

Jing Wang

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School of Electronic Information
and Electrical Engineering,
Shanghai Jiao Tong University

EDUCATION

2018.09 – Present	SHANGHAI JIAO TONG UNIVERSITY Ph.D. Student of Computer Science, GPA: 3.85 in Sustainable Architectures and Infrastructure Laboratory of EPCC NORTHWESTERN POLYTECHNICAL UNIVERSITY	Shanghai, China Xi'an, China
2014.09-2018.07	Bachelor of Software Engineering, Credit: top 6% School of Software and Microelectronics	

PUBLICATIONS

Papers:

- [1] **Jing Wang**, Lu Zhang, Pengyu Wang, Jiaohong Xu, Chao Li, Haojin Zhu, Xuehai Qian, Minyi Guo. "Memory system optimization for graph processing: a survey", *SCIENCE CHINA Information Science*, 2019, 49(3): 295-313.
- [2] Jinyang Guo, Chuanming Shao, **Jing Wang**, Chao Li, Haojin Zhu, Minyi Guo. "Programming environments for FPGA graph processing: survey and exploration", *Journal of Computer Research and Development*, 2020. [Accept]
- [3] Weixin Deng, Pengyu Wang, **Jing Wang**, Chao li. "Exploiting parallelism, sparsity and locality to accelerate matrix factorization on x86 platforms", *BenchCouncil International Symposium on Benchmarking, Measuring and Optimizing*, 2019.

Patents:

- [1] Chao Li, **Jing Wang**, Pengyu Wang, Haojin Zhu, Minyi Guo. "A method for data preprocessing and scheduling strategy of concurrent FPGA graph processing", *CNIPA*, 2020.

HONORS AND AWARDS

2019	Second prize , The 2nd Winning Health Intelligent Medical System Design Competition
2019	First prize , BenchCouncil International Artificial Intelligence System Challenges
2018	Second prize , in CCF TCARCH Computer Architecture Challenge
2018	Outstanding Undergraduate Thesis Award , Northwestern Polytechnical University
2017	Honorable Mention , COMAP's Mathematical Contest in Modeling
2017	Outstanding Students Scholarship , Northwestern Polytechnical University
2017	Good Grade , National College Student Innovative and Entrepreneurship Competition
2016	Outstanding Students Scholarship , Northwestern Polytechnical University
2016	National Encouragement Scholarship , Ministry of Education of China
2015	Outstanding Students Scholarship , Northwestern Polytechnical University
2015	National Encouragement Scholarship , Ministry of Education of China
2013	First Prize, National High School Chemistry Olympiad, Chinese Physical Society

RESEARCH

EXPERIENCES

2020.02 – present	Graduate Research Assistant [In the study] Sustainable Architectures and Infrastructure Laboratory, Shanghai Jiao Tong University <ul style="list-style-type: none">▪ "Disaggregated memory resource management in tiered cluster architecture"▪ Remote memory access with RDMA cooperated with local memory▪ Virtualize Infrastructure and software as graphs and allocate resources with graph mapping
2019.03 – present	Graduate Research Assistant [In the study] Sustainable Architectures and Infrastructure Laboratory, Shanghai Jiao Tong University

- 2018.08 – present
 - Research on “Unified memory exploration for graph processing on GPU”
 - Unified memory utilization for processing graphs larger than shared memory on GPU**Key Project of Chinese National Programs for Fundamental Research and Development**
 Sustainable Architectures and Infrastructure Laboratory, Shanghai Jiao Tong University
 - Chief designer and manager of program of “Graph Processing programming environment on FPGA accelerator”
 - Implementation of HLS tools that translates high-level languages to HDL
 - Design of Graph DSL and libraries for programming graph applications on FPGA
- 2018.02 – 2018.06
 Undergraduate Thesis Research
 Emerging Parallel Computing Center, Shanghai Jiao Tong University
 - Research on “Programming graph algorithms on heterogeneous architecture”
 - Graph processing performance optimization on Xilinx PYNQ platform
 - Outstanding Undergraduate Thesis Award in Northwestern Polytechnical University
- 2016.05 – 2017.11
 National Innovative and Entrepreneurship Research Program of China
 School of Software and Microelectronics, Northwestern Polytechnical University
 - Conducting research on “Design and Implementation of Discrete Event Diagnosis System “
 - Funded by National College Student Innovative and Entrepreneurship Competition
 - Chief designer of the error-diagnosed algorithm with complexity reducing

GRADUATE LEVEL COURSES

- 2018.09 – 2020.01 Advanced Computer Architecture; Parallel Computing & Algorithms; Neural Network Principles & Application; Natural Language Understanding; Large-scale data processing; Modern Cryptographic Algorithms; Applied Algebraic; Advanced Database Techniques; Image Processing & Machine Vision; Coding & Information Theory.

LEADERSHIP ACTIVITIES

- 2018.08 – 2019.06 **Class Monitor**, School of Electronic Information and Electrical Engineering
- Assisted the counselors of school to organize student activities in the class
- 2014.09 – 2018.06 **Class President in charge of psychological**, Northwestern Polytechnical University
- Hold psychology games to popularize psychological knowledge among all students
- 2014.09 – 2016.06 **Core Minister in Student Union**, School of Software and Microelectronics
- Hold annual competitions of debating, program debugging and mental health
 - Assisted the college office in making academic decisions

GRANTS

- 2019 Winning Health Intelligent Medical System design grants
- 2017 Funding of National College Student Innovative and Entrepreneurship Competition, Ministry of Education of China

PROFESSIONAL ACTIVITIES

- *Membership*
Student member of China Computer Federation (CCF)
- *Volunteer of Conference Organization*
 - CCF YOCSEF Shanghai 20th Anniversary Forum, Shanghai, China (**YOCSEF 2019**)
 - The 16th Annual IFIP International Conference on Network and Parallel Computing Conference 2019, Hohhot, Inner Mongolia, China (**NPC 2019**)
 - Website maintenance for The 14th CCF International Symposium on Advanced Parallel Processing Technology Conference to be held (**APPT 2021**)
- *Journal Reviewer*
IEEE Journal on Emerging and Selected Topics in Circuits and Systems (**IEEE MicroSI 2020**)

TEACHING EXPERIENCES

- 2020.03 – 2020.07 ▪ *Teaching Assistant*
Computer Architecture, Professor Chao Li, Spring 2020, Shanghai Jiao Tong University
- 2019.09 – 2020.01 ▪ **Cloud Computing Technology**, Professor Chao Li, Autumn 2019, Shanghai Jiao Tong University
- *Mentoring Experience*
Mathematics and **English** for primary school students, Feiran Zhiyi, Bowen Dong, et al.
Mathematics, and **Physics** for junior high school students, Chan Guo, Yahan Li, et al.
Mathematics, **Chemistry** and **Biology** for high school students, Ang Li, Qian Wang, et al.

TECHNICAL SKILLS

- *Operating Systems*
Windows/Linux/Android
- *Languages*
C/C++, Java, Python, Scala, Verilog HDL, Chisel, Cuda,
MPI, OpenMP, MATLAB, HTML, JavaScript, MySQL
- *Software Development Tools*
Eclipse, Dreamwaver, AxureRP, Idea, Spark, Hadoop, Noe4j
- *Architectural Simulation and Hardware Design Tools*
Gem5, CloudSim, Quaturs II, Vivado, SDAccel

REFERENCE

Dr. Chao Li (Co-advisor)
Associate Professor in the School of Electronic Information and Electrical Engineering
Shanghai Jiao Tong University

Dr. Minyi Guo(Advisor)
Professor in the School of Electronic Information and Electrical Engineering
Shanghai Jiao Tong University

Dr. Haojin Zhu
Professor in the School of Electronic Information and Electrical Engineering
Shanghai Jiao Tong University