
Objective

A full time position in Engineering with focus on manufacturing, system and control or related areas.

Summary

- Broad knowledge, skills in Mechanical Engineering, Electrical Engineering and Industrial engineering.
- Demonstrated self-initiation, management and cooperation through two intern experience in industrial developments.

Education

Georgia Institute of Technology, Atlanta, GA

Ph.D., Mechanical Engineering

October, 2005

GPA: 3.94/4.0, Intelligent Machine Dynamics Laboratory

M.S., Electrical and Computer Engineering

May, 2003

GPA: 4.0/4.0. Area: System and Control, Optics, Microelectronics

M.S.M.E, Mechanical Engineering

December, 2002

GPA: 3.88/4.0. Area: Manufacturing, Tribology, Statistics

University of Connecticut, Storrs, CT

Graduate Study, Mechanical Engineering

August 1999 to May 2000

GPA: 3.75/4.0. Courses: Engineering Analysis, Continuum Mechanics, Modern Computational Methods, and Finite Element Analysis

Tsinghua University, Beijing, China, GPA: 3.8/4.0

B.E., Mechanical Engineering

July, 1999

B.E., Industrial Engineering

July, 1999

Experience

Professional

General Motors Corporation, Warren, MI

2003-2004

Intern Trainee, Manufacturing System Research Lab, Research and Development

May-August 2004

- New Joining Technique for aluminum (AA5052 H32 3mm or thicker) structures: Process Feasibility, Influence of Process Variables, Driving System Selection and Joining Tool Design studies.
 - ♦ Initiated project planning, managed project progress.
 - ♦ Selected, procured and organized testing materials.
 - ♦ Cooperated with machine operators, inspectors and lab managers on scheduling and equipment utilization.
 - ♦ Developed a fast and strong joining technique (patented) ready for plant evaluation.

Intern Trainee, Manufacturing System Research Lab, Research and Development

May-August 2003

- Influence of cooling procedure on cooling behavior of spot welding caps.
 - ♦ Identified optimal metric for cooling.
 - ♦ Investigated influence of cooling water inlet tube's shape, height and cooling water flow rate on cooling.
- Friction Stir Riveting for aluminum structures.
 - ♦ Evaluated a new toolholder.
 - ♦ Designed and tested a new series of rivets.
- Effect of tube material and thickness on springback of hydroforming pre-bent tubes.
 - ♦ Maintained and calibrated Eagle Bender.
 - ♦ Circle-gridded bent sections on tubes.
 - ♦ Designed and performed bending experiments at a series of angles.

The Chinese Computer World, Beijing, China, Assistant Engineer

July-September 1996

- Arranged cables of a Local Area Network for the Chinese Computer and Network Exhibition.
- Constructed and managed a virtual classroom on the exhibition.

Research

Georgia Institute of Technology, Atlanta GA

2000-Present

Graduate Research Assistant, Intelligent Machine Dynamics Laboratory

2003-Present

Research: Control Limitation Analysis and Design Algorithm for Dissipative Passive Haptic Interfaces.

- Identified the ability of redirecting motion for dissipative passive haptic interfaces.
- Defined measures for the ability of redirecting motion.
- Developed Steerability Theorem to evaluate the ability of redirecting motion.
- Evaluated previous interface designs on their abilities of redirecting motion.
- Designed new interfaces to minimize the control limitation.

Graduate Research Assistant, Precision Machining Research Consortium

2000-2002

Research: Relationship between surface textures produced in different surface finishing processes and their tribological properties under rolling and/or sliding contact conditions.

- Designed a new rolling and sliding friction tester and started construction.
- Developed an elastohydrodynamic/partial lubrication model.
- Performed experiments on sliding contact of different surfaces.
- Analyzed experiment results using statistical models and presented results to project sponsor.

University of Connecticut, Storrs, CT

1999-2000

Graduate Research Assistant, Department of Mechanical Engineering

- Performed Finite Element Analyses using ABAQUS & PATRAN for stress analysis in thermal barrier coating.

Tsinghua University, Beijing, China

1998-1999

Undergraduate Research Assistant, Non-Destructive Evaluation Laboratory

- Developed a multimedia teaching software on one of the Radiographic Testing techniques, CT (Computed Tomography) which is currently used in a senior course in Tsinghua University.

Teaching

Georgia Institute of Technology, Atlanta, GA

Graduate Teaching Assistant, Department of Mechanical Engineering

Courses: ME1770 Introduction to Engineering Graphics and Visualization
ME2110 Creative Decisions and Design
ME4803 Creative Motion Control

- Prepared and taught lab courses, helped instructor with lectures.
- Taught students about machine and electronic part operations, supervised students on projects.
- Graded homework and project reports with instructor and coordinator in professional communications.

University of Connecticut, Storrs, CT

1999-2000

Graduate Teaching Assistant, Department of Mechanical Engineering

- Assisted in the instruction of senior courses, phototaped student's presentations.

Skills

Computer language and software

C, MASM, MATLAB; AutoCAD, SolidEdge; SurfCAM; ABAQUS, PATRAN; Autherware; Office series.

Manufacturing

- Operation of manual mills, lathes, grinders, and forging machines.
- Manual casting and welding.
- Operation of CNC mills, lathes; manual G-code programming.
- Optical microscopy; white light interferometry; metallurgical inspection.
- Data acquisition, processing, and analysis.

Honors/Activities

Manufacturing Certificate in the Manufacturing Education Program, Georgia Institute of Technology.

Fellowship of School of Mechanical Engineering (Highest Score on Ph.D. Qualifying Exams).

Honor Student Fellowships, HongKong Alumni Fellowships, Tsinghua University.

Student Member of ASME, SME, AWS.

President of Tsinghua Alumni Association of Georgia Institute of Technology.

Vice President of Tsinghua Alumni Association of Georgia.