Caspar Lant

+1 646 934 8393 — caspar@nyu.edu

EDUCATION

Bachelor of Science, Physics (Math & Computer Science Minors)
New York University, New York, NY, expected May 2020
- Cummulative GPA: 3.7/4.0

AWARDS

NYU Leadership Fellow (AY 2019-2020)
NYU Office of Sustainability Green Grant ($10,000)
United States Department of Energy SULI Fellowship ($8,000)
NYU Dean's Undergraduate Research Fund (DURF) Grant ($3,500)
DAAD RISE Scholarship from German Government ($3,000)
Alexander von Humboldt Travel Grant to Attend Annual DAAD Conference ($500)

WORK EXPERIENCE

Sept 2019 – Present **New York University**, New York, NY
Adjunct Instructor – Advanced Experimental Physics Lab – Physics Department
Group Leader – Smart Cities Sensors Development Group – Tandon School of Engineering

June – Aug 2019 **Surface Chem. and Catalysis Group, Oak Ridge National Laboratory**, TN
Department of Energy Office of Science Undergraduate Research Fellow (SULI)
- Designed, executed, and analyzed complex molecular-beam experiments in ultra-high vacuum of organic alcohols on $LaMnO_3$ perovskite crystals under Dr. Aditya Savara
- Designed and fabricated a "heating enhancement" for an effusive molecular beam (patent pending submission)

May 2018 – Present **NYU Shanghai Air Pollution Monitoring Network**, Shanghai, China
Project Leader – NYU Office of Sustainability Green Grant Recipient
- Fabrication and deployment of low-cost air-quality monitors for the NYU Shanghai campus in collaboration with the UN Environmental Programme

May – Dec 2017 **Leibnitz Institute for Surface Modification (IOM)**, Berlin, Germany
DAAD RISE Fellow and DURF Scholar
- On-the-fly troubleshooting during syncrotron experimental campaigns
- Computer modeling of magnetic bottle spectrometer using SIMION
- Design and development of continuous-flow nitrogen cryostat in CAD

Sept – Dec 2016 **EMIL@BESSY II, Max Planck Society & Helmholtz Zentrum**, Berlin, Germany
Research Practicum
- Investigation of Al-induced crystallization (ALILE) of Si under Dr. Simone Raoux
- Sputter deposition and spectroscopic characterization methods

Jan – July 2016 **Center for Quantum Phenomena (CQP), New York University**, New York, NY
Research Intern
- Magnetoresistive (GMR) measurements in thinfilm wafers under Dr. Andrew Kent

July – Aug 2015 **Altova**, Vienna, Austria
Software Development Intern

2013 – 2016 **Face The Music Contemporary-Classical Youth Orchestra**, New York, NY
Student-Teacher and Musician

INSTALLATIONS

Oct 2018 **"Veggie Party" for UNSEELIE Event at H0l0**, Brooklyn, NY
New Media Artist
- Floating array of wireless RGB lights controllable by event attendees via web interface
- Vacuum-formed two-part moulds from large vegetables for light-diffusing enclosures
- Fabricated circuit boards with wireless microcontrollers running custom firmware

Aug 2016, 2017, 2018 **Berlin Atonal Music and Art Festival**, Berlin, Germany
New Media Artist
- Commissioned to design, assemble, and live-operate large-scale multimedia light installations for three consecutive years at Kraftwerk Berlin

SKILLS

Spoken Languages: English, German (Fluent), Chinese (Advanced)
Programming Languages: Java, Python, C, Bash, LaTeX, Lua
Software Tools: NumPy/SciPy, Fusion 360, LabView, IGOR, Origin, SIMION
Technical Skills: Prototyping/Fabrication, Circuit Design, Soldering, XRD/XPS

Citizenship: United States, United Kingdom, Republic of Austria