



## MESTECH Research Project



### **Project Title:**

Development of a faecal matter sensor for marine and freshwater environments

### **Project Researcher:**

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### **Funding Body:**

Marie Curie Fellowship

### **Project Summary:**

This project is mostly focused on developing new rapid technologies for faecal pollution assessment of environmental waters. This will hopefully be achieved by using a marker enzyme ( $\beta$ -D-glucuronidase) for Escherichia Coli presence combined with an optical detection based on fluorescence. Also involved in this is the collecting and analysing of chemo-physical data from continuous in-situ sensors (sensor maintenance, data processing and statistical analysis). In parallel with this collection of samples for nutrients and microbiological analysis is also underway. By combining the different data sets, assessment of the benefits of using in-situ sensors for the collection of continuous water quality data is possible and also highlighting the potential of this data to detect sporadic pollution events and to inform sampling times for more complex sampling regimes.

### **Key Outputs:**

- Method applicable for continuous monitoring of faecal indicators in water
- Sensing platform for monitoring faecal indicators in environmental waters