

# Challenger Wave



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

SUPPORT THE UK'S PREMIER CONFERENCE ON  
MARINE RESEARCH

## CHALLENGER SOCIETY

FOR

MARINE SCIENCE

CONFERENCE 2016

*Oceans and Climate*

5-8TH SEPTEMBER 2016, LIVERPOOL

The 17<sup>th</sup> biennial conference of the Challenger Society for Marine Science will be held at the University of Liverpool, located within the heart of the city of Liverpool, host to world-leading marine research and a maritime business hub.

The 2016 Challenger Conference promises to provide a fantastic showcase of marine science and technology, covering all areas of ocean research.

Exhibitor space will be available in the conference area and there are opportunities for corporate sponsorship of events.

For details please contact Terry Sloane by email: [terry@planet-ocean.co.uk](mailto:terry@planet-ocean.co.uk) or phone 01276 427 971

### CONFERENCE INFORMATION

The official conference programme will commence with an ice-breaker event on the evening of the 5th September in the Victoria Gallery and Museum, followed by a three-day lecture and poster programme and conference dinner at the awe inspiring Liverpool Anglican Cathedral.

The Challenger conference provides exposure to around 400 of the UK's leading marine scientists and engineers in a focused and high profile meeting. Delegates cover the full spectrum National Centre directors to PhD students and is a unique opportunity to develop contacts within both academic and commercial marine sectors.

Opportunities are currently available for sponsorship of events within the conference and for exhibitor space in the shared social and refreshment areas.

Visit the website for more information:

[www.liverpool.ac.uk/challenger-conference-2016](http://www.liverpool.ac.uk/challenger-conference-2016)



### SPONSORSHIP PACKAGES

#### Headline Sponsor:

- 1<sup>st</sup> choice position for manned exhibition stand 3m x 2m
  - Gold Upgrade
  - Acknowledgement as Headline sponsor in all conference literature, advertising etc
  - Full page advert (A5) in conference handbook £790
- 
- Manned exhibition stand 3m x m £650
  - "Gold Upgrade" (5 minute speaker spot in plenary sessions *only three slots available*) £180
  - Sole sponsorship of conference dinner £5,000
  - Co-sponsorship of conference dinner £1,000, £2,500
  - Co-sponsorship of ice breaker drinks reception £1,000
  - Co-sponsorship of poster session (four available) £500
  - Co-Sponsorship of public lecture £500
  - Sponsorship of keynote speaker £350
  - Exhibition banner unmanned £250
  - ¼ Page advert in conference handbook £100
  - 1/3 A5 banner add in conference handbook £150

Corporate society members benefit from a 15% discount

## NEWS

### SAHFOS adds new technology to their plankton recorder fleet

As part of Sir Alister Hardy Foundation for Ocean Science's (SAHFOS) provision of rapid plankton identification capabilities and development of an integrated monitoring platform, the Foundation has integrated new multi-spectral fluorometers on

board the Continuous Plankton Recorder (CPR) for the initial determination of phytoplankton groups, supplied by Swale Technologies.

The CPR Survey samples the surface waters of the oceans with extensive spatial coverage at approximately monthly intervals. On a number of survey routes, additional physical, chemical and biological observations of water masses are made to complement plankton data. These observations help provide environmental context for

the plankton samples and act as important datasets to monitor changes in the health of the world's oceans.

SAHFOS Marine Instrumentation and Data Scientist, Dr George Graham thinks the multi-spectral fluorometers are the perfect addition to the CPR: "The CPR Survey offers an attractive platform from which in-situ environmental measurements can be made that complement other ocean observation networks and provide validation data for remotely sensed earth observation programmes. The optical signals measured by the fluorometers have the potential to indicate promptly phytoplankton abundance and provide the capability of rapidly identifying Harmful Algal Blooms and samples of interest prior to arrival in the lab. To be the first to have these capabilities is of fantastic benefit to SAHFOS and the stakeholders we serve."



The JFE MFL05W-USB multi-frequency fluorometers were supplied by Swale Technologies and will allow the simultaneous detection of several phytoplankton forms – (diatoms, dinoflagellates, green algae, cryptophyta and cyanobacteria) through excitation by LEDs emitting 9 separate wavelengths of light. The instruments also include depth and temperature sensors and include a mechanical wiper to ensure the optical sensor window remains clean.

### Recognition for Scottish Antarctic explorer

William Speirs Bruce is relatively unknown when compared with his contemporaries, such as Robert Falcon Scott, but was this week recognised by the naming of a laboratory at the British Antarctic Survey Research Station on Signy Island, in the South Orkney Islands. Canadian ancestors of the polar explorer, who led the first

and only Scottish National Antarctic Expedition between 1902 and 1904, have visited Scotland to learn of his legacy.

Michael Russell MSP, who has long championed Bruce's contribution to Arctic and Antarctic research, helped arrange a commemorative plaque to be erected at the Antarctic laboratory and delivered the news to the scientist's Canadian great, great grandsons, Michael and Kyle Watson, during a meeting hosted by the Oban-based Scottish Association for Marine Science in its William Speirs Bruce lecture room. Also present at the meeting in SAMS, which lies within Mr Russell's Argyll and Bute constituency, were the institute's director Prof Nicholas Owens and Henry Burgess, Head of the UK Arctic office.



*Pictured during their meeting in the William Speirs Bruce lecture room are, from left: SAMS Director Prof Nicholas Owens, Argyll and Bute MSP Michael Russell, William Speirs Bruce's great, great grandsons Michael and Kyle Watson, Head of the UK Arctic Office Henry Burgess and Michael and Kyle's mother Sheryl.*

Michael Watson, from Ontario, said: "It is very heartening to see so many people interested in the work of our great, great grandfather. For us, his work has always just been a family story but we are delighted to learn that it is a story for Scotland, the UK and for science in general."

Bruce led the Scottish National Antarctic Expedition from Troon on November 2, 1902 and made two voyages to the Antarctic, returning in July 1904 to the Marine Station in Millport, where he was presented with the Royal Geographical Society's Gold Medal and a telegram of congratulation from King Edward VII. The achievements of the expedition included the establishment of a manned meteorological station, the first in Antarctic territory, and the discovery of new land to the

east of the Weddell Sea. It also led to the establishment of the Scottish Oceanographical Laboratory in 1906.



The commemorative plaque in the British Antarctic Survey Base on Signy Island. Pictured, from left, are : Harriet Clewlow (PhD candidate, penguin biologist); Dr Anne Jungblut (Natural History Museum, microbiologist) and Signy Station Leader Matt Jobson.

Mr Russell MSP said: "I am immensely grateful to the British Antarctic Survey, to Dr John Dudeney who made the initial approach to them regarding some form of recognition and to the Scottish Government for agreeing to fund the plaque. William Speirs Bruce made a distinguished and long lasting contribution to Antarctic research but also to a number of branches of science including climatology and oceanography. He was passionate about the Antarctic, about science and about Scotland. It is wonderful that he is increasingly recognised as the significant scientific figure he undoubtedly was. This honour will I hope create ever more interest in him and those who worked with him in such a successful way."



The British Antarctic Survey station on Signy Island.

Mr Burgess said: The UK has a great history of polar exploration and we have produced many of the pioneers of modern day Arctic and Antarctic

research. William Speirs Bruce is certainly among those, although he is perhaps less well known outside of scientific circles. I hope this recognition from BAS and the Scottish Government will go some way to addressing that". Prof Owens, who has been to the Signy Island Base, said: "SAMS has always recognised the achievements of William Speirs Bruce and the significant contribution he made to our understanding of the polar seas. It was therefore our great pleasure to host his family and share our knowledge of the great man". For any further information, please contact Euan Paterson, SAMS media and communications officer, [Euan.Paterson@sams.ac.uk](mailto:Euan.Paterson@sams.ac.uk)

### NERC's Open Innovation Internships are open for application.

These allow interns to work within a non-academic organisation, on a project of their choosing, and explore how host organisations can make use of scientific knowledge, data, models or other tools to understand and manage their impacts or dependencies on the environment. Applications for internships should focus on accelerating and amplifying economic impact and improvements in quality of life from NERC-funded research, by working with business, non-governmental organisations or government bodies. This includes:

- strengthening existing partnerships;
- developing new relationships that lead to collaborative projects;
- researching new market opportunities;
- providing case studies of knowledge exchange from NERC-funded research;
- providing briefings and reports suitable for policymakers.

Projects may involve one or more non-academic partner and one or more researchers. Applicants must be resident in the UK and be employed by an eligible UK research organisation. The intern must be employed by their host institution for the duration of their fellowship. PhD students may apply providing they are at least in their second year of research. Researchers at any career stage, who can demonstrate how NERC funded research could be used to make a real difference to non-academic organisations, may also apply.

NERC offers a minimum of £100,000 to support open internship projects, which may last for up to six months. Appointees will usually spend 80 to 100 per cent of their time on the project. NERC will pay for direct salary costs, national insurance and superannuation, travel and subsistence costs, whereas the partner organisation is expected to cover the overhead costs of hosting the intern.

**Deadline: 21st July**

More information can be found here: <http://www.nerc.ac.uk/funding/available/schemes/internships/open-innovation/>

**IEWS**

**How to tell if your seaweed looks weird**

A new online course released by the Scottish Association for Marine Science (SAMS UHI), in partnership with The Open University in Scotland, makes cutting edge research on seaweed cultivation freely available for the first time to learners, industry and academics alike.



*SAMS support scientist Lars Brunner collects seaweed at the institute's Dunstaffnage base, near Oban*

Seaweed has often been hailed as a solution to a number of global issues, whether it is the next 'superfood' or the answer to food and fuel shortages. Now the budding UK seaweed cultivation industry, has been boosted by the production of a new free openly licensed online course with The Open University. My Seaweed Looks Weird has been devised by scientists at SAMS UHI and developed in partnership with Opening Educational Practices in Scotland (OEPS) hosted at The Open University in Scotland. The course is aimed at students with a scientific background and employees within the industry. It aims to build their

knowledge and understanding of seaweed parasitology, enhancing employability and skills within the industry and leading to badged recognition for learners.

The content is based on a Natural Environment Research Council-funded project, GlobalSeaweed, which aims to establish a worldwide network of partners tackling emerging issues in seaweed cultivation, such as pests, invasive species and pathogens. Project leader Dr Claire Gachon is excited about opening her research to the wider population. She said: "Seaweed has promised a lot but, as in any new industry, there are pros and cons to consider. We need a clear picture of where the industry is going and how we can make it sustainable. The UK has immense potential as a producer of seaweed, but currently lags behind most coastal Asian countries. However, this delayed development gives scientists and businesses the chance to apply the most advanced levels of research and understanding to the industry from the start. Running this course through the Open University will allow the GlobalSeaweed project to communicate with lots of audiences and will help us achieve our goal of creating a network of seaweed industry partners."



*Scientists check on the SAMS seaweed farm, where a variety of seaweeds are grown to support research*

Ronald Macintyre from OEPS added: "We are seeing a great deal of interest in free and openly licensed courses from specialist research institutes. They are an effective way to reach academic and industry audiences with relevant knowledge and data in a timely way. Openly licensed resources are a useful way to achieve this as they also allow the content to be retained, reused, revised, remixed and/or redistributed provided that the original resource author is attributed. This extensively increases the potential reach and impact of data and knowledge shared in this way."

The UK has a tradition of seaweed harvesting; it has been part of the country's diet for around 4,000 years and was traditionally used as a cheap fertiliser. Today, countries like China harvest seaweed on a huge scale as part of a multi-billion dollar industry globally.

## 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

### 12th-17th June 2016: Gordon Research Conference on Ocean Biogeochemistry

*Hong Kong, China*

The 1st Gordon Research Conference (GRC) on Ocean Biogeochemistry will be held at the Chinese University of Hong Kong. The topic of this first conference will be *The Biologically-Driven Ocean Carbon Pumps*.

Interested researchers, postdoctoral fellows and graduate students are invited to apply for participation as soon as possible on the GRC website (Online Application):

<http://www.grc.org/programs.aspx?id=17297>

[Nianzhi Jiao](#) and [Eileen E. Hofmann](#) (Chairs)

[Louis Legendre](#) and [Sylvia Sander](#) (Vice Chairs)

### 5th-7th July 2016: UK Antarctic Science Conference

*UEA, Norwich, UK*

We welcome everyone working on Antarctic or Southern Ocean science, including techniques such as in situ measurements, numerical models, laboratory experiments or remote sensing. The conference welcomes all science disciplines, including cryosphere, earth, atmosphere, marine, climate and life sciences.

There are rooms booked for associated meetings Monday - Tuesday and Thursday - Friday, so if

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

you would like to organise a side meeting (e.g. UK Polar Network, Sea Ice group) then please contact us. We also look forward to hearing from you if you are interested in sponsoring the conference or having a stand or display at the conference. We look forward to welcoming you to Norwich: <http://www.challenger-society.org.uk/News/UKASC2016>

### 5th-8th September 2016: 17<sup>th</sup> Biennial Challenger Society Conference: Oceans and Climate

*Liverpool, UK*

Keynote speakers for the 2016 Challenger conference have been announced. Details are on the conference website along with session details, registration and abstract submission <https://www.liverpool.ac.uk/challenger-conference-2016/>

The abstract deadline is fast approaching so follow the link for a full list of sessions <https://www.liverpool.ac.uk/challenger-conference-2016/abstract-submission/>. Remember to book your accommodation when you register at <https://www.liverpool.ac.uk/challenger-conference-2016/registration/>. See you in Liverpool on the 5-8th September, the Challenger 2016 Organising Committee [csms\\_enquiry@noc.ac.uk](mailto:csms_enquiry@noc.ac.uk)

### 12th-16th September 2016: CIESM Congress

*Christian Albrechts University, Kiel, Germany*

To All CIESM Friends, this will be the first time that our Congress takes place in Germany, which has been a Member of our Commission since 1969.

The 41st CIESM Congress will take place in mid-September in Kiel, on the Baltic shore, at the kind invitation of the German Government. Our Meeting, one of the largest multi-disciplinary forums in marine science, will present a major opportunity not only for researchers working on the Mediterranean and Black Seas, but also to any investigator from the Red Sea all the way to the Kara Sea, including the Atlantic shores, to come and share / compare / discuss their scientific approaches and latest findings in some 90 distinct sessions that will cover key issues. The sectors will range from marine geo-sciences, ocean climate, marine food-webs, invasive species, to marine plastics, biotechnology, geo-chemistry and marine policy. Note that each session will include a 30 minute-debate with the audience.

The link, [www.ciesm.org/marine/congresses/Kiel](http://www.ciesm.org/marine/congresses/Kiel).

[htm](#), will lead you to our Congress web pages, with details on the many Congress themes. We look forward to see many of you in Kiel in September. With my best regards, Frederic Briand, Director General, The Mediterranean Science Commission, CIESM

#### **14th-15th September 2016: 58<sup>th</sup> Marine Measurement Forum**

*Plymouth Marine Laboratory, Plymouth, UK*

The Marine Measurement Forum (MMF) is a series of non-profit making events that provides opportunities for the informal exchange of ideas, knowledge, techniques and developments across an extensive range of marine scientific measurement activities. The main event will be held on the 15th September with a series of 20 minute presentations and networking breaks. As it is anticipated that many delegates will be staying in Plymouth on the 14th and with generous sponsorship from both the Plymouth City Council and PML a networking/social dinner has been arranged at the National Marine Aquarium. Please see website for full details:

[http://www.pml.ac.uk/Media\\_and\\_events/Events/Marine\\_Measurement\\_Forum](http://www.pml.ac.uk/Media_and_events/Events/Marine_Measurement_Forum)

Plymouth Marine Laboratory in partnership with Plymouth City Council and other marine research organisations are hosting its first Marine Tech Expo on 14th September 2016. The expo will be the first of a series designed to showcase Plymouth's marine credentials across the world in the run up to the Mayflower 400 celebrations in 2020. MMF delegates are encouraged to join this free event hosted at the new University of Plymouth Marine Station. Further details can be found on the website.

#### **26th-29th September 2016: 7th EGO Conference on Autonomous Ocean Gliders and their Applications**

*National Oceanography Centre, Southampton, UK*

Abstracts to be submitted via the conference website by 23:00 UTC on 27th June 2016

<http://conference.noc.ac.uk/ego-conference>

The 7th EGO conference will provide a forum in which scientists, engineers, students and industry can exchange knowledge and experiences on the development of glider technology, the application of gliders in oceanographic research and the role of gliders in ocean observing systems. We invite oral and poster presentations on any aspect of

underwater glider technology and its application in marine science. The final program will be based upon the abstracts received but we anticipate the following themes:

- New developments in glider and sensor technology
- The role of gliders in Ocean Observing Systems
- Observing biogeochemical processes with autonomous vehicles
- Micro-scale to meso-scale physical processes observed with underwater gliders
- Gliders in polar oceans: science and technological challenges
- Sampling strategies for single vehicles and networks
- Glider operations: piloting, infrastructure, data management and legal issues

The 7th EGO conference will be held at the National Oceanography Centre (NOC) in Southampton, UK. The NOC now hosts the largest and most diverse research fleet of marine autonomous systems in Europe in purpose built facilities including the new Marine Robotics Innovation Centre, where marine businesses work alongside NOC's scientists and engineers. The opening session of the meeting will start at midday on Monday 26th September and the meeting will finish at 16:00 Thursday 29th September 2016.

#### **19th–21st October 2016: MASTS Annual Science Meeting: "Our Marine Environment – a Shared Resource"**

*Technology & Innovation Centre, Glasgow, UK*

Announcing the sixth Annual Science Meeting (ASM) of the Marine Alliance for Science and Technology for Scotland (MASTS). Now the largest gathering of marine scientists in the UK, this cross-disciplinary meeting brings together members of the marine science community, with the aim of promoting and communicating research excellence and forging new scientific collaborations. The cross-disciplinary nature of the event as well as the high calibre of the selected talks means that scientists and practitioners can broaden their knowledge in marine science as well as benefit from expertise and ideas gained in a range of fields other than their own.

Science presentations and e-poster sessions will take place on the first two days, together with opportunities to network. On the third day, the venue will host a number of meetings and workshops. The European Marine Board will also be hosting

their Autumn Meeting alongside the MASTS ASM this year.

We invite you to join us at the conference dinner to be held on the evening of Wednesday 19<sup>th</sup> October at the Millennium Hotel Glasgow (featuring MASTS own Prof Nick Hanley and his Hoochie Coochie Ceilidh band). The MASTS ASM is an inclusive event and we encourage all members of the Marine Science community to attend, whether you are based in Scotland, the UK or further afield. Everyone is welcome, so please circulate this notice widely.

We look forward to welcoming you at the MASTS ASM. A call for abstracts will follow in the coming weeks and early bird registration for the event will open on Monday 4<sup>th</sup> July. If you would like to host a special session (i.e. group of talks on a particular area/topic), a workshop or a side meeting, or if you would like to exhibit at the event, or showcase a piece of equipment please contact [masts@st-andrews.ac.uk](mailto:masts@st-andrews.ac.uk) asap for details.

**15th-17th November 2016: SUT 2016 Technical Conference, The Future of Underwater Technology**

*London, UK*

The conference will be held in London (UK) to celebrate the 50th anniversary year of the Society. It aims to attract the best authors in their field from across the world to showcase new technologies, products, best practices and in particular foresight the next generation of subsea engineering, marine science, and all aspects of underwater technology. It will be a flagship event for the Society and it is the intent for it to become a regular occurrence and be held in future at SUT global centres around the world.

Academics, Consultants, Engineers and Scientists, Business Executives and Managers, Lawyers, Insurers and Underwriters, Researchers, Technicians, Young Professionals and Students are some of the people we expect to see at the conference. There are also opportunities for sponsorship and to take up exhibition space. The venue will allow provision for vessel access

alongside.

The programme will consist of plenary sessions, technical sessions, and student poster displays. Substantial effort will be made to ensure the highest quality programme with emphasis on the theme of the event. The final programme will be developed by the Technical Steering Committee which will be made up of representatives from the whole SUT organisation including Branch Committees, Special Interest Groups, and Council, [www.sut.org/event/sut2016](http://www.sut.org/event/sut2016).

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

*Oban, UK*

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)

CSMS email addresses are president, admin, membership, secretary and [treasurer@challenger-society.org](mailto:treasurer@challenger-society.org). Contributions for next month's edition of Challenger Wave should be sent to: [john@vectisenvironmental.com](mailto: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](mailto:jxj@noc.ac.uk) as soon as possible*

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## JOBS

### **Digital Data Analyst**

Cefas has a position for digital data analyst to work in the area of image analysis from camera systems, satellite images and other remotely sensed data sources. For full details and to apply please go to:

<https://www.civilservicejobs.service.gov.uk/csr/index.cgi> Search for job reference DEF/194/16 Data Analyst

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