

Hannah Erdevig



hannah.erdevig@gmail.com



h6nnah.github.io

EDUCATION

University of Colorado Boulder Dec. 2017

B.S., Engineering Physics, Computer Science Minor
summa cum laude

EXPERIENCE

Research Assistant Aug. 2017 – April 2018

Vanderbilt University - Nashville, TN

Constructed software to guide MRI-tracked focused ultrasound systems via fiducial marker registration by implementing convolution and transformation algorithms to automate image analytics

Research Scientist May 2014 - Aug. 2017

National Institute of Standards and Technology, Magnetic Imaging Group - Boulder, CO

Developed custom image reconstruction software for NIST Standards and Metrology MRI

Improved MRI data analysis by debugging, and refining algorithm implementation in Python

Crafted GUIs for open-source software package currently used by researchers at NIST

Simulated magnetic field interactions using Monte Carlo and finite element methods

Worked in a small team to design 3-D printed susceptibility phantoms as a common reference standard for magnetic characterization in medical diagnostics

Presented research at 3 international conferences and published a first-author journal article

Fundraised and organized multi-day, catered colloquium event for student researchers

Teaching Assistant Aug. 2013 - May 2014

University of Colorado Boulder, Department of Physics - Boulder, CO

Facilitated recitations for calculus-based mechanics course and physics of sound and music elective through CU's nationally-recognized LA Program.

Presented material, utilized research-backed methods, and midterm instructor evaluations

SKILLS

COMPUTER LANGUAGES Python, C/C++, Java, SQL, Latex
HTML/CSS/Javascript, PHP, Assembly

SOFTWARE DEVELOPMENT GUI design, Git (version control),
API integration, GDB debugging

COMPUTATIONAL TOOLS COMSOL, SolidWorks, Excel,
MATLAB, Mathematica

PUBLICATIONS

MRI-Based Susceptibility Mapping for In-Vivo Iron and Blood Oximetry Measurements. H. Erdevig. **CU Scholar**. May 2017

Accuracy of magnetic resonance based susceptibility measurements. H. Erdevig, S. Russek, S. Carnicka, K. Stupic, K. Keenan. **AIP Advances**. Feb. 2017

PRESENTATIONS

ISMRM Annual Meeting - Honolulu, HI.
Accuracy of magnetic resonance based susceptibility measurements. Apr. 2017

Magnetism & Magnetic Materials - New Orleans, LA. *MRI Based Susceptibility Mapping for In-Vivo Iron and Blood Oximetry Measurements*. Nov. 2016

American Physical Society March Meeting - Baltimore, MD. *Accuracy of MRI-Based Magnetic Susceptibility Measurements*. Mar. 2016

MMM-InterMag - San Diego, CA. *Accuracy of MRI-Based Magnetic Susceptibility Measurements*. Jan 2016

AWARDS

ISMRM Best Trainee Poster (3rd) \$100 (2017)
Engineering Merit Scholarship \$750 (2016)
Dean's List (Fall '12, Fall '13, Spring '14, Fall '15)
NIST Summer Research Fellowship \$8700, \$9100 (2014, 2015)

LEADERSHIP & OUTREACH

Organizing Committee Member, APS Conferences for Undergraduate Women in Physics. 2016-2017

President, Sigma Pi Sigma Physics Honor Society CU Boulder Chapter. 2016-2017

STEM Outreach Workshop Facilitator, Expanding Your Horizons. Apr. 2016