

PhD Positions in Electrical and Computer Engineering at the University of New Hampshire (UNH)

Positions Description:

The [Energy Control and Optimization Laboratory \(ECO Lab\)](#) at UNH, led by Prof. Arezoo Hasankhani, invites motivated candidates to apply for **two fully funded PhD positions** starting Fall 2026/Spring 2027. These positions are ideal for candidates with expertise in **cybersecurity, AI/ML, or control and reinforcement learning**, interested in applying their skills to **marine cyber-physical systems**:

Project 1: cybersecurity for marine cyber-physical systems

- Apply **cybersecurity** and AI/ML methods to protect marine cyber-physical systems from cyberattacks and study **cyber-physical impacts** on these systems.
- Key activities include: marine communications security, anomaly detection, and penetration testing of control systems.

Project 2: control for marine cyber-physical systems

- Apply control methods, including model predictive control and reinforcement learning, to marine cyber-physical systems.
- Key activities include: design new control techniques for marine cyber-physical systems, design and implement reinforcement learning-based controller.

Required Skills:

- Master's in Electrical/Computer Engineering, Mechanical Engineering, Computer Science, or related field.
- **Project 1:** Background in cybersecurity, AI/ML, or related areas.
- **Project 2:** Background in control and reinforcement learning.
- Proficient in Python and/or MATLAB; strong teamwork and communication.

Preferred Skills:

- Background in cyber-physical systems, e.g., autonomous underwater vehicle, marine microgrids, wave energy converter.
- Familiarity with electromechanical and multi-disciplinary systems.
- Publications or industry experience are advantageous.

Application Process:

Interested applicants should submit a **single PDF** of their **Curriculum Vitae (CV)** and optional **Publications**; Send applications via email to Prof. Arezoo Hasankhani at arezoo.hasankhani@unh.edu with the subject line: *"Prospective PhD Student – Project 1"* or *"Prospective PhD Student – Project 2"*.

Please clearly indicate which project you are applying for. Feel free to reach out with any questions.

About University of New Hampshire:

The UNH is an R1 Carnegie classification research institution with an excellent research background in the ocean engineering located nearby the Atlantic coast, which offers a plethora of [facilities](#) and different [centers](#). The UNH is also one of the main collaborators of the national Atlantic Marine Energy Center ([AMEC](#)) to advance marine energy industry.