

# Challenger Wave



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

## NEWS

### **A GODAE OceanView International School "New Frontiers in Operational Oceanography"**

The implementation of operational oceanography in the past 15 years has provided many societal benefits and has led to many countries adopting a formal roadmap for providing ocean forecasts. Following on from the GODAE OceanView international schools held in France (Chassignet and Verron, 2006) and in Australia (Schiller and Brassington, 2011), the next school, to be held in Mallorca, Spain in October, will bring together senior experts and young researchers (pre- and post-doctorate) from across the world and expose them to the latest research in oceanography, specifically how it will impact operational oceanography. In addition to formal lectures, shorter talks by experts in the field will acquaint the participants with a wide range of applications. Further details are in the Calendar

### **Why are some corals resilient and others are in decline ?**

This is the focus of a study currently being undertaken by the Central Caribbean Marine Institute (CCMI) in Little Cayman, with particular emphasis on improving the methods of coral restoration so that corals will begin reproducing in the wild. Data on temperature and light as well as fish populations on the coral reefs will also be gathered to determine those conditions optimal for growth and survival of these regenerated corals. CCMI scientists hope to use the information that is gathered to improve upon the restoration success rate of the most endangered Caribbean coral species.

Funding for this project has been awarded to CCMI by the Ernest Kleinwort Charitable Trust. The UK-based trust, established in 1963, supports its founder's passion of conservation of wildlife and the natural environment, and is

insistent on funding those projects that will 'make a difference'.

Dr. Carrie Manfrino, President of CCMI is grateful for the Trust's confidence in project: "the coral reefs around Little Cayman are exceptional in that they have demonstrated resilience over long periods of time. It is with this funding from the Ernest Kleinwort Trust that we can really start digging into the 'why' and hopefully use that information to be able to regenerate coral reefs that are dead or dying elsewhere in the Caribbean and around the world". The project is also being funded by the Dart Foundation and the Grindle Foundation, through their financial support of the intern who is working on the project.



Restoration is the process of establishing new fragments of corals in a temporary nursery setting. After a period of six to nine months in the nursery, the corals are re-established, or 'out-planted' on the reef. The Central Caribbean Marine Institute established the first coral restoration program in the Cayman Islands in partnership with the Cayman Islands Department of Environment in 2012. In the last three years, over a thousand new fragments of corals have been re-established in the wild. This new project builds upon this experience with a forward-looking philosophy that seeks to unlock the mystery of why some corals thrive and some are in decline.

## VIEWS

### The Kiel Congress volume is now on CIESM shelves

We have the pleasure to announce, as a final touch to our recent Congress in Kiel, the publication of the 41st CIESM Congress volume which integrates in pdf format all the papers presented in Germany, together with the valuable syntheses of 75 session moderators. You will find the Congress volume available for (free) download on our page <http://ciesm.org/online/archives/abstracts/pdf/41/index.php>. Your paper can now be cited with its final pagination.



If you are the author or coauthor of a Congress communication, you will be happy to know that your paper is now indexed and retrievable (with proper keywords) from our online catalogue that puts thousands and thousands of CIESM publications at your fingertips. For a quick (or

longer) tour, just click on <http://ciesm.org/online/GISBiblio.php> - **Frederic Briand and the CIESM Congress Team**

### Arctic Circle Québec Forum

About 300 participants from many countries attended the Arctic Circle Québec Forum, which was held at the Québec City Convention Centre, December 11- 13, 2016. The Forum was opened by Ólafur Ragnar Grímsson, Chairman Arctic Circle and former President of Iceland (1996-2016), and Philippe Couillard, Premier of Québec. Discussions focused on the sustainable development of northern regions, including Canada, Alaska, Greenland, as well as northern areas of Norway and Finland.



Among the highlights was a historic speech by Foreign Minister Vittus Qujaukitsoq on the future of Greenland, which has caused dynamic discussions across the Arctic. See more photos and information on our webpage [www.arcticcircle.org](http://www.arcticcircle.org).

## 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-15th February 2017: EMODnet Sea-basin Checkpoints Stakeholder Conference**  
*Brussels, Belgium*

There will be another opportunity to meet and consider the future requirements for more efficient and effective marine observation and data acquisition, management and open-sharing practices in Europe at the forthcoming [EMODnet Stakeholder Conference and Seabasin Workshops](#), at the Royal Flemish Academy of Belgium for Science and the Arts. The Stakeholder Conference provides an exciting opportunity to showcase the work of the EMODnet Checkpoints and to interact with regional stakeholders to ensure that our seabasin observing systems are fit-for-purpose. We deliberately organised this event on Valentine's Day to celebrate our common passion for marine data and ocean observing and offer free entrance for all partners of attendees to join the Conference Reception on 14/02. It will be good to see you all there!

## 20th-24th February 2017: Marine Imaging Workshop 2017

Kiel, Germany



The Marine Imaging Workshop 2017 follows on from a successful 2014 workshop, and invites anyone using visual imagery in the marine realm: scientists, engineers, researchers, regulators, and commercial partners. The focus is on developments and challenges in methods of marine optical imaging: imagery acquisition, processing and manipulation, annotation, segmentation and automated strategies, data management, application to scientific aims, and outlook and future developments.

### Important Dates

30 Sept 2016	Registration and abstract submission open
8 Nov 2016	Abstract submission deadline
25 Nov 2016	Abstract acceptances announced
16 Dec 2016	Registration deadline
13 Jan 2017	Photo competition entry deadline
20-23 Feb 2017	Workshop

### Registration

Attendance is limited to 120. Those with presentations (talk/poster) will be given preference – limit of 1 talk per attendee (additional posters available).

Please register on the workshop website. The registration fee is 250 € (+optional conference dinner), to be paid upon abstract acceptance.

### Photo competition

Submit your best marine images to be judged for prizes! Adriana Basques is an international award winning underwater photographer who will judge the entries (<http://www.adrianabasques.com>). See contest rules on the workshop website.

### Accommodation

Special rates at some Kiel hotels are provided for workshop attendees. Details are on the workshop website.

[www.marine-imaging-workshop.com](http://www.marine-imaging-workshop.com)

## 23rd-28th April 2017: European Geosciences Union General Assembly

Vienna, Austria

The abstract Deadline is 11th January 2017.

Craig Smeaton from the University of St. Andrews will convene session BG3.3/OS3.9, entitled

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

*Coastal Carbon: From Vegetated Coasts to Sedimentary Stores*, alongside William Austin (also University of St. Andrews), Hilary Kennedy (University Bangor), Evina Gontikaki (University of Aberdeen) and Thomas Bianchi (University of Florida). Details of the session can be found at <http://meetingorganizer.copernicus.org/EGU2017/session/24946>.

The *Copernicus Marine Environment Monitoring Service (CMEMS)* session, OS4.6, will focus on studies of:

- scientific advances on thematics relevant to CMEMS that are needed for the short to long term evolution of the CMEMS products.
- verification, validation and uncertainty estimates of CMEMS products, forecasting skills.
- the use of CMEMS products for downstream applications.
- ocean monitoring and on the long-term assessment of the ocean physical and biogeochemical states.

A detailed description is available in the direct link to session OS4.6, <http://meetingorganizer.copernicus.org/EGU2017/session/24345>. General information on the General Assembly, is available at <http://egu2017.eu/home.html>.

Session OS2.2 is entitled *Advances in understanding of the multi-disciplinary dynamics of the Southern European Seas (Mediterranean and Black Sea)*. Introduced with a Keynote talk given by Professor Joaquin Tintoré, the session will overview recent developments and understanding, by observations and modelling, of the Southern European Seas (SES) general circulation, physical processes, their ecosystems and biogeochemical fluxes. For further information, visit the EGU Assembly site: <http://meetingorganizer.copernicus.org/EGU2017/session/23131>. The conveners, Marilaure Grégoire, Samuel Somot, Ananda Pascual, Emin Ozsoy, Gianmaria Sannino and Emil Stanev, are looking forward meeting you in Vienna,

## 22nd-26th May 2017: The 49th International Liege colloquium on Ocean Dynamics, the 8th Warnemünde Turbulence Days

Liège, Belgium

Almost four decades after the "Marine Turbulence", 11th Liège Colloquium in 1980. Three decades after the "Turbulence in the

ocean. From the millimeter to the megameter”, 19th Liège Colloquium in 1987. Two decades after the “Marine Turbulence Revisited”, 29th Liège Colloquium in 1997. One decade after the “Turbulence Re-visited”, 39th Liège Colloquium in 2007. The exciting topic of marine turbulence will be revisited for the 3rd time during “Marine Turbulence Re<sup>3</sup>-visited” as the 49th Liège Colloquium in 2017.

As in 2007, the workshop will be co-organised together with the Warnemünde Turbulence Days (its 8<sup>th</sup> edition), a biennial workshop on specific challenges in marine turbulence, organised by the Leibniz Institute for Baltic Sea Research in Warnemünde (Germany).

From decade to decade enormous progress is achieved in our understanding of marine turbulence. A major trigger of this progress is the technological development of oceanic instrumentation, numerical modeling and theory. For the instruments, higher sampling rates, larger data storage and faster data processing facilities generally allow for better resolution but do also open perspectives for novel mechanical, acoustic and optical devices. For the numerical modeling, steadily growing computer resources allow for substantially more complex models and higher resolution than a decade ago. The theory of marine turbulence has further developed towards concepts linking small-scale turbulence, internal waves, surface waves, and (sub)meso-scale dynamics. Tight collaboration between marine and atmospheric scientists in all these fields has substantially triggered progress in the field of geophysical turbulence.

Combining the historically broad approach of the Liège Colloquium with the specialized Warnemünde Turbulence Days, this joint venture will concentrate on five focal topics :

- Turbulence-wave-interaction
- Turbulence-(sub)mesoscale interaction
- Turbulence and the marine ecosystem
- Turbulence observations in the ocean
- Turbulence modelling in the ocean

Contributions to these focal topics as well as to related problems of marine turbulence are invited to the Liège Colloquium in 2017.

Further details (submission, registration, deadlines, venue, etc.) are available on the web site <http://labos.ulg.ac.be/gher/home/colloquium/colloquium-2017/>. **Deadline: submission of**

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

January 2017

**abstracts - 30th January 2017.** We are looking forward to welcoming you in Liège on behalf of the Organizing Committee.

**19th-22nd June 2017: Oceans '17 conference**  
Aberdeen, Scotland



## A Vision for our Marine Future: MTS / IEEE OCEANS '17

Aberdeen, Scotland, 19-22nd June 2017

This flagship conference covers all aspects of ocean science, technology and engineering and returns to Aberdeen, highlighting the importance and size of the oceanic industry to the region. The conference programme will include not only the traditional OCEANS themes but there will also be special topics focusing on the region's expertise.

For more information on the conference, exhibition, patronage opportunities, and attending the event please visit the conference website: [www.oceans17mtsieeaberdeen.org](http://www.oceans17mtsieeaberdeen.org)



**6th-7th September 2017: Advances in Marine Biogeochemistry Conference VIII**

Oban, Scotland

Save the date for AMBIO VIII, more information nearer the time, [www.challenger-society.org.uk/Marine\\_Biogeochemistry\\_Forum](http://www.challenger-society.org.uk/Marine_Biogeochemistry_Forum)

Advances in Marine



Biogeochemistry  
Conference VIII

Save the date!  
6 – 7 Sept 2017

Marine Biogeochemistry Special  
Interest Group of the Challenger Society

at SAMS in Oban



Organisers:

MBF Chair: Gary Fones, Uni. Portsmouth

AMBIO VIII Co-convenors: Kirsty Crocket and Natalie Hicks, SAMS

Photo: Emma Defew and Mark James

AMBIO meetings set the stage for Marine Biogeochemistry in the UK, connecting disciplines within the field and establishing networks for the integration of early career scientists. The AMBIO VIII meeting in September 2017 is to be hosted at the Scottish Association for Marine Science in Oban. Save the date! Registration will open in early 2017.

Info: [www.challenger-society.org.uk/Marine\\_Biogeochemistry\\_Forum](http://www.challenger-society.org.uk/Marine_Biogeochemistry_Forum)  
Contact: [kirsty.crocket@sams.ac.uk](mailto:kirsty.crocket@sams.ac.uk), [natalie.hicks@sams.ac.uk](mailto:natalie.hicks@sams.ac.uk)

*January 2017*

**2nd-6th October 2017: the 5th IMBIZO**

*Woods Hole, MA, USA*

Mark the dates !, IMBER will hold its fifth IMBIZO (the Zulu word for a gathering) at the Woods Hole Oceanographic Institute. The theme of IMBIZO V will be: *Marine biosphere research for a sustainable ocean: Linking ecosystems, future states and resource management*. We will follow the usual IMBIZO format of three concurrent but interacting workshops – topics to be announced soon. Please spread the news widely.



**2nd-13th October 2017: A GODAE OceanView International School "New Frontiers in Operational Oceanography"**

*Mallorca, Spain*

The implementation of operational oceanography in the past 15 years has provided many societal benefits and has led to many countries adopting a formal roadmap for providing ocean forecasts. Following on from the GODAE OceanView international schools held in France (Chassignet and Verron, 2006) and in Australia (Schiller and Brassington, 2011), this school will bring together senior experts and young researchers (pre- and post-doctorate) from across the world and expose them to the latest research in oceanography, specifically how it will impact operational oceanography. In addition to formal lectures, shorter talks by experts in the field will acquaint the participants with a wide range of applications.

For information on how to apply, go to <https://www.godae-oceanview.org/outreach/education-training/gov-summer-school-2017/>  
**Deadline: 28th February 2017**

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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 31st January.

*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

## Two PhD studentships

### PhD 1: [Role of the world's deepest living marine algae in the global carbon cycle](#)

Supervisors: Dr Heidi Burdett (Lyell Centre) and Prof Graham Turnbull (University of St Andrews)

This fully-funded Lyell scholarship will use a range of fluorescence and biogeochemical techniques to investigate the primary production of coralline algae, the world's deepest living marine photosynthesisers, and identify how this impacts local and regional carbon cycling in the mesophotic zone. This multi-disciplinary project is in collaboration with Prof Graham Turnbull, University of St Andrews, and engagement with non-academic partners will set the project within the wider policy context. More information about the project can be found [here](#), and details of how to apply are [here](#). This project is open to UK, EU and international applicants; deadline for applications is 31<sup>st</sup> January 2017. Start date is flexible, but should be by October 2017.

### PhD 2: [Resilience of coralline algae to oil contamination via intricate microbial associations](#)

Supervisors: Drs Heidi Burdett (Lyell Centre), Tony Gutierrez (Heriot-Watt University) & Lynda Webster (Marine Scotland Science)

This competitively-funded studentship will characterise how the microbial community of coralline algae, a globally distributed calcifying seaweed, interacts with its host, and determine the effects of contamination from the oil and gas industry (hydrocarbons, dispersants, etc) on these microbiome-host interactions. More information about the project can be found [here](#), and details of how to apply are [here](#). This project is in collaboration with Marine Scotland Science and is part of the NERC Oil & Gas CDT, providing unique opportunities for industrial and policy engagement. NERC eligibility rules apply; deadline for applications is 31<sup>st</sup> January 2017. Start date is October 2017.

Contact: Dr Heidi Burdett, Research Fellow  
Lyell Centre for Earth and Marine Science and Technology  
Research Avenue South  
Edinburgh  
EH14 4AP

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**Chair in Climate Science  
School of Environmental Sciences  
University of East Anglia**

<http://www.jobs.ac.uk/job/AWL141/chair-in-climate-science/>

The Climatic Research Unit is widely recognised as one of the world's leading institutions concerned with the study of natural and anthropogenic climate change. As an internationally recognised research leader in Climate Science based within the Climatic Research Unit within the School of Environmental Sciences, the successful candidate will lead cutting-edge research in the international climate community.

We are interested in candidates who will conduct research and make scientific advances that underpin the development of improved climate services in one or more of these fields: climate observations; climate dynamics and modelling; climate predictions, projections and scenarios; dynamics and statistics of extreme weather/climate events; and quantifying the impacts of climate variability/change to inform the development of adaptation and mitigation policy. A central focus is the use of models and data to better understand changes in climate, its variability and extremes, and how such changes impact society.

As well as the vision and drive to lead the future development of climate research, the successful candidate will be an excellent and enthusiastic teacher with a strong interest in developing and delivering undergraduate and postgraduate teaching in the School of Environmental Sciences, including the MSc in Climate Change.

Applicants will have publications in scientific journals that demonstrate international excellence and world-leading impact, and an established record in attracting research and studentship funding. A PhD (or equivalent qualification) is necessary along with the ability to fulfill all essential elements of the person specification.

This post is available from 1 March 2017, on a full-time indefinite basis.

We particularly welcome applications from suitably qualified female academics as they are currently under-represented in senior positions within the School.

Closing date: 12 noon on Friday 10 February 2017.

[www.uea.ac.uk/hr/vacancies/academic/-/asset\\_publisher/h0n2rDvu3ug8/content/chair-in-climate-science?](http://www.uea.ac.uk/hr/vacancies/academic/-/asset_publisher/h0n2rDvu3ug8/content/chair-in-climate-science?)

The University is a Bronze Athena SWAN Award holder, currently working towards Silver.

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**Head of Data Centre Facility  
SOCIB  
Mallorca**

SOCIB, the Balearic Islands coastal ocean monitoring and forecasting system, is hiring a Head of the Data Centre Facility to lead a team of engineers, be responsible for the data management full lifecycle and prioritize the workflow with the other facilities in an international frame. The Data Centre is the core of SOCIB. Through it, SOCIB is developing and implementing a general data management system to guarantee international standards, quality assurance and interoperability. The combination of different sources and types of information (time series, profiles, trajectories, grids/meshes, images, acoustic data, etc.) requires appropriate methods to ingest, catalogue, display and distribute this information. SOCIB has a remit to adopt and support international standards and to drive the development of new standards where they do not already exist.

The general goal of the SOCIB Data Centre is to provide users with a system to locate and download the data of interest (near real time and delayed mode) and to visualize and manage the information. Following SOCIB principles, data need to be: 1) discoverable and accessible; 2) freely available; 3) interoperable and standardized. These principles are in line with the challenges and opportunities of Open Data. More information including required qualifications and the duties of the post can be found on the website at: <http://www.socib.es/?seccion=dataCenter>

A full time job is offered where the candidate will be in touch with the most advanced systems in physical oceanography, scientific and technical experts, international research centers and industry leading companies. A test period of 6 months will be established.

Applications in English, Spanish or Catalan should be sent via email to [info@socib.es](mailto:info@socib.es) attaching a CV and a covering letter explaining why you think you are the adequate person for this post. Please provide the names and contacts of two persons that can provide recommendation on your previous work and that could be contacted in the selection process.

Publishing date: December 7, 2015

Closing date: Vacancy will remain open until filled

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There are also jobs on the IMBER web site

<http://www.imber.info>



### IMBER e-News

Visit the IMBER Website



Best wishes for 2017 from the IMBER Offices

#### Jobs and opportunities

- [Future Earth: Executive Director, Montreal, Canada, 3 February 2017](#)
- [Erasmus Mundus Masters course: Maritime spatial planning, 23 January 2017](#)
- [L'Oréal USA Women in Science Postdoc Fellowship Program, 3 February 2017](#)
- [Postdoc: Ocean biogeochemistry modelling, Max Planck Institut, Hamburg, Germany, 1 January](#)
- [Director-General: EMSO ERIC, Rome, Italy, 15 February 2017](#)
- [Living Marine Resources Officer position at the Lenfest program](#)
- [Ecosystem modeller, Institute of Marine Research, Bergen, Norway](#)

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#### Meetings and conferences

- [Register now for the 2017 ESSAS Open Science Meeting, Tromsø, Norway, 11-15 June 2017](#)
- [Ocean Carbon & Biogeochemistry Summer Workshop, Woods Hole, USA, 26-29 June 2017](#)
- [PICES/ICES Early career scientist conference, Busan, Korea, 30 May-2 June 2017](#)
- [3rd International Ocean Colour Science Meeting, Lisbon, Portugal, 15-18 May 2017](#)
- [Copernicus Sentinel ATM Fiducial Reference Measurements workshop, Plymouth, UK, 20-21 June](#)
- [WCRP/IOC Regional sea-level changes conference, New York, USA, 10-14 July 2017](#)
- [Wakefield Fisheries Symposium: Impacts of a changing environment, Anchorage, USA, 9-12 May](#)
- [Blue Science for Blue Growth: EuroMarine, connecting ideas and people, Register before 30 Dec.](#)
- [MARE 'People and the Sea IX' Conference, Amsterdam, Holland, 5-7 July, 2017](#)

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#### Announcements

- [Bid to host the 2019 IMBER Open Science Conference before 1 April 2017!](#)
- [Updated Ocean Acidification-ICC \(OA-ICC\) bibliographic database](#)
- [Contribute to the OA-ICC data compilation on the biological response to ocean acidification!](#)
- [Special Royal Society feature on valuing biodiversity from ICED](#)
- [Phil Williamson encourages scientists to make the effort to correct misinformation](#)
- [Minimising the impacts of closure of the Carbon Dioxide Information Analysis Center \(CDIAC-Oceans\)](#)