

KARL SEWICK

64 North Forge Manor Drive • Phoenixville, PA 19460
(484)-624-1204 • KarlSewick@gmail.com • <https://karlsewick.github.io>

OBJECTIVE

To obtain an electrical engineering internship position utilizing my advanced knowledge in semiconductor theory, electromagnetic theory, signal analysis, and programming.

EDUCATION

University of Pittsburgh, Pittsburgh, PA
B.S in Electrical Engineering, Minor in Computer Science
Current G.P.A.: 3.63
Relevant Coursework:
Semiconductor Device Theory
Signals and Systems Analysis
Algorithms, Computer Organization
Java, C, Python, Matlab, Unix

Expected Graduation: May 2019

WORK/RESEARCH EXPERIENCE

Applications Engineering Intern, Aerotech, Inc.

April 2018 – Present

Programmed motion control for testing characteristics and product functions/features.
Researched and developed optical systems and algorithms for active fiber alignment.
Assisted in generating test system/data for relevant customer application.
Presented product advancement to field salesmen at annual sales meeting.
Acknowledged for python code for use in rapid development of photonics solutions.

Undergraduate Research Assistant, Department of Nanoscale Optoelectronics Lab

January 2017 – Present

Developed various semiconductor fabrication processes and measurement procedures.
Studied advanced low-loss Anisotropic media Surface Plasmons through Maxwell's fundamentals to develop dispersion relationships for multiple geometries, with fabrication and testing of the designs in near future.

International Young Physicists' Tournament USA Team Leader

September 2014 – July 2015

Responsible for research and experimentation on four separate projects under the topics of electromagnetics, wave theory, and coherent/incoherent optics.
Goal of research was to display findings and argue findings at an international tournament.
Research presented at 2015 International Young Physicists' Tournament.

Waiter/Back Waiter, Movie Tavern/Sips Bistro and Bar/Marly's BYO, Phoenixville, PA

May 2013 – August 2016

VOLUNTEER WORK

Guitar Teacher, Phoenixville, PA

August 2011 – July 2015

Work included designing lesson plans, teaching music, various play styles, and guitar restringing. Developed creativity and new ideas. Taught local students from the community.

Various Walk/Run fundraisers; Relay for Life (24-hour relay), Crop Run, Dana Marie Run (7 years)

2003 – present

HONORS

University of Pittsburgh Swanson School of Engineering

August 2015 – Present Honors Student

Recognized by the PA Congress and Governor for work with IYPT

2015

Woody Herman Award; which is given to... "Honor students who exhibit an excitement

for jazz performance, Exceptional work ethic, and a genuine interest in growth as a jazz musician."

May 31, 2015

