Max Frankel

Updated November 17, 2022

Email: max.frankel@stonybrook.edu **Phone**: +1 929 383 2214

Research Interests: Atomic, Molecular, and Optical Physics; Quantum Information

Education

University of Colorado, Boulder — Boulder, CO
Accepted to the physics PhD program, deferred for Fulbright — Aug 2023

State University of New York, Stony Brook — Stony Brook, NY
BS Physics with Honors & Optics Specialization, Summa Cum Laude — Aug 2018 – May 2022
GPA: 3.97
Mentors: Dr. Martin G. Cohen, Prof. Dominik Schneble

Fiorello H. LaGuardia High School of Music & Art — New York, NY
Major in visual art — Sep 2014 – May 2018
GPA: 4.00

Honors / Scholarships

Fulbright Research Award Sweden (Fulbright U.S. Student Program) — Sep 2022 – May 2023
1 of 10 students selected for 9 months of funded study at the pre- and graduate levels and/or conduct independent research in Sweden.

Sigma Pi Sigma Inductee (American Institute of Physics) — Apr 2021
Membership is awarded each year to selected physics students at Stony Brook University

Outstanding Scholastic Achievement Award (Swiss Benevolent Society of New York) — Aug 2021 – May 2022
Award granted to a college senior or graduate student who demonstrates sustained academic excellence (cumulative GPA of at least 3.8) in a demanding study program

Academic Achievement Award (Stony Brook University) — Spring 2019, Fall 2019, Spring 2020, Fall 2020, Fall 2021
Awarded to students who achieve a 4.00 GPA for an academic semester

Research Experience

Advanced Optical BioImaging Lab (SciLifeLab / Royal Institute of Technology) — Stockholm, Sweden — Sep 2022 – May 2023
Supervisor: Professor Ilaria Testa
Working with a phase spatial light modulator to create optical focus arrays through holography. The focus array is to be implemented in one of the group's fluorescent microscopy setups, used to study live neurons and other cells. Studying hologram generation algorithms and diffraction simulation in Python.

Ultracold Quantum Systems Group (Stony Brook University) — Stony Brook, NY — Aug 2020 – Aug 2022
Mentors: Professor D. Schneble, Dr. M.G. Cohen
Designed, built, and tested an optical system to create engineered optical trapping potentials for ultracold atoms in a Bose-Einstein condensate. Experimented in holography with a digital micromirror device

Presentations	**Creating an Optical Ring Lattice for Bose Einstein Condensates using a Digital Micromirror Device** Stony Brook University 2021 Undergraduate Research and Creative Activities Symposium 20-minute virtual talk to physics faculty and students on research conducted in the Ultracold Quantum Systems Lab	Stony Brook, NY May 2021
Teaching Experience	**Private tutor** New York State regents physics	Oct 2019 – May 2020
Work Experience	**Noser Young Professionals AG** Intern, learned the basics of programming in Java and building websites using WordPress, Avada, and HTML	Bern, Switzerland Summer 2019
	Stony Brook University Campus Recreation Center Soccer and volleyball referee	Stony Brook, NY Apr 2019 – Sep 2019
Memberships	**Sigma Pi Sigma** (American Institute of Physics) Physics national honors society	Apr 2021 – Present
	Laser Teaching Center (Stony Brook University) Conducted experiments remotely using optics kit provided by the center in the summer of 2020. Studied the evolution of laser beam profile over propagation distance	Aug 2020 – Present
	Society of Physics Students (American Insitute of Physics, SBU chapter) Participated in the club's membership program as a mentor from Nov 2021 to May 2022	Sep 2018 – May 2022
Skills	**Programming** Python, Mathematica, LaTeX, Matlab, FORTRAN, C++	
	Languages English, Swiss-German	
Leadership Experience	**RC Flying Club** (Stony Brook University) President, held fly meets at Stony Brook's R&D Park where members fly their aircraft, organized an activity in SBU's STEM Craft Night 2020	Aug 2019 – Aug 2021
	AIAA SBU Chapter Leader of the testing subteam and chose aircraft electronics for SBU's chapter of the American Institute Aeronautics and Astronautics which took part in the national Design/Build/Fly competition. Qualified for the competition and placed 61/101	Sep 2019 – Jul 2020