

**CANADIAN OCEAN SCIENCE NEWSLETTER
LE BULLETIN CANADIEN DES SCIENCES DE L'OcéAN**

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CNC-SCOR Early Career Ocean Scientist Award



Stephanie Waterman 2016 Award

The Early Career Ocean Scientist Award is presented to an early career oceanographer/marine scientist for an outstanding contribution to marine sciences (in the broadest sense) within Canada. The award can be based on a single work/paper that provides a seminal contribution to the field, or ongoing work at a sufficiently high level of excellence that provides an outstanding overall contribution.

The Award: The award winner will receive a plaque with the award, as well as funds, from CNC-SCOR, to travel to the upcoming CMOS congress to receive the award and present a paper. Additionally, the award winner will be invited to sit on the CNC-SCOR

committee for 1 year beginning with the CMOS Congress associated with their award.

Obligations of winner: The winner will acknowledge CNC-SCOR on their presentation at the CMOS-Congress, and will be asked to provide a 1 to 2 page article on their research for the Canadian Ocean Sciences Newsletter.

History of the Award: The award was presented for the first time in 2016. It is open to candidates (Canadians, working in Canada or overseas, or permanent residents) who are within 10 years of completion of their Ph.D. (note that periods of leave (e.g., parental, health) during

this period do not count against the 10 year *Kim Davies 2017 Award* duration, provided appropriate documentation is provided). The candidate can work in any area of marine sciences, including academia, government, industry, NGO's, etc.

Award Nomination Instructions: Nominations are to be received no later than **15 February 2017**, by email to the CNC-SCOR secretary: David.Greenberg@dfo-mpo.gc.ca to be considered by the selection Committee. Receipt of submissions will be provided if requested. Nominations will be adjudicated by the CNC-SCOR committee and will require a nomination letter highlighting the nominee's merits (maximum 2 pages), plus 2-4 supporting letters

as well as an up to date CV of nominee. Nominations not selected for the award in previous years will be maintained active for three subsequent years (although they can be updated) or until the 10- year deadline has passed.



Kim Davies 2017 Award



Daniel Boyce 2018 Award



Ever wonder how long your favorite element remains in the ocean before it's gone again?

From [GEOTRACES Science Highlights](#) November 2018 - GEOTRACES eNEWSLETTER n°31

This timeframe, sometimes called a residence time, ranges from decades for the most reactive trace elements to millions of years for the most unreactive elements such as the major components of sea salt. The residence time is often difficult to constrain and involves estimating how much of an element is presently in the ocean (i.e., the inventory) as well as the magnitude of the total supply rate or removal rate of the element. In the study published by Hayes and co-authors in *Global Biogeochemical Cycles* (2018, see reference below), a replacement time (or residence time with respect to supply) can be quantified using large synthesized GEOTRACES datasets from the North Atlantic which can precisely define the inventory of trace elements as well as their supply rate using radioactive tracers. In particular, their method suggests an ocean replacement for iron that is only 6 years, meaning this micronutrient element may be cycling much more quickly than previous estimates have suggested and will provide a target for ocean models to understand how this element is removed from the ocean in terms of biological uptake or abiotic scavenging.

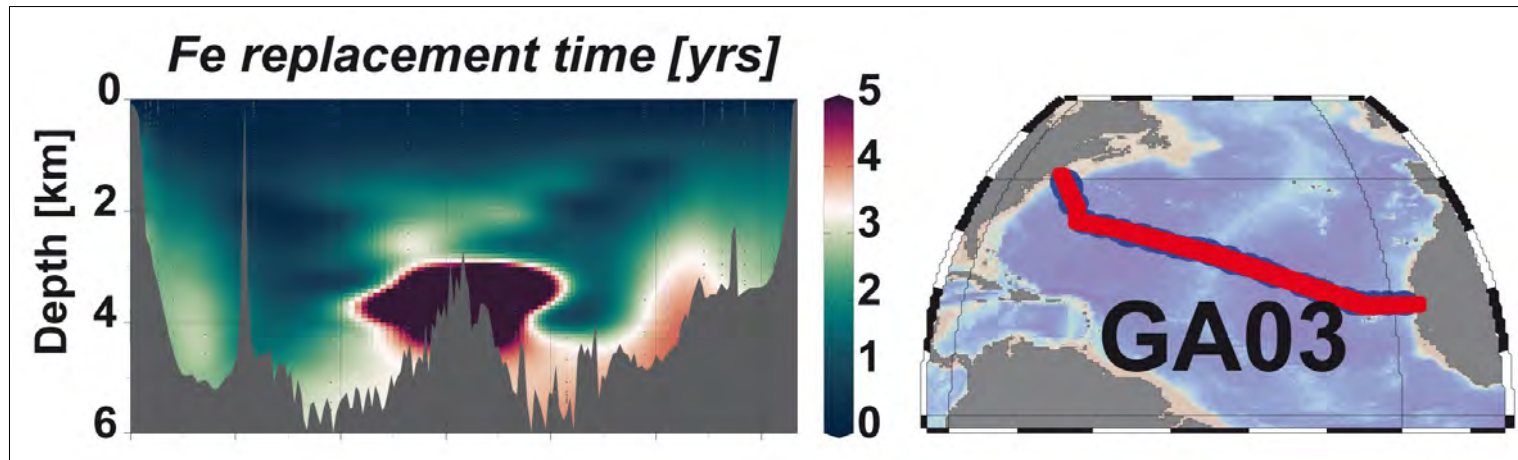


Figure: (Right) Replacement time of dissolved Fe across the GEOTRACES cruise section [GA03](#). This replacement time is how long it would take to replace all of the iron in the North Atlantic Ocean with a source of iron derived from the quantifiable delivery of the crustal isotope thorium-232 to the ocean. (Left) Map showing the GEOTRACES section [GA03](#) in the Atlantic Ocean. Click [here](#) to view the figure larger.

Reference:

Hayes, C. T., Anderson, R. F., Cheng, H., Conway, T. M., Edwards, R. L., Fleisher, M. Q., Ho, P., Huang, K.-F., John, S., Landing, W.M., Little, S. H. Lu, Y., Morton, P. L., Moran, S. B., Robinson, L. F., Shelley, R. U., Shiller, A. M., Zheng, X.-Y. (2018). Replacement Times of a Spectrum of Elements in the North Atlantic Based on Thorium Supply. *Global Biogeochemical Cycles*, 32(9), 1294-1311. DOI: <http://doi.org/10.1029/2017GB005839>

You can also read the Research Spotlight about this paper published on Eos.org: <https://eos.org/research-spotlights/a-novel-approach-reveals-element-cycles-in-the-ocean>

The role of melting-ice in driving the slowdown of circulation in the western Atlantic Ocean revealed by protactinium-thorium ratio

From [GEOTRACES Science Highlights](#) November 2018 - GEOTRACES eNEWSLETTER n°31

Abrupt climate changes in the past have been attributed to variations in Atlantic Meridional Overturning Circulation (AMOC) strength. Knowing the exact timing and magnitude of the AMOC shift is important to understand the driving mechanism of such climate variability. After a thorough selection of 13 sediment cores, the authors show that the proxy Protactinium-231-Thorium-230 ($^{231}\text{Pa}/^{230}\text{Th}$) exhibits remarkably consistent changes both in timing and amplitude over the last 25 thousand years (kyr) in the West and deep high-latitude North Atlantic. This consistent signal reveals a spatially coherent picture of western Atlantic circulation changes over the last deglaciation, during abrupt millennial-scale climate transitions. At the onset of deglaciation, an early slowdown of circulation in the western Atlantic is observed consistent with the timing of accelerated Eurasian ice melting, followed by a persistence of this weak AMOC for another millennium, corresponding to the substantial ice rafting from the Laurentide ice sheet. This timing indicates a role for melting ice in driving a two-step AMOC slowdown. This work also emphasizes that $^{231}\text{Pa}/^{230}\text{Th}$, under thorough criteria, could hold as pertinent proxy of ocean circulation.

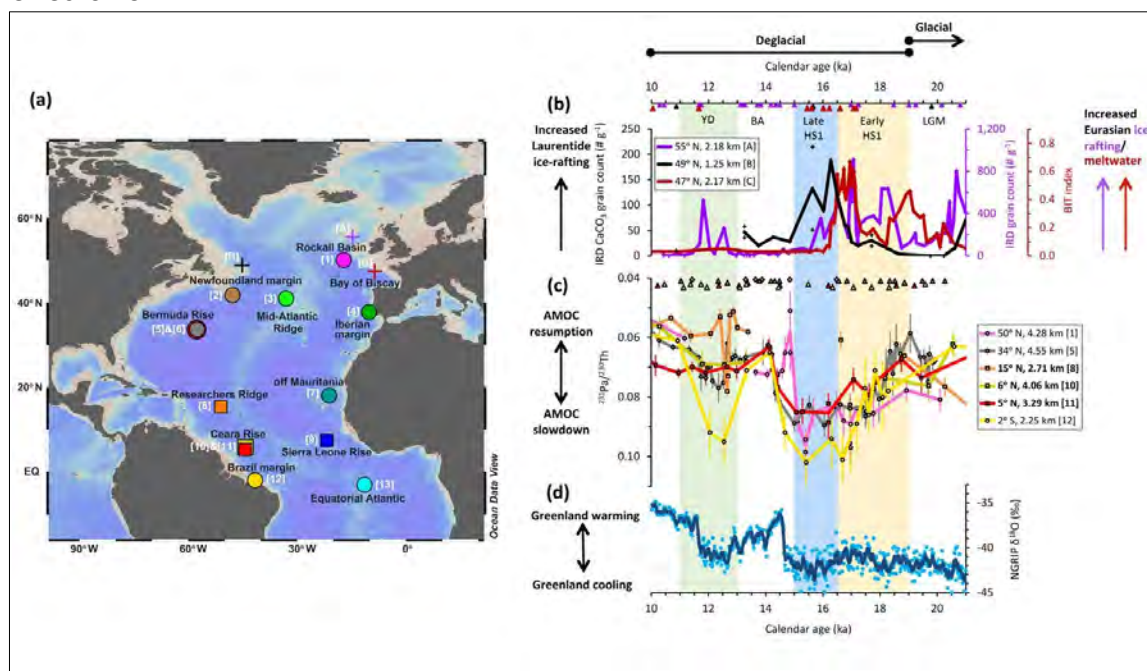


Figure: Use of sedimentary $^{231}\text{Pa}/^{230}\text{Th}$ to interpret changes in Atlantic Meridional Overturning Circulation (AMOC) strength and its link to climate variations over the past 25 thousand years. (a) Location map of $^{231}\text{Pa}/^{230}\text{Th}$ records [1]-[13] and ice melting proxy records [A]-[C] presented in this study, (b) North Atlantic ice rafting records (IRD) and a proxy record of Eurasian meltwater discharge (BIT index), (c) selected West and high-latitude North Atlantic $^{231}\text{Pa}/^{230}\text{Th}$ records, (d) Northern Greenland temperature proxy record. The AMOC slowdown observed (c) is consistent with the timing of an increased Eurasian ice melting (b). Click [here](#) to view the figure larger.

Reference: Ng, H. C., Robinson, L. F., McManus, J. F., Mohamed, K. J., Jacobel, A. W., Ivanovic, R. F., Gregoire, L. J., Chen, T. (2018). Coherent deglacial changes in western Atlantic Ocean circulation. *Nature Communications*, 9(1), 2947. <http://doi.org/10.1038/s41467-018-05312-3>

This section of your newsletter provides an opportunity to highlight your research programs to the Ocean Science Community.

You are invited to send contributions to David Greenberg,
david.greenberg@dfo-mpo.gc.ca

Mettez en valeur vos programmes de recherche en publiant un article dans cette première section de votre bulletin.

Faites parvenir vos contributions à David Greenberg,
david.greenberg@dfo-mpo.gc.ca

MEETINGS

XXVII IUGG General Assembly, CMOS 2019 Potpourri



Your starting point is: <http://www.iugg2019montreal.com>.

Monday, **18 February** 2019, last day for **abstract submission** and **travel grant application**.

Friday, **5 April** 2019, last day for **early bird registration**.

Please consult carefully the abstract submission guidelines before submitting your abstract at: <http://www.iugg2019montreal.com/abstract-submission.html>.

The latest IUGG newsletter: [IUGG Journal Volume 19 Number 1](#).

David Fissel, Chair of the CMOS Arctic SIG wants arctic researchers to participate in the 27 scientific sessions which involve Arctic and Northern Research in atmospheric sciences, oceanography and cryospheric sciences.

If you are working on any aspect of tides, Phil Woodworth [plw@noc.ac.uk] would like you to consider presenting your research in the session called *Tides of the Oceans, Atmosphere, Solid Earth, Lakes and Planets*, - Session **JP1** (IAPSO, IAHS, IAMAS, IAG). Conveners: Philip Woodworth, Richard Ray, Andreas Richter, Jean Paul Boy and Jeffrey Forbes.

GEOTRACES recommends two symposia on biogeochemistry - IAPSO: **P02** - *Physics and Biogeochemistry of Semi-Enclosed, Shelf Seas and Coastal Zones* Conveners: Peter Zavialov, Jianping Gan, Osmar Moller Jr and Katrin Schroeder and **P09** - *Marine Biogeochemistry Through Time: Nutrient, Trace Metal, Oxygen, and Carbon Cycling in the Past, Present and Future*, Conveners: Kate Hendry, Zanna Chase, Katja Fennel and Patrick Rafter.

Air Canada, [official transporter](#), offers IUGG attendees a **10% discount** on roundtrip airfare to Montreal-Pierre Elliott Trudeau International Airport (YUL), from any city or country serviced by Air Canada. Enter the **promo code 77PGTP21** in the search tool.

Ocean Related Gordon Research Conferences

Gordon Research Conferences (GRCs) are a group of prestigious international scientific conferences organized by a non-profit organization of the same name. The conference topics cover frontier research in the biological, chemical, and physical sciences, and their related technologies. The conferences have been held since 1931, and have expanded to almost 200 conferences per year. Conference locations are chosen partly for their scenic and often isolated nature, to encourage an informal community atmosphere. Contributions are "off-record" to encourage free discussion, often of unpublished research.



Gordon Research Seminars (GRSs) are unique meetings enabling graduate students and postdocs to share in the GRC experience. Each seminar is held in conjunction with a related GRC and begins the weekend immediately prior to the GRC. Most GRS participants also apply to attend the associated GRC.

There are several 2018 GRCs/GRSs [centered on ocean research](#). Some examples are:

[Coastal Ocean Dynamics](#) Southern New Hampshire University, Manchester, NH
GRS June 15 - 16, GRC June 16 - 21, 2019

[Chemical Oceanography](#) Holderness School, Holderness, NH
GRS July 13 - 14, GRC July 14 - 19, 2019

[Polar Marine Science](#) Renaissance Tuscany Il Ciocco, Lucca (Barga), Italy
GRS March 16 - 17, GRC March 17 - 22, 2019

Talks are all invited. Posters are welcome. Travel and registration subsidies are available to many contributors. Registration is by application which often closes within a month of the conference start, but can fill up earlier. See the [FAQ](#).

ICES Open Science Symposium - Halifax

Working Group on the Northwest Atlantic Regional Sea (WGNARS)

Bedford Institute of Oceanography, Ford Auditorium, 30 April 2019

Ecosystem Based Management and Integrated Ecosystem Assessments

The objective of the Open Science Symposium is to present ICES WGNARS outcomes to date to the Science community working in the Northwest Atlantic and to invite presentations that are relevant and complimentary to the work of WGNARS and participation by all who are interested. We are particularly interested in indicators of ocean health, productivity, and the benefits and services derived from our marine system, and more broadly anyone engaged or interested in developing science in support of ecosystem-based management and Integrated Ecosystem Assessments. We welcome new ideas, approaches and interest in our work.



[Details](#)

Workshop on Advances in Marine Climatology (CLIMAR-5) - Hamburg, Germany

The Fifth JCOMM [Workshop on Advances in Marine Climatology](#) (CLIMAR-5) will be held in Hamburg, Germany, from 6-8 May 2019. In conjunction with the In Situ Wind Workshop on 9 May 2019, the meeting aims to build on the outcomes of the four previous CLIMAR workshops and on the outcomes of the alternating and closely related "Advances in the Use of Historical Marine Climate Data" (MARCDAT) workshops. All these workshops have brought together a wide spectrum of marine data users and managers of marine data and products. Invited and contributed presentations will explore recent advances in marine climatology and its applications, covering meteorological and oceanographic aspects. **Workshop attendance is free** of charge and there are no registration fees.



Deadline: [abstract submission](#) **February 15, 2019**

Deadline: [registration](#) **March 31, 2019**

Goldschmidt 2019 - Barcelona, Spain

August 18-23 2019



[Goldschmidt](#) is the foremost annual, international conference on geochemistry and related subjects, organised by the European Association of Geochemistry and the Geochemical Society. Sign up to the [mailing list](#) to receive email updates.



geochemical society

Grant application deadline: March 15, 2019

Abstract submission deadline: March 29, 2019

Early Registration deadline: June 18, 2019

Standard Registration deadline: July 18, 2019

*Please send meeting announcements to
David Greenberg,
david.greenberg@dfo-mpo.gc.ca*

*SVP faites parvenir vos annonces de réunion à
David Greenberg,
david.greenberg@dfo-mpo.gc.ca*

POSITIONS AVAILABLE

Two Positions - Royal NIOZ, Texel, 't Horntje , The Netherlands

Junior Scientist or Senior Scientist in Marine Chemical Oceanography

Is your research all about studying ocean carbon cycles? In that case, we gladly invite you to join our research at OCS. We are looking for a highly motivated marine chemical oceanographer with an extensive track record based on ocean carbon cycling. Research topics could include, but are not limited to, ocean acidification, organismal carbon uptake mechanisms and interaction with global biogeochemical cycling.

You are expected to acquire research grants and to participate in (or lead) oceanographic research cruises with the Royal NIOZ research vessel R/V Pelagia. You will cooperate with other members of the OCS department and contribute your knowledge in multidisciplinary projects together with other researchers at the Royal NIOZ.

You like to work in an interdisciplinary and international research environment. You have a strong command of the English language in speaking and writing.

[Details](#)

Deadline: January 28, 2019



Project Leader, Marine Technology Development - Royal NIOZ, Texel The Netherlands

The Royal NIOZ National Marine Research Facilities (NMF) department is responsible for the development and maintenance of high-grade research instruments for scientific sea research and facilitates the operation of national scientific marine research on board of our research vessels worldwide.



The development department includes a marine technology electronics section, an embedded software section, and a micromechanical instrumentation section. The department does not only cater towards all needs of the scientific departments of Royal NIOZ but also towards diverse other institutes within the national and European scientific (sea research) community; physical, chemical and biological oceanography rely on new

instruments to be developed to stay at the forefront of marine research.

Autonomous sensor development, deep sea observatories, and moored instrumentation are currently important research directions. Other potential lines of research include, but are not limited to, autonomous (underwater) vehicles, robotics, and underwater communication.

[Details](#)

Deadline: February 22, 2019

Postdoc - Chemical Oceanography, University of Washington, Seattle

The UW School of Oceanography is seeking a Postdoctoral Research Associate to work with a team (Crusius, Murray, Bundy) focused on understanding the inputs of metals and/or metal isotopes to Gulf of Alaska surface waters from Alaskan and Asian dust, from fossil fuel combustion and from other atmospheric sources. This position is full-time (100% FTE), 12-months/year, with an initial term appointment of one year (12 months), renewable for a second year, assuming satisfactory performance. The start date is negotiable and the position is available immediately.



This position will contribute to a project that involves land-based sampling in remote Alaskan island and/or coastal locations, together with metal and isotopic analyses, aimed at assessing the dust flux to Gulf of Alaska surface waters and at distinguishing Alaskan dust, Asian dust, and fossil fuel-derived inputs. The Research Associate will be involved in all stages of the research, from field observations to laboratory analyses and experiments, to contributing to publications. Field observations will include collection of size-fractionated as well as bulk samples, with optional sector control to allow sample collection during optimized wind direction.

[Details](#)

Deadline: Applications considered as they arrive. Closed when position is filled.

Postdoc - Biogeochemical Cycling, GEOMAR, Kiel, Germany

Our work focuses on the role of the oceans in the global carbon cycle, and the biogeochemical cycles of carbon, nutrients and trace elements and their interactions with ocean biology. We combine developments of analytical techniques and novel sensors, with ocean observations and laboratory experiments.



The candidate will investigate the sources, sinks, biogeochemical cycling and ecological effects of trace elements in the oceans. The work will focus on open ocean systems and form part of the large contribution by the team to the International GEOTRACES Program. State of the art analytical techniques are available to undertake ocean observations, experiments and data handling. The candidate will perform ocean observations and link the sources and behaviour of trace elements to tracers (e.g. Ra isotopes, ^3He). The candidate will undertake sample collection and analysis with assistance of technical staff, with subsequent data analysis, interpretation and scientific manuscript publication. Preparation and submission of research proposals is expected. Supervision and co-supervision of students and researchers is envisaged.

[Details](#)

Deadline: February 14, 2019

Principal Biogeochemist - PNNL, Sequim, Washington

PNNL's Marine Sciences Laboratory is developing robust marine research programs in Sustainable Environmental Systems focused on renewable ocean energy, climate change impacts in the coastal ocean, ecological restoration, ecotoxicology, marine biotechnology, and contaminant fate and effects in the coastal ocean.

This position will identify and steward growth areas in coastal/marine biogeochemistry, lead proposals, and manage and carry out research projects/programs strategic to the energy, environment, and security focus of the Marine Sciences Laboratory (MSL). The incumbent will be responsible for growth in MSL programs focused on research and technology development in marine biogeochemistry. This could include ultra-trace analytical chemistry, investigations into minor and trace element biogeochemical cycling, extraction of minerals from seawater, sediment biogeochemistry, marine radiochemistry or another relevant area of growth.

The principal biogeochemist will work with an interdisciplinary team of scientists and engineers to manage and grow a biogeochemistry program, building on the facilities and expertise that already exists at the MSL.

[Details](#)

Deadline: not posted



Geology Intern - OERA, Halifax, NS

6 Month Full-time (37.5 hr/wk) Position

The Offshore Energy Research Association (OERA) is a not-for-profit organization who leads environmental, marine renewable and marine geoscience energy research initiatives through strategic partnerships with government, industry and academia.



As a Geology Intern, you will have the opportunity to work with geologists and geophysicists on a variety of geological projects within Nova Scotia. Tasks will include helping with onshore/nearshore data management; assisting the geoscience team in implementing their geological tasks, as well as creating geological maps, seismic interpretation and formation evaluations.

The successful candidate will be mentored by our geoscience team and will gain valuable knowledge and work experience in onshore/offshore geology of Nova Scotia. Most of the time candidate will work within the NSDEM office, with some work at the OERA, Central Registry and Department of Natural Resources Library.

[Details](#)

Deadline: February 4, 2019

Assistant Professor, Marine chemist - URI, Kingston, USA

The Graduate School of Oceanography (GSO) at the University of Rhode Island (URI) invites applications for a tenure-track Assistant Professor within the broad specialization of marine chemistry. The position will be an academic year appointment with an expected start date of September 1, 2019. We seek applications from researchers who specialize in any aspect of marine chemistry or chemical oceanography. The new hire will enter the vibrant research community at URI and the many neighboring academic institutions within New England. Opportunities exist to participate in the active sea-going community of GSO, the East Coast Oceanographic Consortium, and the Ocean Exploration Trust, to utilize platforms such as R/V Endeavor, E/V Nautilus and the newly awarded Regional-Class Research Vessel. Physical facilities include the Marine Science Research Facility, Brown Center for Computation and Visualization, Rhode Island Genomics & Sequencing Center, and the NSF Coastal Ecology Assessment Innovation and Modeling Program for Narragansett Bay. In general, we invite individuals with a strong commitment to research, to excellent teaching and mentorship at the undergraduate and graduate levels.



[Details](#)

Deadline: First consideration January 31, Second consideration February 28, 2019

Looking for work? Try the CMOS site ([click](#)).

Vous recherchez un emploi? Visitez le site SCMO ([click](#)).

GENERAL

OERA Student Research Travel Program

The objective of the OERA Student Research Travel Program is to cultivate collaborations between Nova Scotia student researchers and international research facilities or laboratories that will contribute to advancing the offshore energy sector here in Nova Scotia and in building research capacity for the province.

The program is open to full-time senior honours and graduate students* attending a Nova Scotia university or the Nova Scotia Community College (NSCC), whom are conducting research in marine renewables, marine geosciences or seismic & marine sound.

**Funding for post-doctoral fellows may be considered on a case by case basis.*

The program has been designed to support student travel to/from relevant field schools, relevant courses and other learning opportunities as approved by OERA management. Workshops, conferences and other types of meetings are not eligible under this program.

[Details](#)

Deadline for Applications: February 28, 2019



Training: NF-POGO Centre of Excellence 2019-2020

The Nippon Foundation-POGO Centre of Excellence (NF-POGO CofE) provides world class education and training courses in the field of observational oceanography, since 2008. Starting in 2013, the NF-POGO CofE has been hosted by the Alfred Wegener Institute, Germany's foremost polar and marine research institution. The next training programme (NF-POGO cofE Phase III) will start in autumn 2019. The call is **open until the end of February 2019**.



Located in the North Sea, the NF-POGO Centre of Excellence at AWI will be conducted on the offshore island of Helgoland and the UNESCO reserve Waddensea island of Sylt. Helgoland provides opportunities for the study of open-ocean sciences; shelf/basin interactions are topics of study at Sylt.

Scholarships will be provided from NF-POGO through the CofE that cover travel, room, board, tuition, and a modest allowance for those students accepted into the programme.

[Details](#)

Training: Instrumenting our ocean for better observation

IOCCP and BONUS INTEGRAL are thrilled to open online applications (<http://www.ioccp.org/2019-training-course>) for an international training course on "Instrumenting our ocean for better observation: a training course on a suite of biogeochemical sensors". The course will be held at the Sven Lovén Center for Marine Sciences in Kristineberg, Sweden, on 10-19 June 2019. The goal of the course is to further develop proficiency in the use of a suite of biogeochemical sensors and to improve the quality of the data currently generated by autonomous biogeochemical sensors. This intensive, 10-day training course will provide trainees with lectures, hands-on in-situ and laboratory experiences, and informal interactions to improve in-depth knowledge on instrument know-how, troubleshooting, data management, data reduction, and quality control.

The course is open for 28 participants, PhD students and early-career researchers with significant potential for utilizing the course experience to advance their ongoing or planned research projects and their scientific career in general. Detailed application instructions are available from the course page on the IOCCP website. **Deadline: February 1, 2019**



Recognition

In addition to the [Early Career Ocean Scientist Award](#) highlighted at the beginning of this newsletter, there are several awards open for nomination at this time. Please take the time to think of who you think should be recognized in one of these categories.

CMOS recognizes significant achievements with prestigious oceanography [scholarships](#), [awards and prizes](#). Some awards are for members of the Society. Others are open to anyone deemed deserving.

The **President's Prize** is awarded to a Society member or members for a recent paper or book of special merit in the fields of meteorology or oceanography. If for a paper, that paper must have been accepted for publication in ATMOSPHERE-OCEAN, the CMOS Bulletin SCMO or another refereed journal. **Deadline: February 15, 2019**

The **François J. Saucier Prize in Applied Oceanography** is awarded to a Society member (or members) for an outstanding contribution to the application of oceanography in Canada. **Deadline February 15, 2019**

The **Neil J. Campbell Award** for Exceptional Volunteer Service is awarded to a Society member for *exceptional service to the Society as a volunteer*. The award may be made for an exceptional contribution in a single year or for contributions over an extended period. The contribution should have resulted in an important advancement for CMOS and/or its aims, nationally or locally. **Deadline: February 15, 2019**

The **J.P. Tully Medal in Oceanography** is awarded to any person whose scientific contributions have had a significant impact on Canadian oceanography. **Deadline: February 15, 2019**

The Tertia M.C. Hughes Graduate Student Prizes are awarded to graduate students who are, or were within 16 months preceding the nomination deadline, registered at a Canadian university or Canadian students registered at a foreign university for contributions of special merit.

Deadline: February 15, 2019



The **Roger Daley Post-Doctoral Publication Award** is granted for excellence of a publication in the fields of meteorology or oceanography that has appeared, or is in press, at the time of nomination. **Deadline: February 15, 2019**

The **CMOS Undergraduate Scholarships** are awarded to students applying while in their penultimate undergraduate year at any Canadian University who, in their final year, will be taking four or more half courses in meteorology, oceanography, limnology, hydrology or climatology. **Deadline: March 15, 2019**

The **CMOS Daniel G. Wright Undergraduate Scholarship** is awarded to an undergraduate student applying while in the penultimate undergraduate year intending entering the final year of a B.Sc. Honours program in Mathematics and/or Physics or a related discipline, with interest in pursuing graduate work in physical oceanography. **Deadline: March 15, 2019**

The **CMOS - Weather Research House NSERC Scholarship Supplement** is awarded to a student in atmospheric or ocean sciences who has succeeded in winning an NSERC Postgraduate Scholarship or an NSERC Alexander Graham Bell Canada Graduate Scholarship. **Deadline: April 20, 2019**

Information about each award, including how to submit nominations, can be found by clicking [here](#).



The [NSERC John C. Polanyi Award](#) was created to recognize and support a university researcher or team of researchers whose work has led to a recent outstanding Canadian advance in a field of the natural sciences or engineering. **Deadline: March 1, 2019**

The [NSERC Herzberg Medal](#) will be awarded for both the sustained excellence and overall influence of a body of work conducted in Canada in the natural sciences or engineering. **Deadline: March 1, 2019**

Since 1994, CMOS has been invited to select Canadian teachers to participate in atmospheric science (**Project Atmosphere**) and physical oceanography (**Project Maury**) [summer workshops](#) organized by the American Meteorological Society and held in the United States. The workshops are specifically designed for teachers, who will leave with a wealth of classroom-ready ideas and plans. To learn about the great experiences of past attendees, go to the webpage below. The workshops take place in July. All expenses during the workshop are covered and a generous travel subsidy is provided. **Deadline: March 15, 2019**

Canadian Ocean Science Newsletter Le Bulletin Canadien des Sciences de l'Océan

Previous newsletters may be found on the [CNC/SCOR](#) web site.

Newsletter #105 will be distributed in March 2019.

Please send contributions to David Greenberg
david.greenberg@dfo-mpo.gc.ca

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SIGNOFF OCEAN-NEWSLETTER

Les [bulletins](#) antérieurs se retrouvent sur le site web du [CNC/SCOR](#).

Le Bulletin # 105 sera distribué en mars 2019.

Veuillez faire parvenir vos contributions à David Greenberg, david.greenberg@dfo-mpo.gc.ca

Si vous désirez vous abonner à bulletin, veuillez envoyer un courriel à listserv@lists.mcgill.ca avec le message suivant:

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CNC-SCOR

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Le Comité national canadien du Comité scientifique de la recherche océanographique (SCOR) favorise et facilite la coopération internationale. Il reflète la nature multidisciplinaire de la science océanique et de la technologie marine.

Members Ex-Officio/ Membres d'office

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Gordon Griffith (Executive Director CMOS)
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David Beauchesne (Québec-Océan étudiants)
Laura Gillard (CMOS students)
Lisa Miller (SOLAS)

The Canadian National Committee of the Scientific Committee for Oceanic Research (CNC-SCOR) fosters and facilitates international cooperation. It is a non-governmental body that reflects the multi-disciplinary nature of ocean science and marine technology.



WWW.CNCSCOR.CA