

KUAN CHENG

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EDUCATION

Massachusetts Institute of Technology- Cambridge, MA June 2012

Candidate for Bachelor of Science Degree in Mechanical Engineering- GPA: 4.6/5.0

- ♦ Numerical Computation for MechE, Engineering Innovation and Design, Designing for People

WORK EXPERIENCE

GE Hitachi Nuclear Energy- Wilmington, NC June-August 2010

Reactor Pressure Vessel Feedwater Nozzle Stress Analysis Program Input Optimization

- ♦ Identified the 7 key inputs for the program through sensitivity studies and use of Six Sigma tools (design of experiments, regression analysis, etc).
- ♦ Enabled ~60 percent reduction in research and investigation time needed to prepare input files, which translates into an estimated \$27,000 saving for the company.

Nuclear Boiling Water Reactor Jet Pump Load Presentation

- ♦ Taught training seminar to GE Hitachi engineers which covered BWR Jet Pumps loads in a clear and concise manner. Seminar prepared through collaboration with technical experts.

MIT Laboratory for Manufacturing and Productivity- Cambridge, MA February-December 2009

Design and Construction of Flexure-Based Milling Machine

- ♦ Developed actuation of the z-axis for a novel flexure-based precision micro-milling machine.
- ♦ Designed in Solidworks. Design decisions based on finite element analysis. Prototyping and construction completed with 3D printing, milling, and waterjet cutting technologies.

Characterization of Digital 3D Printed Materials to Increase Prototyping Efficiency

- ♦ Quantified material properties for 21 plastics to enable informed selection of prototype material.

LEADERSHIP AND PROJECT MANAGEMENT

TechFair Corporate Relations Director- MIT, Cambridge, MA February 2009-Present

- ♦ Leading committee of 10 to recruit and act as liaison to 40+ companies for 2200+ attended exposition focused on new technologies from both start-up and established companies.

Society of Women Engineers Treasurer- MIT, Cambridge, MA January 2009-Present

- ♦ Outlining and managing \$90,000 annual budget. Oversaw transition to new web-based system.

BEST Robotics- Auburn High School, Auburn, AL September 2004-December 2007

- ♦ *Robotics:* Co-led team of 30 to design and build a robot under considerable time constraints.
- ♦ *Oral Presentation:* Headed an award-winning 8 person oral presentation team.

SKILLS AND ACTIVITIES

- ♦ **Six Sigma:** Green Belt Certified.
- ♦ **Engineering:** Solidworks, COSMOSWorks, HSMWorks, ANSYS, MATLAB, MathCAD
- ♦ **Manufacturing:** waterjet, mill and lathe (manual and CNC), Objet Connex500 3D Printer
- ♦ **Languages:** conversational Mandarin Chinese, basic Spanish
- ♦ **Activities:** Alpha Chi Omega, Gordon-MIT Engineering Leadership Program, LeaderShape