



NYU

**TANDON SCHOOL
OF ENGINEERING**

Fully-Funded PhD Positions in Climate, Energy, and Risk Analytics Lab (CERA)

Start Date: Spring 2026 or Fall 2026

Affiliated Departments: Mechanical and Aerospace Engineering, Center for Urban Science and Progress at New York University

About Us:

At [the Climate, Energy, and Risk Analytics Lab](#) (CERA), we develop cutting-edge methods to understand, quantify, and mitigate climate risks and complex challenges. Our work integrates AI, physics, data science, finance, and risk modeling with strong collaborations across academia, government, and industry.

We are recruiting exceptional PhD candidates for **Spring 2026** or **Fall 2026** entry through NYU's Mechanical and Aerospace Engineering (MAE) department, with a joint affiliation in the Center for Urban Science and Progress (CUSP).

Our current research projects include:

- LLMs for Sentiment & Risk Analysis – Leveraging large language models to analyze public perception, policy discourse, and financial signals in climate risk.
- VLMs for Global Exposure Datasets – Building multimodal datasets (satellite + text) to map building exposure in data-scarce regions worldwide.
- Unbiased Climate Risk Modeling – Developing fair and representative models that address bias in training data and hazard representation.
- Cascading Impact Modeling – Using networks and graph neural networks (GNNs) to simulate interdependencies and cascading failures across infrastructures.
- Reinforcement Learning for Resource Allocation – Optimizing spatially distributed climate adaptation investments under uncertainty.

Our mission: to build resilient communities, protect assets, and support data-based decision-making.

About Dr. Yuki Miura:

Dr. Miura is an assistant professor in the Department of Mechanical and Aerospace Engineering and the Center for Urban Science and Progress at NYU where she leads the CERA Lab. She is a member of NYC Panel on Climate Change to advise NYC on climate-related issues. Previously, she worked at Morgan Stanley in climate risk management and quantitative strategy. She holds a PhD, MPhil, and MS in Civil Engineering and Engineering Mechanics from Columbia University, and a BE in Systems Design Engineering from Keio University, Japan.

PhD Candidate Profile:

We are seeking highly motivated candidates with strong research backgrounds in applied statistics, engineering, risk analysis, data science, fluid dynamics, optimization, generative AI, climate risks, and relevant fields. Essential qualifications include:

- Proficiency in programming languages (e.g., Python)

- Advanced quantitative analysis skills, including physics modeling, machine learning
- Excellent communication skills

Successful candidates will receive full financial support, including tuition coverage, competitive stipends, and comprehensive medical insurance.

Application Instruction:

- Submit [the form](#) to express interest by November 30.
- Apply formally through [the NYU Engineering PhD portal](#) – select **Mechanical and Aerospace Engineering** and indicate **Dr. Yuki Miura** as your intended advisor.
- Applications are reviewed on a rolling basis. Early applications are strongly encouraged. Shortlisted candidates will be contacted.