

Challenger Wave



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

ocean
BUSINESS19

The hands-on ocean
technology exhibition
and training forum
Southampton, UK - 9-11 April



NEWS

Journal of Marine Science and Engineering 2019 Travel Awards

Due to time limitations, JMSE have decided to postpone the deadline for applying. If you are interested in applying for Travel Awards, please send your details to JMSE by the 28th February 2019. The winners will be announced by the 31st March 2019. Please find additional details and apply here: www.mdpi.com/journal/jmse/awards.

The Journal of Marine Science and Engineering (ISSN 2077-1312) has been accepted for coverage in the Science Citation Index Expanded (SCIE) in Web of Science. Articles published from Volume 4 (2015) onwards will be indexed in the Web of Science Core Collection. JMSE is going to receive its first Impact Factor in the June 2019 release of the Journal Citation Reports. JMSE would like to take this opportunity to invite you to submit your work. If you have a paper on any topic within the scope of the journal, please feel free to submit it for consideration. - **Prof. Dr. Anthony S. Clare**

A new Deputy Head at the EMODnet Secretariat

It is with great pleasure that we welcome Dr Kate Larkin as Deputy Head of the EMODnet Secretariat and Director of Seascope Belgium, who joined the team in January 2019.



Kate trained as a marine scientist with a PhD (2006) in deep-sea biogeochemistry from the University of Southampton, U.K. Kate has over 10 years of experience working in European marine science and connecting science with policy, industry and wider society. Kate has worked at the National Oceanography Centre, U.K. for ocean observation projects and, most recently, at the European Marine Board (EMB) Secretariat in Ostend. At EMB, Kate led EMB activities in ocean observation and marine research infrastructures, including EMB's contribution to EMODnet Phase III, which in 2018 focussed on co-development and co-organization of the EOOS Conference 2018 and the related Call to Action. There is no doubt that her expertise and experience will contribute significantly to our efforts to continue to make EMODnet and the European Atlas of the Seas (see last month's Wave) a great success.

The dates of the 2019 Arctic Circle Assembly have been shifted to start one day earlier

The Assembly will now be held from October 10th-13th. Following consultations with Arctic Circle partners and participants, it has been decided to open the Arctic Circle Assemblies ONE day earlier, on Thursdays. Plenary Sessions will end on Saturdays and the party for all participants will take place on the Saturday evening.

Breakout Sessions will begin on Thursday morning and the Opening Session be held after lunch on that day. Opportunities will be created for those who so desire to hold Breakout Sessions, working or networking meetings on Sunday morning. Pre-Events will consequently be on Wednesdays.

VIEWS

Over 17,000 abstracts received by the EGU

We are thrilled to announce we received over 17,000 abstracts to the EGU General Assembly 2019 !. We look forward to welcoming all participants in Vienna on 7–12 April. Aside from many exciting scientific sessions and events, the meeting will have more time for presentations and networking, an illustrator and sculptor as artists in residence, and much more: egu2019.eu/about_and_support/general_information.html.

Until 15 February, you can enter the Imaggio Photo Contest for a chance to win a free registration to next year's General Assembly. You can also apply to receive an EGU Public Engagement Grant until 15 February, if you have a geoscience outreach project you'd like to develop. Winners receive 1000 EUR and a free registration to next year's General Assembly.

Last but not the least, if you'd like to organise an EGU Galileo Conference, a meeting addressing a well-focused, cutting-edge topic at the frontier of geosciences research, make sure to apply for funding by 28 February. The first EGU Galileo Conference of 2019 will be on 'Mass extinctions, recovery and resilience' and is now accepting abstracts.

Challenger Society for Marine Science meetings funds

The Challenger Society supports scientific meetings concerned with any aspect of marine science, as well as its Special Interest Groups. Support may be for the meeting as a whole, or directed to specific aims, such as promoting attendance of early career researchers, CSMS members or inviting a high profile speaker.

For a Meetings Funds Request Form or further details about the Special Interest Groups visit our website at: <http://challenger-society.org.uk>.

Ocean Teacher Global Academy (OTGA) / DOALOS Training Course

The IOC is pleased to inform you that the period for applications for the Training Course on Marine Scientific Research under the United Nations Convention on the Law of the Sea, 6th – 10th May 2019, Ostend, Belgium, is open from the 14th – 24th February 2019. All information, including a course flyer, can be found following the UNESCO/IOC link www.oceanexpert.net/event/2141.

Marine scientific research (MSR) plays a critical role in sustainable development as consistently recognized by the UN General Assembly in its annual resolutions on oceans and the law of the sea. Research, and the tools required to conduct it, are essential for the sustainable development of the oceans and the seas and their resources, including by supporting informed decisions on the conservation and sustainable use of the marine environment and its resources, and by helping to understand, predict and respond to natural

disasters and climate change. Increased MSR through capacity-development strengthening the capacity of States, in particular Small Island Developing States (SIDS), to implement the relevant MSR provisions of the United Nations Convention on the Law of the Sea (UNCLOS) as well as similar provisions in other instruments, is essential for the world's oceans. This course will provide an overview of the legal, technical and scientific aspects of the MSR regime, particularly with respect to consent procedures, so as to reinforce the participants' knowledge of the rights and obligations of coastal and researching States. It will also touch upon matters relating to the development and transfer of marine technology under the United Nations Convention on the Law of the Sea.

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

21st-22nd February 2019: World Ocean Circulation User Consultation Meeting

Frascati, Italy

Your attention is drawn to the forthcoming World Ocean Circulation User Consultation Meeting that will be held by the European Space Agency (ESA) -ESRIN. This event has been organized to prepare a roadmap for new initiatives on ocean circulation research and applications to be implemented in the ESA Earth Observation Science for society program element.

If you are interested to contribute, you can find all details at: <http://woc2019.esa.int>. Please also forward this message to all colleagues potentially interested to the subject.

25th-27th February 2019: Oi Americas 2019

San Diego, California, USA

The newly rebranded Oi Americas is returning to San Diego after a successful first event. Come and celebrate 50 years of delivering world leading ocean technology and marine science events. Now with brand new features for 2019.

Oi oceanology
international
AMERICAS

25TH-27TH
FEB 2019

SAN DIEGO CONVENTION CENTRE, CA



Here are five reasons to attend Oi Americas in 2019:

1. Discover the latest technologies and innovations from 200 exhibiting companies displaying state of the art marine technologies and take the opportunity to explore a diverse range of solutions.
2. Experience live demos and hands on technology from global suppliers under one roof.
3. Collaborate and learn at our conferences: Technical Tracks, Ocean Futures Forum and Catch The Next Wave - www.oceanologyinternationalamericas.com/Conference.
4. Connect with your industry colleagues at one of our many OceanSocial events and through our digital tools
5. Discover future and disruptive technologies in our Future Tech Hub and Ocean ICT set to change the way ocean technology and marine science industries operate.



The ocean has always been a subject of wonder and mystery. Even after years of research, we still know little about the watery abode that covers more than 70% of our planet. However, thanks to some of the latest technologies and innovations in

the marine industry, we're able to explore the ocean like never before. In our latest blog post, <http://inside.oceanologyinternational.com/2018/10/10/innovations-in-the-marine-industry/>, we're outlining some of the newest technologies that are part of that change. Don't miss this opportunity to create value for you and your business. For more information, visit: www.oceanologyinternational.americas.com

7th to 12th April 2019: 2019 EGU general assembly

Vienna, Austria

OS4.9, "Recent advances in physics and biogeochemistry from gliders and other autonomous underwater vehicles", <https://meetingorganizer.copernicus.org/EGU2019/session/30236>. This session provides an open forum for interdisciplinary discussions of the latest advances in oceanographic applications of autonomous underwater vehicles, including their use and complementarity in combination with other platforms.

Topics for this session include physical (e.g. hydrology, hydrodynamics, acoustic, optic), geochemical (e.g. nutrients) and biological (e.g. primary and secondary production, biomasses) variability of the ocean, ocean processes at different spatial and temporal scales (from ocean turbulence to basin-wide circulation), and interactions between the ocean, atmosphere and land.

Looking forward to seeing you in Vienna, the conveners, Antonio Olita, Bàrbara Barceló-Llull, Louise Biddle, Federica Pessini and Simón Ruiz.

OS4.5/NP6.9, "The realm of (sub)mesoscale dynamics: variability, impact, and new challenges", <https://meetingorganizer.copernicus.org/EGU2019/session/30232>.

Mesoscale and submesoscale structures such as fronts, meanders, eddies, and filaments are found worldwide, from the global ocean to marginal seas. During recent years it has been shown that these features play a key role in the advection of heat, salt, biogeochemical properties, and in the enhancement of biological activity across all trophic levels. Due to their typical spatial and temporal scales, direct observations of these features remain currently an open challenge and their study requires a joint multi-platform effort combining in situ and remote sensing

www.challenger-society.org

observations with theory and numerical models.

This session will provide a forum to properly address the new scientific advances associated with:

- Variability of (sub)mesoscale structures through observations (in situ and remote sensing), theory, and numerical simulations.
- 3D dynamics related to (sub)mesoscale features.
- Temporal and spatial interactions between different structures.
- Impact on mixing and transport of hydrographic properties.
- Physical and biogeochemical interactions.
- Limitations and improvements of the observational platforms and numerical simulations.
- A particular emphasis is put on challenges associated with the observation and numerical representation of subsurface (sub)mesoscale eddies.

We are looking forward to meeting you in Vienna, the conveners, Bàrbara Barceló-Llull (IMEDEA (UIB-CSIC)), Angel Amores (IMEDEA (UIB-CSIC)) and Bruno Buongiorno Nardelli (CNR).

OS4.11, 'Copernicus Marine Environment Monitoring Service. This CMEMS session will focus on:

- research activities that are required to maintain CMEMS systems at the state of the art and prepare their long-term evolution, including (but not limited to):
 - for models: physical and biogeochemical modeling, coupling with coastal systems; coupling with sea-ice, atmosphere & waves; data assimilation both for physics (ocean, sea-ice, wave) and biogeochemistry; progress in short-term forecasts and assessment of forecasting skills.
 - for observations: impact of existing and future in situ and satellite observations for estimates of the ocean state; processing and analysis of remote and in-situ observations of the ocean; use of Sentinel products.
 - for long-term evolutions: seasonal to multidecadal regional projections for the coastal ocean and marine ecosystems, ocean model forcing from river discharge of freshwater and nutrients.
- verification, validation and uncertainty

estimates of CMEMS products, forecasting skills,

- ocean monitoring and long-term assessment of the ocean physical and biogeochemical states,
- the use of CMEMS products for downstream applications.

Please note that presentations have not been limited to research teams directly involved in CMEMS; the convenors: Angélique Melet (Mercator Ocean, France, angelique.melet@mercator-ocean.fr), Stefano Ciavatta (PML, UK, s.ciavatta@pml.ac.uk), Emanuela Clementi (CMCC, Italy, emanuela.clementi@cmcc.it), Ananda Pascual (IMEDEA, Spain, ananda.pascual@imedea.uib-csic.es).

OS4.35, “Informatics in Oceanography and Ocean Science session”. The session presents the state of art information systems in oceanography (metadata, vocabularies, ISO and OGC applications, data models), interoperability (Interoperability forms, Web services, Quality of Services, Open standards), data circulation and services (quality assurance / quality control, preservation, network services) and Education in ocean science (Education and Research, Internet tools for education).

This 2019 session should provide new ideas on the interoperability issues deriving from different sources of data and new data streams. ISO standards introduce the necessary elements in the abstract process aiming to assess ‘how’ and ‘how much’ data meets applicable regulatory requirements and aims to enhance user needs. Data management infrastructures should include an evaluation of data by assuring relevance, reliability and fitness-for-purposes / fitness-for-use, adequacy, comparability and compatibility. The session aims also to create a link to the important initiatives on ocean literacy. Presenters are strongly encouraged to demonstrate how their efforts will benefit their user communities, facilitate collaborative knowledge building, decision making and knowledge management in general, intended as a range of strategies and practices to identify, create, represent and distribute data, products and information.

OS2.5, “Advances in Understanding of the Multi-Disciplinary Dynamics of the Southern European Seas”. This session will overview recent developments and understanding, by

www.challenger-society.org

observations and modelling, of the Southern European Seas (SES) general circulation, physical processes, biogeochemical interactions and their ecosystems.

Themes of particular interest are:

- Interaction of scales and processes in the SES: hydrodynamic and ecosystem interactions at multiple temporal and spatial scales (down to submesoscale), coastal processes and shelf-to-open sea interactions, straits dynamics, ocean response to atmospheric forcing, impact of environmental conditions on ecosystem functions from local to regional scales.

- Assessing, understanding and predicting the potential impact of climate change in the SES: long term trends, occurrence of extreme events, development of downscaled models at basin and regional scales, novel approaches to model marine ecosystems, ecosystem functions and biodiversity.

- Integrated Observing System in the SES: development of new sensors, scale of interests, development of advanced methodologies for upscaling local information, new satellite products, processes that need to be monitored, identification of data gaps (eg. observing system experiments).

- Science-based Integrated management of the SES: support to Marine Spatial Planning and deployment of Marine Protected Areas , scenario studies, mapping of anthropogenic pressures, habitat and ecosystem services, potential support for nature-based solutions and/or sustainable exploitation of marine resource.

Looking forward to meeting you in Vienna. Gianmaria Sannino, Emil Stanev, Katrin Schroeder, Arthur Capet, and Alexander Mikaelyan

9th to 11th April 2019: Ocean Business 2019 *Southampton, UK*

As one of the most unmissable events in the ocean technology calendar, exhibit space at Ocean Business is already over 80% sold. With still 5 months until the show is due to take place at the National Oceanography Centre. The organisers have been overwhelmed by how quickly re-bookings have been flooding in; “Never before have we had such an incredible response to re-booking exhibition space. Exhibitors see

Ocean Business as the perfect platform to seek out new opportunities for a relatively low cost. Such a rapid and positive response has been astounding!" exclaimed Cheri Arvonio, event manager.

offshore SURVEY19

Conference focused on the technology, operations and business issues in the global field of offshore surveying

9-10 April 2019 Southampton UK

The 2019 event will see the same winning formula as in previous years with an international exhibition, three-day programme of hands-on training and demonstration sessions, a cutting edge conference, various associated meetings, Ocean Careers and an amazing line of up social events keeping exhibitors and visitors networking around the clock.

The organisers have opened up the last few remaining stands to new companies wishing to exhibit. Interested parties are encouraged to be quick as every show to date has been a sell out and for a number of years there has been a long waiting list. Space won't be available for long. For further information on exhibiting at Ocean Business, visit www.oceanbusiness.com/exhibition/why-exhibit/.

Ocean Business dinner tickets are now on sale, but be quick as they are expected to sell out fast. The famous Ocean Business dinner has returned, but this time at the luxury Southampton Harbour Hotel. Located in Ocean Village, Southampton, it features a stunning contemporary design. Guests can catch up with friends old and new whilst taking in the views across the marina. The evening will take place on Wednesday 10th April and will start with pre-dinner drinks, followed by a three course meal, promising a night to remember. Tickets are £85 +VAT per person, to purchase your ticket, email Apinya Wright awright@divcom.co.uk.

6th – 10th May 2019: GODAE OceanView Symposium, Ocean Predict '19

Halifax, Canada

The next GOV Symposium invites ocean scientists, ocean observation specialists, industry representatives, service providers and users of ocean data and products from across the local, national and international operational oceanography community to engage in science sessions, booth exhibitions and discussions to

www.challenger-society.org

explore and define the direction of future operational oceanography.

GODAE OceanView continues to provide coordination and leadership in consolidating and improving global and regional ocean analysis and forecasting systems. The Symposium objectives include:

- Getting a common picture of future development in all aspects of Operational Oceanography
- Motivating integrated international community projects to further advance science and benefits of Operational Oceanography
- Enhancing end-user awareness of present capacity and providing collaborative output of future in operational oceanography and end-user engagement

The symposium is built around **six major themes** covering all aspects of Operational Oceanography. Abstracts will be invited to contribute to plenary, splinter and poster sessions. Especially welcome are representatives from the service provider and end-user community, to exhibit their work and products, and to engage with the science community.

Further information about the symposium, themes and description of sessions is now available from the OceanPredict '19 website: <http://www.oceanpredict19.org>. We are looking forward to your participation; Fraser Davidson, Eric Chassignet, PN Vinayachandran and Kirsten Wilmer-Becker on behalf of the OceanPredict '19 Symposium Organising Committee. The Symposium is sponsored and supported by MEOPAR, DFO and other members of the [GODAE OceanView Patrons Group](#).

10th – 11th May 2019: Arctic Circle Forum in China

Shanghai, China

The Arctic Circle will hold a Forum under the title "China and the Arctic," hosted by the Ministry of Natural Resources and the Ministry of Foreign Affairs of the People's Republic of China.



Photo by Stefan Fussan, from Wikimedia Commons

The Forum will be organized in cooperation with the Polar Research Institute of China (PRIC), the Shanghai Institutes for International Studies (SIIS) and Shanghai Science & Technology Museum, and will take place at Shanghai Science & Technology Museum. Significant discussion will be held on China's involvement in the Arctic through the Belt and Road Initiative, as well as dialogue on ocean and marine science, transport and infrastructure, renewable energy, indigenous socioeconomic development and stewardship, and Arctic governance. More program news and registration information will be published in March.

Governments, universities, companies, research institutions, organizations and associations are welcome to submit proposals for Breakout Sessions to the Secretariat. Sessions will be accepted based on topic, goals, speakers and scheduling availability. The Arctic Circle provides an open, democratic forum for discussion and cooperation on Arctic Affairs. Proposals may be sent to china@arcticcircle.org.

11th May 2019: Tides and the port of Liverpool
Liverpool, UK

The Merseyside Maritime Museum is hosting a one day meeting on Tides and the port of Liverpool. This meeting marks the 100th anniversary of the world-famous Liverpool Tidal Institute. Founded at Liverpool University in 1919, before moving to Bidston Observatory on the Wirral, this was the precursor of the Proudman Oceanographic Laboratory and the National Oceanography Centre. It also marks the start of teaching and research in Oceanography at Liverpool University, the first oceanography department in the UK.

This meeting is organised by the National Oceanography Centre and the University of Liverpool, in association with the Centre for Port and Maritime History (University of Liverpool, Liverpool John Moores University and Merseyside Maritime Museum) and the Liverpool Institute for Sustainable Coasts and Oceans (National Oceanography Centre, University of Liverpool and Liverpool John Moores University).

The meeting will run from 10 am to 2 pm with free registration and free refreshments. For a list of speakers and to sign up, please go to: <https://conference.noc.ac.uk/ocean-tide-and-port-liverpool> and download a ticket. The National

Oceanography Centre building in Liverpool will also be open that day for you to see the machines which made tidal predictions before the days of digital computers; see the above web site for information on that also. Please sign up yourself and spread the word to your friends, schools etc.

20th May 2019: Institute of Aquaculture Students' Association Careers Fair for Postgraduate Students
Stirling, UK

We would like to draw your attention to the event Aquaculture Careers 2019 organized by the Aquaculture Students' Association (ASA) at the Institute of Aquaculture, University of Stirling. This year the event is taking place a month later than usual, and will run from 09:15 – 16:00.

In the past the event has hosted some stands free-of-charge. However this year the students have decided to apply a nominal charge of £50 for a stand. This charge will contribute toward the sole significant overhead of the event, which is catering. Would this be of interest to any of your companies? In the last two years the event attracted 150 – 200 students of MSc/PhD level with a keen interest in Aquaculture. If this would be of interest, please could you contact Carolina Fernandez carolina.fernandez@stir.ac.uk who is President of the ASA.

20th – 24th May 2019: 8th EGO Meeting and International Glider Workshop
Rutgers University, New Jersey, USA



February 2019

Save the days, express your interest at docs.google.com/forms/d/e/1FAIpQLSeEksxZdaYLtQc0Em9NMCsUaBWY6NEfZkY2ISu55i9CkkacUA/viewform.

17th – 21st June 2019: IMBER 2nd Open Science Conference

Brest, France

The 2nd IMBeR Open Science Conference. <http://www.imber.info/en/events/osc--imber-open-science-conference/osc-2019/2019-imber-open-science-conference>



8th – 18th July 2019: 27th IUGG General Assembly

Montreal, Canada

This is to inform you that until February 18th 2019 it is possible to submit your abstract to the IAPSO Symposium P02. Details of the P02 symposium, Physics and Biogeochemistry of Semi-Enclosed, Shelf Seas, and Coastal Zones can be found below and at this link <http://iugg2019montreal.com/p.html>.

This interdisciplinary symposium provides a joint forum for oceanographers whose research focuses on physical, chemical, and biological processes in coastal zones, semi-enclosed and shelf seas of the World, as well as their responses to climate change and anthropogenic impacts. These areas are often characterized by complex interactions between land, ocean, and atmosphere, they exhibit rich dynamics driven by a variety of feedbacks and forcing mechanisms. Marginal seas and coastal areas are particularly vulnerable to climate change effects and

anthropogenic stressors. Given their limited geographical extension and their sometimes constricted connection to the open ocean, these environments often exhibit shorter timescales in their responses to external forcing: this is why they are widely recognized as natural “laboratories” for studying oceanic processes and interactions between the physical, biogeochemical and climatic spheres. They also play an exceptionally important role in ecosystem services and socio-economic issues and require careful governance measures to avoid or mitigate environmental deterioration.

Gathering experts from different regions, the symposium will give a global perspective of the topic through comparison and elucidation of similarities and differences. Contributions on different regions are invited, related to themes such as innovative observational, theoretical, experimental and modeling studies of the hydrodynamics, marine biogeochemistry (e.g., nutrient dynamics, primary production, acidification, algae blooms) and the influence these regional seas and coastal zones exert on the adjacent basins/oceans and on the global scale. Studies of past, present and future climate variability are welcome, as well as interdisciplinary studies on the bio-physical interactions in semi-enclosed and shelf seas.

The convenor and co-convenors of this session are: Peter Zavialov (Russia), Jianping Gan (China), Osmar Moller Jr (Brazil), Katrin Schroeder (Italy).

17th – 19th September 2019: IOCCP meeting, OceanObs '19

Honolulu, Hawaii, USA

The IOCCP OceanObs'19 organizers are seeking community leaders for the thematic Breakout Sessions during the conference in Honolulu, Hawaii, in September.

Nominations for session leaders should include a one-page proposal outlining the core focus of the chosen Breakout Session including an overview of the approach, expected outcomes, and benefits. Nominations and proposals must be submitted by no later than **February 20th**, with limited exceptions for U.S. Federal employees. For more details and to submit a breakout session proposal please go to <http://www.oceanobs19.net/breakout-sessions/>.

February 2019

**1st – 5th October 2019: 42nd CIESM Congress
Salzburg, Austria**



Invites participants of The International Society for Ecological Modelling Global Conference 2019 to organise symposiums at the conference. Possible symposium topics, which include marine ecology and fisheries, are listed on our website, www.elsevier.com/events/conferences/international-society-for-ecological-modelling-global-conference, and we also welcome other topic suggestions. To submit your symposium proposal please click www.elsevier.com/events/conferences/international-society-for-ecological-modelling-global-conference/about/symposiums and submit before the 22nd February 2019.

The deadline to submit your abstracts is the 8th April 2019, www.elsevier.com/events/conferences/international-society-for-ecological-modelling-global-conference/submit-abstract.

This global conference, to be held at the Salzburg Congress Centre, is the 22nd biennial conference of The International Society for Ecological Modelling (ISEM) and will bring together scientists from all professions and applications that deal with the use of ecological models and systems ecology.

The Conference Chairs are:
Gudrun Wallentin, Department of Geoinformatics,
University of Salzburg

Tarzan Legović, Ruđer Bošković Institute

Brian Fath, Department of Biological Sciences,
Towson University

7th – 11th October 2019: 42nd CIESM Congress

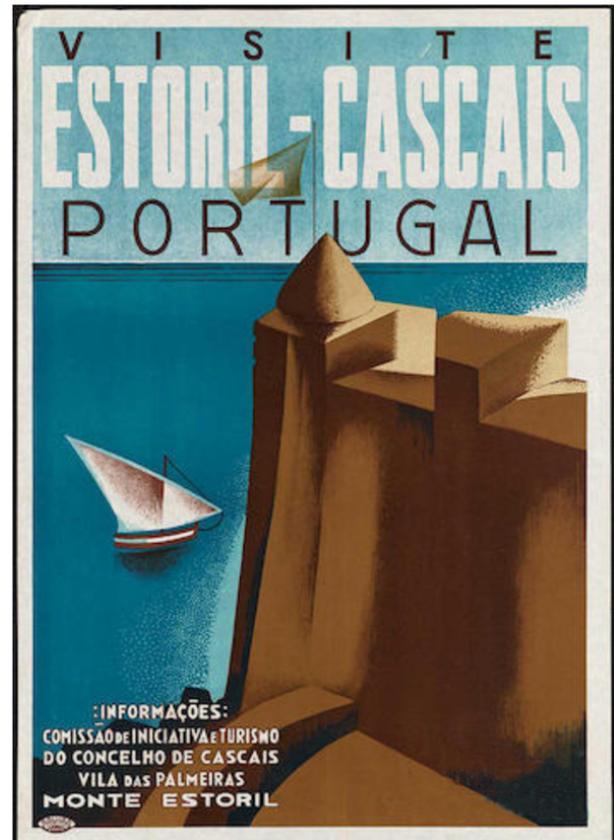
Cascais, Portugal

We hope to see as many of you as possible next October in Cascais, where our Congress will zoom in on the Atlantic/ Mediterranean interface. Some 1000 scientists will be there to share and debate their findings and their views on marine issues.

If your research matches one of our 76 Congress themes, we encourage you to submit a paper

www.challenger-society.org

online as soon as 15th January. Do not wait much longer: Cascais is a picturesque town, highly popular with tourists and so hotels and pensions in the vicinity will fill up quickly. Besides, by registering before 15 February you will enjoy a significant 40% reduction in your fee. Have a close look at the Congress themes selected by our Science Council for the occasion, www.ciesm.org/. Please make a note that the period to submit your one-page illustrated paper online will run from 15th January to 5th April 2019. - **Cordially, The CIESM Congress Team**



10th – 13th October 2019: Seventh Arctic Circle Assembly

Reykjavik, Iceland

Following consultations with Arctic Circle partners and participants, it has been decided to open the Arctic Circle Assemblies ONE day earlier, on Thursdays. Plenary Sessions will end on Saturdays and the party for all participants will take place on the Saturday evening. On Sunday, thematic Excursions and Tours devoted to areas of interest to Arctic Circle participants will be offered.

Breakout Sessions will begin on Thursday morning and the Opening Session will be held after lunch on that day. In addition opportunities

February 2019

will be created for those who so desire to hold Breakout Sessions, working or networking meetings on Sunday morning. Pre-Events will consequently be on Wednesdays. Proposals are now being accepted for Breakout Sessions with a submission deadline of the 10th May 2019.

Participation will be granted based on session topic, area of focus, goals, and room availability at the Harpa Reykjavík Concert Hall and Conference Center. When proposals are submitted, 50% of speakers need to be confirmed. Programs from previous Assemblies, which list all past Breakout Sessions, may be found at www.arcticcircle.org. The Arctic Circle provides an open, democratic forum for discussion and cooperation on Arctic Affairs.



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 28th February.

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

Postdoctoral Researcher in eDNA based approaches for marine monitoring. *AZTI, Sukarrieta, Spain*

AZTI have just opened a position for a two year postdoctoral research fellow in **eDNA based approaches for marine monitoring in AZTI**. See details below:

<https://careers.talentclue.com/en/node/40131567/4590/modal>

There are jobs on the IMBER web site

<http://www.imber.info>



Integrated Marine Biosphere Research

Jobs and opportunities

- Postdoc: Reducing the risk of whale entanglements in fisheries gear, NWFSC, Seattle, WA, USA. Apply by 14 Feb
- Research experience for undergrads: Integrated studies in a rapidly warming fishery ecosystem, GMRI, Portland, ME USA. Apply by 15 Feb
- Intern, maybe Masters: animal eco-physiology and climate change. University of Hamburg, Germany. Apply by 15 Feb
- Summer student fellowships at WHOI, Woods Hole, MA, USA. Apply by 15 Feb
- Assistant/Associate Prof: Fisheries management, Sultan Qaboos University, Oman. Apply by 28 Feb
- Global Sustainability Fellows program: 10-week training. University Colorado, Boulder, CO, USA. Apply by 28 Feb
- Postdoc: Arctic Marine Ecology. Norwegian Polar Institute, Tromsø, Norway. Apply by 1 March
- Executive Director: Scientific Committee on Oceanic Research (SCOR), University of Delaware, DE, USA. Apply by 1 March
- Asst or Assoc Prof: Biological oceanography, University of Southern Mississippi, MI, USA. Apply by 1 March
- Sante Fe Institute Translational Fellows Program for new PhDs. Apply by 17 March
- Postdocs: Biological, physical and chemical oceanography, marine geology and ocean engineering. MBARI, Moss Landing, CA, USA. Apply by 20 March
- Science Director: Inter-American Institute for Global Change Research (IAI), Montevideo, Uruguay. Apply by 30 March
- PICES: Executive Secretary, Sidney, BC, Canada. Apply by 15 June
- Research technician: How and why marine ecosystems vary in space and time, MBARI, CA, USA
- Tenure track researcher/Senior researcher in marine ecosystem dynamics using remote sensing technology. Aarhus University, Denmark. Apply by 1 March
- Researcher position in Marine Plastic Pollution. Aarhus University, Denmark. Apply by 15 Feb
- Tenure track researcher/Senior researcher in marine ecotoxicology. Aarhus University, Denmark. Apply by 1 March

Visit the IMBeR Website

imber@imr.no