

# Hongce Zhang

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## UNDERGRADUATE EDUCATION

Shanghai Jiao Tong University (SJTU)

Shanghai, China

School of Microelectronics

B.Eng. in Microelectronics

Expected graduation: 06 / 2015

GPA: 92.61/100

ranked 1<sup>st</sup> out of 46

## RESEARCH EXPERIENCE

School of Microelectronics, SJTU

*Group leader in Undergraduate Innovation Project*

*03/2014-present*

- Implemented Recursive Least Square and Extended Kalman Filter on FPGA for dynamic estimation of model parameters and the state of charge of li-ion battery.
- Wrote a program for automatic generation of Verilog HDL code of the control logic of Recursive Least Square module, more detail is introduced on *my website*.
- Designed a peripheral board using optocoupler and Hall voltage and current sensor to perform isolated measurement of battery cells.

*Research assistant*

*09/2013-02/2014*

- Employed Support Vector Regression approach to estimate the state of charge of li-ion battery.
- Set up a platform for remote access of battery monitoring data.

## AWARDS

- National Scholarship (one position for each grade in the department) 10/2014
- Samsung Scholarship (awarded to top 5%) 10/2013
- Shanghai Scholarship (two award positions each year in the department) 10/2012

## OTHERS

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|-------------------|--|
| Adept at Verilog  | Implemented a simple MIPS processor with dynamic branch prediction on FPGA and added a memory-mapping serial port for I/O when attending the course of Computer Organization and Embedded System.  |
| Skillful in C/C++ | Wrote a game using C++ & OpenGL, which won the second prize of College Students' Computer Application Ability Contest of Shanghai, 2012. Passed National Computer Rank Examination of China, Rank II (C Language) in 2006 as a junior high school student. |

## PUBLICATION

Hongce Zhang, Pushen Wang, Jiang Jiang, Hongfei Cao, *Hardware Implementation Optimization of Extended Kalman Filter for the Estimation of State of Charge of Li-ion Battery*, the 2<sup>nd</sup> International Conference on Computing, Signal Processing and Analysis, 2014