

Engineering Intern for Building Energy Efficient Heat Pumps for Waste Heat Recovery in Industrial Processes

Job Description

Orien Energy Inc. is an early-stage startup company that's revolutionizing waste heat recovery in heavy industries. Waste heat is ubiquitous in industrial processes, especially in the low-temperature range (<450 °F) which contributes to over 60% of the total inventory. This low grade waste heat is hard to be re-used efficiently by traditional approaches. Orien Energy is trying to address this challenge by integrating water absorbing materials into an innovative heat pump system to convert this low grade waste heat into premium process heat for industrial end-users in a highly-efficient, sustainable, and affordable manner.

As the Engineering Intern, your job entails assisting in experiment design, fabrication, data collection, and data processing for a prototype heat pump system. The prototype system has interesting problems to solve with heat and mass transfer, thermodynamics, and fluid dynamics. Depending on your strengths and interests the internship can be tailored accordingly, though you will get to experience each part of the prototyping process. You will be working directly with and mentored by the lead Mechanical Engineer, Dr. Zachary Welker on a day to day basis. You will also have the chance to work closely with the CEO and founder Dr. Yajing Zhao, who is an MIT course 2 alum (PhD'22) and Delta V alum (cohort 2022). Experience in a lab environment, performing experiments, or doing data analysis is preferred. But you are still encouraged to apply to this position if you are an eager learner, want hands-on engineering experience, and are excited about making the world more sustainable and energy efficient!

Feel free to reach out to Dr. Zachary Welker (zwelker@orien.energy) or Dr. Yajing Zhao (yjzhao@orien.energy) if you have any questions.

Internship Location

Greentown Labs (444 Somerville Ave, Somerville, MA 02143) for prototyping work, remote working possible for modeling work.

Primary Activity

Engineering

Sector

Energy Efficiency