

Benjamin Nussbaum

www.benjaminussbaum.xyz

benjamin@benjaminussbaum.xyz

(802) 373-8662

Education

University of Rochester (UR) **Rochester, NY** **2017 - 2021 (Expected)**

B. S. Optics, B. A. Physics and Astronomy; Minors in Computer Science and Mathematics

GPA: 3.90–Dean’s List

Awards and Recognitions:

★ *Dean’s Citation for Broadening Participation in Research*

★ *Xerox Award for Innovation and Technology*

Highlighted Courses: Electromagnetic Theory · Quantum Mechanics of Physical Systems
Quantum/Nano Optics Lab. (Graduate level) · Optical System Layout/Analysis · Artificial Intelligence

Research Experience

Research Assistant **Vamivakas Group** **The Institute of Optics** **Summer 2019-Present**

Summer 2019 Project: “Investigating Image Quality by Increasing Illumination Coherence”.

Short abstract: Spatially filtering a partially coherent source is shown to increase the coherence area.

Leadership

Vice-President **University of Rochester OSA (The Optical Society)** **2019-2020**

General club management · skilled group leadership · professional development · community outreach
Develop engagement between students of differing class years within the department and with students in other physics/engineering departments via social events from game nights and the annual Photon Cup.

Workshop Leader **The Institute of Optics** **University of Rochester** **Fall 2019**

Lead weekly workshops of a small group of students in Prof. Julie Bentley’s Geometrical Optics course.
Facilitate work on solving problems extending important class topics and ideas.

Photon Camp Counselor **The Institute of Optics** **University of Rochester** **Summer 2019**

Guided high school students through various labs/experiments and taught them about optics.

Supported a small team in the completion of a capstone project and poster presentation.

Provided mentorship and insight via answers to questions about my college experience.

Technical/Computer Skills

Fast learner and long-time programmer with experience in:

Java, MATLAB, Python, Mathematica, JavaScript, Igor Pro, Logger Pro, PASCO Capstone™,
Zemax, C#, Web Application Development – ASP.NET Core & Entity Framework, Git, vim, L^AT_EX

Campus Activities

Professional Development Committee **UR Society of Physics Students** **2018-Present**

Support committee chair in planning, organizing, and running events geared toward professional development of students interested in Physics and Astronomy, e.g., graduate student/faculty research panels, technology workshops, REU/summer program information sessions, and Ask Seniors Anything.