

Yu Wang

Associate Professor

Department of Electronic Engineering, Tsinghua University
Room 4-303, Rohm Building, Tsinghua University, Beijing, China, 86-10-62772966
yu-wang@mail.tsinghua.edu.cn <http://nicsefc.ee.tsinghua.edu.cn>

Education

- 2002 - 2007 **Tsinghua University** Beijing, China
Ph.D. (with honors) in Department of Electronic Engineering
Thesis: *Optimization for the Leakage Current and Reliability in Digital Integrated Circuits*
Advisor: Prof. Huazhong Yang, Co-advised by Prof. Yuan Xie
- 1998 - 2002 **Tsinghua University** Beijing, China
B.S. in Electronic Engineering

Professional Experience

- 2015.12-now **Tsinghua University** Beijing, China
Tenured Associate Professor in the Department of Electronic Engineering
- 2011.12-2015.12 **Tsinghua University** Beijing, China
Associate Professor in the Department of Electronic Engineering
- 2013.07-now **Tsinghua University** Beijing, China
Vice Chair, Department of Electronic Engineering
- 2011 - 2014 **Tsinghua University** Beijing, China
Head of Research Institute of Circuits and Systems
- 2011 - 2013 **Imperial College** London, UK
Visiting Scholar (4 months in total), with Prof. Wayne Luk
- 2007 - 2011 **Tsinghua University** Beijing, China
Assistant Professor in the Department of Electronic Engineering
- 2008 - 2009 **Hong Kong University of Science and Technology** Hong Kong, China
Visiting Scholar (3 months in total), with Prof. Jiang Xu
- 2007 **Microsoft Research Asia** Beijing, China
Visiting Student/Scholar (6 months in total)

Research Summary

Yu Wang has published more than 60 journals (43 IEEE/ACM journals) and more than 150 conference papers (11 DAC, 13 DATE, 5 ICCAD, 22 ASPDAC, 8 FPGA) in the areas of *EDA*, *FPGA*, *VLSI Design*, and *Embedded Systems*, with a focus on brain inspired computing, application specific heterogeneous computing, parallel circuit analysis, and power and reliability aware system design methodology. He has graduated 5 Ph.D. students and 15 Master Students, and currently advising 10 doctoral students and 4 master Students. He has served as PI/Co-PI on over 30 research grants administrated by China government agencies (including NSFC, National Key Technology Program, 863, and etc) and 20 research grants from industry (including Microsoft, IBM, Huawei, MHI and etc), with total amount of over 50 million RMB and personal share of over 30 million RMB. These projects lead to new CAD tools and optimization methods, interesting heterogeneous computing systems based on CPU/FPGA/GPU/emerging memory technology. He has received Best Paper Award in FPGA17, NVMSA17, ISVLSI12, Best Poster Award in HEART12, and 9 Best Paper Nominations (DATE18, DAC17, ASPDAC16, ASPDAC14, ASPDAC12, 2 in ASPDAC10, ISLPED09, CODES09). He is a recipient of Under-40 Innovators Award at DAC in 2018 (only 5 all over the world/year), High-end Leadership Award of Zhongguancun Talent Program in 2018, IBM X10 Faculty Award in 2010 (one of 30 worldwide). He also received Natural Science Fund for Outstanding Youth Fund in 2016. He is the co-founder of Deephi Tech (a leading deep learning solution provider), which is acquired by Xilinx (about 300M USD) in 2018.

Service Summary

Yu Wang has been an active volunteer in the design automation, VLSI, and FPGA conferences. He served as TPC chair for ISVLSI 2018, ICFPT 2011 and Finance Chair of ISLPED 2012-2016, Track Chair for DATE 2017-2019 and GLSVLSI 2018, served as program committee member for leading conferences in these areas, including top EDA conferences such as DAC, DATE, ICCAD, ASP-DAC, and top FPGA conferences such as FPGA and FPT, and served as member of 3 specialized committee (Computer Architecture, Computer Engineering Process, and Fault-tolerance) of CCF. Currently he serves as Co-Editor-in-Chief for ACM SIGDA E-News, Associate Editor for IEEE Transactions on CAD, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), and Journal of Circuits, Systems, and Computers, and Special Issue Editor for Microelectronics Journal. He also serves as guest editor for Integration, the VLSI Journal and IEEE Transactions on Multi-Scale Computing Systems. He has given over 70 invited talks and 4 tutorials in industry/academia. He is with ACM distinguish speaker program and an ACM/IEEE Senior Member.

Awards and Honors

- 2018 **Under-40 Innovators Award**, Design Automation Conference (DAC) 2018
- 2018 **Champion**, System Design Contest on Low Power Object Detection (FPGA) at Design Automation Conference (DAC) 2018.
- 2018 **High-end Leadership Award**, Zhongguancun Talent Program
- 2018 **Best Paper Candidate**, Design, Automation & Test in Europe Conference & Exhibition (DATE). (Paper [C3])
- 2017 **First Prize of Technological Invention**, CCF Awards of Science and Technology
- 2017 **Best Paper Award**, International Symposium on Field-Programmable Gate Arrays (FPGA). (Paper [C8])
- 2017 **Best Paper Award**, Non-Volatile Memory Systems and Applications Symposium (NVMSA). (Paper [C9])
- 2017 **Best Paper Candidate**, Design Automation Conference (DAC). (Paper [C17])
- 2016 **Best Paper Candidate**, Asia and South Pacific Design Automation Conference (ASPDAC). (Paper [C29])
- 2016 **Distinguished Speaker**, Association for Computing Machinery (ACM).
- 2016 **Outstanding Youth Fund**, Natural Science Fund of China.
- 2015 **Champion**, Low Power Image Recognition Challenge (LPIRC) at Design Automation Conference (DAC) 2015. (Paper [C52])
- 2014 **Best Paper Candidate**, Asia and South Pacific Design Automation Conference (ASPDAC). (Paper [C71])
- 2012 **Best Paper Award**, IEEE Computer Society Annual Symposium on VLSI (ISVLSI). (Paper [C88])
- 2012 **Best Poster Award**, International Symposium on Highly Efficient Accelerators and Reconfigurable Technologies (HEART).
- 2012 **Best Paper Candidate**, Asia and South Pacific Design Automation Conference (ASPDAC).(Paper [C98])
- 2011 **Exchange Award**, Research Exchanges with China and India, Royal Academy of Engineering, UK.
- 2010 **IBM X10 Innovation Faculty Award**
- 2010 **Excellent Student Research Training (SRT) Program Instructor**, Tsinghua University.
- 2010 **Second Prize** of AMD GPU Competition, China.
- 2010 **Best Paper Candidates** x 2, Asia and South Pacific Design Automation Conference(ASPDAC).(Paper [C123][C125])
- 2009 **Best Paper Candidate**, International Symposium on Low Power Electronics and Design(ISLPED) (Paper [C128])
- 2009 **Best Paper Candidate**, IEEE/ACM International Conference on Hardware/Software-Coesign and System Synthesis (CODES+ISSS)(Paper [C141])
- 2009 **First Prize** of AMD GPU Competition, China.
- 2009 **Excellent Student Research Training (SRT) Program Instructor**, Tsinghua University.
- 2007 **Excellent PhD Dissertation**, Tsinghua University.

Selected Student Awards

- 2018 **Lixue Xia**, Excellent Doctoral thesis award of Tsinghua University
- 2018 **Lixue Xia**, Excellent graduate of Beijing
- 2018 **Lixue Xia**, Excellent graduate of Tsinghua University
- 2017 **Lixue Xia**, National Scholarship, awarded by MOE of China
- 2017 **Tianqi Tang**, Excellent Master thesis award of Tsinghua University
- 2016 **Tianqi Tang**, National Scholarship, awarded by MOE of China
- 2016 **Boxun Li**, Excellent graduate of Beijing
- 2016 **Boxun Li**, Excellent Master thesis award of Tsinghua University
- 2015 **Boxun Li**, National Scholarship, awarded by MOE of China
- 2015 **Boxun Li**, Excellent Research Award @ Student Research Forum ASPDAC 2015
- 2015 **Wenqiang Wang**, Excellent graduate of Beijing
- 2015 **Wenqiang Wang**, Excellent Master thesis award of Tsinghua University
- 2015 **Xiaoming Chen**, European Design and Automation Association (EDAA) Outstanding Dissertations Award
- 2014 **Wulong Liu**, National Scholarship, awarded by MOE of China
- 2014 **Xiaoming Chen**, Excellent graduate of Beijing

2014 **Xiaoming Chen**, Excellent PhD thesis award of Tsinghua University
 2013 **Song Yao**, Gold Medal in ACM Student Research Competition @ ICCAD
 2013 **Xiaoming Chen**, National Scholarship, awarded by MOE of China
 2012 **Xiaoming Chen**, Young Scholarship Award for Distinguished Doctoral Candidates, awarded by MOE of China
 2012 **Yi Shan**, IBM PhD Fellowship Award, among 84 around the world
 2007-now 8 students won the Excellent Undergraduate Thesis Award of Tsinghua University

Teaching

2018 - now Course director of *Fundamental of Digital Logic and Processor*, Undergraduate Students
 2016 - now *Fundamental of Digital Logic and Processor*, Undergraduate Students
 2014 - now *Modern Computer Architecture*, Undergraduate Students
 2009 - now *Computer Aided Design for Digital Integrated Circuits*, Postgraduate Students
 2009 - now *C/UNIX Programming*, Postgraduate Students

Selected National Projects

Note: Personal Share is listed at the end of each item.

2018.07-2021.06 **Minster of Education, China:** *Real-time collaborative intelligence of mobile networks.*
 PI: Yuan Shen, Yu Wang, RMB 1,500,000

2018.05-2021.04 **The National Key Research and Development Program of China:** *Environmental Perception Technology of Automatic Driving Electric Vehicle.*
 PI: Yu Wang, RMB 1,407,000

2018.03-2019.02 **Advanced Scientific and Technological Innovation Project :** *Key technology of Intelligent Computing for Video Analysis*
 PI: Yu Wang, RMB 2,780,000

2017.07-2022.06 **The National Key Research and Development Program of China:** *Multi-port Non-volatile Nano Logic Devices and Expansion of Computing Capability.*
 PI: Yuchao Yang, Yu Wang, Bing Chen, RMB 930,000

2017.01-2019.12 **Natural Science Foundation of China:** *Design Methodology of Energy Efficient Circuit and System.*
 PI: Yu Wang, RMB 1,300,000

2017.01-2018.12 **Minster of Education, China:** *Memristor-based Neuromorphic Computing.*
 PI: Yu Wang, RMB 1,000,000

2016.02-2019.01 **Natural Science Foundation of China:** *Theories and Methods of Hardware Security.*
 PI: Huazhong Yang, Yu Wang, RMB 1,210,000

2015.01-2018.12 **973 Project:** *Basic research on the theory and method of trustworthiness evaluation.*
 PI: Huazhong Yang, RMB 1,400,000

2014.10-2016.06 **Minster of Education, China:** *Research on Brain Inspired Computing Systems.*
 PI: Luping Shi, Yu Wang, RMB 500,000.

2014.01-2017.12 **Natural Science Foundation of China:** *Research on Power Efficient Heterogeneous Hardware Computing System for Video Data Analytics.*
 PI: Yu Wang, RMB 770,000.

2014.01-2016.12 **Minster of Education, China:** *Key technologies in Brain Like Neuron Computing Systems.*
 PI: Weibei Dou, Yu Wang, RMB 300,000.

2014.01-2016.12 **Minster of Education, China:** *Research on high level synthesis optimization algorithm for dynamic reconfigurable SOC*
 PI: Yuchun Ma, Yu Wang RMB 100,000

2013.06-2014.12 **National Key Technology Program:** *Research on LTE-Advanced Soft-Baseband Processing System.*
 PI: Yu Wang, RMB 397,500

2013.01-2016.12 **Natural Science Foundation of China:** *Cross-layer Analysis and Optimization for the Lifetime Reliability of MPSoCs.*
 PI: Huazhong Yang, Qiang Xu, Yu Wang, RMB 450,000

2013.01-2014.12 **973 Project :** *Research on the theory of intelligent cooperative fast band wireless network*
 PI: Jianhua Lu, Xiaoming Tao, Yu Wang RMB 400,000

- 2013.01-
2014.12 **Key Project of Pre Research Fund** : *High energy and complex environment Analysis*
PI: Huiming Ma, Yu Wang RMB 300,000
- 2011.07-
2013.06 **Pre-research Fund**: *Key technology for many-core systems*
PI: Yu Wang, RMB 300,000
- 2011.01-
2013.12 **National Key Technology Program**: *Research on Generic Technology for New IMT-Advanced Baseband Processing System.*
PI: Yu Wang, RMB 800,000
- 2011.01-
2013.12 **National Key Technology Program**: *Development and Application of EDA tools.* PI: Yu Wang, RMB 456,000
- 2011.01-
2013.12 **Natural Science Foundation of China**: *Research on Physical Planning for Heterogeneous Multi-core Microarchitecture*
PI: Yuchun Ma, Yu Wang RMB 100,000
- 2011.01-
2013.12 **Independent Scientific Research Cross Fund** : *Research Fund for Water Quality Monitoring Technology of Water Supply Network Based on Internet of Things*
PI: Shumin Liu, Yu Wang RMB 250,000
- 2011.01-
2012.12 **Natural Science Foundation of China**: *Research on Circuits and Architecture for 3D MPSoC.*
PI: Yuan Xie, Huazhong Yang, Yu Wang, RMB 150,000
- 2010.07-
2012.12 **Minster of Education, China**: *Research on key design technology of Green 3D-chip*
PI: Qiang Zhou, Yu Wang RMB 100,000
- 2010.05-
2011.05 **Space Innovation Fund** : *Research on Hybrid Storage*
PI: Huazhong Yang, Yu Wang RMB 30,000
- 2010.01-
2011.12 **National Key Technology Program**: *Research on Key Technologies of High Performance Embedded CPU-Research on Clock Tree Technology.*
PI: Huazhong Yang, Yu Wang RMB 900,000
- 2009.01-
2011.12 **Natural Science Foundation of China**: *Research on FPGA based Anti-Degradation Machine Learning.*
PI: Yu Wang, RMB 290,000
- 2009.01-
2010.12 **National 863 program**: *Low power Heterogeneous MPSoC based on Sensor Network on Chip.*
PI: Yongpan Liu, Yu Wang, RMB 190,000
- 2008.10-
2010.12 **National Key Technology Program**: *Advanced EDA platform development.*
PIs: Huazhong Yang, Yu Wang, RMB 2,600,000
- 2008.01-
2010.01 **Minster of Education, China** : *High performance/High reliability/Low power incremental layout method for SOC design*
PI: Yuchun Ma, RMB 100,000
- 2008.01-
2010.01 **The Li Chuanxin fund of the Electronic Department**: *Self-detecting high reliability multi-core SOC*
PI: Yu Wang, RMB 30,000

Industry Projects

Note: Personal Share is listed at the end of each item.

- 2018.04-
2019.03 **Toyota**: *Neural Network Security for Autopilot.*
PI: Yu Wang, RMB 1,030,000
- 2018.01-
2021.05 **DeePhi Tech**: *Processor Architecture for Sparse Deep Neural Network.*
PI: Yu Wang, RMB 6,000,000
- 2018.01-
2018.12 **CEPREI**: *Research on Integrated Circuit Security Monitoring Method Based on On-chip Sensing.*
PI: Yu Wang, RMB 240,000
- 2017.04-
2022.04 **DeePhi Tech**: *Parallel Computing Hardware Architecture Based on MapReduce.*
PI: Yu Wang, RMB 1,000,000
- 2016.08-
2017.05 **Huawei**: *BWT-based Hardware Compression Algorithm.*
PI: Yu Wang, RMB 550,000
- 2016.03-
2017.03 **Microsoft**: *A-Eye - Cloud + Terminal for Object Detection.*
PI: Yu Wang, RMB 100,000

- 2016.01-2018.01 **Huawei:** *Multi-platform Implementaion of General Object Detection.*
PI: Yu Wang, RMB 1,800,000
- 2015.09-2017.09 **Huawei:** *Design Exploration on Database Processor.*
PI: Yu Wang, RMB 390,000
- 2015.09-2016.09 **Huawei:** *Research on Algorithms for Low Power Smart Hardware.*
PI: Yu Wang, RMB 640,000
- 2015.02-2016.02 **Microsoft:** *A-Eye — a smart camera with real-time CNN.*
PI: Yu Wang, RMB 100,000
- 2014.12-2015.12 **Unisound:** *Research on Multi-GPU training for DNN systems.*
PI: Yu Wang, RMB 400,000
- 2014.09-2015.08 **Huawei:** *iFEP big data database basic operation acceleration.*
PI: Yu Wang, RMB 600,000
- 2014.03-2016.03 **Huawei:** *Research on Hardware Acceleration for Database and Cloud System.*
PIs: Yu Wang, RMB 400,000
- 2013.04-2014.04 **Microsoft:** *Heterogeneous Hardware Computing for Deep Neural Network.*
PI: Yu Wang, RMB 140,000
- 2010.01-2012.05 **Mitsubishi Heavy Industries (MHI):** *Development of a real-time image processing hardware prototype system.*
PI: Yu Wang, RMB 900,000
- 2011.12-2013.12 **IBM:** *Smart IOT Database Appliance on Hybrid System.*
PI: Yu Wang, RMB 100,000
- 2010.09-2011.08 **IBM:** *Low-Latency/High-Efficiency Programming Model for Pub/Sub Application on a Heterogeneous Multi-core Platform.* PI: Yu Wang, RMB 100,000
- 2010.04-2011.04 **Microsoft:** *Heterogeneous Hardware Computing for Brain Network Research on Alzheimer Disease.*
PI: Yu Wang, RMB 200,000
- 2009.04-2010.04 **AMD:** *GPU-based Acceleration for Machine Learning Algorithms.*
PI: Yu Wang, RMB 110,000
- 2008.04-2009.04 **Microsoft:** *General FPGA-based Acceleration for Machine Learning.*
PI: Yu Wang, RMB 80,000

Journal Publications

- [J1] Yuliang Sun, **Yu Wang**, Huazhong Yang, Bidirectional Database Storage and SQL Query Exploiting RRAM-based Process-in-Memory Structure , to appear in *ACM Transactions on Storage (TOS)*, 2018.
- [J2] Haixiao Du, Mingrui Xia, Kang Zhao, Xuhong Liao, Huazhong Yang, **Yu Wang**, Yong He, PAGANI Toolkit: Parallel graph-theoretical analysis package for brain network big data , to appear in *Human brain mapping*, vol.1, No.17, 2018.
- [J3] Philip H. W. Leong, Hideharu Amano, Jason Anderson, Koen Bertels, Joo M. P. Cardoso, Oliver Diessel, Guy Gogniat, Mike Hutton, Junkyu Lee, Wayne Luk, Patrick Lysaght, Marco Platzner, Viktor K. Prasanna, Tero Rissa, Cristina Silvano, Hayden Kwok-Hay So, **Yu Wang**, The First 25 Years of the FPL Conference: Significant Papers , in *ACM Transactions on Reconfigurable Technology and Systems (TRETS)*, vol.10, No.2, 2017.
- [J4] Albert Lee, Chieh-Pu Lo, Chien-Chen Lin, Wei-Hao Chen, Kuo-Hsiang Hsu, Zhibo Wang, Fang Su, Zhe Yuan, Qi Wei, Ya-Chin King, Chrong-Jung Lin, Hochul Lee, Pedram Khalili Amiri, Kang-Lung Wang, **Yu Wang**, Huazhong Yang, Yongpan Liu, Meng-Fan Chang, A ReRAM-Based Nonvolatile Flip-Flop With Self-Write-Termination Scheme for Frequent-OFF Fast-Wake-Up Nonvolatile Processors , in *IEEE Journal of Solid-State Circuits*, vol.52, No.8, 2017.
- [J5] Lixue Xia, Wenqin Huangfu, Tianqi Tang, Xiling Yin, Krishnendu Chakrabarty, Yuan Xie, **Yu Wang**, Huazhong Yang, “Stuck-at Fault Tolerance in RRAM Computing Systems”, to appear in *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS)*, 2018.
- [J6] Ming Cheng, Lixue Xia, Zhenhua Zhu, Yi Cai, Yuan Xie, **Yu Wang**, Huazhong Yang, “TIME: A Training-in-memory Architecture for RRAM-based Deep Neural Networks”, to appear in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 2018.
- [J7] Lixue Xia, Mengyun Liu, Xuefei Ning, Krishnendu Chakrabarty, **Yu Wang**, “Fault-Tolerant Training Enabled by On-Line Fault Detection for RRAM-Based Neural Computing System ”, to appear in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, 2018.

- [J8] Guohao Dai, Tianhao Huang, Yuze Chi, Jishen Zhao, Guangyu Sun, Yongpan Liu, **Yu Wang**, Yuan Xie, Huazhong Yang, “GraphH: A Processing-in-Memory Architecture for Large-scale Graph Processing”, to appear in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, 2018
- [J9] Yuliang Sun, Lanjun Wang, Chen Wang, **Yu Wang**, “Exploiting Stable Data Dependency in Stream Processing Acceleration on FPGAs”, in *ACM Transactions on Embedded Computing Systems (TECS)*, 2017.
- [J10] Kaiyuan Guo, Song Han, Song Yao, **Yu Wang**, Yuan Xie, Huazhong Yang, “SoftwareCHardware Codesign for Efficient Neural Network Acceleration”, in *IEEE Micro*, vol.37, No.2, 2017, pp.18-25..
- [J11] Xiaoming Chen, Lin Wang, **Yu Wang**, Yongpan Liu, Huazhong Yang, “A General Framework for Hardware Trojan Detection in Digital Circuits by Statistical Learning Algorithms”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol.36, No.10, 2017, pp.1633-1646.
- [J12] Kaiyuan Guo, Lingzhi Sui, Jiantao Qiu, Jincheng Yu, Junbin Wang, Song Yao, Song Han, **Yu Wang**, Huazhong Yang, “Angel-Eye: A Complete Design Flow for Mapping CNN onto Embedded FPGA”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol.37, No.1, 2018, pp.35-47.
- [J13] Lixue Xia, Boxun Li, Tianqi Tang, Peng Gu, Pai-yu Chen, Shimeng Yu, Yu Cao, **Yu Wang**, Yuan Xie, Huazhong Yang, “MNSIM: Simulation Platform for Memristor-based Neuromorphic Computing System”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, 2017.
- [J14] Xiaoming Chen, Qiaoyi Liu, Song Yao, Jia Wang, Qiang Xu, **Yu Wang**, Yongpan Liu, Huazhong Yang, “Hardware Trojan Detection in Third-Party Digital Intellectual Property Cores by Multi-Level Feature Analysis”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, 2017.
- [J15] Miao Hu, Yiran Chen, J. Joshua Yang, **Yu Wang**, Hai Helen Li, A Compact Memristor-Based Dynamic Synapse for Spiking Neural Networks , in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems*, vol.36, No.8, 2017.
- [J16] Yinan Sun, Zhe Yuan, Yongpan Liu, Xueqing Li, Yiqun Wang, Qi Wei, **Yu Wang**, Vijaykrishnan Narayanan, Huazhong Yang, Maximum Energy Efficiency Tracking Circuits for Converter-Less Energy Harvesting Sensor Nodes, in *IEEE Transactions on Circuits and Systems II (IEEE TCAS-II)*, vol.64, No.6, 2017.
- [J17] Yuzhi Wang, Anqi Yang, Xiaoming Chen, Pengjun Wang, **Yu Wang**, Huazhong Yang, A Deep Learning Approach for Blind Drift Calibration of Sensor Networks , in *IEEE Sensors Journal*, vol.17, No.13, 2017, pp.4158 - 4171.
- [J18] Xiaoming Chen, Lin Wang, Boxun Li, **Yu Wang**, Xin Li, Yongpan Liu, Huazhong Yang, “Modeling Random Telegraph Noise as a Randomness Source and Its Application in True Random Number Generation”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, 2016.
- [J19] Xiaoxiao Liu, Mengjie Mao, Beiye Liu, Boxun Li, **Yu Wang**, Hao Jiang, Mark Barnell, Qing Wu, Jianhua Yang, Hai Li, and Yiran Chen, “Harmonica: A Framework of Heterogeneous Computing Systems With Memristor-Based Neuromorphic Computing Accelerators”, in *IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS: REGULAR PAPERS (IEEE TCAS-I)*, 2016.
- [J20] Xiaoming Chen, Boxun Li, **Yu Wang**, Yongpan Liu, Huazhong Yang, “A United Methodology for Designing Hardware Random Number Generators Based on Any Probability Distribution”, in *IEEE Transactions on Circuits and Systems II (IEEE TCAS-II)*, 2016.
- [J21] Huizi Mao, Song Yao, Tianqi Tang, Boxun Li, Jun Yao, **Yu Wang**, “Towards Real-Time Object Detection on Embedded Systems”, in *IEEE Transactions on Emerging Topics in Computing (TETC)*, 2016.
- [J22] Deming Zhang, Lang Zeng, Mengxing Wang, Youguang Zhang, Jacques-Olivier Klein, **Yu Wang**, and Weisheng Zhao, “All-Spin Artificial Neural Network based on Compound Spintronic Synapse and Neuron”, in *IEEE Transactions on Biomedical Circuits and Systems (TBioCAS)*, 2016.
- [J23] Lixue Xia, Peng Gu, Boxun Li, Tianqi Tang, Xiling Yin, Wenqin Huangfu, Shimeng Yu, Yu Cao, **Yu Wang**, Huazhong Yang, “Technological Exploration of RRAM Crossbar Array for Matrix-Vector Multiplication”, in *Journal of Computer Science and Technology (JCST)*, vol.31, No.1, 2016, pp.3-19.
- [J24] Xiaoming Chen, Ling Ren, **Yu Wang**, Huazhong Yang, “GPU-Accelerated Sparse LU Factorization for Circuit Simulation with Performance Modeling”, in *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, vol.26, No.3, 2015, pp.786-795.
- [J25] **Yu Wang**, Song Yao, Shuai Tao, Xiaoming Chen, Yuchun Ma, Yiyu Shi, Huazhong Yang, “HS3DPG: Hierarchical Simulation for 3D P/G Network”, in *IEEE Transactions on Very Large Scale Integration Systems (TVLSI)*, vol.23, No.10, 2015, pp.2307-2311.
- [J26] Wulong Liu, **Yu Wang**, Guoqing Chen, Yuchun Ma, Yuan Xie, Huazhong Yang, “Whitespace-Aware TSV Arrangement in 3-D Clock Tree Synthesis”, in *IEEE Transactions on Very Large Scale Integration Systems (TVLSI)*, vol.23, No.9, 2015, pp.1842-1853.

- [J27] Wenqiang Wang, Jing Yan, Ningyi Xu, **Yu Wang**, Feng-Hsiung Hsu, “Real-time High-quality Stereo Vision System in FPGA”, in *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, vol.25, No.10, 2015, pp.1696-1708.
- [J28] Boxun Li, Peng Gu, Yi Shan, **Yu Wang**, Yiran Chen, Huazhong Yang, “RRAM-based Analog Approximate Computing”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol.34, No.12, 2015, pp.1905-1917.
- [J29] Haixiao Du, Xuhong Liao, Mingrui Xia, Qixiang Lin, Gushu Li, Yuze Chi, Huazhong Yang, **Yu Wang**, Yong He, “Test-Retest Reliability of Graph Metrics in High-Resolution Functional Connectomics: A Resting-State Functional MRI Study”, in *CNS Neuroscience & Therapeutics*, vol.21, No.10, 2015, pp.802-816.
- [J30] Boxun Li, Peng Gu, **Yu Wang**, Huazhong Yang, “Exploring the Precision Limitation for RRAM-based Analog Approximate Computing”, in *IEEE Design & Test (D&T)*, vol.33, No.1, 2015, pp.51-58.
- [J31] Wujie Wen, Yaojun Zhang, Yiran Chen, **Yu Wang**, Yuan Xie, “PS3-RAM: A Fast Portable and Scalable Statistical STT-RAM Reliability/Energy Analysis Method”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol.33, No.11, 2014, pp.1644-1656.
- [J32] Wulong Liu, **Yu Wang**, Yuchun Ma, Yuan Xie, Huazhong Yang, “On-chip hybrid power supply system for wireless sensor nodes”, in *ACM Journal on Emerging Technologies in Computing Systems (JETC)*, vol.10, No.3, 2014, pp.23.
- [J33] Wulong Liu, Yu Wang, **Yu Wang**, Xue Feng, Yuan Xie, Yidong Huang, Huazhong Yang, “Exploration of Electrical and Novel Optical Chip-to-Chip Interconnects”, in *IEEE Design & Test*, vol.31, No.5, 2014, pp.28-35.
- [J34] Hong Zhang, Xue Feng, Boxun Li, **Yu Wang**, Kaiyu Cui, Fang Liu, Weibei Dou, and Yidong Huang, “Integrated photonic reservoir computing based on hierarchical time-multiplexing structure”, in *Optical Express*, vol.22, No.25, 2014, pp.31356-31370.
- [J35] Yi Shan, Yuchen Hao, Wenqiang Wang, **Yu Wang**, Xu Chen, Huazhong Yang, Wayne Luk, “Hardware Acceleration for an Accurate Stereo Vision System Using Mini-Census Adaptive Support Region”, in *ACM Transactions on Embedded Computing Systems (TECS)*, vol.13, No.4s, 2014, pp.132:1–132:24.
- [J36] Xiaoming Chen, **Yu Wang**, Huazhong Yang, “NICSLU: An Adaptive Sparse Matrix Solver for Parallel Circuit Simulation.”, in *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)*, vol.32, No.2, 2013, pp.261-274.
- [J37] Xiaoming Chen, **Yu Wang**, Huazhong Yang, Yuan Xie, Yu Cao, “Assessment of Circuit Optimization Techniques Under NBTI.”, in *IEEE Design & Test (D&T)*, vol.30, No.6, 2013, pp.40-49.
- [J38] Weichen Liu, **Yu Wang**, Xuan Wang, Jiang Xu, Huazhong Yang, “On-Chip Sensor Network for Efficient Management of Power Gating-Induced Power/Ground Noise in Multiprocessor System on Chip”, in *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, vol.24, No.4, 2013, pp.767-777.
- [J39] Xiaoming Chen, Hong Luo, **Yu Wang**, Yu Cao, Yuan Xie, Yuchun Ma, Huazhong Yang, “Evaluation and mitigation of performance degradation under random telegraph noise for digital circuits”, in *IET Circuits, Devices & Systems*, vol.7, No.5, 2013, pp.273-282.
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Student Supervision

Note: I started to co-advise Ph.D. and Master Students since 2007, I could have my own Master Students from 2009, Ph.D students from 2013.

Doctoral Dissertations Supervised

- [1]. 2018 **Lixue Xia**, Ph.D. in Electronic Engineering, Tsinghua University
Research on Key Technologies of RRAM-based High Energy Efficient Neural Network Computing System
First Job: Alibaba Group
- [2]. 2017 **Haixiao Du**, Ph.D. in Electronic Engineering, Tsinghua University (Co-adviced with Prof. Huazhong Yang)
Research on the Parallel Computing and Test-Retest Reliability of High-Resolution Functional Connetomics
First Job: CITIC Technology Development Co., Ltd.
- [3]. 2015 **Wulong Liu**, Ph.D. in Electronic Engineering, Tsinghua University (Co-adviced with Prof. Huazhong Yang)
Key Technologies of Three-dimensional Integrated Mixed-signal Systems
First Employer: Cognitive Computing, Huawei Research Lab.
- [4]. 2014 **Yi Shan**, Ph.D. in Electronic Engineering, Tsinghua University (Co-adviced with Prof. Xu Chen)
Key Technologies of Big Data Application-Specific Custom Computing
First Job: Deep Learning Lab (IDL), Baidu
- [5]. 2014 **Xiaoming Chen**, Ph.D. in Electronic Engineering, Tsinghua University (Co-adviced with Prof. Huazhong Yang)
Algorithm Parallelization and Architecture Optimization for Irregular Problems
First Job: Postdoc in CMU.

Master Thesis Supervised

- 2018 **Ming Cheng**, M.S. in Electronic Engineering, Tsinghua University
TIME: A Training-in-memory Architecture for RRAM-based Deep Neural Network
First job: Infrastructure, Alibaba Group
- 2018 **Baofu Zhao**, M.S. in Electronic Engineering, Tsinghua University
Research on BWT-based Lossless Compression System and FPGA Implementation
First job: Baidu
- 2017 **Kang Zhao**, M.S. in Electronic Engineering, Tsinghua University
Algorithmic Research on High-Resolution Functional Brain Network Construction from rs-fMRI
First job: Ph.D. student in Tsinghua University
- 2017 **Tianqi Tang**, M.S. in Electronic Engineering, Tsinghua University
Low Bit-Level Neural Network on ReRAM
First job: Ph.D. student in University of California, Santa Barbara
- 2017 **Mengyuan Gu**, M.S. in Electronic Engineering, Tsinghua University
Design and Optimization of Stereo Vision Algorithm Based on FPGA
First job: China Orient Asset Management CO.,LTD.
- 2016 **Xijie Jia**, M.S. in Electronic Engineering, Tsinghua University
Research of Real-Time High Resolution SURF on FPGA
First job: Kunming Institute of Physics
- 2016 **Yubin Li**, M.S. in Electronic Engineering, Tsinghua University
Research of FPGA-based Acceleration for Basic Column-Database Operations
First job: DeePhi Tech
- 2016 **Boxun Li**, M.S. in Electronic Engineering, Tsinghua University
Research on RRAM-based Energy Efficient Computing
First job: Qihoo 360
- 2015 **Wenqiang Wang**, M.S. in Electronic Engineering, Tsinghua University
Research on FPGA-based Stereo Vision System
First job: Microsoft Research Asia
- 2015 **Lin li**, M.S. in Electronic Engineering, Tsinghua University
Research on Heterogeneous Network Protocol of Bridge Health Monitoring System Based on CAN

- 2014 **Zilong Wang**, M.S. in Electronic Engineering, Tsinghua University
Time Series Data Mining on FPGA
First job: Netease
- 2013 **Shuai Tao**, M.S. in Electronic Engineering, Tsinghua University (Co-advised with Prof. Hui Wang)
Hierarchical P/G Simulation Method for 3D IC
First job: Renmin Search
- 2013 **Xin Li**, M.S. in Electronic Engineering, Tsinghua University
Low Power Clock Tree Synthesis for embedded CPU
First job: 28th Research Institute
- 2015 **Tao Liu**, M.S. in Electronic Engineering, Tsinghua University
Coding Hardware Accelerator Design of LTE Down Stream Physical Layer
- 2009 **Yan Xu**, M.S. in Electronic Engineering, Tsinghua University (Co-advised with Prof. Huazhong Yang)
Power Gating Methodology in MPSOC considering P/G Noise
First job: MediaTek

Current Ph.D. Students

- [1]. Ph.D. **Yuliang Sun**, (2013- now, female) Ph.D. Student in Electronic Engineering, Tsinghua University
- [2]. Ph.D. **Guohao Dai**, (2014- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [3]. Ph.D. **Kaiyuan Guo**, (2015- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [4]. Ph.D. **Jiantao Qiu**, (2015- now, Co-advised with Prof. Sen Song) Ph.D. Student in Electronic Engineering, Tsinghua University
- [5]. Ph.D. **Jincheng Yu**, (2016- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [6]. Ph.D. **Xuefei Ning**, (2016- now, female) Ph.D. Student in Electronic Engineering, Tsinghua University
- [7]. Ph.D. **Hanbo Sun**, (2017- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [8]. Ph.D. **Yi Cai**, (2017- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [9]. Ph.D. **Zhenhua Zhu**, (2018- now) Ph.D. Student in Electronic Engineering, Tsinghua University
- [10]. Ph.D. **Shulin Zeng**, (2018- now) Ph.D. Student in Electronic Engineering, Tsinghua University

Current M.S. Students

- [1]. M.S. **Yu Xing**, (2016- now) M.S Student in Electronic Engineering, Tsinghua University
- [2]. M.S. **Yiming Hu**, (2016- now) M.S Student in Electronic Engineering, Tsinghua University
- [3]. M.S. **Wenshuo Li**, (2017- now, Co-advised with Prof. Qi Wei) M.S Student in Electronic Engineering, Tsinghua University
- [4]. M.S. **Ranran Huang**, (2017- now, female) M.S Student in Electronic Engineering, Tsinghua University
- [5]. M.S. **Zhilin Xu**, (2018- now) M.S Student in Electronic Engineering, Tsinghua University
- [6]. M.S. **Weicong Chen**, (2018- now) M.S Student in Electronic Engineering, Tsinghua University
- [7]. M.S. **Weizhe Meng**, (2018- now) M.S Student in Electronic Engineering, Tsinghua University

Presentations

- 2018 Invited Talk, Shanghai Academy of Spaceflight Technology Shanghai, China
“Efficient Deep Learning Processing Unit Design for FPGA/Edge”
- 2018 Invited Talk, University of Shanghai for Science and Technology Shanghai, China
“Efficient Deep Learning Processing Unit Design for FPGA/Edge”
- 2018 Invited Talk, Workshop at 32nd ACM International Conference on Supercomputing (ICS 2018) Beijing, China
“Training on FPGA”
- 2018 Tutorial, 23rd IEEE European Test Symposium Bremen, Germany
“Design of Fault-Tolerant Neuromorphic Computing Systems”
- 2018 Invited Talk, University of Toronto & Tsinghua University: Innovation Entrepreneurship Forum Toronto, Canada
“Efficient Deep Learning Processing Unit Design for FPGA/Edge”

2018	Invited Talk, 2018 National Conference of Deep Learning Technology and Application “The Status and Prospect of Deep Learning Processor”	Xiamen, China
2018	Invited Talk, Hefei 168 Middle School “The Path to the Development of Artificial Intelligence: from Algorithms to Chips”	Hefei, China
2018	Invited Talk, Maanshan No.2 High School “The Path to the Development of Artificial Intelligence: from Algorithms to Chips”	MaAnshan, China
2018	Tutorial, 2018 VLSI-DAT “Software-Hardware Co-Design for Efficient Neural Network Acceleration”	Taiwan
2018	Invited Talk, 10th LSE SU China Development Forum “Neural Networks on RRAM Opportunity and Challenge”	London, UK
2018	Invited Talk, Imperial College London “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	London, UK
2018	Invited Talk, NUCTECH Conference on Security Technology and Innovation “Deep Learning Processor: from the Edge to the Cloud ”	Beijing, China
2018	Invited Talk, China Mobile Communication Corporation “AI Plus: Deep Learning Processor and Multi Scene AI Application”	Beijing, China
2018	Invited Talk, 2018 Innovation Investment Summit “AI Plus: Deep Learning Processor and Multi Scene AI Application”	Shenzhen, China
2018	Invited Talk, International Symposium on Computer Hardware and Artificial Intelligence Security 2018 Shenzhen, China “Neural Network Accelerator and Thinking of Security”	
2018	Invited Talk, Alibaba “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	San Jose, CA, US
2018	Invited Talk, Xi’an Jiaotong University “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Xi’an, China
2018	Invited Talk, Xidian University “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Xi’an, China
2018	Invited Talk, Duke “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Durham, NC, US
2017	Invited Talk, Shanghai Jiao Tong University “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Shanghai, China
2017	Invited Talk, Inspur “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Shandong, China
2017	Invited Talk, Keysight Technologies “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Shanghai, China
2017	Invited Talk, Symposium on Bio-inspired Circuits 2017 “Neural Networks on RRAM Opportunity and Challenge”	Beijing, China
2017	Invited Talk, Department of Electronic Engineering Doctoral Students Forum, Tsinghua “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Beijing, China
2017	Invited Talk, Department of Automotive Engineering Doctoral Students Forum, Tsinghua “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Beijing, China
2017	Invited Talk, CNCC 2017 “Accelerator Design Technical Overview and Development Challenges”	Fuzhou, China
2017	Invited Talk, CCF High Performance Computing China 2017 “Design and Thinking of Neural Network Based on Resistive Memory”	Hefei, China
2017	Invited Talk, University of Science and Technology of China “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Hefei, China
2017	Invited Talk, 13th ESWEEK “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Seoul, South Korea
2017	Invited Talk, Institute of Computing Technology Chinese Academy of Sciences “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Beijing, China
2017	Invited Talk, China Electric Power Research Institute	Beijing, China

	“Efficient Deep Learning Processing Unit Design for FPGA/Edge”	
2017	Invited Talk, CCF Computer Engineering and Techniques “Deep Learning on Edge”	Xiamen, China
2017	Invited Talk, Summer Course of Circuit and System Design Technology for Deep Learning “Deep Learning on Edge”	Taiwan
2017	Invited Talk, Tsinghua 2017 Summer School “Energy-Efficient Intelligent Computing”	Beijing, China
2017	Invited Talk, CFTC 2017 “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Nanjing, China
2017	Invited Talk, Huazhong University of Science and Technology “Efficient Deep Learning Processing Unit Design for FPGA/Edge”	Wuhan, China
2017	Invited Talk, Fudan University “Software-Hardware Co-Design for Efficient Neural Network Acceleration on FPGA”	Shanghai, China
2017	Invited Talk, ShanghaiTech Workshop on Emerging Devices, Circuits and Systems “Software-Hardware Co-Design for Efficient Neural Network Acceleration on FPGA”	Shanghai, China
2017	Invited Talk, THU-USC Faculty Research Symposium on The 4th Industrial Revolution: Enabling Tools and Methods “Software-Hardware Co-Design for Efficient Neural Network Acceleration on FPGA”	Beijing, China
2017	Invited Talk, Heterogeneous Computing in the AI Era: Tectent Rhinoceros Bird Salon “Software-Hardware Co-Design for Efficient Neural Network Acceleration on FPGA”	Shenzhen, China
2017	Invited Talk, 2017 China-Africa Youth Gala “Innovation in Tsinghua”	Pretoria, South Africa
2017	Invited Talk, National Tsing Hua University “Towards Efficient Deep Learning Processing on FPGA”	Taiwan
2017	Invited Talk, National Taiwan University “Towards Efficient Deep Learning Processing on FPGA”	Taiwan
2017	Invited Talk, Academic Symposium on High Performance Computing Technology to Promote Power System Evolution “Deep Learning on FPGA”	Beijing, China
2017	Invited Talk, CCF YOCSEF “Deep Learning on FPGA”	Beijing, China
2016	Invited Talk, Open Source Hardware Forum “From Model to FPGA: Software-Hardware Co-Design for Efficient Neural Network Acceleration”	Beijing, China
2016	Invited Talk, 2016 Chinese Electronic Information Deans Forum “Design and Industrialization thinking of Deep Learning Processor Based on FPGA”	Beijing, China
2016	Invited Talk, Huawei HIRP Exploratory 2016 “From Model to FPGA: Software-Hardware Co-Design for Efficient Neural Network Acceleration”	Shanghai, China
2016	Invited Talk, 12th ESWEEK “RRAM Based Learning Acceleration”	Pittsburgh, PA, USA
2016	Tutorial, FPL 16 “Energy-efficient Acceleration for Neuro-inspired Computing On-a-chip”	Lausanne, Switzerland
2016	Invited Talk, University of Notre Dame “Neural Network on RRAM”	Notre Dame, IN, US
2016	Invited Talk, OpenHW2016 “From Model to FPGA: Software-Hardware Co-Design for Efficient Neural Network Acceleration”	Shanghai, China
2016	Invited Talk, City University of Hong Kong “From Model to FPGA: Software-Hardware Co-Design for Efficient Neural Network Acceleration”	Hong Kong
2016	Invited Talk, CCF Computer Engineering and Techniques “Neural Network on RRAM”	Xi’an, China
2016	Invited Talk, Xilinx “Going Deeper with Embedded FPGA Platform for Convolutional Neural Network”	US
2016	Tutorial, ASP-DAC 16	Macao

	“Machine Learning and Neuromorphic Computing Acceleration”	
2016	Invited Talk, The Hong Kong Polytechnic University “Neural Network on RRAM”	Hong Kong
2015	Invited Talk, Huawei “Can CNN be implemented on Mobile Phone?”	Shenzhen, China
2015	Invited Talk, IBM OpenPower Forum: 2nd Generation Distributed Computing Forum “CNN on FPGA for Image-Net”	Beijing, China
2015	Invited Talk, Shanghai Tec University “Energy Efficient Neural Networks for Big Data Analytics”	Shanghai, China
2015	Invited Talk, GLSVLSI 15 “Energy Efficient RRAM Spiking Neural Network for Real Time Classification”	Pittsburgh, PA, USA
2015	Invited Talk, Shanghai Jiaotong University “Energy Efficient Neural Networks for Big Data Analytics”	Shanghai, China
2015	Invited Talk, University of Pitts “Energy Efficient Neural Networks for Big Data Analytics”	Pittsburgh, PA, USA
2015	Invited Talk, CMU “Hardware Acceleration for Data Analytics on FPGA”	Pittsburgh, PA, USA
2015	Invited Talk, UIUC “Energy Efficient Neural Networks for Big Data Analytics”	Urbana, IL, US
2015	Invited Talk, UCLA “Energy Efficient Neural Networks for Big Data Analytics”	LA, CA, US
2015	Invited Talk, Institute of Software, Chinese Academy of Science “A Heterogeneous Accelerator Platform for Multi-Subject Voxel-based Brain Network Analysis”	Beijing, China
2014	Invited Talk, Huawei “Heterogeneous Hardware Computing for Big Data Analytics”	Shenzhen, China
2014	Invited Talk, Intel Research China “Energy Efficient Neural Networks for Big Data Analytics”	Beijing, China
2014	Invited Talk, UCSB “Energy Efficient Neural Networks for Big Data Analytics”	Santa Barbara, CA, US
2014	Invited Talk, Asia Sensor Workshop “Time Series Data Mining on FPGAs”	Taiwan
2013	Invited Talk, Cambridge, Computing Lab “Energy Efficient Computing System in NICS CAD”	London, UK
2013	Invited Talk, Imperial College “Streaming Similarity Search on FPGA based on Dynamic Time Warping”	London, UK
2012	Invited Talk, DSMC Workshop at ICCAD “Streaming Similarity Computing on FPGAs”	San Jose, CA, USA
2012	Invited Talk, Profit 2012 “A Heterogeneous Accelerator Platform for Multi-Subject Voxel-based Brain Network Analysis”	China
2012	Invited Talk, Imperial College “Voxel-based Brain Network Analysis based on hybrid computing platforms”	London, UK
2011	Invited talk, ICCAD11 “A Heterogeneous Accelerator Platform for Multi-Subject Voxel-based Brain Network Analysis”	San Jose, CA, USA
2011	Invited Talk, National Tsinghua University “Sparse Matrix/Graph Problems on Many Cores: LU Decomposition and Brain Network Analysis”	Taiwan
2010	Invited talk, ASQED’10 “Hardware Computing for Brain Network Analysis”	Penang, Malaysia
2010	Invited Talk, National University of Singapore “Recent MPSoC research work in Nano-Integrated Circuits and Systems (NICS) Tsinghua”	Singapore
2010	Invited Talk, Pennsylvania State University “Recent MPSoC research work in Nano-Integrated Circuits and Systems (NICS) Tsinghua”	University Park, PA, USA

Service and Activities

Professional Community

2016 - now Member, ACM SIGDA Technical Committee of Reconfigurable Computing
2014 - now Committee Member, ACM SIGDA Northern China Chapter
2015 - now Founding Member, IEEE CEDA Beijing Chapter
2014 - now Senior Member, IEEE
2016 - now Senior Member, ACM
2014 - now Founding Member, Research Center of Brain Inspired Computing Systems in Tsinghua University

Editorial Board

2017.01 - now Co-Editor-in-Chief, ACM SIGDA E-News
2017.09 - now Special Issue Editor, Microelectronics Journal
2018.01 - now Associate Editor, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
2013.12 - now Associate Editor, IEEE Transactions on CAD (TCAD)
2013.05 - now Associate Editor, Journal of Circuits, Systems, and Computers (JCSC)
2015 Guest Co-Editor, Integration, the VLSI Journal
2015 Guest Co-Editor, IEEE Transactions on Multi-Scale Computing Systems

Services for Conferences

2018 Technical Program Committee Chair, IEEE Computer Society Annual Symposium on VLSI (ISVLSI)
2017 - now Track Chair, Design Automation and Test in Europe (DATE)
2018 Track Chair, ACM Great Lakes Symposium on VLSI (GLSVLSI)
2012 - 2016 Finance Co-Chair, International Symposium on Low Power Electronics and Design (ISLPED)
2015 Selection Committee Member, Significant Papers from the First 25 Years of the FPL Conference
2011 Program Co-Chair, International Conference on Field Programmable Technology (ICFPT)
2011 Publicity Co-Chair, International Symposium on Low Power Electronics and Design (ISLPED)
2010 Demo Session Chair, Special Session Chair, International Conference on Field Programmable Technology (ICFPT)
2015 - 2017 Technical Program Committee Member, IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC)
2015 - 2016 Technical Program Committee Member, IEEE International Conference on Parallel and Distributed Systems (ICPADS)
2014 - 2016 Technical Program Committee Member, Design Automation Conference (DAC)
2014 - 2016 Technical Program Committee Member, ACM International Symposium on Field-Programmable Gate Arrays (FPGA)
2014 - 2016 Technical Program Committee Member, IEEE/ACM International Conference on Computer-Aided Design (ICCAD)
2014 - 2016 Technical Program Committee Member, Asia and South Pacific Design Automation Conference (ASPDAC)
2014 Technical Program Committee Member, International Conference on VLSI Design (VLSI-D)
2014 - now Technical Program Committee Member, International Symposium on Highly Efficient Accelerators and Reconfigurable Technologies (HEART)
2012 - now Technical Program Committee Member, Design Automation and Test in Europe (DATE)
2010 - now Technical Program Committee Member, International Symposium on Low Power Electronics and Design (ISLPED)
2010 - 2012 Technical Program Committee Member, Asia and South Pacific Design Automation Conference (ASPDAC)
2010 - now Technical Program Committee Member, International Conference on Field Programmable Technology (ICFPT)
2009 - 2013 Technical Program Committee Member, IEEE Computer Society Annual Symposium on VLSI (ISVLSI)
2009 - 2010 Technical Program Committee Member, Asia Symposium on Quality Electronic Design (ASQED)
2009 - 2010 Technical Program Committee Member, IEEE/ACM International Conference on Computer-Aided Design (ICCAD)
2008 - now Technical Program Committee Member, International Symposium on Quality Electronic Design (ISQED)

External Reviewers

2008- Reviewer of APCCAS, ISCAS, ISQED, GLSVLSI, DAC, VLSID08/09, ASPDAC08/09, DATE09; IEEE Transactions on VLSI, Nature Electronics, International Journal of Electronics, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Computer-Aided Design, ACM Transactions on Embedded Computing Systems, and etc