ERIK P. LAMERS

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EDUCATION

Vanderbilt University, TN, USA *August 2015 - September 2020*
PhD in Mechanical Engineering
Department of Mechanical Engineering

University of Dayton, OH, USA *August 2010 - May 2015*
Bachelor of Mechanical Engineering.

WORK EXPERIENCE

X, the moonshot factory [Google X] *June 2019 - September 2020*
Mechanical Engineering Resident

· Worked on early pipeline project in rapid evaluation

Medical Engineering and Discovery Lab, Vanderbilt University *May 2014 - August 2014*
Intern

· Designed mechanism for active cannula lung biopsy system
· Validated mechanism functionality on ex-vivo porcine model

Innovative Scientific Solutions Inc. *May 2012 - August 2013*
Intern

· Quantified delivered energy transfer of spark igniters in a calorimeter
· Aided in construction of GE test rig used to run PLIF, PIV and Phi sweep tests
· Designed experimental corrugated ame holder
· Calculated critical ow factors using MatLab, Excel and TableCurve3D

RESEARCH INTEREST AND OBJECTIVE

Developing and evaluating assistive devices to prevent injuries and enhance human performance

PUBLICATIONS (PEER-REVIEWED)

Lamers E. P., Eveld M. E., Zelik K. E. Subject-Specific Responses to an Adaptive Ankle Prosthesis during Incline Walking. Journal of Biomechanics. In review.

Lamers E. P., Soltys J. C., Scherpereel K. L., Yang A. J., Zelik K. E. Spring-powered Exosuit Reduces Low Back Muscle Fatigue. Journal of Applied Ergonomics. In review.

Lamers E. P., Yang A. J., Zelik K. E. Feasibility of a Biomechanically-Assistive Garment to Reduce Low Back Loading During Leaning and Lifting. IEEE Transactions on Biomedical Engineering, vol. 65, no. 8, pp. 16741680, Aug. 2018.

Swaney, P. J., Mahoney A. W., Hartley B. I., Remirez A. A., Lamers E. P., Feins R. H., Alterovitz R., Webster III R. J. Toward Transoral Peripheral Lung Access: Combining Continuum Robots and Steerable Needles. Journal of Medical Robotics Research, vol. 2, no. 1, Mar. 2017.

CONFERENCE PROCEEDINGS

Lamers E. P., Scherpereel K. L., Soltys J. C., Yang A. J., Zelik K. E. Spring-Powered Exosuit Reduces Low Back Muscle Fatigue. International Society of Biomechanics, August 2019, Calgary, Canada.

Lamers E. P., Eveld M. E., Zelik K. E. Effects of a new adpative ankle prosthesis on level and sloped walking. American Society of Biomechanics, August 2018, Rochester, Minnesota, USA.

Lamers E. P., Yang. A. J., Zelik K. E. Biomechanically-assistive garment offloads low back during lifting and leaning. International Society of Biomechanics, July 2017, Brisbane, Australia.

Lamers, E. P. and Zelik, K. E. The importance of prosthetic ankle range-of-motion for ascending and descending slopes. American Society of Biomechanics, August 2016, Raleigh, NC, USA.

Lamers, E. P. and Zelik, K. E. The importance of prosthetic ankle range-of-motion for ascending and descending slopes. Dynamic Walking Annual Meeting, June 2016, Holly, MI, USA.

Swaney P. J., Mahoney A. W., Remirez A. A., Lamers E. P., Hartley B. I., Feins R. H., Alterovitz R., Webster III R. J. Tendons, concentric tubes, and a bevel tip: Three steerable robots in one transoral lung access system. IEEE International Conference on Robotics and Automation, May 2015, Seattle, Washington, USA.

Lamers E. P., Remirez A. A., Swaney P. J., Webster III R. J. A Bronchial Puncture Mechanism for Transoral Access to the Lung Parenchyma. Design of Medical Devices Conference, April 2014, Saint Paul, Minnesota, USA.

AWARDS AND SCHOLARSHIPS

2017 David Winter Young Investigator Award (Poster) - ISB 2017

2016 National Science Foundation Graduate Research Fellowship (2016201028)