MEGAN (AUGER) EBERS

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EDUCATION

UNIVERSITY OF WASHINGTON, Seattle, WA
PhD Mechanical Engineering — *Expected June 2023*
MS Applied Mathematics — *Expected June 2021*
MS Mechanical Engineering — *June 2020*

COLORADO SCHOOL OF MINES, Golden, CO — Magna Cum Laude
BS Mechanical Engineering — *May 2018*
Minor in Biomechanical Engineering

AWARDS & HONORS

National Science Foundation Graduate Research Fellow *Awarded full funding and support for demonstrated potential to contribute to strengthening the vitality of the U.S. science and engineering enterprise*
Sigma Xi Scientific Research Honor Society *Invited to become an associate member based on independent investigation in a field of pure or applied science*
Michael R. and Patricia K. Starzer Endowment Scholar *Awarded full tuition and fees for academic excellence and campus involvement*
Don L. and Patricia Warner Scholarship Fund for the Board of Trustees Honors Scholar *Awarded scholarship for academic excellence, participation in varsity athletics, and demonstration of financial need*
Mines Presidential Merit Scholar *Awarded scholarship for academic excellence upon beginning undergraduate studies*
E-Days Engineer Award *Selected by the Department of Mechanical Engineering as an outstanding graduating senior*

RESEARCH

Altered Control in Bipedal Locomotion — *Sept 2018 – present*
Ability & Innovation Lab, University of Washington
Advisors: Dr. Katherine M Steele, Dr. J Nathan Kutz
Data-driven approaches to predict changes in movement after brain injury

Exoskeleton Emulation — *Aug 2016 – May 2017*
Biomechatronics Research Laboratory, Colorado School of Mines
Advisor: Dr. Ozkan Celik
Development of a lower extremity exoskeleton emulator aiding stroke-recovery patients with hemiparesis

TEACHING & MENTORING

Graduate Mentor, Ability & Innovation Lab, University of Washington
Qilang (Damon) Ding - UW ME senior undergraduate student — *Sept 2019 – June 2020*
UWIN Innovation Undergrad Fellowship awarded Fall 2019

PUBLICATIONS

Coming soon

PRESENTATIONS

POSTER

American Society of Biomechanics (virtual) — *August 2020*
Biomechanically-Constrained Machine Learning for the Identification of Mechanistic Discrepancies

Dynamic Walking (virtual) — *May 2020*
Discrepancy Modeling in Bipedal Dynamics

Rocky Mountain American Society of Biomechanics *March 2017*
The Design and Validation of a Passive Foot Prosthesis with Adjustable Plantarflexion

ORAL

International Society of Biomechanics *August 2018*
Do Simulated Synergies Accurately Represent Muscle Coordination?

Northwest Biomechanics Symposium *May 2018*
Evaluating Altered Muscle Synergies Following Surgical Intervention in Cerebral Palsy Using Matrix Factorization Algorithms

PROFESSIONAL EXPERIENCE

Medtronic Boulder, CO
Specialty Exploration Mechanical Engineering Intern *Summer 2018*
Creation and development of new, minimally-invasive technologies for surgical innovations

Medtronic Louisville, CO
Neurosurgical Navigation Hardware Test Engineering Intern *Summer 2017*
Explored feasibility of automating optical hardware accuracy testing for neurosurgical navigation

Prytime Medical Devices, Inc Lakewood, CO
Engineering Intern *Autumn 2017*
Developed REBOA (Resuscitative Endovascular Balloon Occlusion of the Aorta) catheter and pulsatile simulator

Procter and Gamble Cincinnati, OH
R&D Process Engineering Intern *Summer 2016*
Optimized material characterization product design and process capability of Swiffer Surface Care substrates

Procter and Gamble Cincinnati, OH
R&D Products Research Intern *Summer 2015*
Researched and developed consumer-friendly claims and methods for Gain laundry detergent

TEACHING & OUTREACH

Engineering Discovery Days, University of Washington *Spring 2019*
Solid Mechanics Private Tutor, Colorado School of Mines *Spring 2018*

SKILLS & COURSEWORK

Computer: Matlab, LaTeX, OpenSim, SolidWorks (Associate Certified), Creo (Pro-E), Nessus, ABAQUS, Minitab, Mastercam CAD/CAM, Solidworks Flow Simulation, Computational Fluid Dynamics, LabVIEW, Mathcad Prime, EES, Excel, Word

Coursework: *Graduate Level:* Mechanical Engineering Analysis I & II (ODEs, PDEs); Scientific Computing; Bio-Inspired Robotics; Biomechanics of Human Movement; Computational Methods for Data Analysis; Inferring Structure of Complex Systems; Automatic Controls; Advanced Methods for ODEs; Linear Systems Theory; Machine Learning Control