

# Zhiting (May) Mei

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## EDUCATION

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### Princeton University

Ph.D., Mechanical and Aerospace Engineering

Princeton, NJ

Expected May 2027

### Duke University

B.S.E, Mechanical Engineering

B.S., Physics

Certificate, Innovation and Entrepreneurship

Durham, NC

May 2022

## RESEARCH EXPERIENCE

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### Princeton Intelligent Robot Motion (IRoM) Lab

Princeton, NJ

Advisor: Anirudha Majumdar

*Research Assistant*

Jun. 2022 – Present

My research aims to approach robotics through a fundamental science's perspective. My work applies concepts and theories in information theory to quantify performance of robotic systems with arbitrary dynamics, tasks, and control strategies, given their sensing capabilities and computational constraints. I am also interested in applying these theories in the design and implementation of robotics.

### Duke Pratt Fellows

Durham, NC

Advisor: Stefan M. Goetz

*Undergraduate Research Assistant*

Dec. 2020 — May. 2022

Developed theories and simulations on control and optimization of lattice modular multilevel converters with serial and parallel connectivity. Obtained most efficient control algorithms for lattice converters under requirements (converter size, input/output terminals, and output voltage/current).

### Duke Neutrino & Cosmology Group

Durham, NC

Advisor: Kate Scholberg

*Undergraduate Research Assistant*

Nov. 2019 — Feb. 2021

Worked on SNEWS (Supernova Early Warning System), produced sky maps with predicted supernova location and uncertainty intervals. Analyzed neutrino events detected at the Super-Kamiokande Detector.

## PUBLICATIONS

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[1] Anirudha Majumdar, Zhiting Mei, and Vincent Pacelli, "Fundamental Limits for Sensor-Based Robot Control", *Under Review*, 2023.

[2] Zhiting Mei, Jingyang Fang, Stefan M. Goetz, "Control and Optimization of Lattice Converters", *Electronics* 2022, 11, 594.

## AWARDS AND HONORS

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### Graduate

- Francis Robins Upton Fellowship (2022)

### Undergraduate

- Dean's List with Distinction (2018, 2019, 2021)
- Engineering Honor Societies: Tau Beta Pi, Pi Tau Sigma
- Graduation with Distinction (2022)

## TEACHING EXPERIENCE

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### Teaching Assistant

Durham, NC

*For Math, Physics, Civil Engineering, and Mechanical Engineering*

Jan. 2019 — May. 2022

- Mentored and inspired 100+ students at multivariable calculus and linear algebra help rooms.
- Lead labs and office hours for Mechanics of Solid, Introductory Physics, and Controls.

## REFERENCES

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### Anirudha Majumdar

*Assistant Professor, Mechanical and Aerospace Engineering*

*Associated Faculty, Computer Science*

Princeton University

[ani.majumdar@princeton.edu](mailto:ani.majumdar@princeton.edu)

(609) 258-8375

### Stefan M. Goetz

*Assistant Professor, Psychiatry and Behavioral Sciences*

*Assistant Professor, Neurosurgery*

*Faculty Network Member, Duke Institute for Brain Sciences*

Duke University

[stefan.goetz@duke.edu](mailto:stefan.goetz@duke.edu)

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### Kate Scholberg

*Arts & Sciences Distinguished Professor, Physics*

Duke University

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### Rebecca Simmons

*Associate Professor of the Practice, Department of Mechanical Engineering and Materials Science*

Duke University

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