

# MARINE AUTONOMY & TECHNOLOGY SHOWCASE

12-14 NOVEMBER 2019

National Oceanography Centre

[conference.noc.ac.uk/matshowcase](http://conference.noc.ac.uk/matshowcase)

# MATS 2019

## Day 3 – Theme Data Collection

### Session Chair Matthew Mowlem NOC



#### **Dr. Allison Schaap**

Senior engineer, microfluidic sensors - National Oceanography Centre

[Allison.schaap@noc.ac.uk](mailto:Allison.schaap@noc.ac.uk)

#### **Autonomous sensors for detection of leaks from a carbon capture and storage site**

Allison Schaap is a research engineer in the Ocean Technology and Engineering Group at the National Oceanography Centre. Her primary research interest is the engineering of devices at the micro-scale to create new technology for environmental sensing. She is currently working on developing novel sensors for the in situ measurement of seawater total alkalinity and for the early detection of harmful algae blooms.

She received her PhD from the Eindhoven University of Technology (The Netherlands) for work on integrating optics and microfluidics to automatically identify algae species. Prior to that she completed a masters in Mechanical Engineering and a bachelors in Engineering Physics at the University of British Columbia (Canada).

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## **Dr Alex Beaton**

Ocean Engineering and Technology NOC

[a.beaton@noc.ac.uk](mailto:a.beaton@noc.ac.uk)

Alex Beaton is a technology researcher working in the Ocean Technology and Engineering Group (OTEG) at the National Oceanography Centre (NOC) in Southampton. He develops new cutting-edge technologies to help understand our oceans, rivers, lakes and glaciers. He leads multiple sensor development projects, producing new instrumentation for the measurement of nutrients, hydrocarbons and dissolved metals in the marine environment. He is delivery lead on “Autonuts”, a project developing a high performance chemical sensor suite for marine autonomous systems.

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**Phil Johnston**

**Business Development AutoNaut Ltd**

[phil.johnston@autonautusv.com](mailto:phil.johnston@autonautusv.com)

Environmental Monitoring of The Ocean Cleanup by AutoNaut USV

Phil leads business development for AutoNaut USV. He has a background working at sea as an offshore environmental consultant. Working mainly in the oil & gas industry, but also defence and marine renewables, he specialised in the effects of underwater man-made noise on sea-life

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## **Ioseba Tena**

Global Business Manager - Defence & Robotics - **Sonardyne International Ltd**

[Ioseba.Tena@sonardyne.com](mailto:Ioseba.Tena@sonardyne.com)

### **Choosing the right ocean robot to gather your data.**

Ioseba (Joe) Tena is tasked with helping shape and grow Sonardyne's business within the global maritime defence and autonomy markets. Joe has more than 20 years' experience working with marine robotic systems. At Sonardyne he works alongside his colleagues to ensure that clients' operational requirements are completely satisfied through the delivery of fit-for-purpose, low-risk, subsea technologies. Joe has a PhD in Electrical and Electronic Engineering from Heriot-Watt University focusing on the use of sensors to improve situational awareness for underwater robots.

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## **Dr. Socratis Loucaides**

Leader Analytic Science NOC

[s.loucaides@noc.ac.uk](mailto:s.loucaides@noc.ac.uk)

### **Novel in situ sensor technology for monitoring marine carbonate chemistry and ocean acidification on autonomous platforms.**

Is an oceanographer with research interests in marine biogeochemistry and chemical oceanography with emphasis on inorganic carbon cycling in the ocean. He is a senior scientist at the Ocean Technology and Engineering Group at the National Oceanography Centre, Southampton, UK, leading the development of analytical assays for the determination of carbonate system parameters and their application to autonomous in situ sensors. Current projects include instrumenting small island developing states in the S. Pacific, Indian Ocean and Caribbean for long term ocean acidification observations, developing new sensors for marine carbonate chemistry measurements on marine autonomous platforms, and developing new tools for monitoring sub-seabed Carbon Capture and Storage (CCS) sites.

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## **Robyn Samuel**

PhD Candidate – National Oceanography Centre

[r.m.samuel@soton.ac.uk](mailto:r.m.samuel@soton.ac.uk)

## **Autonomous eDNA sampling for biomonitoring of marine ecosystems**

Robyn Samuel is NEXUSS PhD candidate working with the Biology Team at the National Oceanography Centre's Ocean Technology and Engineering department. Robyn's background is in marine ecology, having previously carried out research using a range of methods including trawls, grab sampling, HD video tows and dive-based surveys. This first-hand experience with some of the difficulties involved in marine biomonitoring sparked her interest in working with eDNA. Now a year into her PhD, research interests include; identifying relationships between microbial and metazoan communities, looking at small scale temporal changes in community composition during bloom conditions and monitoring invasive species using autonomous eDNA sampling.