

Di (Judy) Zhu

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EDUCATION

- University of Southern California**, Los Angeles, CA, United States August 2011 - May 2016 (Expected)
▪ Ph.D. candidate in Computer Engineering GPA: 3.92/4.0
- Tsinghua University**, Beijing, China August 2007 - June 2011
▪ B.S. in Electrical Engineering GPA: 90.3/100 (Top 10%)

PROFESSIONAL EXPERIENCE

- Software Engineering Intern** May to August, 2014
Research and Development, Cadence
- Designed a feasible framework to implement operand isolation in RTL compiler to reduce dynamic power
 - Proposed an algorithm and implemented its overall flow in C++ for said operand isolation framework
- Hardware Engineering Intern** May to August, 2013
Mobile and Wireless Group, Broadcom
- Set up and configured the Oasys RealTime RTL synthesis toolset for the whole team, working in close collaboration with Oasys AEs
 - Used RealTime RTL synthesis toolset to identify and help eliminate the timing bottlenecks, power consumption hotspot, and wiring congestions of memory management unit and video decoder

EXPERTISE

- System-level and circuit-level power management
- VLSI design and optimization
- Algorithm design, especially computer aided design
- Electrical energy storage systems

SELECTED RESEARCH PROJECTS

- Design Optimization for On-Chip Networks** 2012 - present
Published 6 papers (including 4 first-author papers) on top-tier conferences/journals such as *HPCA, TC, IPDPS*.
- Developed a power gating scheme that achieves both high power saving and low latency penalty
 - Proposed a temperature-aware on-chip network design and management scheme
 - Presented an efficient mapping algorithm to minimize delay and power for express-channel based NoCs
- Hybrid Electrical Energy Storage System (HEES) for Electric Vehicles** 2013 - 2014
Published 2 papers (including 1 first-author paper) on *CODES, PES*.
- Developed a cost-aware HEES design methodology for electric vehicles with optimal battery bank sizing to minimize everyday operational costs
- Design and Control of the Residential Electrical Energy Storage Systems** 2011 - 2014
Published 8 papers (including 4 first-author papers) on top-tier conferences such as *DATE, ICCAD, ISLPED*.
- Modeled the residential hybrid EES (HEES) system considering cycle efficiency and aging of batteries, conversion circuit power loss, system weight and volume, etc.
 - Proposed a design and control methodology for household HEES system to maximize its return on investment

HONORS AND REWARDS

- **Ming Hsieh Institute Ph.D. Scholar**, University of Southern California 2015-16
- **Provost's Fellowship**, University of Southern California 2011-15
- **Best TA nomination**, EE department, University of Southern California 2014
- **Excellent Graduate**, Tsinghua University 2011

TEACHING EXPERIENCE

- **Teaching Assistant** VLSI System Design B 2013 Spring, 2014 Fall
(Nominated as best TA in EE department)
- **Teaching Assistant** VLSI System Design A 2012 Fall, 2013 Fall