Day 1 – Theme 1 Users and Applications

Session Chair Peter Collinson

Sarah Cryer
NEXUSS PhD Student – University of Southampton
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A CAMEL in Belize: using an autonomous surface vehicle to trace the Belize River plume.

I am a postgraduate research student within Ocean and Earth Science, National Oceanography Centre Southampton at the University of Southampton. I am interested in water quality surrounding tropical coral reefs and how changes in land use may be impacting on carbonate chemistry and coral reef health. I am currently using a combination of discrete water sampling and autonomous technology to investigate the role of the Belize River and its effects on carbonate chemistry in the marine environment and on the Meso-American Barrier Reef.

MARINE AUTONOMY & TECHNOLOGY SHOWCASE
12-14 NOVEMBER 2019
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MATS 2019

Simon Cheeseman
Offshore Renewable Energy Catapult Wave & Tidal Sector Specialist
simon.cheeseman@ore.catapult.org.uk

Robotics & Artificial Intelligence for offshore wind Farms

Simon Cheeseman is an experienced engineer and programme manager, having worked in both the private and public sectors.

Working within the Offshore Renewable Energy Catapult's Research and Innovation directorate, Simon is responsible for the Catapult's marine renewables strategy and South West regional development programme.

During his career Simon has held various senior manager roles with responsibility for high value technology development projects across the aerospace, communications and marine renewables sectors.

Mark Burnett
Chief Operating Officer - Seiche Water Technology Group

Acquiring otherwise unobtainable sound level data in close proximity to an oil and gas asset - with marine robotics

Mark Burnett is Seiche Water Technology Group's (SWTG) Chief Operating Officer, having joined the company November 2017. Immediately prior to this Mark was the Chief Executive Officer of WGP Group Ltd.

Mark is a graduate of Liverpool John Moores University and has over twenty years' experience in the marine sector, having commenced his career working offshore with Western Geophysical (now part of Schlumberger). Shorebased roles followed thereafter within GeoMarine and then WGP (Westland GeoProjects Ltd) during which the initial focus was the acquisition of niche and frontier marine geophysical surveys. During this time, Mark established and operated a regional office based in Houston, Texas and operated on secondment to client offices in Sakhalin, Russia.

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Prof Matthew Mowlem
National Oceanography Centre

Essential Ocean Variables for Global Ocean Observing Systems

Is head of the Ocean Technology and Engineering Group and lead over forty engineers, technologists, and scientists in the development and provision of technology for support of marine, aquatic and environmental science and related industrial and regulatory applications.

My research interests include the development of environmental measurement systems including the development of new chemical sensors and sensors for microbiology. I have a particular interest in the development of microsensors using either or both microfabrication and microfluidics. This has led to the development of a suite of sensors for nutrients, carbonate system parameters, trace metals, organic nutrients, pathogens, phytoplankton, hydrocarbons, pollutants and toxins.

Skills:

- Development and generation of research ideas and technology development programmes
- Microfluidic Systems Design
- Sensor Design
- Metrology of complex parameters
- Autonomous Systems

Multidisciplinary Engineering

Marta Januszewska,
Consultant – Oil Spill Response Ltd.
MartaJanuszewska@oilspillresponse.com

The use of Marine Autonomous Systems in emergency oil spill response

Marta started in the oil spill response industry in 2010 after graduating with MSc in Oceanography. Prior to joining OSRL she was a Sales Support Engineer working with oil spill detection radar and currents/wave monitoring sensors in the Netherlands. Since she joined OSRL she fulfilled different roles in business development and recently joined consultancy department. Marta is an active member of Surveillance Core Group and has taken part in a number of practical exercises, workshops and conferences where she presented on different applications of surveillance tools and sensors in oil spill response.

Ben Leslie
Senior Computer Vision Engineer – Rovco
ben.leslie@rovco.com

A2I2: A novel autonomous solution for offshore and nuclear end-users

Ben Leslie is a Senior Computer Vision Engineer at Rovco, an innovative subsea technology company headquartered in Bristol. Ben is the technical lead on the InnovateUK project "Advancing Underwater Vision for 3D", developing the next generation of Rovco's SubSLAM smart camera system. Prior to entering the field of subsea robotics, Ben worked on sensor fusion and Inertial Navigation Systems (INS) at Oxford Technical Solutions, leading the integration of LiDAR sensors with INS to produced georeferenced pointclouds. Ben holds an MSc Machine Learning from Bristol University and an MA Pure Mathematics from the University of Edinburgh

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Emma Carline
Ocean Sonics
emma.carline@oceansonics.com

Localizing underwater acoustic pingers using a streamlined method with an AUV

Emma Carline is an acoustic algorithm developer at Ocean Sonics, Canada. Her passion is creating new tools for extracting knowledge from ocean acoustic data. She has a BSc and MSc in mathematics (harmonic analysis) from Dalhousie University.

Dr James R. Fishwick
Head of Smart Sound Plymouth -Plymouth Marine Laboratory.
Email: jrfi@pml.ac.uk

Dr James Fishwick is a highly regarded UK Research and Innovation (UKRI) Senior Technologist/Scientist at Plymouth Marine Laboratory where he is Head of Technology and Operations for the Western Channel Observatory. James is a Fellow of the Institute of Marine Engineering, Science and Technology (IMarEST) and has gained chartered status as both a Marine Technologist and Scientist.

He has been instrumental in the technical development of the autonomous monitoring platforms and sensors of the Western Channel Observatory and is currently leading on the delivery of an autonomous water column profiling buoy. These offshore monitoring platforms are complimented with a recently developed onshore 'Smart Sound Laboratory' at PML, designed for testing and development of pioneering scientific sensors and platforms.

In addition, to his role at PML, James heads up Smart Sound Plymouth, an academic and commercial consortium facilitating a 1000km^2, fully instrumented proving ground for innovative marine technologies; within the Marine Business Technology Centre, Plymouth of which PML is a delivery partner. He chairs the Future Autonomous at Sea Technologies cluster, a group of industry leading companies and organisations working towards the delivery of autonomous at sea solutions. James also sits on the national Maritime Autonomous Systems Regulatory Working Group.

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MATS 2019

Stuart Baker

Assistant Director Strategy and Programme Development - Solent Local Enterprise Partnership

stuart.baker@solentlep.org.uk

After leaving University, Stuart worked for five years in commercial insurance underwriting for Axa and Aon. He then took a short career break, travelling to New Zealand, before returning back to the UK to teach Geography at Secondary and Sixth Form.

Stuart has worked in Local Government since 2005, first in Transport Planning, at both upper and lower-tier Authorities, before managing Solent Transport - a partnership of the Local Highway Authorities of the Solent area (south Hampshire, Isle of Wight, Portsmouth and Southampton). During this time he gained a MSc. in Transport Planning and Management.

Stuart has been working at the Solent LEP since 2013. He is Assistant Director of Strategy and Programme Development, leading the service area that is responsible for developing strategy and the evidence base that underpins it, as well as work to develop a pipeline of investable projects. It is an exciting and varied portfolio that reflects the priorities for the Solent economy, and includes: infrastructure, skills, innovation, and strategic sectors, which, for the Solent economy is dominated by the Maritime sector.

Following on from this, Stuart is the Assistant Director for Maritime UK Solent - an organisation that provides strategic leadership advice on the Solent Maritime cluster to ensure the sector is effectively promoted on a domestic and international basis,

and continues to innovate and grow. Stuart chairs the Maritime UK Regional Cluster Council and is a strong advocate of the UK's Maritime regions and the role they collectively play in underpinning the UKs position as the great and the leading Maritime nation.