# Caspar Lant

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| **EDUCATION** | *Bachelor of Science, Physics (Math & Computer Science Minors)* |

**New York University**, New York, NY, expected December 2019
– Cummulative GPA: 3.7/4.0
– 337/340 GRE Composite Score

**AWARDS**

Fulbright Scholarship Recipient to China (Postponed due to Covid-19)
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)

## WORK EXPERIENCE

**Sept 2019 – Present** — **New York University**, New York, NY
*Adjunct Instructor – Advanced Experimental Lab and Physics III – Physics Department*
*Group Leader – Smart Cities Sensors Development Group – Tandon School of Engineering*
*Research Staff – Shasha Group – Courant Institute of Mathematical Sciences*

**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

**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*

**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

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| **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 |