

Title: Visualization and quantitative analysis of marine microbiomes using microscopic imaging

Description:

Microbial communities are essential components of marine ecosystems, contributing to nutrient cycling, pollution remediation, and carbon export. Some microbes form tight associations with vertebrate and invertebrate marine animals, impacting the population health and development at higher trophic levels. In this project, we will apply microscopic technologies to visualize and quantify microbes from coastal ecosystems in the Narragansett Bay. Potential case studies include (1) characterizing the abundance and spatial distribution of microbiomes associated with marine invertebrates, and (2) identifying the diversity and organelle composition of benthic protists.

Project location: in-residence

Preferred skills: Course preparation in microbiology and microbial ecology. Prior experiences in field work, microscopy, image analysis using ImageJ/Fiji, experiences with R or Python programming languages.

Contact:

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