

# Jialin WAN

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## 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

- 2017-2018 **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.
- 2017 Teaching Assistant for **NVIDIA Deep Learning Institute Workshop.**
- 2016 Teaching Assistant for **Theory of Computation.**

## 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.
- 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.
- 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++.
- OTHERS **More projects can be found [@GitHub](#) or [@YouTube](#).**

## PATENTS

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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

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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

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**Programming:** C, C++, PYTHON, PHP, LINGO.  
**Database:** SQL, MYSQL.  
**Hardware:** VHDL.  
**Platform & Framework:** LINUX, TENSORFLOW, PYTORCH.  
**Sports:** BADMINTON, SWIMMING.