

Caspar Lant

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- EDUCATION** *Bachelor of Science, Physics (Math & Computer Science Minors)*
New York University, New York, NY, expected December 2019
- Cumulative GPA: 3.7/4.0
 - 337/340 GRE Composite Score
- 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 LaMnO₃ 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 synchrotron 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
- 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 H010**, 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, L^AT_EX, 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