# Benjamin Nussbaum

www.benjaminnussbaum.xyz

benjamin@benjaminnussbaum.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 · event planning
Lead a group in planning, organizing, and constructing devices incorporating optical physics as a learning and professional development opportunity, e.g., an IR rangefinder using a Raspberry Pi.

***Workshop Leader***    ***The Institute of Optics***    ***University of Rochester***    ***Fall 2019***
Lead weekly workshops of 10-12 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, LaTeX

## 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.