

CANADIAN OCEAN SCIENCE NEWSLETTER  
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### Chroniques étudiantes : Allier échanges culturels et étude scientifique : les zostères de la Baie James

**Lou Richer** l'Institut des sciences de la mer de Rimouski (ISMER)

De: [ISMER-UQAR Actualités](#), 28 novembre 2019



Crédit photo : Julián Idrobo de Los Andes University (Colombie)

Les zostères sont des plantes aquatiques marines formant de vastes herbiers sur de nombreuses côtes à la surface du globe. La zostère n'est pas une algue, mais bien une plante marine, comparable à du gazon, composée de feuilles, tiges, racines et produisant des graines. Les herbiers marins sont des environnements riches, primordiaux en termes d'habitat comme de nourriture pour de nombreuses espèces s'échelonnant sur toute la chaîne alimentaire : des petits invertébrés vivant dans le sédiment jusqu'aux poissons et aux oiseaux marins. L'importance des zostères ne s'arrête pas là puisque les herbiers sont des zones de reproduction et nourriceries d'espèces de poissons ou coquillages à forte valeur commerciale. Ils jouent aussi un grand rôle dans la stabilisation des sédiments, le stockage du carbone et le recyclage des nutriments. A l'échelle mondiale, ces herbiers subissent un déclin général observé depuis plusieurs décennies, s'accéléralant au cours de ces dernières années. La communauté scientifique s'intéresse de près aux facteurs et aux raisons de ce déclin, en particulier dans le contexte actuel des changements globaux.



Crédit photo : [Hydro Québec](#)

En Baie James, les membres des communautés Cries habitant la zone côtière sont les premiers à avoir remarqué un déclin des zostères et se sont inquiétés des conséquences sur les écosystèmes côtiers. Face à cette inquiétude et le manque de données scientifiques historique sur cette région difficile d'accès, Niskamoon Corporation, une organisation à but non lucratif fondée par le Conseil des Cris et Hydro-Québec, s'est donné comme mandat d'évaluer la

condition actuelle des écosystèmes côtiers basés sur la zostère et a engagée pour cela plusieurs scientifiques rattachés à différentes universités à travers le Canada dont l'UQAR/ISMER. C'est dans ce contexte que s'inscrit ma maîtrise en océanographie (supervision [F. Noisette](#)).

En effet, mon objectif principal est d'évaluer la condition physiologique actuelle des zostères à l'aide d'indicateurs physiologiques et en étudiant les performances



Crédit photo: [dfo-mpo](#)

relies aux processus de photosynthèse selon les conditions de leur milieu . Ce processus biochimique se résume par la production de matière organique et d'oxygène par l'utilisation de la lumière et de plusieurs nutriments fondamentaux présents dans l'environnement. C'est en particulier sur le lien entre les quantités d'azote et de carbone présentes dans le milieu et la qualité physiologique des zostères, que ma maîtrise se concentre. Afin de répondre à cet objectif, , une mission s'est menée à l'été 2019 dans la zone côtière de la Baie James, au sein de quatre communautés Cries. Nous avons échantillonné en plongée des zostères le long de la côte tout en mesurant plusieurs paramètres environnementaux de l'eau tels que la salinité, la température, la concentration de matière en suspension, de chlorophylle et, évidemment, les nutriments dans la colonne d'eau au-dessus des herbiers. Ces expéditions d'échantillonnage ont été réalisées depuis les canots traditionnels

autochtones, guidés par des membres des communautés. Ces moments privilégiés nous ont permis d'échanger avec nos guides, faisant converger leurs connaissances traditionnelles cries et les méthodes scientifiques que nous utilisons et qu'ils appellent plus communément la " Western Science".

Les indicateurs physiologiques sur les échantillons de zostères prélevés sur 16 sites seront analysés à l'hiver 2020 et, je l'espère, me permettront d'apporter une petite pierre à la compréhension des facteurs biochimiques en lien avec le déclin observé des herbiers marins de la Baie James.

#### **En Plus:**

Hydro Québec: [La zostère marine de la baie James](#) : un programme de recherche conjoint est toujours en cours.

ArcticNet: [Hydrographical Variations at James Bay Eelgrass Beds](#) in Relation to an Under-Ice River  
CBC.CA: [As eelgrass disappears in James Bay](#), so does a way of life.



## CNC-SCOR Early Career Ocean Scientist 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



*Cathryn Clarke Murray, 2019, leads invasive species research at DFO's Institute of Ocean Sciences//Cathryn Clarke Murray, 2019, dirige la recherche sur les espèces envahissantes à l'Institut des sciences de la mer du MPO.*



*Daniel Boyce, the 2018 awardee, continues his ground-breaking work related to Marine food webs at the Ocean Frontier Institute (Dalhousie University)//Le lauréat 2018, Daniel Boyce, poursuit ses travaux novateurs sur les réseaux trophiques marins au Ocean Frontier Institute (Dalhousie University).*

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 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 January, by email to the CNC -SCOR secretary: [David.Greenberg@dfo-mpo.gc.ca](mailto: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
  - Nominations 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.

## Prix du CNC du SCOR pour océanographe en début de carrière

Le prix pour océanographe en début de carrière est présenté à un océanographe ou à un spécialiste de la mer pour sa contribution exceptionnelle, en début de carrière, aux sciences de la mer (au sens large), au Canada. Le prix est octroyé soit pour un article ou une étude ponctuelle qui contribue de façon déterminante aux sciences marines, soit pour des travaux de longue haleine de haute qualité et qui apportent une contribution globale exceptionnelle.



Notre premier lauréat, [Stephanie Waterman](#), travaille sur plusieurs aspects de la circulation océanique à UBC. // Our first laureate, [Stephanie Waterman](#), is working on several aspects of ocean circulation at UBC.

des résidents permanents (notez que les périodes de congé, parental ou médical, par exemple, prises au cours de ces dix années, ne comptent pas, du moment que des preuves sont fournies). Le candidat peut travailler dans n'importe quel secteur des sciences de la mer: universitaire, gouvernemental, industriel, non gouvernemental, etc.

• Directives de nomination:

- Les nominations doivent parvenir le 15 janvier au plus tard, par courriel, au secrétaire du CNC du SCOR ([David.Greenberg@dfo-mpo.gc.ca](mailto:David.Greenberg@dfo-mpo.gc.ca)) pour

- Le prix: le gagnant du prix recevra une plaque commémorative et une subvention du CNC du SCOR, qui lui permettra de se rendre au prochain Congrès de la SCMO pour recevoir son prix et présenter ses travaux. De plus, le lauréat pourra siéger au CNC du SCOR pendant un an, à partir de la date du Congrès où le prix lui sera décerné.
- Obligations du gagnant: le gagnant mentionnera le CNC du SCOR dans sa présentation au Congrès de la SCMO. On lui demandera de rédiger un article d'une ou deux pages portant sur ses travaux, pour publication dans le Bulletin canadien des sciences de l'océan.
- Histoire du prix: le prix est décerné pour la première fois en 2016. Y sont admissibles les candidats qui ont obtenu leur doctorat il y a



En 2017, [Kim Davies](#) s'est distinguée pour ses recherches sur les baleines qui se poursuivent à l'UNB Saint John. // In 2017 Kim Davies was honoured for her whale research which continue at UNB Saint John.

garantir que le comité de sélection en tienne compte. Un accusé de réception sera envoyé si le candidat le demande.

- Le CNC du SCOR évaluera les nominations.
- Les soumissions devront inclure une lettre de nomination soulignant les mérites du candidat (2 pages, maximum), deux à quatre lettres de soutien et un curriculum vitae à jour du candidat.
- Les nouvelles nominations qui n'auront pas été retenues seront prises en compte (et pourront être mises à jour) au cours des trois années subséquentes, ou moins, si le délai de dix ans est passé.

## Dany Dumont CNC-SCOR East to West Tour Speaker

Each year CNC-SCOR selects someone from the West coast to give a lecture tour heading East and someone from the East to give a lecture tour heading West. The person heading West gives talks over about 1 week at some combination of western oceanographic institutes and schools. [Dany Dumont](#), professor of physical oceanography at Institut des sciences de la mer de Rimouski (ISMER), Université du Québec à Rimouski (UQAR), will be the speaker for this year's Western Tour. Plans are now being made to visit universities and institutes some time between March 16 to 27. He will be speaking about his work on the [physics of seasonal sea ice and wave-ice interactions](#).



## CNC-SCOR West to East Tour Speaker Schedule

The 2019-20 [Eastern annual CNC-SCOR tour speaker](#), [Dr. Jennifer Jackson](#) from the [Hakai Institute](#) in Victoria will be speaking at the venues below:

Monday, January 27th – Rimouski – Contact [Cédric Chavanne](#) (UQAR)

Tuesday, January 28th – Quebec City – Contact [Brigitte Robineau](#) (Laval)

Thursday, January 30th – St John's – Contact [Fraser Davidson](#) (DFO), [Brad de Young](#) (Memorial)

Friday, January 31st – Halifax – Contact [David Greenberg](#) (BIO), [David Barclay](#) (Dalhousie)



Check with the contacts for locations and timing.

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

*Your are invited to send contributions to David Greenberg,  
[david.greenberg@dfo-mpo.gc.ca](mailto: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](mailto:david.greenberg@dfo-mpo.gc.ca)*



## MEETINGS

### AMEMR 2020

#### **Plymouth, UK - 13-16 July 2020**

The AMEMR (Advances in Marine Ecosystem Modelling Research) Conference provides an opportunity to present, discuss and learn about a wide variety of marine modelling challenges, methods, applications and outcomes.

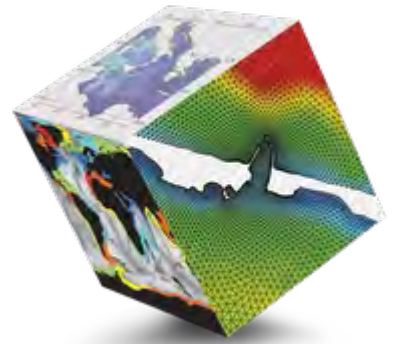
Marine ecosystem models are a fundamental tool for understanding marine ecosystems and providing projections of potential future states of the marine environment. Marine modelling is continuously evolving, in response to new scientific knowledge, societal needs and computational resource.

AMEMR has a strong focus on the state-of-the-art and articulating future challenges. It also promotes interdisciplinary discussion among stakeholders and modelling, observational and experimental scientists and students who want to contribute to the conceptualisation, design, development and application of improved and new marine ecosystem models.

[Details](#)

**Abstract deadline December 13 2019**

**Early Registration March 15 2020**



### EGU General Assembly

#### **Vienna, Austria - May 3-8 2020**

The [EGU General Assembly](#) 2020 will bring together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience. The EGU is looking forward to cordially welcoming you in Vienna.

The European Geosciences Union (EGU) is the leading organisation for Earth, planetary and space science research in Europe. With their partner organisations worldwide, they foster fundamental geoscience research, alongside applied research that addresses key societal and environmental challenges. Their vision is to realise a sustainable and just future for humanity and for the planet.



**Abstract deadline Jan 15 2020**

**Early Registration Mar 31 2020**



54<sup>th</sup>  
CONGRESS  
e  
CONGRÈS

## Congrès Ottawa 2020 Congress

**The Canadian Meteorological and Oceanographic Society (CMOS) 54<sup>th</sup> Congress** will be held May 24-28, 2020, Delta Ottawa City Centre - Ottawa, Ontario, Canada. More detailed information will be posted as it becomes available on the Congress website at <http://congress.cmos.ca>.

The focus of this congress is **“Building Societal Resilience to Changing Weather, Climate, Oceans and Environment”**.

The CMOS Congress in 2020 in Ottawa has the unique opportunity to highlight to policy makers the national observations, research and services that contribute substantively to reduction of society’s risk to extreme weather, climate and environmental events and to outline the challenges facing us in managing our Future Earth environment and societal resilience. In addition, the Congress can foster cross-disciplinary dialogue amongst research and managerial professionals in meteorology, oceanography, hydrology, earth sciences, environment and social science on challenges facing us nationally and globally. What measures can be taken to ensure that we have the necessary national and global infrastructure and expertise in place to maintain societal resilience? Special sessions will be held not only on the use of weather, climate and environmental prediction for risk reduction but also on: (i) protecting Canada’s vast Arctic and sub-Arctic as weather, climate and environment changes and (ii) strengthening cooperation to reduce risks to agriculture and other sectors posed by changing weather and climate

The Themes under which scientific and technical sessions will be organized are, in no order of priority:

1. Risks and Impacts of Climate Change on the Resilience of Major Sectors
2. Tornadoes and Other Extreme Weather Events Impacting Canadians
3. Oceans and Ice in a Changing Climate
4. Floods and Water Crises in Canada and Globally
5. Impacts of A Changing Climate in the Arctic
6. Climate-Weather-Water and Food
7. Pollution of the Air, Water and Ecosystems
8. The Cryosphere – Impacts Locally to Globally

The **Call for Abstracts** will be issued in December 2019 with a **deadline for submission of 1 February 2020**.

Scientific and plenary sessions of the Congress will take place from Monday, 25 May to Thursday 28 May 2020. Requests for workshops, business meetings, courses and other Congress-related events may be accommodated during Sunday 24 May 2020, before the icebreaker reception, depending on available space.

**Le 54<sup>e</sup> Congrès de la Société canadienne de météorologie et d’océanographie (SCMO)** aura lieu du 24 au 28 mai 2020, à l’hôtel Delta City Centre d’Ottawa (Ontario), Canada. Dès que disponibles, de plus amples renseignements paraîtront sur le site Web de la SCMO à l’adresse <http://www.scmo.ca>.



Le thème de ce congrès est «**Bâtir une résilience sociétale face à l'évolution du temps, du climat, des océans et de l'environnement**».

Le Congrès 2020 à Ottawa offre une occasion unique de renseigner les décideurs sur les observations, les recherches et les services nationaux qui contribuent de façon importante à la réduction des risques qui menacent la société, en ce qui a trait aux phénomènes météorologiques, climatiques et environnementaux extrêmes. Il permet en outre de souligner les enjeux auxquels nous sommes confrontés relativement à la gestion de l'environnement de la Terre de l'avenir et à notre résilience sociétale. Le congrès favorise les échanges interdisciplinaires entre les professionnels de la recherche et ceux de la gestion qui travaillent dans les domaines de la météorologie, de l'océanographie, de l'hydrologie, des sciences de la Terre, de l'environnement et des sciences sociales, en ce qui concerne les enjeux qui nous préoccupent aux échelles nationale et mondiale. Quelles mesures pouvons-nous mettre en œuvre afin de disposer de l'infrastructure et de l'expertise nationales et mondiales nécessaires au maintien de la résilience de la société? Des séances spéciales traiteront non seulement de l'utilisation des prévisions météorologiques, climatologiques et environnementales pour réduire les risques, mais porteront aussi sur i) la protection des vastes régions arctique et subarctique du Canada et sur ii) le renforcement de la coopération afin de réduire les risques menaçant l'agriculture, et ce, dans le contexte de l'évolution du temps, du climat et de l'environnement.



Voici, sans ordre particulier, les thèmes des séances scientifiques et techniques :

1. Les risques et les impacts des changements climatiques relativement à la résilience des secteurs importants
2. Les tornades et autres phénomènes météorologiques extrêmes et leur répercussion sur les Canadiens
3. Les océans et les glaces dans un climat en évolution
4. Les inondations et la crise de l'eau au Canada et dans le monde
5. Les impacts des changements climatiques dans l'Arctique
6. Le climat, le temps et l'eau relativement à l'alimentation
7. La pollution de l'air, de l'eau et des écosystèmes
8. La cryosphère: impacts locaux à mondiaux

L'appel de communications qui paraîtra au décembre 2019 et dont la date limite de soumission sera le 1<sup>er</sup> février 2020.

Les séances scientifiques et plénières du congrès se tiendront du lundi 25 mai au jeudi 28 mai 2020. Les éventuels ateliers, réunions d'affaires, cours et autres événements proposés liés au congrès se tiendront le dimanche 24 mai 2020, avant la soirée d'accueil, selon l'espace disponible.

## Gordon Research Seminar/Conference Ocean Mixing

**Manchester, NH - June 13-14 2020 (GRS), June 14-19 2020 (GRC)**

The Gordon Research Seminar (GRS) and Gordon Research Conference (GRC) are related but run independently. The Conference speakers are chosen by the chairs and others can present posters. The Seminars, are aimed at graduate students, post-docs, and other scientists with comparable levels of experience. The speakers are chosen from submitted abstracts.

[GRS: \*Relevant Processes and Their Impact on Ocean Dynamics, Biogeochemistry and the Climate System\*](#) - This meeting intends to not only focus on the fundamental understanding of ocean mixing processes, but also on the impact of ocean mixing processes on the larger scale climate system. This thus includes (but not limited to) the role of mixing processes for global ocean circulation, heat uptake, biogeochemistry, and the climate system. We therefore encourage junior scientists within and adjacent to the ocean mixing community to present their scientific advances from numerical, observational, and theoretical analyses across all time and spatial scales, and for any discipline. Attendees are therefore encouraged to consider the potential collaborations that may be initiated at this meeting, in particular those that are interdisciplinary.



The 2020 GRS on Ocean Mixing will be held the weekend immediately before the Gordon



Research Conference (GRC) on Ocean Mixing, both at the Southern New Hampshire University. The GRS is an ideal introduction to the GRC and participation in both meetings is highly recommended. The GRS format includes oral presentations by attending junior scientists, two poster sessions, social events in the evenings and dedicated time for discussion. Applications for this meeting must be submitted by **May 16, 2020**. The seminar chair will select speakers from abstracts submitted by **March 13, 2020**. Those applicants who are not chosen for talks and those who apply after this oral presentation deadline will be expected to present a poster.

[GRC: \*The Impact of Ocean Mixing on the Earth, Ocean and Atmosphere Systems, Climate and Society\*](#) - The distribution of turbulent mixing in the ocean affects the transport of heat, freshwater, dissolved gasses, nutrients and pollutants. In turn these influence or control biological productivity, air-sea exchanges, regional and global scale circulation patterns, local weather and future climate. The goal of the 2020 Ocean Mixing GRC is to bring together disparate groups to identify and describe critical elements of mixing physics that are most important in reducing the uncertainty in model predictions on all scales - spanning from rapid, small-scale dynamics to multi-decade, global impacts. We seek to bring together observational, theoretical, experimental, and numerical communities to develop new approaches to both advance our understanding and to tackle applied problems that have most societal relevance. Applications for this meeting must be submitted by **May 17, 2020**. Please apply early, as some meetings become oversubscribed (full) before this deadline. If the meeting is oversubscribed, it will be stated here. Note: Applications for oversubscribed meetings will only be considered by the conference chair if more seats become available due to cancellations.



## **AOGS2020 17<sup>th</sup> Annual Meeting**

### **Hongcheon, Korea - Jun 28 - Jul 4 2020**

Asia Oceania Geosciences Society (AOGS) was established in 2003 to promote geosciences and its application for the benefit of humanity, specifically in Asia and Oceania and with an overarching approach to global issues. Asia Oceania region is particularly vulnerable to natural hazards, accounting for almost 80% human lives lost globally. AOGS is deeply involved in addressing hazard related issues through improving our understanding of the genesis of hazards through scientific, social and technical approaches.



**Asia Oceania Geosciences Society**  
**[www.asiaoceania.org](http://www.asiaoceania.org)**

Geodesy and Geophysics (IUGG), Japan Geo-science Union (JpGU), and Science Council of Asia (SCA).

[Details](#)

**Abstract deadline Jan 21 2020**

**Early Registration Apr 21 2020**

AOGS holds annual conventions providing a unique opportunity of exchanging scientific knowledge and discussion to address important geo-scientific issues among academia, research institution and public. Recognizing the need of global collaboration, AOGS has developed good co-operation with other international geo-science societies and unions such as the European Geosciences Union (EGU), American Geophysical Union (AGU), International Union of

*Please send meeting announcements to  
David Greenberg,  
[david.greenberg@dfo-mpo.gc.ca](mailto:david.greenberg@dfo-mpo.gc.ca)*

*SVP faites parvenir vos annonces de réunion à  
David Greenberg,  
[david.greenberg@dfo-mpo.gc.ca](mailto:david.greenberg@dfo-mpo.gc.ca)*



## POSITIONS AVAILABLE

### Postdoctoral Fellow, Ocean Remote Sensing/Computer vision

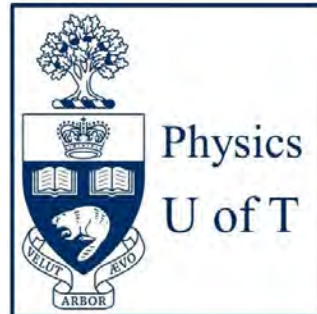
#### University of Toronto, Physics/Faculty of Arts & Science

Description of duties: We are seeking to hire a post-doctoral fellow, who either has expertise in physical oceanography and is willing to learn about modern computer vision methods, or vice-versa. Modern physical oceanography relies heavily on satellite imagery. The future [SWOT \(Surface Water Ocean Topography\)](#) satellite altimeter will measure ocean dynamics at an unprecedented resolution. Our community hopes that this new mission will trigger a giant leap in our fundamental understanding of the ocean, with impacts ranging from improving climate modelling to improving fisheries and coast guard operations.

The successful candidate will complement and have the opportunity to collaborate with the Department's vibrant Earth, [Atmospheric and Planetary Physics group](#) which we are a part of.

[Details](#)

**Applications are being considered now. Open until filled.**



### PhD Position in Evaporites Stable Isotope Geochemistry at ETH Zurich

#### ETH Zurich, Switzerland

The Isotope Geochemistry Group of the Institute for Geochemistry and Petrology, ETH Zurich, Switzerland, invites applications for a PhD position to explore the Mg and Sr stable isotope signature in evaporitic sequences. In recent years, the oceanic balance of Mg and stable-Sr isotopes (as  $\delta^{26}\text{Mg}$  and  $\delta^{88}/^{86}\text{Sr}$  values) has been investigated, demonstrating their potential to trace past variations in the oceanic inputs and outputs of these elements. However, the scarcity of past seawater  $\delta^{26}\text{Mg}$  and  $\delta^{88}/^{86}\text{Sr}$  record data, and differences between existing data-sets (all based on Ca-carbonate archives), currently limit this approach. In this project, we will explore and develop new evaporitic (non-Ca-carbonate) archives for seawater  $\delta^{26}\text{Mg}$  and  $\delta^{88}/^{86}\text{Sr}$  values and use them to reconstruct past variations in seawater composition. In that framework, we will also study the environmental conditions related to the formation of these evaporitic sequences as well as their post-depositional preservation.

The position is funded for four years by the Swiss National Science Foundation. It includes mainly geochemistry laboratory work as well as two field trips for sampling (in Italy and Israel), sedimentary and petrological study of the sequences, data analysis and modeling and outcomes communication (in conferences and papers). The position offers the student an excellent training in a world-leading Earth's surface group and laboratory as well as collaborations with geoscientists from different countries.

The position is funded for four years by the Swiss National Science Foundation. It includes mainly geochemistry laboratory work as well as two field trips for sampling (in Italy and Israel), sedimentary and petrological study of the sequences, data analysis and modeling and outcomes communication (in conferences and papers). The position offers the student an excellent training in a world-leading Earth's surface group and laboratory as well as collaborations with geoscientists from different countries.

[Details](#)

**Open until the position is filled**



## Postdoc - Coping with Climate Related Uncertainties and Variabilities

### Universität Hamburg, Germany

CLICCS (Climate, Climatic Change, and Society) is an ambitious research program at Universität Hamburg and its partner institutions. Funded by the German Research Foundation (DFG), it is part of Germany's Excellence Strategy. CLICCS is an ambitious research program at Universität Hamburg and its partner institutions. Funded by the German Research Foundation (DFG), it is part of Germany's Excellence Strategy. The program aims to understand climate changes, taking into account internal variability, extreme events, and unexpected side effects, addressing the natural and social spheres as well as their interactions. Thus CLICCS' overarching research question is: Which climate futures are possible and which are plausible?



Duties include academic services in the project named above. Research associates may also pursue independent research and further academic qualifications. The research associate will participate in the CLICCS-B5 project "Coping with Climate-Related Uncertainties and Variabilities" (<https://www.cliccs.uni-hamburg.de/research/theme-b/b5.html>). The specific duty within project B5 will be to advance spatially explicit integrated climate-energy-economic modelling within the field of Integrated Assessment. Processes must become resolved to such a degree that the modelling framework would become susceptible to insights on social dynamics as generated within the CLICCS-projects B1-B4. This requires close collaboration with all CLICCS-B projects.

[Details](#)

**Deadline for applications December 15, 2019**

### Tenure Track Scientist - Physical Oceanography

#### Woods Hole Oceanographic Institution

The Physical Oceanography Department at the [Woods Hole Oceanographic Institution](#) invites applications for a tenure track position on our scientific staff. The successful candidate will join a collaborative group of scientists who address a wide range of fundamental problems in ocean and climate physics, as well as interdisciplinary research questions. A world-class technical staff supports the use of a broad mix of traditional and innovative instruments and observational techniques to make measurements on all scales from microstructure up to global, and in all ocean domains including open-ocean and coastal regions. We welcome qualified applicants working in physical oceanography or a related field regardless of approach (observational, modeling, theory), and encourage those interested in the interplay between ocean dynamics and other components of the Earth system. We expect to hire at the Assistant Scientist level, but exceptional candidates at more senior levels may be considered.



Applicants should have a doctoral degree, postdoctoral experience, and a record of peer-reviewed publications. Scientific staff members are expected to develop independent, externally funded, and internationally recognized research programs. They also have the option of advising graduate students and teaching courses through the [MIT/WHOI Joint Program in Oceanography and Oceanographic Engineering](#).

[Details](#)

**Deadline for applications December 16, 2019**

## Postdoctoral Investigator - Biology

### Woods Hole Oceanographic Institution

Applications are invited for one Postdoctoral Investigator position in coupled biological-physical modeling and ecological data analysis to join an active research team at Woods Hole Oceanographic Institution (WHOI). The successful candidate will contribute to the understanding of underlying mechanisms linking physical forcings with biological productivity and population dynamics. The position will be based at WHOI.

The position is full time and available for a period of one year initially, but renewable for up to three years depending on performance and funding availability. Online application forms should be submitted with a cover letter and full curriculum vitae including a list of three references. Additionally, please email a copy of your letter of interest and CV to Dr. Rubao Ji ([rji@whoi.edu](mailto:rji@whoi.edu)).



Applicants must have a PhD in oceanography. Preference will be given to an applicant who has strong quantitative skills with direct research experience in physical-biological coupled numerical modeling in aquatic systems and analyzing large modeling and observation data sets. A strong background in physical oceanography and/or biological oceanography is desirable.

#### [Details](#)

**Application review begins immediately and will continue until the position is filled.**

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

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



## GENERAL

### CMOS Membership // Adhésion à la SCMO

**Help CMOS reduce costs by renewing your membership now.**

**Aidez CMOS à réduire les coûts en renouvelant votre adhésion dès maintenant.**

*Remember membership for **students** is **free!***

*N'oubliez pas que l'inscription pour les **étudiants** est **gratuite!***

Dear CMOS Member,

Every year at this time, we send you reminders to renew your membership. Please help the Society save money on postage and renew online. Outstanding invoices will be mailed out if required.

I trust you will continue to be part of the CMOS community. Take the time to renew online at <http://www.cmos.ca/>. When doing so please consider making a voluntary donation to one of the CMOS funds – your generosity will greatly enrich our CMOS activities. In addition, please continue to use our website as a useful resource of our events, publications, news and announcements.

Thank you for being a member of our Canadian Meteorological and Oceanographic Society. I hope to see you at our 2020 Congress in Ottawa, ON. I speak on behalf of our Society to thank you and express my appreciation of your active participation in our community!

Sincerely yours,

Gordon Griffith, P.Eng., ing., FEC  
Executive Director



Canadian  
Meteorological and  
Oceanographic Society

La Société Canadienne  
de Météorologie et  
d'Océanographie

Chers membres de la SCMO,

Chaque année, à cette époque, nous vous invitons à renouveler votre adhésion. S'il vous plaît, aidez la Société à économiser sur les frais des timbres et à renouveler en ligne. Les factures en suspens seront expédiées si nécessaire.

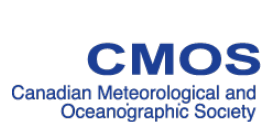
J'espère que vous continuerez à faire partie de la communauté de la SCMO. Prenez le temps de renouveler votre adhésion en ligne à : <http://www.scmo.ca/>. Merci de considérer de faire un don à

l'un des fonds de la SCMO — votre générosité enrichira considérablement les activités de la SCMO. De plus, merci de continuer à utiliser notre site Web en tant que ressource utile pour en savoir plus sur nos événements, publications, nouvelles et annonces.

Merci d'être membre de la Société canadienne de météorologie et d'océanographie. J'espère vous voir à notre congrès de 2020 à Ottawa. Au nom de notre société, je vous remercie de votre participation active au sein de notre communauté !

Sincères salutations,

Gordon Griffith, ing., P.Eng., FEC  
Directeur général



## Help our Teachers// Aidez nos enseignants

### Call for applications: CMOS Projects Atmosphere and Maury // Appel de candidature : Projets Atmosphere et Maury de la SCMO

(le français suit)

Dear CMOS members in Canada,

In today's heated debate about climate, our teachers need help in the classroom to get the correct knowledge about climate, oceans, the atmosphere and weather to their students. CMOS has a program to help them. But CMOS needs your help to reach the teachers! Would you please forward this e-mail to your local schools, friends and relatives who are teachers inviting them to apply.

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.

Kindergarten to Grade 12 teachers from across Canada are invited to apply. The deadline for application is March 15. One teacher per workshop will be selected by CMOS. For more information on the workshops, including subsidy details and the application forms, see [http://www.cmos.ca/site/summer\\_workshops](http://www.cmos.ca/site/summer_workshops) or e-mail Denis Bourque (see below).



Chers membres de la SCMO au Canada,

De nos jours où il y a tant de controverse au sujet du climat, nos enseignants ont besoin d'aide dans leur classe pour assurer une bonne connaissance du climat, des océans, de l'atmosphère et de la météo parmi leurs étudiants. La SCMO a un programme à cette fin. Mais la SCMO requiert votre aide à rejoindre ces enseignants! Pourriez-vous, s.v.p. ,faire parvenir ce courriel à vos écoles locales ainsi qu'à vos

ami(e)s ou membres de famille qui seraient enseignants, leur invitant à soumettre leur candidature.

Chaque année depuis 1994, la SCMO organise une compétition pour choisir des enseignant(e)s pour assister à un atelier en météorologie (Project Atmosphere) ou en océanographie (Project Maury). Ces ateliers sont conçus pour enseignant(e)s, qui se veront muni, lors de leur retour, de matériaux pédagogiques à leur niveau. Des descriptions d'anciens participants se trouvent sur le site web, ci-bas.

Ces ateliers, présentés en anglais par l'« American Meteorological Society », ont lieu aux Etats-Unis en juillet. Toutes les dépenses sont subventionnés. Il y a aussi une subvention généreuse pour les frais de voyage.





Les enseignant(e)s de la maternelle à la 12<sup>ième</sup> année (Secondaire 5) sont invité(e)s. La date limite pour la soumission de candidature est le 15 mars. Un(e) enseignant(e) sera choisi(e) pour chaque atelier par la SCMO. Veuillez consulter

[http://www.scmo.ca/site/summerworkshops?language=fr\\_FR&](http://www.scmo.ca/site/summerworkshops?language=fr_FR&)

pour plus d'informations sur ces ateliers, les formulaires de candidatures et les rapports de lauréats précédents. (À noter : le tout est en anglais.) Vous pouvez aussi communiquer avec Denis Bourque par courriel (voir au bas).

Denis A. Bourque

Awards Coordinator

CMOS Postal address: PO Box 3211 Stn D, Ottawa ON K1P 6H7

Courier address: 200 Kent Street, Ottawa ON K1A 0E6

E-mail: [awards-coord@cmos.ca](mailto:awards-coord@cmos.ca), <http://www.cmos.ca>

Coordinateur des honneurs SCMO

Adresse postale: C.P. 3211, Succursale D, Ottawa, ON K1P 6H7

Adresse messagerie: 200 rue Kent, Ottawa ON K1A 0E6

Courriel: [coord-honneurs@scmo.ca](mailto:coord-honneurs@scmo.ca), <http://www.scmo.ca>

## Newsletters - CMOS Bulletin, Geotraces, SCOR International

**CMOS Bulletin Vol.47 No.5** is now available online. Download the [pdf](#), or view online in [English](#) ou en [français](#). In it, among other features, you will find the [Arctic Regional Climate Centre Consensus Statement on temperature](#) and articles on comparing wind predictions and observations at lake Saint-Charles, Quebec and on the replacement of the Canadian Weather Radar Network.



**GEOTRACES eNEWSLETTER n°35** is available [online](#). It has articles on tracing anthropogenic iron in the Atlantic and on the debate on CO<sub>2</sub> drawdown during glacial periods, as well as news for the geochemical ocean tracer community and pointers to recent publications.



**SCOR International Newsletter #41** is available [online](#). It has more on the new SCOR Executive director Dr. Patricia Miloslavich and news from the 2019 SCOR annual meeting. There are updates from the C-GRASS, the working group on the Coordinated Global Research Assessment of Seagrass System and from DeepSeaDecade the working group preparing a Roadmap for a Standardised Global Approach to Deep-Sea Biology for the Decade of Ocean Science for Sustainable Development. Other news highlights SCOR visiting scholars and planning for SCOR and UN [Decade of Ocean Science for Sustainable Development](#) and [Agenda 2030](#).





## CMOS Call for Awards nominations // Appel pour les nominations : Prix de la SCMO

### CMOS AWARDS Nominations Deadline: Feb 15.

February 15th is the deadline for nominations for the CMOS Prizes and Awards. It may seem far away, but it always seems to arrive faster than we thought.

Please take a moment to visit <http://www.cmos.ca/site/awards> for a list of the eight awards, for instructions on how to make a nomination and then submit something on behalf of one of your colleagues or students.

CMOS has a rich history recognizing deserving persons (members and non-members) through its awards programs. But regrettably, there are many deserving candidates who go unrewarded each year because we were too busy to work up a nomination. Don't wait - do it now!

Note that any inquiries and all nominations are to be forwarded to the CMOS Awards Coordinator (Denis Bourque) at [awards-coord@cmos.ca](mailto:awards-coord@cmos.ca).



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**Date limite pour les nominations envers les Prix de la SCMO : 15 février.**

Le 15 février est la date limite pour la soumissions des mises en candidature pour les prix et honneurs de la Société. Cela semble peut-être loin, mais il semble toujours que la date arrive soudainement.



Veillez prendre quelques secondes pour visiter [http://www.cmos.ca/site/awards?language=fr\\_FR&](http://www.cmos.ca/site/awards?language=fr_FR&) pour la liste des huit prix et pour lire les instructions, puis prendre le temps de soumettre la nomination d'un de vos collègues ou étudiants.

La SCMO a une histoire qui souligne les personnes méritantes (membres et non-membres) par ses programmes de reconnaissance. Malheureusement, il y a beaucoup de personnes qui méritent d'être nommées qui ne le sont pas, parce qu'on est trop occupé. N'attendez pas : faites-le maintenant!

À noter que toutes enquêtes ainsi que toutes nominations doivent être soumises au Coordinateur des honneurs de la SCMO (Denis Bourque) au [coord-honneurs@scmo.ca](mailto:coord-honneurs@scmo.ca).

Denis A Bourque  
CMOS Awards Co-ordinator/ Coordinateur des prix SCMO

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

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

Newsletter #**110** will be distributed in **January 2020**.

Please send contributions to David Greenberg  
[david.greenberg@dfo-mpo.gc.ca](mailto:david.greenberg@dfo-mpo.gc.ca)

## Subscribing and Unsubscribing

If you wish to subscribe to this newsletter or cancel your subscription, please visit the website:

<http://www.mailman.srv.ualberta.ca/mailman/listinfo/cnc-scor>

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

Le Bulletin #**110** sera distribué en **janvier 2020**.

Veillez faire parvenir vos contributions à David Greenberg, [david.greenberg@dfo-mpo.gc.ca](mailto:david.greenberg@dfo-mpo.gc.ca)

## Abonnement et désabonnement

Si vous souhaitez vous abonner à cette newsletter ou annuler votre inscription, veuillez visiter le site web:

<http://www.mailman.srv.ualberta.ca/mailman/listinfo/cnc-scor>

## CNC-SCOR

### Members/ Membres

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Rob Macdonald – Past Chair (DFO-IOS)  
David Greenberg – Secretary (DFO-BIO)  
Markus Kienast (Dalhousie)  
Michael Scarratt (DFO-IML)  
Paul Snelgrove (Memorial)  
Stephanie Waterman (UBC)  
David Fissel (ASL)

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

Jody Klymak (IAPSO)  
Keith Lennon (DFO-HQ)  
Paul Kushner (President CMOS)  
Gordon Griffith (Executive Director CMOS)  
Jean-Éric Tremblay (Québec-Océan)  
David Beauchesne (Québec-Océan étudiants)  
Lisa Miller (SOLAS)  
Ellen Gute (CMOS Students)  
Jay Cullen (Geotraces)

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 multidisciplinary nature of ocean science and marine technology.



[WWW.CNCSCOR.CA](http://WWW.CNCSCOR.CA)