Amanda Catherine Tenhoff, EIT

1016 Washington Avenue SE, apt. 915 ● Minneapolis, MN 55414

(651) 252-7500 ● tenho004@umn.edu ● linkedin.com/in/amandatenhoff

Graduate Education

University of Minnesota, St. Paul, Minnesota — Anticipated Graduation: Spring 2022

Doctorate of Philosophy in Biomedical Engineering — GPA: 3.52

Undergraduate Education

University of St. Thomas, St. Paul, Minnesota — Graduation: May 2018

Bachelor of Science in Mechanical Engineering, minor in Electrical Engineering — GPA: 3.96

Technical Skills

Mimics, 3Matic, MATLAB, C, LaTeX, SolidWorks, Microsoft Excel, computational research and modeling, data analysis

Graduate and Undergraduate Research Experience

Doctoral Student Researcher, *Visible Heart Laboratories, Dr. Paul Iaizzo, University of Minnesota* — November 2018 – Present

- Assisting in *in vivo* and *in situ* porcine, bovine, and canine cardiac physiological studies
- Creating 3D models of clinical congenital pediatric heart cases for surgical assistance and educational use

Engineering Research Assistant, *BRaM Lab, Dr. Thomas Secord, University of St. Thomas* — January 2017 – May 2018

- Programmed in MATLAB to map deformation between systolic and diastolic phases
- Segmented 4D CT cardiac data to create silicone heart model for accurate benchtop device testing

Code + Chords, *Playful Learning Lab, Dr. AnnMarie Thomas, University of St. Thomas* — May 2016 – January 2017

- Wrote software in Processing which creates visualizations driven by real-time audio input
- Received 2017 ASEE/SME Best Student Paper for Manufacturing Division

Physics Research Assistant, *Dr. Jeffrey Jalkio, University of St. Thomas* — June 2015 – February 2016

- Mathematically derived and empirically verified relationship between buoyant force and cross-sectional area of a submerged object

Publications

Secord T, Tenhoff A, Audi M, Lorch A. 2018. A multi-actuator approach to high bandwidth in vitro cardiac kinematic simulation. Presented at BioRob2018, Enschede, The Netherlands. 2018 Aug. DOI: 10.1109/BIOROB.2018.8487781

Meuer EM, Kern EA, Andrews M, Tenhoff A, Andrews K, Huschka P, Ryan EM, Tozour L, Thomas, AP. Board # 150: MAKER: Painting Pitches. Presented at ASEE Annual Conference & Exposition, Columbus, Ohio. 2017 Jun. https://peer.asee.org/27775

Tenhoff AC, Gerenz AJ, Jalkio JA. Buoys and springs – building connections between math and physics. The Physics Teacher J. 2016;54(9):556-559. DOI: 10.1119/1.4967898

Conferences and Presentations

Department of Surgery and Neurosurgery Research Day – *University of Minnesota, Minneapolis, MN* — June 2019

Utilizing 3D Modeling in Pediatric Surgical Planning: Expansion of the Atlas of Human Cardiac Anatomy

Design of Medical Devices Conference – *Minneapolis, MN* — April 2019

Earl E. Bakken Surgical Device Symposium – *Minneapolis, MN* — October 2018

Society of Women Engineers Annual Conference – *Austin, TX* — October 2017

American Society of Engineering Educators Annual Conference and Exhibition – *Columbus, OH* — June 2016

Make It! Session*: Painting Pitches* **-** Received 2017 ASEE/SME Best Student Paper for Manufacturing Division

Fellowships, Honors, and Certifications

Engineer In Training Certification, State of Minnesota — October 2018

University of Minnesota College of Science and Engineering Graduate Fellowship — Fall 2018 – Present