

Malcolm Lazarow

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Education

Northwestern University

GPA 3.69/4.0

Bachelor of Science

- Engineering Sciences & Applied Mathematics, concentrated in Physics *with departmental honors*
 - Thesis Title: *Simulating Open Quantum Systems: Computational Condensed Matter via Graphics Processing Units*
- Pure Mathematics *with departmental honors*
 - Thesis Title: *Curvature on Principal G-Bundles: Differential Geometric Formalisms in Modern Physics*

Bachelor of Music

- Music Composition
 - *Some Sounds, Some Noises: A Senior Recital*

Evanston, Illinois

June 2017

Research and Related Experiences

Visiting Researcher, The Wurtele Group, UC Berkeley

Research project TBD, but it concerns theoretical plasma physics

January 2018-Present

Undergraduate Researcher, The Koch Group, Northwestern University

Implement studies of computational physics on GPUs, with applications in Condensed Matter Physics:

- Quantum Computation
 - Solve master equations for open quantum systems
 - Analyze time evolution of quantum bits such as fluxonium

January 2016-June 2017

Northwestern University Microgravity Team

Member of a team that won a position in NASA's Microgravity University Program

- Designed an original cellular biology experiment to test the rate of polymerization of various types of actin
- Executed our experiment in zero gravity aboard NASA's Reduced Gravity Flight Program
- Given unrestricted access within NASA's Johnson Space Center

September 2013-June 2014

Teaching Experience

Mathematics Teaching Assistant, Northwestern Mathematics Department

Recipient of the 2016 Excellence as an Undergraduate Teaching Assistant Award

- Give weekly lectures covering course material
- Host biweekly office hours
- Proctor and grade examinations

September 2013-June 2017

Courses taught include:

- Math 220: Single Variable Differential Calculus
- Math 230: Multivariable Differential Calculus
- Math 234: Multivariable Integral Calculus and Vector Calculus
- Math 240: Linear Algebra

Mathematics Tutor and Coordinator, Northwestern Mathematics Department

- Host open table tutoring for all core math courses offered at Northwestern
- Tend to administrative necessities
- Coordinate quarterly tutoring schedules

September 2014-June 2017

Miscellaneous Experience

Music Composition and Production Intern, Paint House Music

- Wrote jingles and melodies to be used in commercials
- Produced and mastered music to be included in commercials

Tijuana, Mexico

June 2015-September 2015

Programming Languages: TensorFlow, PyCUDA, C++, Python, Matlab