

DANIEL E. HOEHN

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EDUCATION:

University of Notre Dame, Master of Science in Mechanical Engineering

May 2010, GPA 3.5

University of Missouri-Columbia, Bachelor of Science in Biomedical Engineering & Business Minor

May 2008, GPA 3.7, *Magna Cum Laude & Honors Scholar*

WORK / RESEARCH EXPERIENCE:

Laboratory Manager / Graduate Research

08/2008 - Present

Multi-Scale Cardiovascular Laboratory

University of Notre Dame

- Design, validate and implement a device to investigate the origin of heart valve disease
- Utilize Matlab, ImageJ and Excel software to quantify results and perform statistical analysis
- Coordinate with vendors to acquire supplies (including organ harvest)
- Develop protocols and new laboratory procedures
- Mentor undergraduates in their research

R&D Engineer Intern / Product Development

Fall 2007

Musculoskeletal Transplant Foundation (MTF)

Edison, NJ

- Conducted tensile testing, decellularization protocols and prepared dermal tissue for research use, all while abiding by standards and regulations set by the organization
- Managed the progress of outsourced projects and reported directly to the Section Manager
- Formulated research protocols and purchased supplies for new R&D endeavors

Undergraduate Research

06/2006 – 05/2008

Department of Biological Engineering

University of Missouri-Columbia

- Led Senior Design Project – Graft fixation for hernia repair using laser welding. Met weekly with surgeons to discuss progress, new ideas, and surgical concerns
- Designed a device to analyze capillaries and liquid core wave guides
- Acquired experience with quantum dots and gold nanoparticles as optical biosensors
- Gained experience with photolithography techniques

SKILLS / QUALIFICATIONS:

- Human Physiology/Anatomy
- Sterile Processing of Human Tissue
- FE/EIT
- Mechanics
- German Language
- Orthopedic Biomechanics
- Microsoft Office
- GD&T
- ProE/AutoCAD
- Linux

ACTIVITIES / HONORS:

- St. Joseph Medical Center, Clinical Engineering, Volunteer 2010 – Present
- Biomedical Engineers Society (BMES), Member 2005 – Present
- American Society of Mechanical Engineers (ASME), Member 2008 – Present
- Engineering Ambassadors, Member 2004 – 2008
- Biological Engineering Club, Vice President 2005 – 2008
- Engineering Club, Member 2005 – 2008
- College of Engineering High School Weekend, Volunteer 2005 – 2007
- Habitat for Humanity, Volunteer 2007
- Lloyd E. Hightower Scholarship 2005 – 2008

CONFERENCES / PRESENTATIONS:

- **Hoehn, D.**, Sucusky, P., “Elevated Shear Stress Induces Aortic Valve Inflammation.” Heart Valve Biology Annual Conference, Hilton Head, SC, March, 2010.
- **Hoehn, D.**, Sucusky, P., “Aortic Valve Inflammation: A Shear Stress Dependent Mechanism?” Biomedical Engineering Society Annual Conference, Pittsburgh, PA, October, 2009.

PUBLICATIONS:

- **Hoehn, D.**, Sucusky, P., (Submitted) “The Role of Pathologic Shear Stress Alterations in Aortic Valve Endothelial Activation.” *Cardiovascular Engineering and Technology Journal*.
- Stringer, R.C., **Hoehn, D.**, Grant, S.A., “Quantum Dot-Based Biosensor for Detection of Human Cardiac Troponin I Using a Liquid-Core Waveguide.” *IEEE Sensors Journal*, 2008.
- Stringer, R.C., **Hoehn, D.**, Schommer, S., Grant, S.A., “Development of an optical biosensor using gold nanoparticles and quantum dots for the detection of PRRSV.” *Sensors and Actuators Journal*, 2008.