

Alexander Tschinkel

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New York, NY

Education:

New York University, CAS & Tandon School of Engineering

Spring 2024

Dual BS Degree in Physics and Mechanical Engineering, Minors in Mathematics and Aerospace Engineering (GPA 3.33)

Extracurricular Activities: *Society of Physics Students:* Co-President (2023-2024), Treasurer (2022-2023), Winner of SPS National Outstanding Chapter Award (2023), *NYU Rogue Aerospace:* Avionics Team Mechanical Engineer, Winners of the AIAA Reusable Launch Vehicle Award

Research Experience:

NYU Center For Soft Matter Research: Pine Lab

Spring 2022-Present

Undergraduate Research Assistant

Conducted research on colloidal self assembly of photonic crystals. Performed and optimized synthesis of latex patchy particles. Executed chemical techniques for the separation of colloidal clusters. Examined adhesion properties of polystyrene micro-particles in relation to silicon wafers under different colloidal dispersion conditions. Designed and manufactured parts for microfluidics applications using CAD and stereolithography.

Recipient: Dean's Undergraduate Research Fund Grant

Work Experience:

NYU Physics Department Peer Tutoring

Fall 2022-Present

Tutor

Led an average of 4 hours/week of tutoring sessions for General Physics students averaging 6 students per session. Students who attended sessions achieved improved grades and a better understanding of concepts from classical mechanics and electricity and magnetism. Served as a liaison between 10 tutors and department administration to communicate tutor concerns and needs.

Oculogica

Summer 2021

Summer Engineering Intern

Provided Solidworks designs and built prototypes for drop-test compliant medical device shipping. Led project from start to finish including recommending and sourcing materials, design specifications, prototype build and testing, and development and transfer of Solidworks designs.

Buck Hill Ski Racing Department

Winter 2018-2020

Course Assistant

Led team of six daily race course set up, including gate setting and safety fencing installation and removal. Installed and repaired timing equipment. Performed safe extractions of injured skiers by effectively communicating with teammates and ski patrol.

Eco Finishing Company

Summer 2019

Maintenance Department Assistant

Assembled and disassembled electroplating equipment including assembly of over 300 brackets for electroplating. Organized over 1000 spare inventory parts. Maintained ventilation systems by regularly changing filters on the factory roof.

Skills:

Digital Skills: L^AT_EX, Matlab, Python, ANSYS, Autodesk Fusion 360, Solidworks, Ultimaker Cura, Grabcad

Relevant Coursework: Quantum Mechanics, Electricity & Magnetism, Dynamics, Computer Aided Design, Heat Transfer, Fluid Mechanics, Mechanics of Materials, Thermal and Statistical Physics, Advanced Experimental Physics, Advanced CAD, Computational Physics, Mechanics of Materials, Finite Element Analysis

Languages: English, German (Fluent), Russian (Fluent), French (Fluent)