



MESTECH Research Project



Project Title: Testing the performance of sensors in a marine environment

Project Researcher: Jonathan Collins

Funding Body: Beaufort Marine Awards Internship Programme

Project Summary: The student will study the degradation of the performance of sensors and platforms in a marine aquatic environment. Work will be laboratory-based using tank set-ups developed by the student. Sensors and platform support materials or filters will be exposed to saline environments over periods of time. Biofilm formation will be studied using imaging methods together with other characterisation procedures.

Some efforts to reduce biofilm formation will be carried out and this work can be extended to the external marine environment together with existing postgraduate studies in the field. Students will also gain experience working with biological organisms of biofilm significance, learning how to manipulate the organisms and expose test platforms and sensors. The student will be involved in developing laboratory best practice in testing for biofilm formation and standard operating procedures will be developed for the laboratory.

The student may be involved with developing anti-fouling coatings for sensors and platforms for test in the laboratory.

Key Outputs: Sensors, marine environment, biofilm, imaging techniques

Key Impacts: Chemistry, marine chemistry / biology, environmental science, materials chemistry or related expertise