

YUHUI QU

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SUMMARY OF QUALIFICATION

- Seven years of experience in AutoCAD modeling and two years of experience in Solidworks modeling
- Proficient in MATLAB for test and simulation, Finite Element Analysis
- Two years of experience in C++ and JAVA programming in solving dynamic system problems
- Quick learner, good verbal and communication skills, self-motivated in a quickly changing environment

RELEVANT ACADEMIC EXPERIENCE

Research in Piezoelectric Energy Harvesting Shock Absorber (NSF project) 05/2013-current

- Theoretical analysis of piezoelectric material and structures
- Mechanical design of piezoelectric energy harvesting generator
- Numerical simulations and experiments study of its response

Research in Nonlinear Dynamic System 08/2012-current

- Built mathematical model and derived formula to get equation motions of a nonlinear vibration system
- Researched alternative methods for calculating the periodic solutions and evaluating the stability of the system
- Obtained the periodic solutions and stability of the motion and corresponding phase portrait for the system

IDOT Training Game Program, SIUE Civil Engineering Department 05/2013-current

- Testing and updating the training course on website
- Collecting and summarizing feedbacks from the trainers and making improvement accordingly
- Writing the final report for the program

Wrong Way Driving Conference, SIUE Civil Engineering Department 05/2013-07/2013

- Designed traffic animation for conference show
- Designed part of the conference brochure

Design of a Control System to Stabilize an Inverted Pendulum 08/2013-12/2013

- Modeled the physical system in state space form and analyze the Lyapunov function
- Simulated the system and designed the feedback control system

Project of Vacuum Superconducting Drying Cabinet 07/2009-07/2012

- Designed the vacuum structure and tested the rationality
- Designed the control system to achieve improvement of temperature precision by 0.5 °C

Design of 150 m² Sintering Machine 09/2010-01/2011

- Built the 3-D model of Sintering Pallet
- Analyzed mechanical behaviors of Sintering Pallet.

SKILLS AND AFFILIATION

- Computer language: Visual Basic, C#, C++, Python, JAVA, MySQL, PHP
- Software: MATLAB, Pro/E, Solidworks, ABAQUS, AutoCAD, SigmaPlot, Microsoft Office, Latex
- Languages: native speaker of Mandarin, fluent in English
- Member of ASME (American Society of Mechanical Engineers)

EDUCATION

Master of Science in Mechanical Engineering Edwardsville, IL

- Southern Illinois University Edwardsville GPA 3.75/4.0 07/2014
- Relevant Coursework: Theory of Elasticity, Advanced Dynamics, Stress Analysis and Design, Engineering Numerical Analysis, Vibrations, Gas Turbine, Finite Element Analysis, Advanced Vibration, Modern Control

Bachelor of Engineering in Process Equipment & Control Engineering Shanxi, China

- Taiyuan University of Technology GPA 3.68/4.0 07/2012
- A paper published in Materials for Renewable Energy & Environment (ICMREE), 2012 International Conference

VOLUNTEER EXPERIENCE

- Member of Dean's Graduate Student Advisory Council 2013-2014
- ASME newsletter editor 2013-2014
- Volunteer to rebuild of the Edwardsville Rotary Club Playground at Airplane Park 09/2013

AWARD AND CERTIFICATION

- Presidential Scholarship 2011-2012
 - The Fundamentals of Engineering (FE) exam passed 10/2013
 - CAD Engineer Certification
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