Jialin WAN

EMAIL: wanjialin@ust.hk PHONE: +852 65705285
ADD.: HKUST, Clear Water Bay, Hong Kong, China

EDUCATION

Harbin Institute of Technology, Harbin, China

2015-2017	M.Phil in Computer Science	GPA: 84.29/100	Mentor: Prof. Jianzhong Li
2011-2015	B.Eng in Computer Science	GPA: 86.89/100	

MATH COURSES: Mathematical Analysis(100); Probability Theory(98); Linear Algebra and Analytic Geometry(97); Mathematical Logic(98); Numerical Method(98); Modern Algebra(98); Mathematical Statistics(94); Mathematical Modeling(91)

HARDWARE COURSES: Electric Circuit(100); Introduction to Electronic Technology(93); Computer Design and Practice(92); Computer Interface Technology(91); Digital Logic Design(90); Computer Architecture(89); Embedded Systems(86)

EXPERIENCE

2017-NOW | **System networkING Lab (SING), HKUST, Hong Kong.** Full-time Research Assistant.
-Advisor: Prof. Kai Chen. Worked on AI Cloud implementation.

2015-2017 | **Massive Data Computing Research Center, HIT, Harbin.** Part-time Research Assistant.
-Mentor: Prof. Jianzhong Li. Worked on WSNs and data management.

2016 | Teaching Assistant for **Theory of computation**.

2017 | Teaching Assistant for **NVIDIA Deep Learning Institute Workshop**.

PUBLICATIONS

JUL. 2016 | **Jialin Wan**, Siyao Cheng, Shanshan Han, Jianzhong Li.
Optimal Scheduling of Friendly Jammers for Securing Wireless Communication. **CoRR 2017**
-Studied schedule strategies of jammers to prevent eavesdroppers and maximize network lifetime.
-Proved NP-hardness by reduction to Maximum Independent Set problem.
-Devised a greedy algorithm to minimize energy consumption in each slot.

OCT. 2015 | Tuo Shi, **Jialin Wan**, Siyao Cheng, Zhipeng Cai, Yingshu Li, Jianzhong Li.
Time-Bounded Positive Influence in Social Networks. **IEEE IIKI 2015**
-To find the Positive Influence Dominating Set with time factor taken into account.
-Devised a greedy algorithm by building a Spread-graph and moving nodes greedily between layers.

NOV. 2016 | Shanshan Han, Hongzhi Wang, **Jialin Wan**, Jianzhong Li.
An Iterative Scheme for Leverage-based Approximate Aggregation. **CoRR 2017**
-Devised a novel algorithm to calculate high-quality approximate estimation using only a small share of samples, by assigning leverage-based possibility to data of different range.

MAY. 2017 | **Jialin Wan**, Siyao Cheng.
An Efficient Visualization Algorithm in Wireless Sensor Networks. **SciencePaper Online**
-Devised an error conversion algorithm considering hardware information.
-Implemented a prototype on Android.

PROJECTS

OCT. 2017 | **AI Cloud implementation with RDMA support.**
-Supervised by Prof. Kai Chen.
-Configured mainstream AI platforms,including Tensorflow, MXNet, Caffe2 and Pytorch, to support RDMA between GPUs, in order to achieve lower latency, lower CPU load and higher bandwidth.

MAR. 2014 | **VHDL Designing and Modeling in FPGA-based Embedded CPU.** @GitHub
-Designed the logical circuit of a simple CPU with 6 modules, i.e. clock, instruction fetch, ALU, memory, write back, and memory control, then implemented on an FPGA board.

MAY. 2014 | **Simple Compiler of C Language.** @GitHub
-Built a simple compiler including lexical analysis, grammatical analysis, semantic analysis, and intermediate code generation. Developed independently with C++.

OCT. 2015 | **Android Developing: Data Visualization Application.** @GitHub
-Translated raw data into graphical representation, supported zooming and aggregation query.
-Developed independently with JAVA and PHP.

OTHERS | **More projects can be found** @GitHub **or** @YouTube.

Patents

Jul. 2017	Shanshan Han, Hongzhi Wang, **Jialin Wan**. **A Method of Leverage-based AVG Aggregation on Big Data. China. Patent Number: 2017101754584** -Increased quality of aggregation from the statistical perspective.

Honors and Awards

Jun. 2012	First-Class People's Scholarship (Top 3%)
2012-2013	National Scholarship for Encouragement (Top 3%, twice)
2015-2016	First-Class Postgraduate Scholarship (twice)
Sep. 2016	Suzhou Industrial Park Scholarship (Top 6%)
2013-2015	Third-Class People's Scholarship (triple)
Apr. 2014	Successful participant of Mathematical Contest in Modeling

Skills

Programming: C, C++, python, PHP, LINGO.
Database: SQL, MySQL.
Hardware: VHDL.
Platform & Framework: Linux, Tensorflow, Pytorch.
Sports: Badminton, Swimming.