Lang Qin

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EDUCATION

Dalian University of Technology (DUT) Sep. 2013 - Anticipated in Jun. 2017

- **Major:** Automation, Bachelor of Science in Engineering, Faculty of Electronic Information and Electrical Engineering
- **Curriculum GPA:** 90.0/100; **Major GPA:** 90.5/100; **Rank:** 1/127
- **Relevant Coursework:** Fundamentals of Program Design, Data Structure, Computer Principles, Microcomputer Principles, Modern Intelligence of Optimize Arithmetic, Computer Control Technology, Linear Algebra, Theories of Automotive Control

RESEARCH & INTERNSHIP EXPERIENCE

Research Assistant, Institute of Water Resources and Flood Control Mar. 2016 – Present
Dalian University of Technology Mentor: Prof. Chi Zhang *Dalian, P.R.China*
Funded by the National College Students' Innovative Training Program of China

- Performed analysis on 5 years of water usage data and designed a distributed system, including measurement, data transmission method, and feedback control, to optimize water use management based on real-time data. Carried out a pilot scheme that would help save DUT 500,000 CNY annually and developed an informational Android application.
- Introduced a water right trade algorithm and platform based on water usage data from a hopsital that would improve Dalian city's water management system and reduce water usage by an estimated 8%.

Visiting Student, Advanced Integrated Cyber-Physical Systems (AICPS) Lab Jul. 2016 - Sep. 2016
University of California, Irvine Mentor: Prof. Mohammad Al Faruque *Irvine, CA, United States*

- Designed experimental approaches and set up a testbed for battery pack SOC estimation and internal resistance calculation. Integrated Python and MATLAB to drive the testbed and collect data automatically every 0.6 seconds.
- Discovered similarities among batteries of the same vendor and differences among those of different vendors after a filtration and correlation analysis of charge and discharge voltage, current, temperature, and internal resistance.

Research Assistant, School of Innovation Experiment Nov. 2014 - Mar. 2016
Dalian University of Technology Mentor: Prof. Quihui Pan *Dalian, P.R.China*
Funded by the National College Students' Innovative Training Program of China

- Built an ecosystem model and simulation by applying Cellular Automata to explore the tendencies of prey-predator systems influenced by distribution and quantity of water resources; introduced energy to complete evolutionary process.
- Submitted a paper titled 'Prey-predator Models Affected by Water Resource' to Physica A as **the first author**.

Research Trainee, Jiangsu Power Design Institute Co., Ltd. Jan. 2016 - Feb. 2016
China Energy Engineering Group *Nanjing, P.R.China*

- Involved in the over-voltage protection portion of secondary circuit design for a 500kV power substation and participated in design reviewing conferences.

PUBLICATIONS

L. Qin, Q. Pan, M. Huang, Y. Zhang and M. He, 'Prey-predator Models Affected by Water Resource', Submitted to Physica A, 2017.

HONORS, AWARDS & LEADERSHIP

Honorable Mention, International Interdisciplinary Contest in Modeling *International*, Apr. 2014

- Established a ranking algorithm based on Principal Component Analysis (PCA) and Weight Decision by Entropy to analyze more than 3000 NCAA coaches since 1978; utilized the pervasive algorithm to rank coaches from other alliances.

The First Prize, Undergraduate Mathematical Contest in Modeling *National*, Sep. 2014

- Led a team in optimizing a landing route with minimum time and fuel for 'Change III' by analyzed numerous data.

Other Honors and Awards: DUT Learning Excellence Award (2014, 2015, 2016); DUT Ethic Award (2015); DUT Merit Student Award (2014, 2015); DUT Technological Innovation Award (2014)
Scholarship: *Endress+Hauser* Scholarship, Top 10% (2015); *NISSAN* Scholarship, Top 10% (2014)
Leadership: Vice Minister of Students' Association Union (2014-2015)

SKILLS

- **Programming Languages:** Proficient: C/C++, MATLAB, Assembly Language; Familiar: VHDL, Verilog, Python
- **Environments/Software:** MATLAB/Simulink, LabVIEW, AutoCAD, Auto Inventor, STEP 7
- **Language:** Native Chinese, Fluent English, Basic Japanese