

Timothy Gormley

Curriculum Vitae

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Education

Academic Qualifications

- 2018–Present **Ph.D. in Aeronautics and Astronautics**, *University of Washington*, Seattle, Washington.
Recipient of UW College of Engineering Fellowship
- 2014–2018 **Bachelor of Science in Aeronautics and Astronautics**, *University of Washington*, Seattle, Washington.
Magna Cum Laude
- 2014–2018 **Bachelor of Science in Mathematics**, *University of Washington*, Seattle, Washington.
Magna Cum Laude
- 2010–2014 **Graduate**, *Hanford High School*, Richland, Washington.

Research Experience

○ Graduate Research Assistant (2018–present)

Wave propagation in nonlinear topological metamaterials

Sponsored by NSF Emerging Frontiers in Research and Innovation (EFRI)

I am currently expanding on my earlier research by exploring if creating a topological defect is possible with nonlinear spring systems, as well as exploring the possibility of curved surfaces with topological waveguides.

○ Senior Capstone Design Project Member (2017–2018)

Research on embedded defects in composites

Sponsored by GKN Aerospace

As my senior year capstone design project, I produced a model for the behavior of thin titanium plates containing bonded embedded steel defects, realizing that model into ABAQUS, and subsequently experimentally verifying this model.

○ Research Experiences for Undergraduates (REU) Intern (2017)

Widening and lowering the bandgap in topological metamaterials

Sponsored by NSF

I designed topological metamaterials and calculated dispersion curves using Matlab codes. Particular focus was placed on widening and lower frequency bandgaps in topological metamaterials. I intend to present the outcome of this project at the AIAA Regional Conference in March of 2019.

- **Society for Advanced Rocket Propulsion team member (2016-2017)**

Design and testing of the ground station

UW Society for Advanced Rocket Propulsion

I helped select the components for the team's ground station and plan the design, as well as assisting with testing.

Awards

- **Graduate Research Fellowship**, National Science Foundation (2019)
- **Honorary Mention, Graduate Research Fellowship**, National Science Foundation (2018)
- **College of Engineering Fellowship**, Given to four exceptional students entering the College of Engineering at the University of Washington (2018)
- **Graduated Magna Cum Laude**, Double majoring in Aero/Astro and Mathematics (2018)
- **Finalist, Husky 100**, University of Washington (2017)
- **Research Experiences for Undergraduate (REU) Fellowship**, National Science Foundation (2017)
- **Deans List (every quarter)**, University of Washington (2014–2018)
- **Scored Top 500 on the Putnam Exam** (2015)

Publications

- T. Gormley, R. Chaunsali, and J. Yang, "Manipulation of frequency bandgaps in topological metamaterials," Proceeding of American Institute of Aeronautics and Astronautics (AIAA) Region VI conference

Outreach and Other Activities

- June 2018- Present **Department Representative**, *Aeronautics and Astronautics*, UW, Seattle WA.
I organize and give lab tours to external delegates, e.g., alumni, K-12 students, and newly incoming undergraduate students including URM and female students.
- June 2018- Dec 2018 **Cashier, Stocker, Janitor**, *Trinity Market*, Seattle WA.
I worked part time a cashier, stocker, and janitor. I was trusted with money, assisting customers, and preventing theft.
- June 2014- August 2014 **Assistant Camp Counselor**, *Arc of Tri-Cities*, Richland WA.
I spent the summer before my freshman year of college as an assistant camp counselor at a camp for children with intellectual disabilities.
- September 2012- June 2014 **Volunteer Tutor**, *Hanford High School*, Richland WA.
During high school I tutored a number of my peers, including some Somali refugees in math and other subjects, volunteering through the school's key club

Technical and Personal skills

- **Programming Languages:** Proficient in: Java , Matlab, and TeX
- **Industry Software Skills:** Matlab, ABAQUS, and Excel.
- **General Skills:** Works well with teammates, excellent writing and presentation skills.