

# Challenger Wave



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

## NEWS

### Professor Harry Bryden appointed Regius Professor of Ocean Sciences

The University of Southampton is pleased to announce the appointment of Professor Harry Bryden, FRS, as Regius Professor in Ocean Sciences. The prestigious Regius Professorship was bestowed on the University by Her Majesty the Queen in recognition of Southampton's international leadership in ocean science and maritime systems. Southampton also hosts the Regius Professor of Computer Science, held by Professor Dame Wendy Hall, with both titles being unique to the University of Southampton.



*Newly-appointed Regius Professor in Ocean Sciences, Professor Harry Bryden*

Throughout his distinguished career as an oceanographer, Professor Bryden is, perhaps, best known for his pioneering work in ocean circulation and advancing our knowledge of the role of the ocean in the Earth's climate. "I have enjoyed working on a wide variety of global ocean circulation topics with colleagues in Southampton for the past 28 years," said Professor Bryden. "A special privilege has been to interact with enthusiastic undergraduate, Masters and PhD students on leading-edge research problems on nearly a daily basis. I am deeply honoured to

have been appointed Regius Professor by the University of Southampton giving me the opportunity to further build Southampton's international profile and potential in Ocean Sciences."

Professor Rachel Mills, Southampton's Dean of Environmental and Life Sciences, said: "Our undergraduate and postgraduate programme in Ocean and Earth science is amongst the largest, and most successful in the world. Together with our Southampton Marine and Maritime Institute, this makes us world leading in a sector that contributes over £10 billion annually to the UK economy. Our award of the Regius Professorship of Ocean Sciences is fitting recognition of our global profile in this area. We look forward to celebrating Harry's appointment with the wider oceanographic community in the months ahead."

Professor Paul Wilson, the University's Head of Palaeoceanography and Paleoclimate Research Group and Chair of the Regius Professor search panel added: "No-one embodies that profile better than ocean physicist and avid Saints' fan, Harry Bryden, FRS. He has pioneered our understanding of what makes the ocean tick. Thanks to him we have a much better idea of the way it circulates, the way it moves heat around on our planet and the consequences for our climate."

Professor Mark E. Smith, President and Vice-Chancellor of the University, offered his congratulations: "A Regius Professorship is a rare privilege and reflects the exceptionally high-quality of teaching and research at the University. Today we celebrate Harry's appointment and I look forward to working with him to mobilise our research power to confront the extraordinary scientific and societal environmental challenges that lie ahead."

Professor Bryden originally joined the UK's Institute of Oceanographic Sciences in 1993 and worked at the National Oceanography Centre

Southampton (NOCS) from its inauguration as the Southampton Oceanography Centre (SOC) in 1995. From 2007-2011 he led the NOCS Graduate School through an exciting period of development and growth.

Professor Bryden is a Fellow of the American Meteorological Society, the American Geophysical Union and the Royal Society, and Honorary Fellow of the Royal Meteorological Society, and past President of the Challenger Society for Marine Sciences. He has authored and co-authored over 110 refereed scientific publications.

In 2005, Professor Bryden was elected as a Fellow of the Royal Society "for the outstanding contributions he has made through careful observation and innovative analysis and interpretation of data to the study of the meridional transport of heat in the ocean". He was awarded the Prince Albert I Medal in 2009 by the International Association for the Physical Sciences of the Ocean, "in recognition of his fundamental contributions to understanding the ocean's role in the global climate system."

Professor Bryden has received the Fridtjof Nansen Medal from the European Geosciences Union (2013) "for his long-term leadership in experimental physical oceanography and in understanding the mechanisms of the general ocean circulation and heat transport". The Challenger Society for Marine Science awarded him the Challenger Medal in 2014, for his significant contribution to the development of marine science.

Professor Bryden has supported the University philanthropically for many years. He has given generously to the Peter Kilworth Memorial Prize, the National Oceanography Centre's Post-Doc Fund, and to special lectures in the School of Ocean and Earth Science. He is therefore recognised in the Southampton Giving Circles as a member of the Vickers Circle.

#### **Calling 'early stage' career Special Interest Group members for the postponed Challenger Conference**

Although you will see that the Oban Challenger Society conference is postponed, it is not called off, it will now take place between the 6th-10th September 2021. Many thanks for those who have responded already with your preference for

how your SIG will engage with the Challenger Conference in Oban. We remind you that we're very keen to have SIG members who are in the early stage of their careers to work alongside the session leads and act as session Co-leads with responsibility for sifting abstracts, shaping sessions and chairing sessions during the conference. Please can you promote this opportunity to your early career members and encourage them to make contact with the session leads listed on the conference website [challenger2020.co.uk](http://challenger2020.co.uk). Their election as a Co-Lead is not guaranteed but representatives of SIGs will probably be prioritised. Please keep promoting the conference to your SIG members and wider networks.

#### **The MASTS Webinar series kicked off on the 1st April**

We are grateful to Dr Leslie Mabon from SAMS for delivering our first webinar entitled, Nine years on from the Fukushima Dai'ichi nuclear accident: how is Fukushima's coastal fishing society faring?

There are More to come in the webinar series:

Wed 15<sup>th</sup> April – Dr Clive Fox (SAMS), title TBC.

Wed 22<sup>nd</sup> April - Dr Tavis Potts (University of Aberdeen), Participatory mapping for natural capital

Wed 29<sup>th</sup> April - Dr Meadhbh Moriarty (Marine Scotland Science), Evaluation of multiple coupled biological-physical models in Loch Linnhe

Find out more here: [www.masts.ac.uk/research/masts-webinar-information/](http://www.masts.ac.uk/research/masts-webinar-information/)

#### **Sonardyne International appoints Graham Brown as new Managing Director**

Marine technology provider Sonardyne International Ltd. has announced Graham Brown as its new Managing Director. Graham, who takes over the role from John Ramsden on the 1st April, has served on Sonardyne International's board from 2008, most recently as Sales and Marketing Director and Deputy Managing Director. John, who has been Sonardyne International's Managing Director since 2009, is staying within the Sonardyne family, taking the role of CEO of Sonardyne Group, the newly formed parent company of Sonardyne International and its sister companies; Chelsea Technologies, EIVA, Wavefront and 2G Robotics.

"This is an exciting time for Sonardyne International," says Graham. "Looking beyond the current, uniquely challenging business climate, we'll continue to grow organically, in terms of our people, our technology offering and the global markets which we support - while upholding the service and support that we're renowned for. But we're now part of a wider group of companies, with access to a considerably enlarged portfolio of products and services that complement our own seabed-to-shore systems. We expect this to deliver significant operational benefits for our customers across the global energy, ocean science, civil and defence markets."



*Marine technology provider Sonardyne International Ltd. has announced Graham Brown as its new Managing Director.*

"Next year will be Sonardyne's 50th year in business and I'm proud to have played a significant role in the success of the company over the last two decades," says John. "As we look forward to celebrating that half century milestone with Graham at the helm, our collective sights are focussed on the direction we're headed in at the start of our second half century. As CEO of Sonardyne Group, I'm excited at the prospect of working with Graham and his counterparts across our business to support those who measure, navigate, communicate or explore the world's waters and oceans, safely, responsibly and more efficiently than ever before."

Graham is an Electromechanical Engineer by background with a first-class degree and Ph.D. He is also a Chartered Engineer, a Fellow of the Institute of Directors (IoD), a Fellow of the Institute of Marine Engineering Science and Technology (IMarEST), and a member of the Society for Underwater Technology (SUT). He contributes to a number of industry groups such

as the Southern Region Council of the Energy Industries Council (EIC).

### **IMBeR is on the move**

After eight wonderful years at the Institute of Marine Research in Bergen, IMBeR is very pleased to announce that the International Project Office (IPO) in Norway will have moved to Canada on 1st April 2020. The IPO will be hosted at Dalhousie University in Halifax, with support from the Government of Canada and will be housed in the Steele Ocean Sciences Building with our other co-sponsors: The Ocean Frontier Institute, MEOPAR and the Ocean Tracking Network. We look forward to joining our new colleagues there when life returns to normal.



John Claydon (Director) and Lisa Maddison (Deputy Director) will relocate to the IPO-Canada where we will join our new team member, Tracey Woodhouse. Our new email addresses are: [john.claydon@dal.ca](mailto:john.claydon@dal.ca), [lisa.maddison@dal.ca](mailto:lisa.maddison@dal.ca) and [tracey.woodhouse@dal.ca](mailto:tracey.woodhouse@dal.ca).

### **Postponement of "Structures in the Marine Environment" (SIME) conference**

In line with many other events that were planned for the coming months, we have taken the decision to postpone the 2020 "Structures in the Marine Environment" (SIME) conference. Don't worry though, we plan to run a session on Thursday 8th October as part of the MASTS Annual Science Meeting – more details to follow. We also plan to host the next full SIME conference in May 2021 (date to be confirmed). Many thanks for your interest in the SIME conference and we look forward to seeing you later in the year.

### **There will be no physical meeting of EGU General Assembly in 2020 in Vienna**

The EGU is officially announcing the cancellation of the physical EGU General Assembly 2020 in



Vienna, Austria. Because the Union is committed to minimizing the impact of COVID-19 on scientific research and collaboration, we believe EGU has a responsibility and a duty to ensure these activities continue despite the current, extreme circumstances. We have therefore decided to host EGU2020: Sharing Geoscience Online (#shareEGU20), [egu2020.eu/sharing\\_geoscience\\_online/sharing\\_geoscience\\_online.html](https://egu2020.eu/sharing_geoscience_online/sharing_geoscience_online.html), a week-long series of online activities held during the first week of May that support our community by fostering scientific communication.

EGU2020: Sharing Geoscience Online will allow abstract authors to share presentation materials and open these for live discussion as well as participate in a selection of online networking events. We are also planning additional activities that will extend into the rest of the year and will provide more information about all of these events in the coming weeks.

We personally thank our members and other attendees for their patience as the Union has navigated this difficult situation. We also extend our sincere thanks to the hundreds of volunteers around the globe who have worked so hard to shape such an exciting programme, and especially the Programme Committee for their tireless efforts to make EGU2020 as inclusive, environmentally friendly, and progressive as possible.

For answers to pressing logistical questions regarding the cancellation, please refer to the list of frequently asked questions. We look forward to virtually meeting during the online activities of EGU2020 and welcoming you in person to Vienna from 25th – 30th April 2021 at the next face-to-face General Assembly. - **Alberto Montanari, EGU President and Susanne Buiter, EGU Programme Committee Chair**

#### **10th Annual Meeting of the NOC Association of Marine Science National Capability Beneficiaries (NOCA) - postponed**

In light of the current situation with coronavirus we have decided to postpone the 2020 NOCA Annual Meeting, originally planned for 23rd June 2020. The meeting will be rescheduled to a date, to be confirmed, in early 2021. There will be a further announcement about this in *Challenger Wave*, when possible.



Credit: Howard Marson

#### **Arctic Circle Berlin Forum postponed**

Following consultations with their German hosts on the pandemic challenges now facing Europe and the global community, the Arctic Circle has decided to postpone the Forum in Berlin, which had been scheduled for 30th June – 1st July. Proposals for Sessions will remain valid and our international partners are encouraged to continue their dialogue and preparations for the Forum. A new date for the Forum will be announced in the coming months.

#### **Virtual Western Tropical Atlantic Regional Workshop, 28th-29th April**

Due to the unprecedented situation caused by the COVID-19 virus, the UN Decade of Ocean Science for Sustainable Development (2021-2030) Western Tropical Atlantic Regional Workshop Organizing Committee, together with the local host, have decided to host this workshop virtually instead of as a face to face meeting. The event will provide a two-day virtual forum to gather ocean leaders/champions/key stakeholders to further discuss and prioritize the issues identified at the First Global Planning Meeting.

This event is being hosted by the Autonomous National University of Mexico (UNAM) and co-organized by the Government of Mexico with the Intergovernmental Oceanographic Commission (IOC) as coordinating body for the Decade and the Secretariat of the Cartagena Convention (UN Environment). The Western Tropical Atlantic Regional Workshop offers a crucial opportunity to co-design mission-oriented ocean research strategies in line with the 2030 Agenda, Sustainable Development Goals (SDG), particularly SGD 14, the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean, and the SAMOA Pathway.

The virtual meeting will aim to identify:



- Knowledge gaps and regional ocean science priorities for the 2030 Agenda
- Existing relevant partnerships/networks/initiatives and potential ones/interested partners
- Priorities in capacity-development/training-Priority themes and topics to be addressed by the Decade
- Other regional initiatives and meetings to be aligned with the Decade.

Register for the meeting before the 15<sup>th</sup> April, [iocaribe.ioc-unesco.org/undecade](https://iocaribe.ioc-unesco.org/undecade).

## VIEWS

### **Sonardyne International Ltd. announces new additions to its product line-up**

Underwater technology provider Sonardyne International Ltd. has announced important new additions to its 2020 product line-up, all designed to play a role in delivering users' data from the seabed to the shore. With a focus on compact yet highly capable unmanned and vessel instruments, Sonardyne has unveiled SPRINT-Nav Mini, a compact guidance and control solution, as well as ADCP functionality for its Syrinx Doppler velocity log (DVL) and a smaller, lighter version of its popular Gyro USBL transceiver.

SPRINT-Nav Mini provides guidance and control outputs, orientation, velocity, altitude and depth, in a single instrument that weighs just 0.7 kg in water for the 300 m depth rated version. By tightly fusing the information from each of its sensors, SPRINT-Nav Mini provides precise, robust and fixed frequency outputs, independent of each individual sensor's update rates. In replacing the need for three separate instruments; AHRS, DVL and pressure sensors, customers will benefit from reduced cost, less cabling and additional vehicle payload capacity. SPRINT-Nav Mini comes in a highly compact 215 mm high and 149 mm diameter housing and is also available in a 4,000 m depth rated titanium unit of the same size making it ideal for smaller remotely operated vehicles (ROVs).

Sonardyne is also introducing its second-generation Gyro USBL. It combines the vessel heading, pitch and roll data that's critical to Ultra-

Short Base Line (USBL) system performance, with an acoustic transceiver, all in one housing. However, using the experience it's gained from designing complex and compact sensor assemblies, the new Gyro USBL is now 30% shorter and 40% lighter. That means more vessels, including small vessels of opportunity and unmanned surface vessels, can get the best performance from their USBL using an even easier to handle and install instrument. Gyro USBL is available in two performance levels; a cost-effective version for standard USBL operations and "plus" for long layback tracking and touch-down monitoring. Both versions will be delivered pre-calibrated, in-water, enabling users to get straight to work.

Finally, Sonardyne has also increased the functionality of its Syrinx 600 kHz DVL. Specifically, Syrinx now has optional acoustic current Doppler profiling (ADCP) capability, as well as dual DVL/ADCP operations, without compromising bottom track. The ADCP data can be viewed and analysed using the new Echo Observer software. When using SPRINT-Nav, which comes with a tightly coupled Syrinx DVL built-in, the addition of ADCP functionality really comes into its own. Users can get absolute profile velocities in the most challenging conditions while maintaining SPRINT-Nav's navigation performance. When bottom track is not available, inertial velocities from SPRINT are used by Syrinx to compensate the ADCP water column velocities for vehicle motion. That means users get absolute water velocities through the local water column, even when they have no DVL bottom track.



"Our customers across the energy, defence and civil markets want to do ever more in the ocean space, increasingly through remote operations," says Graham Brown, Sonardyne International's

Managing Director. "We've been supporting them every step of the way, from seabed to shore, with smaller and more capable systems. Our latest products and capabilities, which we had intended to demonstrate in March in London at Oceanology International, will further support their goals across an even wider range of assets, from smaller ROVs to small manned and unmanned vessels of opportunity."

Following the postponement of Oceanology International 2020 in London from March to December, Sonardyne is bringing its show news online, and the company will be posting content across its social media channels.

## 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

### 1st - 3rd June 2020: ESSAS Annual Science Meeting

*Sapporo, Japan*

ESSAS (Ecosystem Studies of Subarctic and Arctic Seas) will hold its annual science meeting in 2020 on "Linking past and present marine ecosystems to inform future fisheries and aquaculture". The list of meeting sessions will be posted soon, stay tuned, [essas.arc.hokudai.ac.jp/what\\_s\\_new/2020-essas-annual-science-meeting/](https://essas.arc.hokudai.ac.jp/what_s_new/2020-essas-annual-science-meeting/).

### 17th - 19th June 2020: 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) call for papers for MARTECH 2020, [www.martech-workshop.org](http://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
- 2020 as a point between the past and the future



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

### 22nd - 25th September 2020: EMODnet 2nd Open Conference and Jamboree

*Oostende, Belgium*

Five years after the first edition, we are delighted to announce the organisation of the second EMODnet Open Conference (22-23 September 2020) and Jamboree (23-25 September 2020). During the event, EMODnet partners, communicators and data providers/users will take stock of EMODnet achievements over the past 10 years, connect across stakeholder communities and set goals for the future.



To start the week, the EMODnet Open Conference will focus on use cases and ocean data and observation requirements to develop essential open marine data services for blue economy actors, public sector, civil society and researchers: [www.emodnet.eu/conference2020](http://www.emodnet.eu/conference2020).

**7th - 9th October 2020: Marine Alliance for Science and Technology for Scotland 10th Annual Science Meeting (ASM)**

*Glasgow, Scotland*

Join us at the Technology and Innovation Centre, Glasgow. We will look back at the significant progress made by our partners and collaborators, and look forward to 2021, which sees the start of the decade of ocean science for sustainable development. We will examine the modern challenges that face our marine waters, and identify ways and means to conserve and sustainably use the oceans, seas and marine resources for sustainable development.

This cross-disciplinary meeting brings together members of the marine science community, with the aim of promoting and communicating research excellence and forging new scientific collaborations. The cross-disciplinary nature of the event as well as the high calibre of the selected talks means that scientists can broaden their knowledge in marine science as well as benefit from expertise and ideas gained in a range of fields other than their own. Science presentations and e-poster sessions will take place on the first two days, together with Plenary Speakers and opportunities to network.

We are delighted that IMarEST is sponsoring the student prizes for the 2020 ASM. Best Presentation - £200 first prize and a £100 second prize and Best Poster - £130 first prize and a £70 second prize. Winners of the Best Presentation and Poster will be invited to attend the IMarEST Scottish Branch evening lecture to obtain their certificate and prize (travel cost to be reimbursed by IMarEST). You must be a student member of IMarEST to be eligible for these prizes, [www.imarest.org/membership/membership-registration/upgrade-your-membership/student-member-simarest](http://www.imarest.org/membership/membership-registration/upgrade-your-membership/student-member-simarest). The E-poster submission deadline is 16.00 on Monday **28th September 2020**.

On the third day the venue will host a number of meetings and workshops: If you are interested in hosting one of these, or if you are interested

[www.challenger-society.org](http://www.challenger-society.org)

in **exhibiting** at the 2020 event, or anyone wishing to showcase or demonstrate a piece of kit/equipment please email Dr Emma Defew, [ecd2@st-andrews.ac.uk](mailto:ecd2@st-andrews.ac.uk). For further general information, please visit, [www.masts.ac.uk/annual-science-meeting/](http://www.masts.ac.uk/annual-science-meeting/).

**8th – 11th October 2020: Eighth Arctic Circle Assembly**

*Reykjavík, Iceland*

Proposals are now being accepted for Sessions, which will now run for either 55 or 60 minutes. Sessions at the Arctic Circle Assembly are held in auditoriums, lecture halls, board rooms, and open spaces throughout Harpa and nearby venues.



Sessions are organized by governments, institutions, organizations, universities, think tanks, companies and others. In addition the Arctic Circle itself organizes Plenary Sessions at the Assemblies. SUBMISSION DEADLINE: MAY 1st, 2020. For Information, visit [www.arcticcircle.org/assemblies/2020/proposals](http://www.arcticcircle.org/assemblies/2020/proposals).

**21st – 23rd November 2020: Arctic Circle Japan Forum**

*Tokyo, Japan*



The Forum will be organized in coordination with the Third Arctic Science Ministerial Meeting, which is co-hosted by the Icelandic Ministry of Education, Science and Culture, and the Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT). The Arctic



Circle is collaborating with the Sasakawa Peace Foundation in organizing the Forum.

Governments, universities, companies, research institutions, organizations, associations and other partners are invited to submit proposals for Sessions to the Arctic Circle Secretariat. Guidelines will be published soon.

**30th November – 2nd December 2020: Evolving and Sustaining Ocean Best Practices Workshop IV**

*Maryland, USA*

We are pleased to inform you that this annual OBP event will be held in suburban Maryland. The agenda and more details will be circulated next month. We look forward to you joining us for another productive workshop. Please mark the dates on your calendar.

If you have any questions, please email [jay.pearlman@ieee.org](mailto:jay.pearlman@ieee.org). On behalf of the Steering Group for the Ocean Best Practices System, Jay Pearlman and Johannes Karstensen, SG Co-Chairs. Submit your Best Practices in Ocean Observing for peer-review: [www.frontiersin.org/research-topics/7173/best-practices-in-ocean-observing](http://www.frontiersin.org/research-topics/7173/best-practices-in-ocean-observing)

**1st – 3rd December 2020: Oceanology International**

*London, UK*

Celebrate the world's largest ocean technology exhibition and conference. Oceanology International is turning 50, and you are invited to the celebration. The event brings the industry together, from businesses to government and thought leaders from different sectors, to offer the latest information and technology that are moving our oceans.



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, bringing together 500 companies in 17,000 m<sup>2</sup> of exhibition space designed to inspire. 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.

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/](http://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.

Here are some of the exciting developments for 2020:

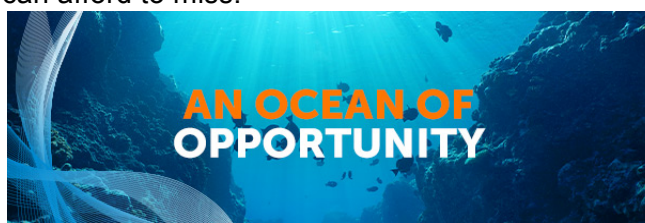
- Expanded Dockside Demonstrations - we doubled the number of companies demonstrating technology at the dockside so you have even more options for an immersive experience.
- New tracks at this year's conference - Asset Integrity and Monitoring, Coastal Zone and Shallow Water, Data Interpretation and AI, and much more. Full programme coming soon.
- Expanded Ocean ICT Zone – More exhibitors and technology at the area dedicated to the latest IT and Communication Technologies for the Ocean Space.

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/>.

#### Background

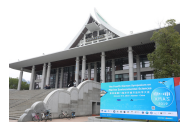
To promote interdisciplinary studies in marine environmental science and to foster the next generation of ocean scientists, the State Key Laboratory of Marine Environmental Science (MEL, <http://mel.xmu.edu.cn/en>), Xiamen University initiated the Xiamen Symposium on Marine Environmental Sciences (XMAS) in 2014, with the overarching theme **The Changing Ocean Environment: From a Multidisciplinary Perspective**. XMAS has grown to be one of Asia's largest conferences in marine sciences and acts as a hot spot to exchange research interests in global and regional oceans.

Its fifth iteration, XMAS-V (<http://melmeeting.xmu.edu.cn/xmas5>) will be held in Xiamen from **January 11th to 14th, 2021**. XMAS-V will focus on how **Multidisciplinary Sciences Can Serve a Sustainable and Healthy Ocean**. It will be one of the important hallmarks of Xiamen University's centenary celebrations. The symposium will consist of different, interconnected sessions covering physical oceanography, marine biogeochemistry, biological oceanography, and marine ecotoxicology along

with workshops for emerging topics in marine environmental sciences such as how to achieve the goals outlined in the United Nations Decade of Ocean Science for Sustainable Development (2021-2030).

MEL was established in 2005 under sponsorship from the Ministry of Science and Technology of China (MOST). It has been awarded The Excellent State Key Laboratory twice in two recent official reviews by MOST. MEL is dedicated to interdisciplinary cutting-edge research in marine environmental sciences, with particular strengths in marine biogeochemistry and ecosystem studies.

Originally known as Amoy, Xiamen is an island renowned for rich cultural relics, a pleasant climate, and beautiful natural scenery. It is located on the southeast coast of China and has a long history of international commerce. It has a monsoonal humid subtropical climate characterized by mild and dry winters (average January temperature around 15 °C /59 °F).



#### Important Dates

January 1, 2020: Call for Session/Workshop Proposals Begins  
April 30, 2020: Call for Session/Workshop Proposals Ends  
May 15, 2020: Decision of Proposals Sent  
June 1, 2020: Abstract Submission Begins  
August 31, 2020: Abstract Submission Closes  
September 30, 2020: Authors Notified of Acceptation  
October 1-31, 2020: Registration  
November 15, 2020: Scientific Program Posted

#### Chair of XMAS-V

Minhan Dai, Xiamen University

#### Local Organizing Committee

Yawei Luo  
Zhimin Cao, Yongxiang Huang, Xing Jian, Xin Lin, Jian Ma, Dalin Shi, Shanlin Wang, Siqi Wu and Wei Zhuang

#### Organizers

State Key Laboratory of Marine Environmental Science, Xiamen University  
Department of Earth Sciences, National Natural Science Foundation of China

#### Contact

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### 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.

**April 2020**



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.

**5th - 9th September 2022: Challenger Society Biennial Meeting – celebrating the 150<sup>th</sup> anniversary of the Challenger Expedition**  
*London, UK*

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

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

*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](mailto:jxj@noc.ac.uk), as soon as possible*

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## **JOBS**

### **Oceanographic Research Scientist**

The [Cape Eleuthera Institute](#) (The Bahamas) is seeking a full-time Research Scientist to deliver a new glider-based research programme aimed at improving Atlantic hurricane forecasts. This a collaborative project with NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and University of Miami's CIMAS. The position is suited to an early career scientist that is enthusiastic about working at a non-traditional academic institution that supports strong integration between research, education, and outreach. For more information please visit: <https://ceis.bamboohr.com/jobs/view.php?id=92>

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### **Data Stream Manager in SYKE, Finland**

The Data Stream Manager, [haku.valtiolle.fi/Public/Assignment.aspx?guidAssignment=283d5e6e-387a-4720-b376-19acca2c4e68](https://haku.valtiolle.fi/Public/Assignment.aspx?guidAssignment=283d5e6e-387a-4720-b376-19acca2c4e68), is a permanent position that will be in charge of data streams generated by all SYKE coastal RI under FINMARI (e.g. JERICO, AQUACOSM), their quality control and assurance, and the interfaces to national and European databases. A central part of the job is to participate in the R&D related to new



data types generated by emerging automated instruments, research equipment integration, smart sensor networks, data communication solutions and machine vision applications. Be prepared to roll up your sleeves and hammer that code !

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**There are jobs on the IMBER web site**

<http://www.imber.info>

**IMBeR**

Integrated Marine Biosphere Research

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**Jobs and opportunities**

- PhD: Gender, equity and inclusion towards ocean sustainability. ANU, Canberra, Australia. Applications assessed as received
- Positions for Profs, Associate Profs and Postdocs: Ecology, environmental sciences and geosciences, Institute of Eco-Chongming, ECNU, Shanghai, China. Open until filled
- Two Research Scientists: Ecology and conservation of sea turtles, sharks or deep-sea ecosystems, CEI, Eleuthera, Bahamas. No deadline given
- Newton International Fellowships: to work at a UK institution for 2 years. Not open to UK citizens
- Senior Manager: Climate Program, Ocean Conservancy, Washington DC. No deadline given
- Senior Associate: Pew's Lenfest Ocean Program, Washington, DC. Open until filled
- Scientist: Ocean Acidification, EPA Program, Lacey WA, USA. Apply by 12 April
- Two PhDs in benthic nitrogen isotope biogeochemistry, Basel, Switzerland. Apply by 15 April
- Postdoc: Nitrogen isotope biogeochemistry, Basel University, Switzerland. Apply by 15 April
- Four Postdocs: Marine Sciences, IsBlue Labs, Brest, France. Apply by 23 April
- EuroMarine fellowships for PhD students and Postdocs (5 years post PhD) for advanced course attendance. Apply by 30 April
- EuroMarine call for Foresight Workshops and Working Group proposals. Apply by 1 June
- Chief Chemical Oceanographer/Marine Chemist: PNNL, Sequim WA, USA Apply by 10 May
- ESA/Future Earth seed funding opportunity for the development and uptake of Earth observation data. Apply by 11 May
- Simons Postdoc Fellowships: Marine Microbial Ecology. Apply by 15 May
- MSc: Fisheries science (2 years funding), MUN, St John's, Canada. Apply by 15 May
- PhD: Fisheries science (4 years funding), MUN, St John's, Canada. Apply by 15 May

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Visit the IMBeR Website

[imber@imr.no](mailto:imber@imr.no)