

Devin R. Berg

bergdev@uwstout.edu

807 3rd Street East
Fryklund 308, Engineering & Technology
Menomonie, WI 54751
715/232-1133

1063 Canyon Road
Menomonie, WI 54751
612/267-4462

Professional Interests

Experiential learning in engineering education.
Design and fabrication of medical devices.
Bio-inspired engineering and design.

Education

In Progress	PhD Mechanical Engineering , University of Minnesota - Twin Cities
2011	MS Mechanical Engineering , University of Minnesota - Twin Cities
2008	BS Mechanical Engineering , University of Wisconsin - Madison

Academic Positions

2012–present	Assistant Professor , University of Wisconsin - Stout
2012	Adjunct Faculty , University of St. Thomas
2011–2012	Lab Supervisor , Medical Devices Center
2010–2012	Teaching Assistant , University of Minnesota - Twin Cities
2008–2012	Graduate Research Assistant , University of Minnesota - Twin Cities

Provisional Patent Applications

2012	Jordan Paul NADEAU, Badrinath R. KONETY, Lucas HARDER, Devin Rodney BERG, and Adam GLADEN. Catheter Clamp, 09 2012. 61/702,609
------	--

Peer-Reviewed Journal Articles

- 2010 | Z. G. Liu, D. R. Berg, V. N. Vasys, M. E. Dettmann, B. Zielinska, and J. J. Schauer. 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, 2010
- 2009 | Z. G. Liu, D. R. Berg, T. A. Swor, J. J. Schauer, and B. Zielinska. A study on the emissions of chemical species from heavy-duty diesel engines and the effects of modern aftertreatment technology. *SAE Technical Paper Series 2009-01-1084*, 2009
- 2009 | J. Schmidt, D. R. Berg, L. Ploeg, and H. L. Ploeg. Precision, repeatability and accuracy of optotrak optical motion tracking systems. *International Journal of Experimental and Computational Biomechanics*, 1(1):114–127, 2009
- 2008 | Z. G. Liu, D. R. Berg, and J. J. Schauer. Effects of a zeolite-selective catalytic reduction system on comprehensive emissions from a heavy-duty diesel engine. *Journal of the Air & Waste Management Association*, 58(10), 2008
- 2008 | Z. G. Liu, D. R. Berg, T. A. Swor, and J. J. Schauer. 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, 2008
- 2008 | Z. G. Liu, D. R. Berg, and J. J. Schauer. An analysis of methods for measuring particulate matter mass emissions. *SAE Technical Paper Series 2008-01-1748*, 2008
- 2008 | Z. G. Liu, D. R. Berg, and J. J. Schauer. Detailed effects of a diesel particulate filter on the reduction of chemical species emissions. *SAE Technical Paper Series 2008-01-0333*, 2008

Invited Talks

- 2013 | D. R. Berg. Surgical robotics under fluid power. In *Proceedings of the 2013 Design of Medical Devices Conference*, Minneapolis, MN, 2013. ASME
- 2012 | D. R. Berg, P. Y. Li, and A. G. Erdman. Achieving dexterous manipulation for minimally invasive surgical robots through the use of hydraulics. In *Proceedings of the 2012 ASME Dynamic Systems and Control Conference*, Fort Lauderdale, FL, 2012. ASME. (Best Paper in Session)

Peer-Reviewed Conference Proceedings

- 2013 | F. Capaldi and D. R. Berg. Outcomes of using an infinitely explorable online learning system. In *Proceedings of the 2013 ASEE Annual Conference*, Atlanta, GA, 2013. ASEE
- 2012 | D. R. Berg, L. A. Harder, and A. G. Erdman. Generating interest in technology and medical devices through an interactive educational game. In *Proceedings of the 2012 ASEE Annual Conference*, San Antonio, TX, 2012. ASEE
- 2011 | D. R. Berg, T. P. Kinney, P. Y. Li, and A. G. Erdman. Determination of surgical robot tool force requirements through tissue manipulation and suture force measurement. In *Proceedings of the 2011 Design of Medical Devices Conference*, Minneapolis, MN, 2011. ASME
- 2011 | D. R. Berg, A. Carlson, W. K. Durfee, R. M. Sweet, and T. Reihsen. Low-cost, take-home, beating heart simulator for health-care education. In *Proceedings of Medicine Meets Virtual Reality 18*, Newport Beach, CA, 2011

Poster Presentations

2010	D. R. Berg, P. Y. Li, A. G. Erdman, T. Cui, and T. P. Kinney. The application of fluid power to meet the needs of surgical robotics. Minneapolis, MN, 2010. LifeScience Alley Conference & Expo
2010	D. R. Berg, P. Y. Li, A. G. Erdman, T. Cui, and T. P. Kinney. The application of fluid power to meet the needs of surgical robotics. Seattle, WA, 2010. North American Summer School in Surgical Robotics and Simulation
2009	D. R. Berg, P. Y. Li, A. G. Erdman, T. Cui, and T. P. Kinney. Robotic Multi-Articulated Surgical Tools for NOTES. Minneapolis, MN, 2009. Institute for Engineering in Medicine Innovation Showcase

Honors and Awards

2008–2012	3M Science and Technology Fellowship
-----------	--------------------------------------

Service to the Field

2013–present	Director: ASEE Mechanics Division Executive Committee
2012–2013	Reviewer: ASME Dynamic Systems and Control Conference

Service to the Engineering and Technology Department

2012–present	Manufacturing Engineering Advisory Board, member
2012–2013	Bylaws Revision Committee, member

Affiliations

American Society for Engineering Education
American Society of Mechanical Engineers
Product Development and Management Association
Pi Tau Sigma (Honorary Mechanical Engineering Society)
Tau Beta Pi (Honorary Engineering Society)

Updated: 29 August 2013