

Challenger Wave



Monthly newsletter of the Challenger Society for Marine Science (CSMS)

NEWS

Low or zero carbon oceanography

An ambitious scoping project, led by the National Oceanography Centre (NOC), has been launched to investigate how to move towards low or zero-carbon oceanographic research. The aim of the NZOC (Net Zero Oceanographic Capability) project is to bring together the marine science community and key stakeholders to consider how NERC can maintain and enhance its research infrastructure in the future whilst adhering to the UKRI's objective of becoming a 'net-zero' organisation by 2040.

Leigh Storey, NOC Associate Director National Marine Facilities and NZOC Principal Investigator commented, "The replacement of a modern research ship is normally a decade-long process. However, the advances in technology are opening up opportunities which require a genuinely strategic view to be taken regarding the UK's next generation of oceanographic research infrastructure. The 20th century paradigm must give way to a low-carbon system and that shift must consider the science and policy needs alongside the technological opportunities."

NZOC will run for approximately one year and include six work packages, investigating:

1. Future science need (led by Dr Kate Hendry, University of Bristol),
 2. Policy & regulation (led by Professor Steve Fletcher, University of Portsmouth),
 3. Future ship technology (led by Colin Day, NOC),
 4. Marine Autonomous Systems (led by Dr Maaten Furlong, NOC),
 5. Future sensor systems & networks (led by Professor Matt Mowlem, NOC), and
 6. Data ecosystems (led by Dr John Siddorn, Met Office).
7. Dr Peter Collinson (independent) will work with

the leadership team to support engagement across related industries.

For expressions of interest visit <https://noc.ac.uk/projects/nzoc>.

Researchers to investigate impact of 'COVID-shock' on UK seafood sector

A research team led by the Scottish Association for Marine Science (SAMS) has begun to investigate the impact of COVID-19 on the UK seafood industry. The seafood sector incorporates significant processing and logistics operations within the supply chain, which begins with farming and fishing and ends with supermarkets, fishmongers and restaurants.



RiseUp project researcher George Charalambides, SAMS, is pictured at the Railway Pier in Oban, one of many UK towns that benefits from a thriving seafood sector. Credit: SAMS

Analysis of the previous economic crash in 2008 showed huge implications for the seafood sector, which also needed a longer recovery time than other industries. There is also a great deal of uncertainty within the industry over a looming post-Brexit end to the transition period. Now the RiseUp project, led by Dr Sofia Franco from SAMS, will seek to find out the extent of the so-called 'COVID-shock' throughout the industry and provide policy recommendations and advice to

help government and business improve resilience in the sector.

The 18 month long investigation, funded by the Economic and Social Research Council (ESRC) as part of the UK Research and Innovation's rapid response to COVID-19, will also involve the University of Manchester and will conduct interviews and surveys with industry during its initial data collection. The project is also benefitting from Seafish information and analytical input.

Dr Franco said: "The UK seafood industry is under unprecedented pressure to deliver on national food security during the COVID-19/SARS-CoV-2 pandemic, while trying to adapt to remain viable. Many livelihoods depend on the industry, whether that is people working within fishing and aquaculture sectors, supply chain companies or high street businesses. The location of many of these jobs, many in coastal and rural communities, is also significant in these local economies. However, it is important to capture the systemic impacts to the UK seafood industry, how businesses are adapting and how the supply network has been affected."



Fishmongers are at the end of the supply chain and therefore rely on processing as well as fishing to supply their products. Credit: Seafish

Dr Franco continued to point out there have likely been 'winners and losers' during the COVID-19 lockdown and the extent to which businesses prospered or struggled and why this happened could be vital to inform recommendations. She also said the project's recommendations must consider opportunities and seafood sector concerns about the effect of an extended 'COVID-shock' on top of the uncertainty around the Brexit trade deal negotiations.



Many livelihoods depend on a thriving seafood industry. Credit: Seafish

The project is keen to hear from companies across the seafood industry in gathering evidence on the effects of the COVID-19 disruption across the sector, the response from seafood businesses and the uptake of existing government support measures. Please contact the project lead (sofia.franco@sams.ac.uk) if you would like to share your experience of how COVID-19 has affected your business.

Planet Ocean Ltd is pleased to announce the formation of the ecoSUB Robotics Advisory Board

As the ecoSUB range of small, affordable autonomous underwater vehicles enters full production, Planet Ocean is pleased to announce the formation of an advisory board to help guide the project into the next phase and beyond. The board is comprised of acknowledged leaders in their fields to counsel the company on the opportunities for maximising the impact of its technologies globally.



"We recognise that although we have a deep understanding of the technology and the three

main target user groups for ecoSUB, we are by no means expert in them all and the formation of this board of specialists will ensure that we remain focused and on the right track as well as providing industry insights into what the user groups around the World need in the future.” said Terry Sloane, founder and MD of Planet Ocean, www.planet-ocean.co.uk, and ecoSUB Robotics, www.ecosub.uk.



From left to right: Professor Russell Wyn, Director of Wild New Forest CIC, Dr Peter Collinson, BP International Ltd., and Cdre David Burton RN (rtd), Director of ASW Barrier Smart Defence Initiative

The advisory team have long been advocates of the use of small, agile autonomous systems in their respective fields and ecoSUB in particular. Their decades of real world experience and vision is a significant asset available to the ecoSUB team. Of particular importance is an understanding of how micro AUV technology fits into the wider use of undersea autonomy in general.

Mission Atlantic

NOC scientists have joined forces with ocean scientists from elsewhere in Europe, Brazil, South Africa, Canada and the USA to map and assess the current and future risks from climate change, natural hazards and human activities, on Atlantic ecosystems.

Funded by a €11.5M grant from the European Union's Horizon 2020 programme, MISSION ATLANTIC will be the first initiative to develop and systematically apply Integrated Ecosystem Assessments (IEAs) at Atlantic basin scale. This unique IEA approach engages scientists, marine stakeholders, and resource managers, integrating all components of the ecosystem, including human activity, into the decision-making process. In this way, managers and policy makers informed by science, can balance the need for environmental protection with secure, sustainable development, thereby ensuring a positive future for the secure, sustainable development, thereby ensuring a positive future for the Atlantic Ocean

and its peoples. To read more about how the NOC is contributing to Mission Atlantic, visit noc.ac.uk/news/international-horizon-2020-project-mission-atlantic-launched-map-assess-sustainable-development.

VIEWS

New EMODnet video – 10 years of EMODnet in 10 minutes

We are delighted to share this short documentary film which captures the EMODnet story over the last ten years. It tracks our journey from its launch, to where we are now and where we will go next. EMODnet is a network of people and so despite being immersed in a global pandemic, we tried to gather insights from some of those who were instrumental in the early development years of EMODnet, those who have made it what it is today and those who use EMODnet and rely on it as an operational service.

We tried to make the impossible possible, to put 10 Years of history and achievements in a 10-minute documentary, www.emodnet.eu/en/ten-years-emodnet-ten-minutes. Tune in and hear all about EMODnet, curating the past, capturing the present and charting the future! For those with less time available, you can also watch the shorter 2-minute teaser, www.youtube.com/watch?v=4CSWSjQEVos.

Impacts of COVID 19 on the UK Marine Science Community – SURVEY

The Coronavirus (COVID-19) pandemic has impacted everyone, and will likely continue to do so for years to come. Those in the UK marine researcher community may have had direct health effects, or may have been impacted indirectly through an increase in caring duties, cancellation of fieldwork or laboratory closures, or economic set-backs. The National Oceanography Centre Association of Marine Science National Capability Beneficiaries (NOCA), www.noc.ac.uk/partnerships/our-national-role/coordinating-uk-marine-science/noc-association, is motivated to document and understand the wide-ranging impacts of the COVID-19 pandemic on UK marine researchers.

In July we approached the community to seek members for a working group to tackle this issue.

The working group has now created an anonymous survey which is intended for UK-based marine scientists working in research (academia, industry, education, public sector). We would be very grateful if you and/or your colleagues would take a few minutes (it takes ~ five minutes) to complete the survey: forms.office.com/Pages/ResponsePage.aspx?id=MH_ksn3NTkql2rGM8aQVG351MwypdUxNjQR7-Zzj1dpUM1c5R1dMRThOSIFMMVFMUFE5Nk1EV1pNUy4u.

The Working Group intends to produce a written report on the findings and a short video presentation in early 2021. Updates will be posted on the NOCA web site. The deadline to complete the survey is COP **Monday 2nd November 2020**. If you have any questions, please contact NOCA Secretary, Jackie Pearson jfpea@noc.ac.uk.

SALTS

No news from sea this month I'm afraid

I know that this is a favourite section for many readers, where we get the inside information about life at sea, its thrills and spills. So please the next time you are at sea or carrying out any fieldwork, please remember that a simple paragraph or two will get you published here. –

Ed

CALENDAR

10th – 12th November 2020: Marine Autonomy and Technology Showcase 2020

Southampton, UK

Registration is now open for the National Oceanography Centre's Marine Autonomy and Technology Showcase (MATS) 2020, mats2020.vfairs.com, which will be held as a virtual event for the first time.

MATS 2020 will still feature a packed three-day programme of exhibits, presentations, panel discussions and networking, offering a unique and valuable opportunity to find out about the latest developments in marine autonomous technology and how this field is set to develop in the years to come. The event also enables

organisations to engage with the NOC to explore opportunities around funding, sharing ideas and getting those ideas in front of influential, high-profile users from the marine and maritime sector.



As ever, the event will welcome a broad roster of speakers from across industry, academia, and government organisations. Each day of the showcase will see leading figures from the world of marine autonomy and technology take to the virtual stage to present on innovative and disruptive technologies, as well as highlighting current developments and future priorities and challenges.

This year's event will feature an additional session focusing on the Command and Control, data collection and data management element of the Oceanids Programme, projects.noc.ac.uk/oceanids/. To express interest in joining this session - and if you have any other questions about MATS 2020 - please email NOCevents@noc.ac.uk

This year's keynote speakers are Leslie-Ann McGee, Assistant Director of the Consortium For Marine Robotics at Woods Hole Oceanographic Institution, and Neil Tinmouth, Chief Operating Officer at SEA-KIT International Ltd.

Tickets are priced at £130 (including VAT) for the three-day online event, with a limited number of student places available costing £80. The full programme will be announced in the coming weeks.

The expert session chairs for the NOC's Marine Autonomy and Technology Showcase 2020 are:

Claire Cardy (MD of Nortek UK)

Doug Connelly (the NOC's Associate Director for

Research and a Director of NOC Innovations Ltd)
Peter Collinson (Lead for the Marine Autonomy
Group at BP)
Dan Hook (Managing Director at Armada)
Dan Ridgwell (Unmanned and Autonomous
Systems Capability Lead for BMT).

1st – 3rd December 2020: Oceanology International

London, UK

We've got some great news to share with you! Oceanology International will be taking place as a live event at the London ExCel Centre. Once the UK Government confirmed that events could go ahead on from 1st October, we have been all hands to the pumps to make sure that Oceanology International can run safely and smoothly. Rest assured that with the enhanced health and safety protocols developed in collaboration with the relevant authorities and guidelines, Oceanology International will showcase the best our industry has to offer. To see all the health and safety measures in place at the venue, please make sure to read our full onsite safety guide. To go with the in-person event, we will also be launching a virtual Oi platform – details coming soon!. Make sure to register today and we'll see you in December, www.oceanologyinternational.com/.

Dramatic progress in ocean surveying is unlocking previously unimaginable opportunity across the ocean tech community. The 50th Anniversary Oi expo looks ahead to the next half century of surveying and services. Survey and services are key dimensions of the current ocean tech revolution, enabling new kinds of insight into the ocean floor, aquatic life and ongoing change in our oceans.

Progress in automation is unlocking previously unimaginable opportunity across the ocean tech community. It's a unique chance to meet the teams behind the innovations and see the technology in action. From subsea controls to autonomous survey boats, aerial drones to independent sample collectors, unmanned systems will streamline operations and deliver new depth in detail and data.

October 2020

Oi oceanology
international
2020 10-12 MARCH 2020, LONDON, EXCEL



This is a unique chance to find out what's possible, meet the teams and see the technology in action. Register online now to attend Oi 2020: www.oceanologyinternational.com/.

Visit the show to:

- Have access to a free and interactive educational programme that will inspire and inform you on key industry topics.
- Meet experts and do business – the show offers more than 500 exhibitors, global suppliers of cutting-edge technology.
- Stay up to date with regulations and policies to make more effective decisions for your business and projects.
- Explore features such as the Ocean ICT Zone, focused on marine and ocean IT, communications, satellite and data solutions.

To succeed in your future ocean strategies, you need to be where the people shaping them are. Register now to Oceanology International 2020 and celebrate our 50th anniversary where the industry is.

Our technical sessions unpack the latest developments and insights on essential topics, including:

- offshore energy development
- asset monitoring
- navigation and positioning
- hydrography, geophysics and geotechnics
- environmental stressors
- data interpretation and AI

It's shaping up to be a sensational show and an occasion no one in the Ocean tech community can afford to miss.



In its 50 years, Oi has consistently advanced with the community involved in exploring, monitoring, developing or protecting the world's oceans by providing networking across different sectors, knowledge exchange from various disciplines and valuable business opportunities. That reflects on the developments of the show programme year by year and the new benefits for attendees.

11th – 14th January 2021: The Fifth Xiamen Symposium on Marine Environmental Sciences

Xiamen, China

The State Key Lab of Marine Environmental Science (MEL), Xiamen University and the Earth Science Division of the National Natural Science Foundation of China (NSFC) are going to hold the fifth bi-annual meeting XMAS-V. The theme of XMAS-V is **Multidisciplinary Sciences Serving a Sustainable and Healthy Ocean**. More information about the meeting can be found at <http://melmeeting.xmu.edu.cn/xmas5/>.

15th – 17th February 2021: Oceanology International Americas

San Diego, USA

Oi Americas will be taking place from the 15th-17th February 2021 in the San Diego Convention Centre. Topics will include:

- Sensors and Instruments
- Vessels, Vehicles and Platforms
- Data Communications
- Data Management
- Data Analysis and Interpretation
- End-use Case Studies

For full details on the event topics, check out our website here: www.oceanologyinternationalamericas.com.

14th-18th June 2021: EMODnet Open Conference and Jamboree

Ostend, Belgium

Due to the outbreak of the COVID-19 virus, the second EMODnet Open Conference and Jamboree which was initially scheduled to take place in September 2020 has been postponed.

Save the date for this event, which will bring together the extended EMODnet family in Ostend (Belgium) to set goals for the next phase of EMODnet to 2030. More information will follow, www.emodnet.eu/conference2021.

14th-18th June 2021: the postponed EcoSummit 2020

Gold Coast, Australia

As a result of the spread of COVID-19, Elsevier and the EcoSummit 2020 Chairs took the decision to postpone the 6th International EcoSummit Congress to 2021, to be held in the same venue at The Gold Coast Convention Centre, Australia.



Call for abstracts open for our 2021 dates

14-18 June 2021 | Gold Coast, Australia



You can submit your abstracts and register with confidence as we are relaxing our cancellation terms due to the COVID-19 situation: we will refund your registration fee, with no penalty, should you wish to cancel during the uncertainty of the outbreak.

Join mailing list

Sponsorship enquiries

The **6th International EcoSummit: EcoSummit 2021** (rescheduled to 14-18 June 2021) will have a focus on coastal and marine ecosystems including adjacent terrestrial ecosystems and all habitats that are integrated within those ecosystems, including river networks, wetlands and catchments. **>> View our outstanding speakers and panelists**

Oral and poster abstract submission for symposia and general sessions is open until **30 October 2020**. Abstracts should be submitted using the online abstract submission system. **>> View symposia and submit abstracts**

Registration is open at the original 2020 rates for our new dates. Early-bird rates are available until **5 March 2021**. Remember you can cancel your registration at any time if affected by the COVID-19 outbreak. **>> View rates and register**

We send you our warmest wishes at this challenging time.

EcoSummit 2021 Co-Chairs

Jan-Olaf Meynecke, Griffith University, Australia

Robert Costanza, Crawford School of Public Policy at Australian National University, Australia

B. Larry Li, University of California, Riverside, USA

Supporting publications



Due to this rescheduling, oral and poster abstract submission for symposia and general sessions is open until 30 October 2020. Abstracts should be submitted using the online abstract submission system, ecosummitcongress.com/submit-abstract.asp. We continue to look forward to welcoming our speakers and plenary panelists to the Gold Coast in June 2021.

Registration is open for the new dates, ecosummitcongress.com/conference-register.asp, and we look forward to seeing you at EcoSummit 2021. So that you can submit your abstract and

register with confidence we are relaxing our cancellation terms due to the Coronavirus COVID-19 situation. Rest assured that we will refund your registration fee, with no penalty, should you wish to cancel during the uncertainty of the outbreak.

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16th - 18th June 2021: 9th International Workshop on Marine Technology - MARTECH 2020

Vigo, Spain



The organising Campus de Excelencia Campus do Mar (University of Vigo, Spain) and the Universitat Politècnica de Catalunya (UPC, Spain) will call for papers for MARTECH 2021, www.martech-workshop.org.

The main objective of the MARTECH Workshop is to show latest investigations and exchange of information and points of view on current research in MARine TECHnology. The Program Committee cordially invites you to participate and submit your contribution in one of the proposed topics:

- Operational Oceanography
- Instrumentation, Metrology, Signal processing
- Seafloor observatories and sensor networks
- Observatories, remote sensing
- Marine Robotics: ROVs, AUVs, ASVs, Gliders
- Underwater imaging and communication
- Seafloor and Water Column characterization
- Technology for Marine Biology and Aquaculture
- Renewable energies
- Coastal, regional, and offshore research vessels and platforms
- Marine Geophysics technology and solutions
- Marine Data Interoperability and data flow
- Technologies for a sustainable dredging
- 2021 as a point between the past and the future

Yours sincerely, Dr. Ana Bernabeu, General Chair and Dr. Joaquin del Rio, Steering Committee Chair

9th – 13th August 2021: IMBeR ClimEco7 summer school

Vancouver, Canada



6th - 10th September 2021: Postponed Challenger Society Biennial Meeting

Oban, Scotland

The biennial Challenger conference attracts around 300 leading UK marine scientists, science managers and early career scientists. As well as showcasing cutting edge marine science and technology, the conference is noted for its training of young scientists and networking events, including a public lecture by an eminent authority on relevant societal marine issues.



Once again the call is out for sponsors and exhibitors wishing to participate in next year's conference. The conference is a great place to be if you are recruiting marine science graduates.



For the only the third time, the conference will be held at SAMS (Scottish Association for Marine Science) in beautiful OBAN. SAMS hosted the first post war conference back in 1946 and since then only once more since in 2006.

20th – 22nd September 2021: Oceanology International Middle East

Abu Dhabi, UAE

Whilst it is hugely disappointing to postpone the launch, and not a decision we have taken lightly, we believe it is the best course of action for all involved. In the last couple of months, we have been speaking to customers, partners and supporters to understand their views and to ensure we make the best decision - in such

challenging circumstances - for the ocean communities we serve.

We trust that postponing Oceanology International Middle East will enable us to deliver the true value of this world-leading brand next year. Amid these challenging times, we would like to reiterate our commitment in creating new opportunities and connections for our industry. Over the next several months, we will offer our support to the global community by hosting various digital activities that will connect our exhibitors with their targeted clients. In advance, we thank you for your understanding and support. If you require any further clarification or information regarding this situation, please feel free to email us at info@oceanologyinternationalmiddleeast.com.

5th - 9th September 2022: Challenger Society Biennial Meeting – celebrating the 150th anniversary of the Challenger Expedition

London, UK

To be hosted by the National History Museum, just a 'date for the diary', stayed tuned.

The CSMS email address is info@challenger-society.org.uk. Contributions for next month's edition of Challenger Wave should be sent to: john@vectisenvironmental.com by the 30th October.

We continue to send printed copies of Challenger Wave to members of the CSMS without email addresses. However it is in everybody's interest to send your email address to Jennifer Jones, jxj@noc.ac.uk, as soon as possible

JOBS**Postdoc position**

Title: Synergy between ocean observing systems over boundary currents

Description

We are looking for a "data scientist" to come and work at LOPS in the Ocean and Climate team. The objective of this postdoc is to develop a new ocean product that will statistically combine complementary information from satellites and in situ ocean measurements to produce a 3-dimensional time series with sufficient resolution to track eddies in the Gulf Stream region.

Location: Laboratory for Ocean Physics and Satellite remote sensing, Ifremer – Brest, France.

Contract: 18 months

Starting date: As soon as possible

How to apply

Applications (detailed CV including a list of publications, cover letter explaining how your interests and experiences would make you a suitable candidate, name/email of at least 2 referees) and/or informal inquiries should be sent to Guillaume Maze (gmaze@ifremer.fr).

Deadline: November 15th 2020

Who can apply:

A PhD in mathematics or information and communication science and technology with experience in environmental science, but also a PhD in physical oceanography, meteorology or climate science with strong experience in statistics.

For more information: docs.google.com/document/d/1JGvmFwu2HJ5RhBbe9Z8UVkqTRCMCQz7hLev2c9tInbo/edit

There are jobs on the IMBER web site

<http://www.imber.info>



Integrated Marine Biosphere Research

Jobs and opportunities

New

- Postdoc: Importance of phagotrophy for mixotrophic phytoplankton under different environmental conditions, Ifremer, Brest, France. No deadline given. **Apply now**
- Postdoc: Marine biogeochemistry, University of Bergen, Bergen, Norway. Apply by **18 October**
- Deputy Director: UKRI GCRF One Ocean Hub, University of Strathclyde, Glasgow, Scotland. Apply by **25 October**
- PhD: Multidisciplinary oceanography, MIO, Marseille, France. Apply by **28 October**
- PhD: Feedbacks between human-driven changes in productivity and marine top predators and the role of sandeels, Royal NIOZ, Texel, The Netherlands. Apply by **30 October**
- Editorial Internships for Early-Career Researchers to learn about scientific publishing and journal editing: ICES Journal of Marine Science. Apply by **7 December**

In case you missed it...

- Postdoc: Global Marine Fish Contaminants & Nutrients, Institute of Marine Research, Bergen, Norway. No deadline given, **apply now**
- 3 Postdocs: Southern Ocean carbon and climate research, CSIR, Cape Town, South Africa. No deadline given, **apply now**
- Two postdocs: Coastal Management and Socio-Environmental Conflicts, Santos, Brazil. No deadline given, **apply now**
- Senior Oceans Campaigner, Greenpeace, Washington DC, USA. Only applicants eligible to work in USA. No deadline given, **apply now**
- 3 Postdocs: Climate Change & Fishery Sustainability, University of Wisconsin, USA. Open until filled
- Postdoc: The Big Data Revolution and Oceans Governance, Chapel Hill, NC, USA or work remotely. Apply by **15 October**
- 2021 Simons Foundation Early Career Investigator in Marine Microbial Ecology and Evolution Awards. Submit reference letters by **5 November**
- 2021 Call: SCOR Visiting Scholars. Apply by **1 December**

Visit the IMBeR Website

imber@imr.no