Paul Reggentin

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Education

University of Michigan, Ann Arbor Aug 2014—Present
B.S.E. Electrical Engineering, Math Minor; expected graduation Apr 2018
Relevant Coursework: DSP, Signals, E&M, Statistics, Circuits, Combinatorics, Lin Algebra
GPA: 3.99 / 4.0

Experience

Student Research Project, Signal Reconstruction Sept 2016—Present
- Improved dictionary-based methods for reconstructing voxels in MRI imaging
- Implemented parallel processing in OpenCL to improve image reconstruction time

Harvard-MIT Health Sciences & Technology Summer Research Project
- Implemented real-time processing for polarization-sensitive Optical Coherence Tomography
- Designed faster processing mode that achieved a 3x increase in image rate
- Attended lectures on current trends and research areas in medical imaging

Instructional Aide: Intro to Digital Signal Processing Jan 2015—Present
- Ran lab where students applied DSP techniques to musical applications using MATLAB
- Held weekly office hours to explain and reinforce core concepts of the course

Neural Circuit Mapping Research Sept 2015—Apr 2016
- Joined research lab to image and quantify neural pathways at cell scale
- Processed raw 3-D microscope images to account for device imperfections and light scattering
- Researched and implemented improved methods for 3-D mapping of neurons and connections

Lockheed Martin Summer Internship May-July 2015
- Updated system and component testing procedures for Sniper Advanced Targeting Pod
- Coordinated between test designer, testing, manufacturing, and design teams
- Troubleshot and resolved unexpected failures in components, pods, and test equipment

Research Assistant, Electrical Engineering Department Dec 2014-April 2015
- Worked on algorithms to fit data to models for application in MRI imaging
- Applied signal-processing and mathematical analysis techniques
- Designed and tested optimization code in MATLAB and presented results at end of semester

University of Michigan Mars Rover Team Sept 2014-Apr 2015
- Designed, built, and tested a rover with club team for a national competition in May 2015
- Developed control systems and wireless communication with electrical sub-team

Activities

Eta Kappa Nu Aug 2015—Present
- Operations Officer of IEEE Honors Society, Univ. of Michigan chapter
- Managed on-campus café to provide funds for the organization

Audio Engineering Society Sep 2014—Present
- Applied engineering skills to open-ended musical projects like the Microphone Showdown
- Worked on projects involving applications of software and hardware for musical purposes

Computer Skills C++, MATLAB, Python, Java, Microsoft Office Suite, ImageJ, OpenCL

Honors

Recipient of Immelt Scholarship and Tau Beta Pi Centennial Endowment
University Honors
University of Michigan Dean's List, 2014-2015
Perfect ACT Score