

Underwater Mobile Robotics / Hardware Intern

We are looking for extraordinary roboticists and electrical engineers to help commercialize robotic technology from a premier robotics research lab - the Harvard Microrobotics Lab. We are actively developing robots that address extreme inefficiencies in all marine vessels: biofouling. Biofouling - the growth of organisms such as barnacles and algae on the bottom of ship hulls - contributes to unnecessary greenhouse gas emissions, allows the transportation of invasive marine species, and slows global maritime traffic down by increasing drag on the ship by more than 50%. The robots we are developing can actively prevent biofouling and keep ships in top-performing condition.

Ideal candidates have experience or interest in developing novel robotic electro-mechanical systems, allowing the robot to locomote over complex surfaces, stay adhered to ships, and perform tasks such as inspection or cleaning. Specifically, we have projects related to gearbox design, tether systems, magnetic and suction adhesion systems, miniaturization, sensor integration for obstacle avoidance, and deployment operations. Candidates should have a clear understanding of how to test novel robotic platforms. Candidates with experience in underwater robotics are ideal, however, our robotic platform is more similar to a vacuum cleaning robot than an AUV (Autonomous Underwater Vehicle). Candidates with experience in robotic competitions such as FIRST Robotics, VEX, Battlebots, design/build/fly, or similar are highly encouraged to apply. This will be an exciting and fast-paced design-build-test cycle of work.

Terms Available

Summer Term 2023 - May/June to August (3-4 months)

A 6-month work term is preferred (and encouraged), but 4-month applicants will also be considered.

Required Skills:

- Hands-on mechanical design of mechanisms, gears, and other robotic components
- Good understanding of when a problem can be solved mechanically or electrically
- Experience using 3D printers, machine shop tools, and sending parts to external vendors

Contact

Email resume to Dr. Michael Bell - bell@bluetechrobotics.com