KEITH SEVCIK

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Drexel University Philadelphia, PA
Master of Science in Mechanical Engineering with Controls Concentration
GPA: 4.0/4.0 index Anticipated Graduation: June 2006

Drexel University Philadelphia, PA
Bachelor of Science in Mechanical and Electrical Engineering with Controls Concentration, Class of 2004

COURSE WORK

Optimal Control, Computer Control Systems, Microcontrollers, Digital Electronics, Digital Signal Processing, Thermodynamics, Mass and Heat Transfer, Mechanics of Vibrations, Mechanics of Materials, Transform Methods & Filtering

HONORS

Dean's Fellow Scholarship, Vanguard Scholarship – 5 yr, Anthony J. Drexel Scholarship – 5 yr, Honors Student

SKILLS

Equipment:
Scanning Laser Vibrometer, Velocity and Position Lasers, Oscilloscopes, Function Generators, Power Supplies, Network Analyzer, Microcontroller Programmers

Tools:
Lathe, Mill, Vertical/Horizontal Band Saws, Drill Press, Grinder, Circuit Construction, Various Power Tools

Software:
SDRC I-DEAS 8, ANSYS, AutoCAD 2000, Pro-E, Cadence, Mat Lab, Simulink, LabVIEW, MS Office, MS Project

Languages/Operating Systems:
Visual Basic, C++, Visual C++, NesC, VHDL, Assembly, Windows 95/98/NT/XP, DOS, Mac OS

EMPLOYMENT EXPERIENCE

DREXEL UNIVERSITY Philadelphia, PA
Research Assistant January 2003 – Present

- Pioneered indoor aerial robotics field by assisting in design, construction and programming of robot
- Utilized PIC16F84 and optic flow sensor to achieve automated take off, landing, and obstacle avoidance
- Localized robotic blimp using wireless mote technology
- Developed adaptive control system for actuated pendulum
- Constructed and programmed blimp to track a line
- Developed code, constructed electronics and wrote tutorials for using PIC16F84 to control servos, IR sensors, ultrasonic sensors and optic flow sensors

KULICKE & SOFFA INDUSTRIES, INC. Willow Grove, PA
Mechanical Engineering Co-op for Fall/Winter of 2001 and 2002

- Performed solid modeling and drafting of wire bonder components using SDRC I-DEAS
- Performed static, normal mode and magnetic FEA analysis using I-DEAS and ANSYS
- Characterized dynamic behavior of bonded wire through FEA analysis and shaker testing
- Programmed Excel interface for oscilloscope and function generator using Visual Basic
- Tested geometric and grayscale pattern recognition software using Visual C++
- Tested, characterized and documented small mechanism servo performance
- Developed hall effect position sensor
- Analyzed and tested voice coil performance
- Used Excel to analyze and manipulate data
- Designed wire clamp test fixtures

ACTIVITIES

SENIOR DESIGN PROJECT – SEMI AUTONOMOUS UNDERWATER ROBOT
September 2003 to June 2004

- Led team of senior engineering students in design, construction, and programming of underwater robot
- Created robot capable of navigating in 3 dimensions, relaying orientation information and detecting obstacles

F.I.R.S.T. ROBOTICS
January 1998 to April 2002

- Led team comprised of faculty and students in national robot design project
- Guided 20 students in design and construction of robot
- Designed parts and assemblies in 3D modeling software
- Supervised part fabrication, material ordering, electronics and programming of robot

Society of Hispanic Professional Engineers: External Vice President 2002-2003
Society for the Advancement of NACME Scholars: President 2002, Treasurer 2001
Tutor: Controls, Heat Transfer, Materials, Differential Equations, Physics, Calculus 2001-Present