DANIELLE RENEE ZUROVCIK

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West Newton, Pennsylvania 15089
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OBJECTIVE Full-time position

EDUCATION

Massachusetts Institute of Technology **GPA – 4.800 / 5.000**
Major: Mechanical Engineering - Product Design, Doctor of Philosophy Graduation Date: May 2011
Minor: Technology, Innovation and Entrepreneurship
Major: Mechanical Engineering, Master of Science Graduation Date: May 2007
Research: Medical Device Design

Penn State University, Schreyer Honors College **GPA - 3.960 / 4.000**
Major: Mechanical Engineering, Bachelor of Science Graduation Date: May 2004
Minors: Engineering Entrepreneurship
Engineering Mechanics
Product Realization
Engineering Leadership Development
Research: Polymer Structural Reinforcement in Concrete

University of New South Wales, Sydney, Australia **GPA – 3.930 / 4.000**
Schreyer Honors Travel Ambassador Spring 2003

Yough Senior High School, Herminie, Pennsylvania (9-12) **GPA – 4.100 / 4.000**
Class Valedictorian (1/194) Graduation Date: June 1999

WORK EXPERIENCE

Design Continuum, West Newton, MA Summer 2005
Mechanical Engineer, Intern
Owned new product development project for client
Designed and built functional prototypes for clients
Analyzed new product concepts and strategies

General Motors, Warren, MI Summer 2004
Aerodynamics Engineer, Intern
Analyzed sunroof buffeting noise trends in relation to all vehicle parameters
Developed the "g-effect" Theory to predict influence of sunroof opening length on buffeting

General Motors, Milford, MI Summer 2003
Noise and Vibration Engineer, Intern
Created and developed the "Zurovcik's Prioritizing Method" for squeaks and rattles
Designed and published online Squeaks and Rattles Material Selection Guide
Tested beta vehicles, issuing a probable cause analysis

BorgWarner Inc., Ithaca, NY Fall 2002
Product Engineer, Co-op
Produced MATLAB code to predict chain jump
Developed methods of pitch elongation measurement
Verified FEA predictions of chain strength and behavior

General Motors, Warren, MI Summer 2002
Design Process Engineer, Intern
Automated pre-production testing for new version releases of Unigraphics
Designed regression testing format for Unigraphics
Managed Unigraphics problem reports

General Motors, Wixom, MI Summer 2001
Facility Planning Engineer, Intern
Assisted the engineering team with relocation and installation of test equipment
Coordinated the facility planning and relocation procedures, using Auto-CAD
Organized a trouble-shoot-analysis of problems with the current test equipment
Assisted the metallurgy laboratory in testing automobile parts

Adtranz DaimlerChrysler Rail System, Pittsburgh, PA Summer 1999
Engineering Department Assistant
Maintained engineer project inventory
Assisted engineers in completing prototypes

RESEARCH EXPERIENCE

Massachusetts Institute of Technology, Cambridge, MA Fall 2004 - Spring 2010

Medical Device Design:
- Adjustable Implants
- Catheter-based Mitral Valve Repair Instrument
- Percutaneous Tissue Removal Device
- MEMS Tissue Removal Device
- simplified Negative Pressure Wound Therapy (sNPWT) Device

Product Design:
- National Archives Precision Hermetically Sealed Display Encasements
- Walker Assistive Device

Engineering Education: WGBH Children's Television Show

Penn State University, University Park, PA Spring 2000 - Spring 2004

Carbon Fiber Reinforced Polymer (CFRP) Cages for Reinforcement in Concrete - Honors Thesis

Carbon Fiber Reinforced Polymer (CFRP) and Glass Fiber Reinforced Polymer (GFRP) Cylindrical Cages for Reinforcement in Concrete

COMPUTER EXPERIENCE

Computing: ANSYS, Abaqus, Unigraphics, GM Iman, PDL, SolidWorks, Pro/ENGINEER, Auto-CAD, Solid Modeling/CAD, Iron-CAD, FEA, tgrid, Fluent, LabView, C++ Programming, Fortran, Minitab, Kriging Wizard, Stepwise Regression Wizard, MATLAB, EXCEL, PowerPoint (multimedia presentation)

Internet Skills: ftp, telnet, WWW, HTML, Confluence

MACHINING EXPERIENCE

Machines: lathe, mill, band saw, drill press, OMAX Waterjet, CNC machine, grinder

Manufacturing Processes: injection molding, sand casting, foam casting, powder metal processes, brazing, soldering, welding, 3D printing

ACTIVITIES

- MIT Edgerton House – Athletics Chair
- Children's Hospital's BioRobotics Lab – Webmaster
- MIT Iron Nerd Triathlon – 2009 Women's Champion
- MIT American Society of Mechanical Engineers (ASME) – Webmaster
- Graduate Association of Mechanical Engineers (GAME) – Social Chair
- Tang Hall Government – Athletics Chair
- Women in Science and Engineering Research (WISER) – Performed independent research
- Women in Engineering Program (WEPO '02) – Activity Leader - Organized design project, advised freshmen
- Engineering Leadership Development Unlimited (ELDU) – Activity leader
- THON (Dance marathon, funding cancer research) – Operation Committee, co-organizer
- IM Golf Champion - Fall 2000
- FISE (Freshmen in Science and Engineering) Housing - Social Activities Committee (Head)

HONORS AND AWARDS

- 2009 MIT De Florez Competition - Presenters Award
- Selected to 2009 School on Medical Robotics and Computer-Integrated Interventional Systems (MRCIIS) at Johns Hopkins University
- Society of Women in Engineering (SWE) National Conference Poster Competition – First Place
- Fall 2006 Massachusetts Institute of Technology, Graduate Student Council (GSC) Travel Grant - $500 Award
- 2006 MIT IDEAS Competition - $5,000 IDEAS Award
- 2006 MIT $100K Competition Semi-finalist
- 2004-2005 Pappalardo Fellowship
- 2003 Penn State Homecoming Queen Semi-finalist
- The Evan Pugh Scholar Award - Penn State Univ. (2003) - high academic achievement
- American Association of Physics Teachers - Outstanding Physics Student of the Year (1999)
- YMCA/Tribune Review Newspaper Outstanding Scholar-Athlete-1999 Leadership Honoree
- Selected to 1998 Pennsylvania Governor's School for the Sciences (PGSS) at Carnegie Mellon University
- First Place - 1998 Pittsburgh Regional Science and Engineering Fair - Geophysics Category
- Selected to 1997 PA Space Grant Consortium (NASA) Fellowship - (SOARS) - at Penn State Univ.
- PA Ambassador – 1997 Hugh O'Brian Youth Foundation Leadership Seminar (HOBY)