YUHUI QU

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SUMMARY

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

RELATED WORK EXPERIENCES

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 (Solidworks)
- Numerical simulations and experiments study of its response (ABAQUS)

Research in Nonlinear Dynamic System   08/2012-current

- Modeling and theoretical derivation of a nonlinear vibration system (Solidworks)
- Calculating the analytical and numerical periodic solutions and evaluating the stability with Harmonic Balance Method (C++, MATLAB). Search the phase portrait for the system

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

- Testing and update the training course on website (Captivate, Adobe Flash, MS)
- Collecting and summarizing feedback of the training course and making improvement accordingly

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

- Designed traffic animation for conference show (Adobe Flash, Photoshop)
- Designed part of the conference brochure (Photoshop)

Design of a Ramjet Engine for an Advanced, Air-Launched, Long-Range Missile   05/2013-07/2013

- Conduct a systematic parametric search for the best ramjet cycles for the application
- Design control for disturbance rejection

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

- Model the physical system in state space form and analyze the Lyapunov function
- Simulate the system and design the feedback control

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

- Designed the vacuum structure and test the rationality(AutoCAD and Solidworks)
- Designed the control system to improve the temperature precision by 0.5 °C

SKILL & PERSONAL INFO.

- Computer langue: Visual Basic, C#, C++, Python, JAVA, MySQL, PHP, R
- Software: MATLAB, Pro/E, Solidworks, ABAQUS, AutoCAD, SigmaPlot, ANASYS, Microsoft Office, Latex
- Languages: Native speaker of Mandarin, fluent in English
- Fundamentals of Engineer (FE)

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 3.5/4.0   07/2012

UNIVERSITY SERVICE

- Member of Dean's Graduate Student Advisory Council 2013-2014.
- Volunteer: ASME newsletter editor
- Volunteer: Re-build of the Edwardsville Rotary Club Playground at Airplane Park