

Rebecca M. Murray
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EDUCATION

Columbia University

The Fu Foundation School of Engineering and Applied Science

Bachelor of Science in Electrical Engineering

Minor in English Literature

GPA 3.86/4.00

Expected May 2018

Coursework: Solid State Devices, Principles of Microfabrication, Fundamentals of Photonics, Electromagnetics, Signals and Systems, Advanced Programming in C/C++, Electronic Circuits, Data Structures in Java, Probability for Engineers

EXPERIENCE

Intern, OpenBCI

October 2017-present

- Update documentation for software created by OpenBCI, a startup specializing in low-cost, high-quality biosensing hardware for brain computer interfacing
- Improve and create new tutorials using OpenBCI software and hardware for a non-technical audience

Technical Intern, System Survivability, Northrop Grumman Aerospace Systems

Jun 2017-Aug 2017

- Worked with senior engineer to develop a novel material testing procedure using electromagnetics concepts
- Implemented procedure in C++ using NI-VISA to interface with hardware devices
- Built an accompanying GUI in Qt, prepared executable and source code for delivery to customer

Research Assistant, Department of Electrical Engineering, Columbia University

Jan 2017-May 2017

Lightwave Research Laboratory

- Tested and documented I-V and power characteristics of a photonic integrated circuit
- Used NI-VISA via the PyVISA library to communicate with function generators, bit error rate testers, and tunable laser sources

Research Assistant, Department of Electrical Engineering, Columbia University

Jan 2016-Aug 2016

Faculty Advisor: Prof. James T. Teherani

- Created a numerical simulation of Auger generation in tunneling field-effect transistors using MATLAB
- Included mapping from discrete-space summations to continuous space integrals with non-well-behaved functions, representation of multi-dimensional data, regular progress updates using PowerPoint
- Wrote a paper summarizing research for possible submission to engineering conference

ACTIVITIES

Society of Women Engineers (SWE)

2015-present

Executive Board Member – President

- Lead Columbia SWE's five-person executive board and 12 subcommittees
- Represent the group to university administration, outside companies, and the national SWE organization

Executive Board Member – Treasurer

- Collected and submitted all financial transaction requests for the 35-member group
- Created and maintained a budget for all SWE events within the group's \$3,600 of allocation funding

Organizational Committee Member – Community Outreach

- Planned and coordinated events for 40 middle-school students to visit Columbia's engineering school
- Gave presentations on science and engineering to groups of visiting students

SKILLS

Proficient in C, C++ and MATLAB, familiar with Java, HTML, CSS and C#

Experience with Qt and NI-VISA

Experience with Microsoft Office (Excel, Word, PowerPoint)