Student Research Assistantships

Applications due by Friday, October 13, 2023 at 4pm (Pacific)

The Schatz Energy Research Center has openings for two undergraduate students for research assistantships related to offshore wind energy. These intern positions are expected to start on or near November 1, 2023 and continue to the end of the spring semester 2024. The position is supported with stipends made possible by funding support from the Philip & Yuriko Anton Climate Endowment.

Who we are

Since 1989, the Schatz Center has been a leader in applied research and project development for clean and renewable energy. Our current portfolio includes microgrid development, sustainable transportation design, carbon life cycle analysis, solar product testing, offshore wind feasibility studies, and planning and policy for clean energy access around the globe.

As residents of a rural coastal community, we are keenly aware of our social and environmental responsibilities. We are committed to increasing energy access and resilience for communities worldwide — and do so through clean and renewable design that reduces climate change and restores environmental and human health.

Position summaries

The student interns will be assigned responsibilities based on background skill sets, project needs, and student interests. A position is available in each of the following projects:

- Battery energy storage analysis: The student intern will be assigned to carry out research tasks related to the Center's efforts associated with offshore wind energy. The activities will include research associated with an assessment of the potential to combine battery energy storage with electric transmission infrastructure to support possible offshore

wind development in northern California. The student intern may also have the opportunity to participate in other efforts related to offshore wind.

- Mooring entanglement: Floating offshore wind lease areas in California overlap with known marine animal habitats. Floating turbines are anchored to the seafloor using mooring lines, which can become entangled with lost fishing gear or other debris, and in turn entangle wildlife (i.e. secondary entanglement). Our entanglement mitigation project will develop a system of technologies to monitor and identify mooring line entanglements. We will use computer simulation to predict floating turbine motions and cable stress for scenarios with and without secondary entanglements, and this position will support those efforts. The student intern in this position will design and perform the simulations using the OrcaFlex software, and will post-process the results and apply statistical analysis to draw conclusions based on the results.

Qualifications

Minimum qualifications

Education and Experience

- Eligible applicants must be undergraduate students in good academic standing at Cal Poly Humboldt who are registered for at least 6.0 units the coming semester (Fall 2023) and who plan to be enrolled during the Spring 2024 semester.
- Prior experience with energy systems analysis and/or geographic information systems is required. The experience could be from academic coursework, work experience, and/or other forms of experience.

Knowledge, skills, and abilities

- Proficiency with modern office computing, including word processing and spreadsheet analysis.
- Ability and willingness to work with and learn from others effectively in a team setting.
- Ability to communicate effectively in written and interpersonal contexts.
- Ability and interest to engage in quantitative and/or mapping analysis related to offshore wind energy, battery energy storage systems, electric transmission infrastructure, and/or transmission line routes (For applicants to the Battery Storage opportunity).
- Ability and interest to engage in quantitative analysis related to simulation of offshore wind turbines (For applicants to the Mooring Entanglement opportunity).

- Ability to self-motivate and follow through on assignments.
- Demonstrates interest and enthusiasm for issues related to energy and environmental sustainability.

Compensation

Interns will receive a stipend of $2,500 per semester for the Fall 2023 and the Spring 2024 semesters, for a total stipend of $5,000. It is anticipated that interns will contribute an average of 8-10 hours per week during each semester to the Center's off-shore wind research efforts.

How to apply

Deadline

All application materials must be received by **4 pm Pacific Time (US) on Friday, October 13, 2023**.

Materials

Applicants must submit the following via email to schatzenergy@humboldt.edu:

- A formal letter of application that
    - Describes your background and what motivates you to apply.
    - Specifies the research project to which you are applying. If you wish to apply to both research opportunities, a separate letter of application for each is required.
    - Addresses your experience with the qualifications described above and provides examples of experience, including descriptions of relevant work and/or a listing/description of relevant college/university courses successfully completed
- A resume (1 page maximum preferred)

Additional Information

About the Philip & Yuriko Anton Climate Endowment

Philip and Yuriko Anton are pleased to support research assistantships at the Schatz Energy Research Center through their Anton Climate Fund. Support will go to undergraduate students pursuing extracurricular work at the Center related to clean energy and climate change, with a preference for supporting student involvement in projects involving renewable energy technologies such as offshore wind energy.

For additional information, please email schatzenergy@humboldt.edu or call (707) 826-4345.

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