

Challenger Wave



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

NEWS

UNESCO launches first Ocean Decade Actions to drive ocean knowledge revolution

In the context of global celebrations for World Oceans Day, UNESCO's Intergovernmental Oceanographic Commission announced the first Actions officially endorsed as part of the United Nations Decade of Ocean Science for Sustainable Development, 2021-2030 (the 'Ocean Decade'), oceansdecade.com/news/136/UNESCO-launches-first-Ocean-Decade-Actions-to-drive-ocean-knowledge-revolution-.

Subject to a competitive selection process with hundreds of applications, the endorsed Actions were selected for their focus on solutions and ability to accelerate the generation and uptake of ocean knowledge for sustainable development; for their use of innovative technology; for their transdisciplinary efforts to co-design solutions between scientists and users of ocean knowledge; and for their respect of inclusivity, empowering women, early-career professionals and indigenous knowledge holders across their activities.



The thematic diversity of the endorsed Actions is reflected in initiatives to expand deep sea research and exploration of the enigmatic twilight zone of the ocean (from 200 to 1000m);

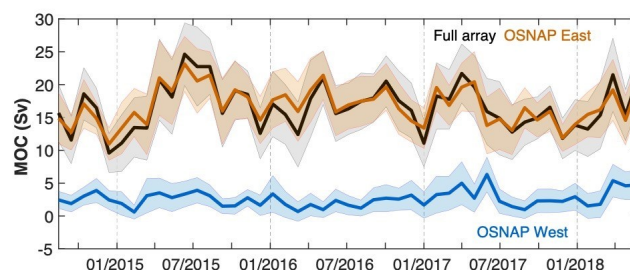
www.challenger-society.org

development of knowledge and solutions to reduce multiple pressures on marine ecosystems including from climate change, biodiversity loss, underwater noise or pollution; the use of innovative technology to collect data on the state of the ocean and use of that data to make decisions about its management; and measures to improve sustainable management and resilience of fish stocks.

"From restoring the Great Barrier Reef to mapping 100% of the ocean floor in high resolution, these innovative programmes and contributions make up the first set of Ocean Decade Actions that will contribute to help deliver the ocean we want by 2030", said UNESCO Director-General Audrey Azoulay.

Scientific discovery in North Atlantic deep western boundary currents

A new international study has cast doubts on the view that variations in the density of some of the deepest currents of the subpolar North Atlantic Ocean are caused by winter surface conditions and represent changes in the strength of the Meridional Overturning Circulation (MOC).



The strength of the Atlantic Meridional Overturning (MOC) as measured across the eastern and western sections of the OSNAP array.

The study included the efforts of 15 research institutes and was led by Dr Feili Li and Professor Susan Lozier from Georgia Institute of Technology, in partnership with Professor Penny Holliday, from the NOC. Research published on 24th May 2021 in Nature Communications, www.nature.com/articles/s41467-021-23350-2, shows observations made over four years from 2014 in

the subpolar North Atlantic reveal no sign of strong winter cooling at the surface of the ocean on the density of the deepest boundary currents found in the western regions of ocean basins. Surprisingly, the authors also found no visible relationship between changes in those deep western boundary currents and variations in the strength of the MOC. For more information visit noc.ac.uk/news/scientists-discover-changes-density-north-atlantic-deep-western-boundary-currents-were-not.

New articles of potential interest to Challenger members in the Arctic Circle Journal

The journal publishes statements, notes, memorandums, essays, short reports and other texts of relevance to the Arctic and our interconnected world. The purpose is to provide insights, understanding and new information.



Recent article titles include:

Project 6633: A Hard Security Forum Bridging the Military-Academia Polar Divide, by Dr. Elizabeth Buchanan and Dr. Ryan Burke.

Restoring Arctic Ice: A New way to Stabilize the Climate, by Dr Leslie Field and Dr Anthony Strawa.

The Northern Sea Route: From Strategies to Realities, by Anton Vasiliev

Under the editorship of the Arctic Circle Secretariat the Arctic Circle Journal is open to all Arctic partners, individuals as well as institutions. To download or submit an article visit www.arcticcircle.org/journal.

Ocean Decade Laboratory: First International Ocean Decade Conference 7th-8th July 2021

Following the launch of the First International Ocean Decade Conference on the 1st June, the first Decade Laboratory will look into the key

elements required to bring about a step change in how we understand and interact with the ocean over the course of the Ocean Decade. It will take participants on a journey, inspiring them to care, engaging them to act and empowering them to be actors for sustainable change.

The Laboratory will foster actions by demonstrating how mass communications and ocean Literacy can influence our behaviors and lead to concrete action, as well as how to empower actors from communities to the global scale. Stay tuned for the registration link, www.oceandecade-conference.com/en/.

Eco Magazine: Launch of a Special Digital Issue on the Ocean Decade

The Ocean Decade marks a new era of ocean knowledge and understanding, and offers ocean stakeholders an unprecedented opportunity to drive global change. ECO Magazine and the Intergovernmental Oceanographic Commission of UNESCO is delighted to reveal the latest issue of the magazine: a special digital issue on the Ocean Decade.



The Ocean Decade issue features an impressive collection of stories about the global initiatives and debates contributing to each of the Ocean Decade's seven societal outcomes:

- A clean ocean – whereby sources of pollution are identified, quantified and reduced, and pollutants removed from the ocean
- A healthy and resilient ocean - whereby marine ecosystems are mapped and protected, multiple impacts (including climate change) are measured and reduced, and provision of ocean ecosystem services is maintained
- A predicted ocean - whereby society has the capacity to understand current and future ocean conditions, forecast their change and impact on human wellbeing and livelihoods

- A safe ocean - whereby human communities are protected from ocean hazards and where safety of operations at sea and on the coast is ensured
- A productive ocean whereby the ocean ensures the provision of food supply and alternative livelihoods
- An accessible ocean - whereby all nations, stakeholders and citizens have access to ocean data and information, technologies, and have the capacities to inform their decisions
- An inspiring and engaging ocean –whereby society understands and values the ocean

From citizen science projects and innovative solutions to diverse perspectives on inclusivity and leadership, this edition has it all. Visit, digital.ecomagazine.com/publication/frame.php?i=707374&p=1&pn=&ver=html5, to know more about inspiring projects implemented to deliver the science we need for the ocean we want: enjoy your reading now.

Arctic Circle names Ásdís Ólafsdóttir as its new CEO

Arctic Circle is the largest international platform for dialogue and collaboration on the Arctic.



Ms Ásdís Ólafsdóttir has served the Arctic Circle since 2018, most recently as the Director of the Secretariat. She holds a Master's degree in Disaster Risk Management and Climate Change Adaptation from Lund University, Sweden and a BSc degree in Psychology from the University of Iceland. She has extensive experience in the

www.challenger-society.org

management and development of new initiatives. Previously she has worked on projects that require special advice and research on climatic issues, resilience, capacity, development, issues, adaptation, risk management and current market status.

Marine Monitoring during the "Anthropause": attention all Marine researchers of the CIESM family

The pandemic influenced our way to live and our way to make science. It also gave the scientific community the biggest experimental pool ever recorded to study the impact on the natural environment of reduced human activities. Studies reported wildfires diminishing, fisheries pausing, transport and commerce shrinking; people witnessed more wildlife sighting close to inhabited areas.



The EU H2020 project RELIANCE is building an inventory of all existing monitoring efforts of the marine environment that have been put in place in the seas and oceans, to assess the impact (or de-impact) of the Covid-19 related lockdowns, and due to the absence/reduction of anthropogenic disturbances. You can contribute by answering this questionnaire, docs.google.com/forms/d/e/1FAIpQLSe9yaL-IV4bLW41sc482YxxV-TKYP6WtLK7iTVEhgWORTqrg/viewform.

VIEWS

WEkEO User survey - Be featured on wekeo.eu

Mercator Ocean international, EUMETSAT, ECMWF and EEA (European Environment Agency), partners of the WEkEO platform, would

like to involve you in the future actions of development to optimize your Earth Observation cloud computing platform experience. We edited a comprehensive user survey to study your expectations in Earth Observation for the near future, marinecopernicus.typeform.com/to/hh8lgbXZ.



Please take some of your time to answer it and you will have the possibility to highlight your activity through a use case published on our website.

Sonardyne unveils ‘operate-anywhere’ portable shallow-water tracking system

Energy, defence and science technology company Sonardyne has launched a new, entirely portable configuration of its shallow water Ultra-Short BaseLine (USBL) system Micro-Ranger 2. Everything needed to start tracking divers, remotely operated vehicles, autonomous underwater vehicles or any other subsea targets is contained in a single, IP67-rated ruggedised case small enough to operate-anywhere, from anything.

The one-box USBL solution is able to track up to 10 targets out to 995 m. Inside the case is a Micro-Ranger Transceiver (MRT) with 10 m of cable, a GNSS antenna with 5 m of cable, and two Nano transponders and command hub. A built-in battery provides more than 10 hours of continuous use, enough for a full day of activity out on the water. The case can also accept external power from a boat or shore supply. To get started, users simply have to connect their laptop running the Ranger 2 software to the case via Wi-Fi, put the MRT in the water, connect the antenna, and fit a Nano to each target. Sonardyne says even first-time operators can expect to be up and running in around 30 minutes.

Nano transponders are the perfect size and weight for divers, small towfish and micro ROVs. The two that come in the case are Sonardyne’s recently introduced second generation model, offering extended battery life and depth rating. A connector-equipped Nano is also available allowing it to operate continuously via an external power source. Customers can choose the type of Nano transponder that comes with their system at the time of ordering.

The needs of AUV developers who need to both track and communicate with targets have been addressed with the Micro-Ranger 2 integrator system kit. It comes complete with Sonardyne’s add-on Marine Robotics software pack and AvTrak 6 Nanos, which support two-way messaging, vehicle control and tracking in one small instrument.



Sonardyne’s updated Micro-Ranger 2 USBL system contains everything you need to track divers, ROVs and AUVs in a rugged case small enough to operate-anywhere, from anything. Photo by Tom Acton - Sonardyne.

John Houlder, USBL product line manager at Sonardyne said; “Whether you’re looking for flexibility, ease of use, or convenience, Micro-Ranger 2 is the ideal solution. It’s a smaller, lighter and more complete portable system than anything else on market. And it’s very competitively priced when you consider everything that’s included in one box as standard. It’s export-licence free and is engineered to be safely carried on passenger aircraft. Then, when you get to where you’re working; a quayside to track an ROV, a RIB for tracking divers or a small boat to track and control your AUV, just turn it on, connect to the control hub with your laptop and away you go.”

Micro-Ranger 2 is ideal for supporting shallow water operations in offshore wind, including seabed instrument positioning and release with its command functionality and/or positioning objects relative to each other. Because it's built with the same Wideband-2 signal architecture and 6G hardware as Sonardyne's Ranger 2 family, it's also fully compatible with the company's Release Transponder 6 range (RT 6). It also suits quick mobilisation for underwater inspections using small ROVs.

The integrator kit is ideal for AUV developers who want to trial their ideas and capabilities, including swarm capabilities, inshore before moving into deeper waters. Sonardyne have also recently introduced an upgraded and extended Nano range which; improves the acoustic performance of the Nano transponder, extends its operational depth range and increases its acquiescent battery life to 90 days. Nano transponders are now available with or without connectors or as OEM options.

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

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

Ostend, Belgium

Full registration to the EMODnet Open Conference and its virtual exhibition is now open, emodnetconference2021.eu/. This online event will provide a unique opportunity to bring together EMODnet partners, data providers and users from Europe and beyond, to discuss the value of EMODnet data, data products and services, celebrate existing and emerging partnerships, as

well as co-design EMODnet's next phase to 2030 and beyond.

High-level speakers from various fields, backgrounds and experiences will take part in the conference composed of plenary sessions, panels, community pitches and group discussions.



An online platform, with a virtual exhibition, will showcase EMODnet highlights and feature more than 60 community posters, with the possibility to organize 1:1 meetings with other participants and a dedicated space to present your products services and special requests. To review the conference programme, visit emodnet.eu/en/emodnet-open-conference-programme.

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

17th - 18th June 2021: Structures in the Marine Environment (SIME2021)

SIME2021 will be held online via HopIn and split over two half day sessions (afternoon of 17th June and morning of 18th June 2021). The programme of talks and their abstracts are now available to view online, masts.ac.uk/upcoming-events/structures-in-the-marine-environment-sime2021/. We do still have space to accommodate some more e-posters, so please get in touch if you would be interested in this opportunity. Please register to attend here, hopin.com/events/sime-2021.

In response to our societal need to generate energy, man-made structures (MMS) have been built into our coastal and marine environments. The structures range from oil and gas installations, associated pipelines and seabed infrastructure, and now we also look towards a replacement for carbon-fuelled electricity via offshore wind farms. Inevitably, these structures host communities by providing habitat and shelter, and potentially serve as stepping-stones for the spread of some species (some of whom will be non-indigenous). In addition to deliberately placed structures, shipwrecks can also serve a similar function. In turn, the biodiversity that develops on MMS can affect biological, hydrodynamic and biogeochemical processes from the water column to the seafloor, either directly (e.g. scouring, organic matter export from piles) or indirectly (e.g. population dynamics or closure/displacement of fisheries) and, hence, ecosystem functioning is also affected at various spatial and temporal scales. When flow effects in surrounding areas are included, the footprint of these structures is much larger than just the physical area. Science has an important role to play in both development decision-making as well

as decommissioning, and we need a robust evidence base for informed environmental management decision-making. We need to be clear about what how future MMS that are put into the marine environment will affect the marine biological ecosystems, what should happen to these structures when they have been decommissioned and what the ecological best practice is in relation to decommissioning and rigs/renewables-to-reefs.

Academics, stakeholders, industry and government representatives and interested parties are invited to come together for talks, e-posters, networking and discussion about man-made structures already within the marine ecosystem, and any new infrastructures that may be put in place over the coming decades. Let's talk about the impacts, benefits and implications of these structures, and discuss how we can accelerate our understanding to support policy and regulatory decisions. Within an international context, and taking MMS in its widest definition, the "Structures in the Marine Environment" (SIME2021) conference will focus on the impact that the presence or removal of these structures may have on biological marine ecosystems. For more information please visit, hopin.com/events/sime-2021.

22nd-27th June 2021: ASLO 2021 virtual Meeting

Hoping that the virtual meeting can reach participants from farther places who normally cannot attend in-person meetings, and this platform can also be used as a "teaser" for the in-person meeting in Palma in 2023. The time zone of the meeting will be GMT European time to mirror the original June schedule (and will be held on the same days). ASLO 2021 goes virtual: <https://www.aslo.org/2021-virtual-meeting/>.

Are you an early career scientist interested in learning more about how to present your work to different audiences? The 2021 NSF-funded (for the third year in a row!) ASLO Science Communication workshop is for you. This free workshop will help you better hone your verbal and visual presentation skills. Dr. Tullio Rossi, founder of Animate Your Science (www.animateyour.science/) will focus on conference poster design and effectiveness. Michelle Smisek is a professional actor and acting coach in South Florida who will introduce basic poster and oral presentation communication skills. The workshop

will be on Tuesday June 22nd, 2021 from 08:30-16:00 UTC / 4.30 AM - 12 PM EST. Please plan on attending the full workshop. You can email Hayley Schiebel (hschiebel@suffolk.edu) with any questions and the registration link can be found here: www.eventbrite.com/e/2021-aslo-science-communication-workshop-tickets-152928418015%3Faff=ebsdoporgprofile.

29th - 30th June 2021: The 8th PRIMaRE marine renewable energy conference

Menai Bridge, Wales

The conference represents the latest in the annual scientific conference series of the marine renewable energy community. The conference will be held **online**, and run by Bangor University, School of Ocean Sciences, www.bangor.ac.uk/oceansciences/primare.php.en.

The conference includes universities, industry and research centres active in all aspects of marine renewable energy with presentations ranging from industrial developers, university researchers, marine environmentalists and policy makers. The aim of the event is to cover a wide range of topics in marine renewable energy, including: technology, policy, environment, hydrodynamics, resource characterisation, materials, operation and management, etc.

The 8th PRIMaRE conference will provide a platform for both industrial and university speakers to present their up to date activities and on-going research programmes through posters.

Conference Themes within Marine Renewable Energy:

- Materials
- Fluid Dynamics and Hydrodynamics
- Survivability and Reliability
- Environmental Impacts
- Power Conversion and Control
- Infrastructure and Grid Connection
- Marine Operations and Safety
- Marine Planning and Governance

We hope to build on the hugely successful online conference of last year, with over 210 delegates from all over the world. There is no conference fee; however please register to ensure a place by 29th May 2021. Instructions for conference registration details can be found on the PRIMaRE website, <https://primare.events/>. You can also sign up to the PRIMaRE network here; www.primare.org/.

www.challenger-society.org

7th - 8th July 2021: Ocean Decade Laboratory: First International Ocean Decade Conference

Following the launch of the First International Ocean Decade Conference on the 1st June, the first Decade Laboratory will look into the key elements required to bring about a step change in how we understand and interact with the ocean over the course of the Ocean Decade. It will take participants on a journey, inspiring them to care, engaging them to act and empowering them to be actors for sustainable change.

The Laboratory will foster actions by demonstrating how mass communications and ocean Literacy can influence our behaviors and lead to concrete action, as well as how to empower actors from communities to the global scale. Stay tuned for the registration link, www.oceandecade-conference.com/en/.

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

Vancouver, Canada



IMBeR ClimEco7 summer school postponed to 2021

Unfortunately, due to the restrictions that we are currently all dealing with, and the uncertainty as to how things will be in August when we were planning to hold ClimEco7, IMBeR has taken the decision to postpone the summer school for a year.

All the applications that we received for ClimEco7 this year will be carried over to 2021. Results of the selection process will be made known during March 2021.

New dates for ClimEco7 are 9-13 August 2021

UBC, Vancouver, Canada

6th - 9th September 2021: Estuaries and coastal seas in the Anthropocene

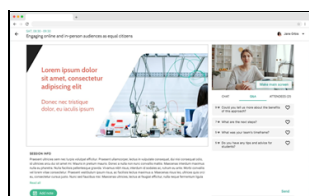
Hull, England



Same great content will now take place online as a live-streamed and interactive event. The conference will bring together our expert invited speakers, contributed talks and e-posters showcasing the latest research and addressing key topics from our cancelled in-person meeting.

You will be able to participate in a live interactive conference experience direct from your desktop or mobile device.

Live-stream presentations, ask questions to the speakers and poster presenters and chat with other attendees via a dedicated conference platform. Plus, enjoy more flexibility with on-demand access to recorded sessions for 12 months after the event. Visit www.estuarinecoastalconference.com, for more information and registration (deadline 3rd September).



Engage with speakers



Participate in poster sessions

We do hope that you will be able to participate in this exciting event, Conference Chairs:

Mike Elliott, University of Hull, and International Estuarine & Coastal Specialists Ltd
Tim Jennerjahn, Leibniz Centre for Tropical Marine Research, Bremen, Germany
Masataka Watanabe, Chuo University, Japan

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

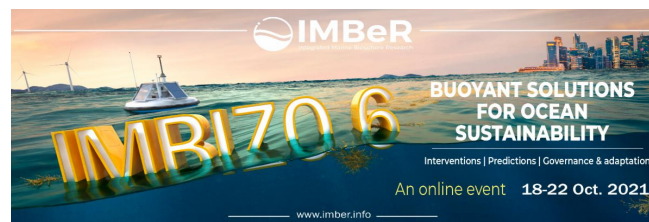
Abu Dhabi, UAE

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.

If you require any further clarification or information regarding this situation, please feel free to email us at info@oceanologyinternationalmiddleeast.com.

18th – 20th October 2021: IMBeR sixth IMBIZO (the Zulu word for a gathering) virtual meeting

IMBeR aims to promote and enable interdisciplinary marine research and governance to achieve improved prediction of, adaptation to and mitigation of global change towards ocean sustainability. Topics addressed during IMBIZO6 will showcase positive, ‘buoyant’ solutions for ocean sustainability currently being discussed and implemented around the world.



We will follow the usual IMBIZO format of three distinct but interacting workshops. To optimize discussions, the number of IMBIZO6 participants will be limited to about 120 people (around 40 per workshop). The workshop topics are:

1. Exploring potential marine options for climate intervention
2. Lighting the ‘grey zone’: how can we integrate human dimensions in decadal-scale prediction systems ?
3. Ocean governance and climate adaptation: comparing responses, charting future courses.

Plenary keynote presentations and poster sessions will enable you to learn about the work of participants in other workshops. More information about IMBIZO6 and each of the workshops is available here, imber.info/events/imbizo/.

Attendees will be selected on the relevance of their abstracts to the workshop topic. So, choose a workshop and submit an abstract by 30 June, imber.ceotr.ca/machform/view.php?id=59222.

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’, stay 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 June.

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

JOB*S* and OPPORTUNITIES

**Master of Science in Applied Oceanography
Operational Oceanography and Marine Studies**

APPLY NOW

Scholarships available

Find us on: **facebook**

L-Università ta' Malta
Faculty of Science

Department
of Geosciences

Supporting Partners

Deltares
Enabling Delta Life

PHYSICAL OCEANOGRAPHY RESEARCH GROUP

AQUABIO TECH GROUP

www.um.edu.mt/research/physicaloceanography/mscourse

PREPARING THE FUTURE MARINE PROFESSIONALS FULL TIME ONE YEAR COURSE OPENING OCTOBER 2021

This is the right course for those who want to sharpen their talents and wish to shape their career to fit the future challenges of the knowledge based society which will rely more extensively on our sustainable relationship with the sea, and the smart minds of the human resource in the marine and maritime sector of this decade. Whether you are a student just finishing your first degree or an already qualified professional wishing to enhance and diversify your career, this course offers the ideal opportunity to unleash your drive.

The course builds on the core principles of oceanography in coastal and open sea domains, with a focus on operational oceanography and the versatile and broad spectrum of disciplines and offshoot applications related to it. The main target of the course is to match the human resource needs in the evolving marine sector at local, European and global scales, providing professionals with wide ranging skills to exploit the outcomes of marine research and technology in favour of the competitiveness of the industry and service sectors. It is also set against a background of the rising industrialisation of seas and oceans with increasing human impact (such as from renewable energy provision, oil and gas extraction, fishing and leisure industries) and the extended quest for achieving sustainable development by protecting the marine ecosystem, minimising the impacts of climate change, natural hazards and anthropogenic influences, whilst maximising benefits to society.

The course is delivered with the participation of an international faculty including high profile experts in operational oceanography. It is run by the Physical Oceanography Research Group of the University of Malta following the course concept launched in 2014 by Prof. Aldo Drago. It is supported by the AquaBioTech Group, an international consulting company located in Malta and operating globally with clients and projects covering a variety of aquaculture, fisheries and aquatic environmental projects, and Deltares, an independent institute in the Netherlands dedicated to applied research and smart solutions, innovations and applications for people, environment and society in the field of water throughout the world, working on four Mission Areas: Future deltas, Sustainable deltas, Safe deltas and Resilient infrastructure. Both partners offer their support to train and give research opportunities to students following this course.

June 2021

For more details on the course and the available scholarships, please visit the course website or the course announcement on the University page, www.um.edu.mt/research/physicaloceanography/msccourse. For online application and advice please refer to www.um.edu.mt/journey/admissionsadvice.

There are jobs on the IMBER web site

<http://www.imber.info>



Integrated Marine Biosphere Research

Jobs and opportunities

New

- Coral Aquaculture Specialist: Nature Seychelles CORAL Centre, Amitie, Praslin Island. No deadline given; **apply now**
- Senior Research Associate: Marine Eco-physiologist, Research Corporation of the University of Guam, Mangilao, Guam. Open until filled; **apply now**
- Events Manager, Conservancy of Southwest Florida. No deadline give; **apply now**
- Director, Blue Climate Strategy; Conservation International. No deadline given; **apply now**
- Senior Science Officer: Future Earth, Paris, France. Apply by **10 June**
- Intern: Future Earth, Paris, France. Apply by **15 June**
- Fisheries Specialist: Washington Sea Grant, University of Washington. Apply by **14 June**
- Marine Scientist, WILDOCEANS, Durban, South Africa. Apply by **14 June**
- Marine Earth Observation Research, CSIR. Apply by **14 June**
- Postdoctoral Associate: Marine Carbonate Systems, Stony Brook University, New York. Apply by **18 June**
- PhD: Ocean Biogeochemical Modelling, ocean alkalinity enhancement. Alfred Wegener Institute. Apply by **21 June**
- MSc opportunities, SARChI Marine Ecology and Fisheries, University of Cape Town. Apply by 21 June
- Women in Aquaculture Scholarship Program. Apply by **22 June**
- Resilient Fisheries Governance Course, organized by the Wageningen Centre for Development Innovation. Course runs online from 24 November to 2 March. Apply by **22 June**
- Call for Proposal: ESA Invitation to Tender on Ocean Health. Submit by **28 June**
- PhD: Public engagement with Oceanography, Utrecht University. Apply by **29 June**
- Call for applications for individual fellowships: EuroMarine. Apply by **30 June**
- Faculty (rank TBD): Marine Biology, Nova Southeastern University, Fort Lauderdale-Davie, Florida. Apply by **30 June**
- Science Manager, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Hobart, Tasmania, Australia. Apply **30 June**
- Call for proposals of Foresight Workshops, EuroMarine. Submit by **30 July**
- ABALOBI Eastern Cape Project Manager, ABALOBI, South Africa. Apply by **30 September**

In case you missed it...

- Indigenous Knowledge Systems Fellow, Conservation International. No deadline given; **apply now**
- Postdoc: Ocean Modelling, UCLA. Position is open until filled; **apply now**
- Sea Level Rise Manager: Sanibel-Captiva Conservation Foundation, Sanibel, Florida, USA. No deadline given, **apply now**
- PhD bursary on artificial intelligence and tropical tuna purse seine fisheries. Apply by **25 June**

Visit the IMBeR Website

imber@imr.no