

Hannah Erdevig



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h6nnah.github.io

EDUCATION

University of Colorado Boulder (May 2017)

B.S., Engineering Physics, Computer Science Minor
summa cum laude, Major GPA: 3.7/4.0

EXPERIENCE

Graduate Researcher (Aug. 2017 - Present)

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 distributable software package

Simulated magnetic field interactions using Monte Carlo and finite element methods

Worked in 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 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 introductory calculus-based mechanics course and non-major physics elective

Held office hours, presented material, employed Socratic Method in helping students learn material, and utilized midterm evaluations

SKILLS

COMPUTER LANGUAGES Python, C/C++, Java, SQL, HTML, regex, PHP, Latex, Assembly, JS

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

COMPUTATIONAL TOOLS COMSOL, SolidWorks, Excel, MATLAB, Mathematica

PUBLICATIONS

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

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

PRESENTATIONS

ISMRM Annual Meeting - Honolulu, HI.

Accuracy of magnetic resonance based susceptibility measurements (4/25/17)

Magnetism & Magnetic Materials - New Orleans, LA. *MRI Based Susceptibility Mapping for In-Vivo Iron and Blood Oximetry Measurements* (11/1/16)

American Physical Society March Meeting - Baltimore, MD. *Accuracy of MRI-Based Magnetic Susceptibility Measurements* (3/14/16)

MMM-InterMag - San Diego, CA. *Accuracy of MRI-Based Magnetic Susceptibility Measurements* (1/13/16)

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 (April 2016)