

# Kai Zhang

Wuhan University

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## EDUCATION

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### Wuhan University (WHU)

#### Bachelor in Electrical Engineering and Automation

Sept. 2011 - June. 2015

School of Electrical Engineering

Overall GPA 3.56/4.0 (87.36/100)

#### Master in Electrical Engineering

Sept. 2015 - Present

School of Electrical Engineering

Overall GPA 3.63/4.0 (87.72/100)

## RESEARCH EXPERIENCE

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### Multi-objective Optimization of Transmission Lines Maintenance

Sept. 2015 - Aug. 2017

WHU Motor and Power Electronics Research Center

*Assistant Researcher, Supervised by Associate Prof. Hui Peng & Prof. Gong Qingwu*

- Implemented multi-objective optimization algorithms in MATLAB.
- Compared the global searching ability and the convergence speed of several different types of multi-objective evolutionary algorithms.
- Established objective functions and constraint conditions for maintenance of transmission lines.
- Obtained the optimal maintenance strategy of transmission lines.

### Metering Methods of Grid-connected Distributed Power Supply

Jul. 2014 - May. 2015

WHU Motor and Power Electronics Research Center

*Researcher, Supervised by Associate Prof. Hui Peng*

- Detected a potential problem in grid-connected distributed power measurement strategy.
- Improved the metering algorithm for grid-connected distributed power stations.
- Designed a metering environment monitoring device to address the potential problems of traditional measurement in distributed power supply.

### On-line Automatic Water Quality Monitor for Remote Areas

Mar. 2013 - May. 2014

WHU Electrical Practice and Innovation Open Laboratory

*Assistant Researcher, Supervised by Associate Prof. Hougui Chen*

- Implemented an automatic power generator based on micro water flow to provide stable output electricity with stable voltage.
- Accomplished an automatic water quality monitor using related sensors for remote areas.
- Implemented wireless signal transmission using wireless data communication module.

### Obstacle-avoiding Smart Car

Feb. 2013 - Mar. 2013

WHU Electrical Practice and Innovation Open Laboratory

*Assistant Researcher, Supervised by Ph.D Zhihao Xu*

- Implemented obstacle recognition and tracking using LabVIEW Vision Development Module.
- Measured the distance between the smart car and an obstacle using several distance sensors.
- Accomplished velocity and direction control of smart car through MCU.

## PUBLICATION

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**Kai Zhang**, Hui Peng. Prediction Model of Large Transformer Failure Rate Considering Real-time Aging State. (in the review process)

Yaojia Yang, **Kai Zhang**, Hui Peng, et al. Analysis of the Quantization Error of Electronic Transformer Merging Unit. In 2015 Fifth IMCCC.

Binruo Zhu, Xiaohui Song, **Kai Zhang**, et al. Study of Electric Energy Measurement Algorithm Based on Morphological Wavelet Considering Distortion Waveform. In 2015 Fifth IMCCC.

## EXTRACURRICULAR ACTIVITIES

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**Vice President of the Student Union** Sept. 2012 - June. 2015

- Organized many extracurricular activities as the team leader, such as the New Year party and the graduation party at School of Electrical Engineering.

**Volunteer Teaching in Xiaogan, Hubei Province** July. 2013

- Taught pupils, most of whom were left-behind children, different subjects at a primary school.
- Arranged special courses to provide psychosocial support for the kids to enhance their inner world.

**Helping Mentally Retarded Children** Aug. 2013

- Developed a volunteer program to help mentally retarded children.
- Did home visits to teach the kids some basic living skills.
- Taught the kids how to make simple handicrafts, hoping to provide them with a possible choice of means to earn a living by themselves.
- Organized a university bazaar of the handicrafts made by the kids in order to appeal to more people to pay attention to mentally retarded children.

## STANDARDIZED TESTS

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TOEFL: Total 102, Reading 29, Listening 27, Speaking 20, Writing 26

GRE: Total 327, Verbal 159, Quantitative 168, AW 3.5

## AWARDS

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China National Scholarship	2012
Merit Student Award	2012 & 2013
Huang Zhangren Scholarship	2014
Third-class prize of 7th mathematical modeling contest in Central China	2014
Outstanding Graduates Award	2015

## SKILLS

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<b>Computer Languages</b>	C, Assembly Language, Java, Perl
<b>Software &amp; Tools</b>	HTML, LaTeX, MATLAB, LabVIEW, MCU, Linux