in the International Conf. on Communications*, Anchorage, Alaska, June 2003.
  - *14th IEEE International Symp. Personal, Indoor and Mobile Radio Communications*, Beijing, Sept. 2003.
  - *IEEE International Workshop on Signal Processing Advances for Wireless Communications (SPAWC)*, 2004 and 2005.
  - *Communications Theory Symp. in the International Conf. on Communications*, Paris, France, June 2004.
  - *Communications Theory Symp. in the Globecom 2004*, Dallas, Texas, Nov. 29- Dec. 3, 2004.
  - *Wireless Access in the International Conf. on Vehicle Tech.*, 2004.
  - *Wireless Communications Symp. in the International Conf. on Communications*, Seoul, Korea, May 16-20, 2005.
  - *4th Intern. Conf. on Mobile Business 2005*, Sydney, Australia, July 11-13, 2005.
  - *Communication Theory Symposium of the 2005 International Workshop on Communications, Circuits And Systems (ICCCAS'05)*, Hong Kong, May 27-30, 2005.
  - *14th European Signal Processing Conference (EUSIPCO)*, Florence, Italy, Sept. 4-8, 2006.
  - *IASTED International Conference on Communication Systems and Applications (CSA 2006)*, Banff, Canada from July 03- 05, 2006.
  - *Symposium on Next Generation Mobile Networks (NGMN 2006)*, Vancouver, Canada, July. 3-6, 2006.
  - *CHINACOM*, Beijing, Oct. 16-19, 2006.
  - *WCNC'07*, Hong Kong, March, 2007.
  - *IASTED International Conference on Communication Systems, Networks and Applications (CSNA 2007)*, Beijing, China, Oct. 8-10, 2007.
  - *IEEE Milcom 2007*, OFDM Session Organizer, Oct. 2007.
  - *IEEE Radar Conf. 2008*, May 26-29, Rome, Italy.
  - *Wireless Communications Symp. in the International Conf. on Communications (ICC)*, Beijing, China, May 19-23, 2008.

- *Signal Processing Symp. in the International Conf. on Communications (ICC)*, Beijing, China, May 19-23, 2008.

- *IEEE International Conference on Circuits and Systems for Communications (ICCSC) 2008*, Shanghai, China, May 26-28, 2008.

- *WCNC'08*, Las Vegas, Nevada, USA, Mar. 31-April 4, 2008.

- International Advisory Committee Member, *2008 IEEE International Conference on Neural Networks and Signal Processing (ICNNSP)*, Nanjing, China, June 2008.

- *IASTED International Conference on Circuits and Systems (CS 2008)*, Kailua-Kona, Hawaii, USA, Aug. 18-20, 2008.

- *European Conference on Signal Processing (EUSIPCO) 2008*, Lausanne, Switzerland, Aug. 25-29, 2008.

- *MESH 2008 (International Conference on Advances in Mesh Networks)*, Cap Esterel, France, August 25-31, 2008.

- *IEEE Milcom 2008 - Wireless Mobile Communications: OFDM Session Organizer*

- *ICCCAS 2008*, Xiamen, China, May 2008.

- *Signal Processing Symp. in Globecom*, New Orleans, Nov. 30-Dec. 4, 2008.

- *IEEE Radio and Wireless Symposium (RWS2009)*, Jan 18-22, San Diego, 2009.

- *Communication Theory Symp. in the ICC*, Dresden, Germany June 14-18, 2009.

- *Wireless Communications Symp. in the Globecom*, 2009.

- *WCNC'09*, Budapest, Hungary, April 5-8, 2009.

- *Signal Processing Symp. in ICC*, South Africa, 2010.

- *Wireless Communications Symp. in ICC*, South Africa, 2010.

- *Wireless Commun. Signal Processing Symp. in ICCCN*, Switzerland, 2010.

- *Signal Processing for Comm. Symp. in Globecom*, Miami, 2010.

- *Wireless Communications Symp. in Globecom*, Miami, 2010.

- *Wireless Communications Symp. in ICC*, Kyoto, Japan, 2011.

- *Signal Processing Symp. in ICC*, Kyoto, Japan, 2011.

- *Wireless Communications Symp. in Globecom*, Houston, USA, 2011.

- *Signal Processing for Communications Symp. in ICC*, Houston, USA, 2011.

- *ICC AHSN* Ottawa, Canada, 2012.

- *PIMRC* 2012.

- *NTMS* 2012.

- *SPAWC* 2012.

- *WCNC*, 2012, 2013, 2015, 2016, 2019, 2020, 2021

- *Globecom CT*, 2013, 2014.

- *Globecom SPC*, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021

- *Globecom WC*, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021
- *ICC SPC*, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021
- *ICC WC*, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021
- *ICC CT*, 2014, 2015, 2016.
- *IGARSS*, 2014, 2020.

- Reviewer for over 40 Technical Journals.

- Conference Session Chairs of a number of leading IEEE and other Conferences in the areas including ICC, Globecom, ISIT, and ICASSP.

University Activities and Service

- Promotion and Tenure Committee Chair for Dr. Abhi Singh, 2020

- Peer Review Committee Chair for Dr. Yuping Zheng, 2020

- Post Tenure Review Committee Chair for Dr. Fouad Kiamilev, 2019

- Faculty Searching Committee Member, the Department of Electrical and Computer Engineering, 2019

- Data Science Faculty Searching Committee Member, the Department of Electrical and Computer Engineering, 2018

- Graduate Student Committee Member, the Department of Electrical and Computer Engineering, 9/2011 –

- Committee Chair, Secondary Appointment Committee, the Department of Electrical and Computer Engineering, 2015 –

- Diversity Committee Member, College of Engineering, 2014 –

- Committee Memeber, Secondary Appointment Committee, the Department of Electrical and Computer Engineering, 2008-2009.

- Committee Chair, Faculty Review Committee, the Department of Electrical and Computer Engineering, 2007, 2015, 2016.

- Committee Member, Staff Recruit Committee, the Department of Electrical and Computer Engineering, 2007.

- Committee Member, New Faculty Searching Committee, the Department of Electrical and Computer Engineering, 2001-2002.

- Committee Member, New Faculty Searching Committee, the Department of Electrical and Computer Engineering, 1997-1998.

- Committee Member, New Faculty Searching Committee, the Department of Electrical and Computer Engineering, 1998-1999.

- Committee Member, New Faculty Searching Committee, the Department of Electrical and Computer Engineering, 1999-2000.

- Committee Member, Undergraduate Planning Committee, Department of Electrical and Computer Engineering, 1997, 2003.

- Committee Member, Ad-hoc Committee to Re-evaluate the Signals and Systems Curriculum for Undergraduate Students

- Committee Member, Ad-hoc Committee to Recruit Graduate Students

Professional Society Membership: Fellow of IEEE

Patents

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- X.-G. Xia, Vector trellis coded modulation using vector convolutional codes for reliable data transmission, U.S. Patent #5,809,082, Sept. 15, 1998.

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2. F. Liu, Z. Nashed, G. M. N'guerekata, D. Pokrajac, Z. Qiao, X. Shi, and X.-G. Xia, Ed., *Advances in Applied and Computational Mathematics*, Nova Science Publishers, New York, 2006.

Refereed Journal Articles (Published and Accepted):

[J435]. C. Zhang, L.y. Zhang, L. p. Zhu, T. Zhang, Z. y. Xiao, and X.-G. Xia, 3D Deployment of Multiple UAV-Mounted Base Stations for UAV Communications, *IEEE Trans. on Communications*, to appear.

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Invited Talks

- Mathematics and Electrical Engineering, Jilin University, Dec. 30, 2020.

- Phased-Array Transmission for Secure mmWave Wireless Communication via Polygon Construction, UASR Security for Cyber Space Workshop, Xian Jiao Tong Univ., Nov. 25, 2020.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, Jilin University, Nov. 24, 2020.

- Topics on Modulations for Current and Future Wireless Communications, Jilin University, Nov. 23, 2020.

- Sunzi Theorem and Signal Processing, The 26th Annual Information Theory Symp., The Information Theory Society of Chinese Institute of Electronics, Nanning, China, Nov. 9-10, 2019.

- OFDM SAR Imaging, The 5th Forum of Journal of Radars, Hohhot, China, Aug. 14-15, 2019.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, University of Science and Technology of China (USTC), July 29, 2019.

- Sunzi Theorem and Signal Processing, Beijing Technology and Business University, July 16, 2019.

- Mathematics and Electrical Engineering, Xidian University, June 14, 2019.

- Signal variations in Schwarzschild spacetime, Asia Pacific Conf. on Communications, Nov. 13, 2018, Ningbo, China.

- Signal variations in Schwarzschild spacetime, The 1st Workshop in Communications and Networking, Nanjing Univ. of Post and Telecomm., Nov. 10, 2018, Nanjing, China.

- Past and Future, NEWTON Forum, Beihang Univ., Nov. 9, 2018, Beijing, China.

- Hierarchical Codebook Design for mmWave Communications, China Communications's International Frontier Research Workshop, Dali, Yunnan Province, China, August 2, 2018.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, Nanjing University of Post and Telecommunications (NJUPT), July 15, 2018.

- Mathematics and Electrical Engineering, University Distinguished Lectures, Beijing Institute of Technology, July 9, 2018.

- Mathematics and Electrical Engineering, The Second International Conference on Mathematical Characterization, Analysis and Applications of Complex Information (CMCAA), Bejing Institute of Technology, June 30-July 1, 2018.

- Topics on Modulations for 5G and Beyond, Nankai Workshop on Information Theory and Data Science, Nankai University, June 30, 2018.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, Nankai University, June 29, 2018.

- Sunzi Theorem and Signal Processing, Beijing Institute of Technology, Aug. 14, 2017.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, Beijing Jiaotong University, July 15, 2017.

- Topics on Modulations for 5G and Beyond, Beijing University of Aeronautics and Astronautics, June 9, 2017.

- Topics on Modulations for 5G and Beyond, Zhenzhou University, March 29, 2017.

- Electrical Engineering and Mathematics, Nanjing University of Post and Telecommunications, Dec. 19, 2016.

- Topics on Modulations for 5G and Beyond, Chongqing University of Post and Telecommunications, Nov. 27, 2016.

- Topics on Modulations for 5G and Beyond, Chongqing University, Nov. 27, 2016.

- Topics on Modulations for 5G and Beyond, Southern University of Science and Technology, Nov. 16, 2016.

- Next Generation SAR Imaging, Shenzhen Univ., Nov. 2, 2016.

- Omnidirectional Transmission in Massive MIMO Systems and Sequences, Nanjing Univ. of Aeronautics and Astronautics, Oct. 18, 2016.

- Topics on Modulations for 5G and Beyond, Univ. of Electronics Science and Technology of China, July 26, 2016.

- Topics on Modulations for 5G and Beyond, Southeast University, July 11, 2016.

- Sunzi Theorem and Signal Processing, Xidian University, June 20, 2016.

- Mathematics and Electrical Engineering, Nanjing University of Aeronautics and Astronautics, March 30, 2016.

- Mathematics and Electrical Engineering, Southeast University, March 25, 2016.

- Topics on Modulations for 5G and Beyond, Tongji University, March 23, 2016.

- Next Generation SAR Imaging, Institute of Acoustics, Chinese Academy of Sciences, Beijing, Jan. 29, 2016.

- Next Generation SAR Imaging, Keynote Speech, IET Radar Conference, Hang Zhou, China, Oct. 15-16, 2015.

- Topics on Modulations for 5G and Beyond, Nanjing University of Post and Telcommunications (BUPT), Oct. 14, 2015.

- What's Next After OFDM, Beijing University of Post and Telcommunications (BUPT), Sept. 11, 2015.

- OFDM SAR Imaging, AVIC Leihua Electronic Technology Research Institute, Beijing, August 25, 2015.

- Robust Remaindering and Signal Processing, Tianjin University, July 31, 2015.

- Mathematics and Electrical Engineering, Tianjin University, July 31, 2015.

- Robust Remaindering and Signal Processing, Nankai University, July 30, 2015.

- What's Next After OFDM?, FuTure Forum, Harbin Institute of Technology, July 29, 2015.

- OFDM SAR Imaging, Harbin Institute of Technology, July 28, 2015.

- Modulation Designs for Multiple Antennas with Low Complexity Receivers, Harbin Institute of Technology, July 28, 2015.

- Mathematics and Electrical Engineering, Xidian University, July 8, 2015.

- OFDM SAR Imaging, Nanjing University of Science and Technology, June 29, 2015.

- Mathematics and Electrical Engineering, Nanjing Normal University, June 5, 2015.

- OFDM SAR Imaging, Nanjing University of Aeronautics and Astronautics, June 4, 2015.

- What's Next After OFDM? University of Electronic Science and Technology of China (UESTC), Chengdu, China, Jan. 28, 2015.

- Topics in 5G Networks, Xidian University, Xi'an, China, Jan. 19, 2015.

- What's Next After OFDM? Southwest Jiao Tong University, Chengdu, China, Jan. 7, 2015.

- MIMO-OFDM Radar and Paraunitary Matrices, P. P. Vaidyanathan's 60th Birthday Workshop, Caltech, Pasadena, CA, USA, Nov. 1, 2014.

- What's Next After OFDM? Southeast University, Nanjing, China, Oct. 29, 2014.

- The Past, Current, and Future of Digital Communications, Nanjing Normal University, Nanjing, China, Oct. 25, 2014.

- Modulation Design for MIMO Systems with Simplified Receivers, The Wireless Communication Workshop 2014, Hefei, China, August 11, 2014.

- OFDM SAR Imaging Using Sufficient Cyclic Prefix, Beijing Institute of Technology, July 24, 2014.

- What's Next After OFDM? Harbin Institute of Technology, Harbin, China, July 23, 2014.

- What's Next After OFDM? Institute of Acoustics, Chinese Academy of Sciences, July 22, 2014.

- OFDM SAR Imaging Using Sufficient Cyclic Prefix, the Mathematical Issues in Information Sciences, Xidian, China, July 10, 2014.

- What's Next After OFDM? Donghua University, Shanghai, China, June 24, 2014.

- What's Next After OFDM? University of Science and Technology of China, He Fei, China, Jan. 3, 2014.

- What's Next After OFDM? Hefei University of Technology, He Fei, China, Jan. 3, 2014.

- Robust Remaindering and Signal Processing, Nanjing University, Nanjing, China, Dec. 31, 2013.

- What's Next After OFDM? Xidian University, Xi'an, China, Dec. 28, 2013.

- Robust Remaindering and Signal Processing, Nanjing University of Aeronautics and Astronautics, Nanjing, China, Nov. 1, 2013.

- What's Next After OFDM? Nanjing University of Post and Telecommunications, Nanjing, China, Oct. 30, 2013.

- Self-coding for Full Duplex Asyncrhonous Cooperative Systems, Southeast University, Nanjing, China, Oct. 28, 2013.

- What's Next After OFDM? WCSP 2013, Hangzhou, China, Oct. 24-26, 2013.

- A channel indepndent precoding for MIMO-OFDM systems with insufficient CP length, ICCC 2013, Xi'an, China, Aug. 12-14, 2013.

- Robust remaindering and signal processing, ChinaSIP 2013, Beijing, China, July 6-10, 2013.

- Single Antenna Vector OFDM Systems, Nanjing University of Aeronautics and Astronautics, Nanjing, China, Jan. 23, 2013.

- A Channel Independent Precoding for MIMO-OFDM Systems with Insufficient Cyclic Prefix Using Interference Nulling, Southeast University, Nanjing, China, Jan. 17, 2013.

- Single Antenna Vector OFDM Systems, Xi'an Jiao Tong University, Xi'an, China, July 25, 2012.

- Quantitative Signal-to-Noise Ratio Studies for Joint Time-Frequency Analysis with Applications in ISAR Imaging, International Workshop on Mathematical Issues in Information Sciences (MIIS 2012), Xidian University, Xi'an, China, July 13, 2012.

- Modulation Designs for Multiple Antennas with Low Complexity Receivers, IEEK Summer Conference, Jeju Island, South Korea, June 27-29, 2012.

- Robust Reconstruction from Remainders and Applications, Korea IT Society Workshop, Chonbuk National University, Jeonju, South Korea, June 22, 2012.

- Single Antenna Vector OFDM Systems, Institute of Computing Technology, Chinese Academy of Sciences, Beijing, Jan. 10, 2012.

- A Simple Distributed Alamouti Coding for Asynchronous Cooperative Systems for Frequency Selective Fading Channels, Southeast University, Nanjing, China, Nov. 11, 2011.

- Space-Time Coding for Cooperative Communications, Nanjing Institute of Communications, Nanjing, China, Nov. 7, 2011.

- Space-Time Coding for Cooperative Communications, Concordia University, Montreal, Canada, Sept. 30, 2011.

- Single Antenna Vector OFDM Systems, ETRI, Daejeon, South Korea, August 19, 2011.

- Single Antenna Vector OFDM Systems, Chungbuk National University, Cheongju, South Korea, July 27, 2011.

- Space-Time Coding for Cooperative Communications, Nanjing University of Post and Telecommunications, Nanjing, China, July 22, 2011.

- Single Antenna Vector OFDM Systems, Chonbuk National University, Jeonju, South Korea, June 3, 2011.

- Quantitative Signal-to-Noise Ratio Analysis for Joint Time-Frequency Analysis with Applications in ISAR Imaging, Nanjing University of Science and Technology, Nanjing, China, May 12, 2011.

- Sunzi Theorem and Signal Processing, Ryerson University, Toronto, Canada, March 3, 2011.

- On Space-Time Codes with Conditional PIC Group Decoding, Southeast University, Nanjing, China, Sept. 25, 2010.

- Sunzi Theorem and Signal Processing, The Second Symp. on IT Advances in 21st Century – Signal Processing and Its Applications, Northwestern Polytechnical University, Xi'an, China, Sept. 22, 2010.

- Space-Time Codes for Cooperative Communications, Xidian University, August 27, 2010.

- Sunzi Theorem and Signal Processing, Xidian University, August 27, 2010.

- Modulation Designs for Multiple Antennas with Low Complexity Receivers, Xidian University, August 24, 2010.

- Modulation Designs for Multiple Antennas with Low Complexity Receivers, Chongqing University, August 21, 2010.

- Achieving Full Diversity and Fast ML Decoding via Simple Analog Network Coding for Asynchronous Two-Way Relay Networks, Peking University, Beijing, China, August 2, 2010.

- Modulation Designs for Multiple Antennas with Low Complexity Receivers, Keynote Speech, 2010 IEEE International Conference on Wireless Communications, Networking and Information Security (WCNIS 2010), June 26, Beijing, China.

- Space-Time Codes/Modulations with Low Complexity Receivers, Zhejiang University, Hang Zhou, China, June 25, 2010.

- Space-Time Codes with Low Complexity Receivers, Hangzhou Dianzi University, Hang Zhou, China, June 24, 2010.

- Space-time coding for cooperative communications, ETRI, South Korea, Oct. 13, 2009.

- Sunzi Theorem and Signal Processing, The Chonbuk Nantional University, South Korea, Sept. 16, 2009.

- Space-time coding for cooperative communications, The Chonbuk Nantional University, South Korea, Sept. 4, 2009.

- Achieving Full Diversity and Fast ML Decoding via Simple Analog Network Coding for Asynchronous Two-Way Relay Networks, The Chinese University of Hong Kong, Hong Kong, August 13, 2009.

- Space-time coding for cooperative communications, Xi'an Jiao Tong University, Xi'an, China, August 8, 2009.

- Achieving Full Diversity and Fast ML Decoding via Simple Analog Network Coding for Asynchronous Two-Way Relay Networks, Southeast University, Nanjing, China, July 24, 2009.

- Sunzi Theorem, Signal Processing, and Phase Unwrapping, Beijing University, Beijing, China, July 13, 2009.

- Space-Time Codes, Orthogonal Designs, and Compositions of Quadratic Forms, Nankai University, China, July 6, 2009.

- Sunzi Theorem, Signal Processing, and Phase Unwrapping, Beijing Institute of Tech., Beijing, China, April 1, 2009.

- Space-time coding for cooperative communications, BeiHang University, Beijing, China, Mar. 31, 2009.

- Space-time coding for cooperative communications, Tsinghua University, Beijing, China, Mar. 20, 2009.

- Space-Time Codes Based on Linear Receivers and PIC Group Decoding, University of Sydney, Australia, Jan. 28, 2009.

- Sunzi Theorem and Signal Processing, University of New South Wales, Sydney, Australia, Jan. 22, 2009.

- Space-Time Codes with Simplied Receivers, Southeast University, Nanjing, China, Dec. 19, 2008.

- Space-time coding for cooperative communications, University of Electronics Science and Technology of China, Chengdu, Dec. 17, 2008.

- Sunzi Theorem and Signal Processing, The 2nd Internal. Conf. on the Advances of Hilbert-Huang Transform and Its Applications, Guangzhou, China, Dec. 15, 2008.

- Space-time coding for cooperative communications, State University of New York, Buffalo, Oct. 24, 2008.

- Sunzi Theorem and Signal Processing, Distinguished Lecture Series, Shun Hing Institute of Advanced Engineering, The Chinese University of Hong Kong, July 23, 2008.

- Space-time coding for cooperative communications, Distinguished Lecture Series, Shun Hing Institute of Advanced Engineering, The Chinese University of Hong Kong, July 21, 2008.

- Space-time coding for cooperative communications, ACoRN Workshop on Co-operative Wireless Communications, Keynote presentation, Melbourne, Australia, July 16, 2008.

- Space-time coding/modulation for MIMO systems: what is left? Huazhong University of Science and Technology, June 1, 2008.

- Sunzi Theorem and Signal Processing, Xi'an Jiao Tong University, May 29, 2008.

- Space-time coding/modulation for MIMO systems: what is left? Xi'an Jiao Tong University, May 29, 2008.

- Sunzi Theorem and Signal Processing, The Institute of Electronics, The China Academy of Science, Beijing, May 23, 2008.

- Distributed Linear Space-Time Convolutional Codes Achieving Asynchronous Full Cooperative Diversity With MMSE-DFE Receivers, WCNC 2008, Special Paper Presentation, Las Vegas, April 2, 2008.

- Space-time coding/modulation for MIMO systems: what is left? Shanghai Jiao Tong University, Jan. 25, 2008.

- Space-time coding/modulation for MIMO systems: what is left? Beihang University, Jan. 16, 2008.

- A family of distributed space-time trellis codes achieving full diversity for asynchronous cooperative communications, Southeast University, Nanjing, China, Nov. 10, 2007.

- Space-time coding/modulation for MIMO systems: what is left? Huawei, Shenzhen, China, Nov. 9, 2007.

- Space-time coding/modulation for MIMO systems: what is left? Hong Kong University of Science and Technology, Nov. 8, 2007.

- Space-time coding/modulation for MIMO systems: what is left? South China University of Technology, Guangzhou, China, Nov. 7, 2007.

- Robust Phase Unwrapping, Robust Chinese Remainder Theorem, and Moving Target SAR Imaging, The 2007 Asia and Pacific Conf. on Synthetic Aperture Radar, Huang Shan, China, Nov. 2007 (Plenary Talk).

- Space-Time Coding/Modulation for MIMO Systems: What Is Left?, InterDigital, King of Prussia, PA, May 2, 2007.

- Space-Time Coding for MIMO and Cooperative Systems, the 16th International Conference on Computer Communications and Networks (ICCCN), Honolulu, Hawaii, August 13-16, 2007 (Invited 45 Minutes Position Talk).

- A simple construction of nonvanishing determinant space-time block codes based on cyclic division algebra, Information Theory and Applications–Inaugural Workshop, University of California at San Diego, La Jolla, California, Jan. 29-Feb. 2, 2007.

- New recursive space-time trellis codes from general differential encoding, Information Theory Workshop, Chengdu, China, Oct. 22-26, 2006.

- Space-time coding for multiple antenna systems: concept and state of the art, University of Electronic Science and Technology of China, Oct. 25, 2006.

- Generalized Chinese remainder theorem and under Nyquist sa,pling with applications in sensor networks, University of Electronic Science and Technology of China, Oct. 23, 2006.

- Space-time coding for multiple antenna systems: concept and state of the art, Southeast University, July 4, 2006.

- Space-Time Codes, Orthogonal Designs and Compositions of Quadratic Forms, Math Dept., Air Force Institute of Technology, Wright-Patterson AFB, Ohio, May 10, 2006.

- A Family of Distributed Space-Time Trellis Codes Achieving Full Diversity for Asynchronous Cooperative Communications, Information Theory and Applications–Inaugural Workshop, University of California at San Diego, La Jolla, California, Feb. 6, 2006

- High Rate Space-Time-Frequency Coding for MIMO-OFDM Systems, the 1st Tsinghua International Forum for Doctoral Candidates, Beijing, Sept. 3, 2005 (Keynote Speaker).

- Space-Time-Frequency Coding for MIMO-OFDM Systems, Intel Wireless Forum, Beijing, Aug. 25, 2005.

- Space-Time-Frequency Coding for MIMO-OFDM Systems, Philips Research Labs., New York, July 12, 2005.

- Space-Time Coding for Multiple Antenna Systems, Math Dept., Tsinghua Univ., May 20, 2005.

- Space-Time Coding for MIMO Channels, Air Force Research Lab, Rome, New York, Dec. 8, 2004.

- Guard Band Configuration for Single-Antenna Vector OFDM Systems, 38th Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, Nov. 2004.

- On pilot pattern design for PSAM-OFDM system, ISCAS 2004, Vancouver, Canada, May 23-26, 2004.

- Space-Time Coding/Modulation for Multiple Antenna Systems, Ryerson University, May 14, 2004 (Distinguished Speaker).

- Space-Time Block Codes, Compositions of Quadratic Forms, and Orthogonal Designs, The City University of Hong Kong, June 25, 2003.

- Space-Time Block Codes, Compositions of Quadratic Forms, and Orthogonal Designs, The Chinese University of Hong Kong, Sept. 27, 2002.

- Quasi-orthogonal designs with optimal rotation angles, Asilomar Conf. on Signals, Systems, and Computers, Pacific Grove, CA, Nov. 2002.

- Space-time codes and multi-antenna communication systems, the National Natural Science Foundation of China, Aug. 5, 2002.

- Space-Time Block Codes, Compositions of Quadratic Forms, and Orthogonal Designs, University of Cincinnati, May 6, 2002.

- Space-Time Block Codes, Compositions of Quadratic Forms, and Orthogonal Designs, University of Southern California, April 22, 2002.

- Detection, Location and Imaging of Fast and Slow Moving Targets and Ships Using Multi-frequency Antenna Array SAR (MFAASAR), The Institute of Electronics, the Chinese Academy of Science, Beijing, China, Jan. 2002.

- Vector OFDM for Single Transmit Antenna Systems, Southeast University, Nanjing, China. Jan, 2002.

- On Context-Based Bayesian Image Segmentation: Joint Multi-context and Multiscale Approach and Wavelet-Domain Hidden Markov Models, Proc. of 35th Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, Nov. 2001.

- On some orthogonal space-time codes, SPIE, San Diego, July 2001.

- A MinMax optimal filterbank transceiver design, Conference on Information Sciences and Systems, the John Hopkins University, March, 2001.

- Adaptive chirp-Fourier transform and its applications in ISAR imaging of maneuvering targets, SPIE, Orlando, April 2001.

- Polynomial Ambiguity Resistant Precoders (PARP) for MIMO Channels: Necessity and Sufficiency for the Blind Indentifiability and PARP Characterization and Construction, The 2000 Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, California, Nov. 2000.

- A New Channel Indepedent Precoded OFDM Systems Robust to Spectral Null Channels, the IEEE Wireless Communications and Networking Conference, Chicago, Sept. 2000.

- Space-Time Modulated Codes for Memory Channels: Capacity and Information Rates, Zero-Forcing Decision Feedback Equalizer, the first IEEE Sensor Array Multichannel (SAM) Signal Processing Workshop, Boston, Mar. 16-17, 2000.

- Detection, Location and Imaging of Fast and Slow Moving Targets and Ships Using Multi-frequency Antenna Array SAR (MFAASAR), The Atlanta IEEE Chapter of the AES and GRS Societies, Dec. 14, 1999.

- Prefiltering for Discrete Multiwavelet Transforms with Applications in Image Compression, Center for Theoretical Studies of Physical Systems, Clark Atlanta University, Dec. 14, 1999.

- Some properties of multirate filterbank precoders for ISI mitigation, SPIE'99, Denver, 1999.

- ISI Mitigation Using Nonmaximally Decimated Multirate Filterbanks as Precoders, The 1998 Symposium on Image, Speech, Signal Processing and Robotics, Sept. 3-4, Hong Kong, 1998.

- Gabor transforms: some new properties and applications, The 1998 Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, California, Nov. 1998.

- System identification using time-frequency analysis and synthesis, The Joint Mathematics Meetings, Baltimore, Maryland, Jan. 7-10, 1998.

- A New Precoding for Intersymbol Interference Cancellation, Hughes Network Systems, Germantown, Maryland, May 1, 1997.

- A New Prefiltering for Multiwavelet Transforms, American Mathematical Society AMS #927 Meeting at Milwaukee, Wisconsin, Oct. 24-26, 1997.

- Vector-Valued Wavelets and Multiwavelets, American Mathematical Society AMS #918 Joint Meeting at San Diego, California, Jan.8-11, 1997.

- A New Method for Intersymbol/Interchannel Interference Cancellation, Department of Electrical Engineering, California Institute of Technology, Feb. 28, 1996.

- Wavelet Transforms and Applications, Department of Electrical and Computer Engineering, University of Wisconsin at Madison, Feb. 12, 1995.