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John L. Waczak

CONTACT INFO
E-mail: waczakj@oregonstate.edu Phone: (503) 330-1280
LinkedIn: www.linkedin.com/in/john-waczak/

INTERESTS
Computational Physics, Applied Mathematics, Spectroscopy

EDUCATION
Oregon State University, Corvallis, OR. September 2015 – present
Bachelor of Science in Physics and Mathematics (GPA 3.90/4.0)

TECHNICAL SKILLS
Programming and Operating Systems: Python, C++, C#, Mathematica, LaTeX, git, Linux, Windows, MS Word, MS Excel, Numpy, Matplotlib, SQLite
Electronics: Arduino, Raspberry Pi, National Instruments, Soldering

EXPERIENCE
Roundy Research Group, Oregon State University January 2017 – Present
Undergraduate Researcher github.com/john-waczak/dynein_walk
I am working with Dr. Roundy to develop and test computational simulations which evaluate a physical model for the locomotion of the cellular motor protein Dynein. My duties include editing simulation code (C++), writing scripts to analyze and visualize large data sets (python), exploring the simulation space to find the best set of parameters to produce *physical* behavior, and presenting my findings at weekly group meetings.

Cooper Environmental Services, Beaverton, OR March 2015 – December 2017
Intern
I developed a program in c# to enable the production team to test input/output boards before they are put in instruments. This involved writing code to send and read voltages as well as creating a graphical user interface via Microsoft Visual Studio. I designed and implemented controller logic (using a PID loop) for controlling a vacuum pump. Using Modbus serial communications protocol, I created code to make data accessible locally with a Modbus slave device.

Physis 201 TA, Oregon State University September 2017 - Present
I am a teaching assistant for the Physics 21x and 20x series (with and without calculus). This involves teaching multiple sections of the lab, grading weekly assignments, holding office hours, and proctoring examinations.

Physics 199 TA, Oregon State University January 2017 – March 2017
I was one of two undergraduate teaching assistants for the introductory class Physics 199, a student organized "intro to the physics major" class. As a TA I organized lab tours and guest speakers as well as a panel of upperclassmen to talk to students about the physics track at OSU.

ACTIVITIES
Lambda Chi Alpha ($\Lambda X A$) Vice President September 2015 to Present
I am the current Vice President of the Alpha Lambda chapter of Lambda Chi Alpha Fraternity. We are a 140 man organization devoted to building leaders and serving our community. My duties as VP include organizing weekly brotherhood events, presenting each week during our chapter meetings, talking with Alumni, and administering various executive committee responsibilities.
Society of Physics Students Member, Mentor September 2015 to present
As a mentor, I am paired with a new undergraduate physics major whom I help acclimate to university classes (expectations, resources, class suggestions, etc...)
Sigma Pi Sigma ($\Sigma\Pi\Sigma$) National Physcis Honor Society member June 2017 to present
Community Outreach Inc. Corvallis, OR - Volunteer September 2015 to present

AWARDS
Lambda Chi Alpha - Alpha Lambda Chapter Freshmen of the Year June 2016
Awarded for grades, involvement, and overall chapter vote.

Oregon State honor roll 2015-present
Awarded for achieving above a 3.5 GPA and being enrolled in a minimum of 12 credit hours per term.