Devin R. Berg: Biosketch

A. Professional Preparation*:*

University of Wisconsin-Madison (Madison, WI). *Mechanical Engineering, B.S.* 2008.
University of Minnesota (Minneapolis, MN). *Mechanical Engineering, M.S.* 2011.
University of Minnesota (Minneapolis, MN). *Mechanical Engineering, Ph.D.* 2013.

B. Appointments*:*

- January 2014-Present: Program Director, B.S. Manufacturing Engineering, University of Wisconsin-Stout.
- August 2012-Present: Assistant Professor, Engineering & Technology Department, University of Wisconsin-Stout.
- January 2012-May 2012: Adjunct Faculty, Department of Mechanical Engineering, University of St. Thomas.
- September 2008-May 2012: 3M Science and Technology Fellow, University of Minnesota.

C. Selected Products:

Berg. D.R. (2014). Evaluation of Student Learning Outcomes Due to Self-Guided Engineering Analysis of Surroundings. *Proceedings of the ASEE Annual Conference,* Indianapolis, IN.

Berg. D.R. (2013). Experiences with Inquiry-Based Learning in an Introductory Mechanics Course. *Proceedings of the ASEE North Midwest Section Conference,* Fargo, ND.

Capaldi, F. and **Berg. D.R.** (2013). Outcomes of Using an Infinitely Explorable Online Learning System. *Proceedings of the ASEE Annual Conference,* Atlanta, GA.

Berg, D.R., Harder, L.A., and Erdman, A.G. (2012). Generating Interest in Technology and Medical Devices Through an Interactive Educational Game. *Proceedings of the ASEE Annual Conference*, San Antonio, TX.

Berg, D.R., Carlson, A., Durfee, W.K., Sweet, R.M., and Reihsen, T. (2011). Low-Cost, Take-Home, Beating Heart Simulator for Health-Care Education. *Proceedings of Medicine Meets Virtual Reality 18,* Newport Beach, CA.

D. Other Significant Products:

Berg, D.R., Li, P.Y., and Erdman, A.G. (2012) Achieving Dexterous Manipulation for Minimally Invasive Surgical Robots Through the Use of Hydraulics. *Proceedings of the ASME Dynamic Systems and Control Conference*, Fort Lauderdale, FL.

Berg, D.R., Kinney, T.P., Li, P.Y., and Erdman, A.G. (2011). Determination of Surgical Robot Tool Force Requirements Through Tissue Manipulation and Suture Force Measurement. *Proceedings of the Design of Medical Devices Conference,* Minneapolis, MN.

J. Schmidt, **D. R. Berg**, L. Ploeg, and H. L. Ploeg (2009). Precision, Repeatability and Accuracy of Optotrak Optical Motion Tracking Systems. *International Journal of Experimental and Computational Biomechanics,* 1(1):114-127.

Z. G. Liu, **D. R. Berg**, V. N. Vasys, M. E. Dettmann, B. Zielinska, and J. J. Schauer (2010). Analysis of C1, C2, and C10 through C33 Particle-Phase and Semi-Volatile Organic Compound Emissions from Heavy-Duty Diesel Engines. *Atmospheric Environment,* 44(8):1108-1115.

Z. G. Liu, **D. R. Berg**, T. A. Swor, and J. J. Schauer (2008). Comparative Analysis on the Effects of Diesel Particulate Filter and Selective Catalytic Reduction Systems on a Wide Spectrum of Chemical Species Emissions. *Environmental Science and Technology,* 42(16):6080-6085.

E. Synergistic Activities:

1) Pioneering Implementation of New Educational Software: Early adopter of a new educational software for engineering courses to better serve students of diverse learning styles.

2) Pursuing Open Access Education: Building a collaborative online repository for engineering information and sample problems geared towards engineering students.

3) Contributing as External Reviewer: Reviewer of conference proceedings for the ASEE Annual Conference and the ASME Dynamic Systems and Control Conference.

4) Developing Hands-On Classroom Tools: Design and fabrication of in-class tools for demonstrating engineering concepts consistent with the concept of experiential learning.

5) Promoting K-12 Outreach: Exploring new methods for generating interest in engineering and technology among K-12 aged school children.

Collaborations & Other Affiliations:

(10 individuals) Franco Capaldi (Merrimack College), Lucas Harder (Heart Leaflet Technologies), Andrew Carlson (Novo Engineering), Timothy Kinney (Ridgeview Medical Center), Jordan Nadeau (University of Minnesota – Twin Cities), Adam Gladen (University of Minnesota – Twin Cities, Jerry Liu (Cummins Emission Solutions), James Schauer (University of Wisconsin – Madison), Heidi-Lynn Ploeg (University of Wisconsin – Madison), Jill Schmidt (University of Wisconsin – Milwaukee)

Graduate Advisors:

(2 individuals) Perry Y. Li, University of Minnesota (MS and PhD) and Arthur G. Erdman (PhD), University of Minnesota

Current Graduate and Postdoctoral Advisees:

Not applicable.