

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

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## **Position Announcement, Canada Excellence Research Chair in Remote Sensing of the Arctic, Laval University, Quebec City**

The Government of Canada's new Canada Excellence Research Chair (CERC) program has invited Laval University to submit an application for a Chair in Remote Sensing of the Arctic. For more information on the CERC program, please see below.

The position will begin 1 July 2010, and the successful candidate will hold the position of full professor with tenure. The CERC program will award chairholders with up to \$10 million over seven years to establish a research program. An attractive salary will be offered, and the chair will have access to considerable resources to conduct research. Laval University has made large investments in northern research through its support to four complementary research centres (Quebec-Ocean; the Centre for Northern Studies [CEN]; the Interuniversity Centre for Aboriginal Studies and Research [CIERA]; and the Centre for Inuit Health and Changing Environments [Nasivvik]), in addition to hosting two pan-Canadian Networks of Centres of Excellence (ArcticNet and Geoide), and major infrastructure including the research icebreaker CCGS Amundsen and the CEN Network of arctic field stations.

To apply, send a CV, a statement outlining the development of an innovative program of arctic research combining remote sensing and geospatial analysis, and the names of four references, by email before 31 August 2009 to: Edwin Bourge [Edwin.Bourget@vrr.ulaval.ca](mailto:Edwin.Bourget@vrr.ulaval.ca)

## **Response to the Chair of the Canadian National Committee / Scientific Committee on Oceanographic Research, Rob Macdonald**

Dear Rob,

In the CNC/SCOR newsletter of June, 2009 [<http://www.cmos.ca/scor/NLJune2009.pdf>], writing as the new chair of CNC/SCOR, you asked "How can we in this CNC-SCOR committee better promote Canadian Ocean Science". Thank you for asking this important question. There are many answers in many categories, and I will focus here on just one: the training of postgraduate students. To my mind, this is a key issue. Canada is on the verge of losing a great deal of expertise through retirement, and it is facing new challenges that will require new approaches. New blood is important.

In the interests of promoting discussion, let me lay out four ideas.

### **1. CNC/SCOR should lobby DFO and similar government agencies to provide increased funding for postgraduate students.**

Background: The funding will help to attract more, and stronger, students to Oceanography. That is a sufficient goal in and of itself, but to "sell the idea" to the agencies, CNC/SCOR might argue that (1) funding students is the cheapest way to focus cutting-edge research on areas that interest the agencies, and (2) connections made with students today will be valuable when agencies seek to hire, tomorrow.

Action: Urge the agencies resurrect the highly regarded "Subvention Grant" program, in which agency funds were used to fund postgraduate students.

Likelihood of a successful result: high.

## **2. Lobby the Canadian government to keep CFCAS alive.**

Background: As noted in #4 below, NSERC has only limited funds in its Discovery Grants program. There is funding for business-oriented work, but this does not apply well to environmental science. By contrast, the CFCAS focus areas matched well with those of active university research, and CFCAS moneys were sufficient to actually *fund* the work, not just nibble around the edges. CFCAS did everything right, so there is no need to study how to create a new CFCAS. All that's needed is a cheque.

Action: Use the reputation of a National Committee to lobby the federal government to provide new funding for CFCAS.

Likelihood of a successful result: moderate to high, depending on political "optics".

## **3. Take action against foreign-student differential fees for postgraduate students.**

Background: Professors typically pay these fees from grants, and so increasing limitations of the grants (see #2 and #4) along with increasing fees are leading to worrisome limitations on the talent pool. This is bad today, and will be worse tomorrow. Small nations are wise to look outward. Canada needs the best researchers, no matter the source, and it needs the solid international connections that come from foreign students who study here and then return home.

Action: Create a new CNC/SCOR (or third-party) scholarship to offset foreign-student differential fees.

Likelihood of a successful result: high.

## **4. Lobby NSERC to supply more funds to the Discovery Grant program.**

Background: The median grant is now about 20K for Panel 9, which covers many oceanographers. (This does not count the 1/3 of applicants who are zero-funded.) At many universities, a graduate student costs more 20K, even before taking into account the costs of their research. NSERC is Canada's flagship funding agency for university science, and something is wrong if it cannot afford to fund postgraduate students.

Action: Use the reputation of CNC/SCOR in the lobbying effort. Highlight the fact that the committee is somewhat arms-length. (The problem with the chorus of comments made by professors is that they are not disinterested parties.)

Likelihood of a successful result: probably (says a graying professor) quite low.

Thanks. Dan.

Dan Kelley  
Associate Professor and Graduate Coordinator  
Department of Oceanography  
Dalhousie University  
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## **Goldschmidt Conference, June 22 to 26, 2009, Davos, Switzerland**

Frank Whitney Whitney, [Frank.Whitney@dfo-mpo.gc.ca](mailto:Frank.Whitney@dfo-mpo.gc.ca) and Denis Gilbert, [Denis.Gilbert@dfo-mpo.gc.ca](mailto:Denis.Gilbert@dfo-mpo.gc.ca)

Goldschmidt Conferences are held annually, alternating between Europe and North America, to provide a forum for geochemists to discuss issues that range from the formation of planets to the evolution of life and impacts of humans on Earth. Held in Davos, Switzerland this June, the 5 day conference attracted over 2800 delegates. Facilities were stretched to their limits to handle the meeting, but what a beautiful town nestled in the Alps.

Sessions of particular interest to oceanographers covered ocean hypoxia (co-chairs D. Gilbert and L. Stramma), ocean acidification, instability of gas hydrates, carbon cycling, accumulations of contaminants in marine ecosystems and a wide variety of talks about impacts of past climate changes on oceans. Sediment records provide tantalizing evidence of the kinds of impacts we might expect from climate change, spurring talks such as "Ocean Acidification: Been There, Done That". The common rider to such talks was that past change in e.g. atmospheric CO<sub>2</sub> never occurred at rates as fast as we are seeing currently. Another interesting twist on past ocean ecosystems is that following the great oxygenation event about 2 billion years ago, the euxinic bacteria that once ruled the oceans had to seek refuge in the anoxic pore waters of sediments.

The ocean hypoxia session drew talks covering impacts of both coastal stress resulting from nutrient and sewage inputs, and basin impacts arising from the increased stratification of the surface ocean which results in weaker gas exchange between ocean and atmosphere. Coastal regions in which hypoxia is a concern are increasing almost exponentially and are impacting fisheries in diverse regions such as the Gulf of Mexico, west coast of India and west coast of North America. Coastal fisheries are being squeezed by these two inshore and offshore sources of hypoxia. It was estimated that 60% of the east Pacific groundfish habitat (O<sub>2</sub> > 60 μmol kg<sup>-1</sup>) could be lost by 2050.

Other notes of interest:

- geochemical sources of methane (seeps of various kinds) were not assessed for IPCC 2007 and are estimated to be the second most important source behind wet lands
- shallow gas hydrate deposits along continental margins can be mobilized within decades if oceans warm by 3 °C. Deep deposits (1000 m) will not be affected by warming
- the Arctic is especially vulnerable to ocean acidification; necessary to keep atmospheric CO<sub>2</sub> below 450 ppm to avoid major disruptions
- diatoms may have developed Cd and Zn enzymes to better access carbon dioxide in a low CO<sub>2</sub> world, also their silica walls may provide a pH buffer for these enzymes.

Abstracts from the meeting can be found at <http://www.goldschmidt2009.org>. Next year's meeting will be held in Knoxville, <http://www.goldschmidt2010.org/>.

## **The Ocean in a High-CO<sub>2</sub> World**

The Summary for Policymakers from the second symposium on The Ocean in a High-CO<sub>2</sub> World is now available at <http://www.ocean-acidification.net/>.

## **Call for Sessions Proposals: Joint CMOS/CGU Congress**

The joint CMOS/CGU Congress will be held on June 1-4, 2010 in Ottawa, Ontario at the Crowne Plaza. This will be the 44<sup>th</sup> Annual Congress of the Canadian Meteorological and Oceanographic Society (CMOS) and the 36<sup>th</sup> Annual Scientific Meeting of the Canadian Geophysical Union (CGU). This will be the third occasion for a joint Congress between the two societies. The Congress theme for this year will be “Our Earth, Our Air, Our Water: Our Future”. See: <http://cmos.ca/congress2010/index.htm>

The theme for the Congress provides an opportunity to do a bit more than is often the case at a scientific meeting. That is to have the presenters think and talk about “our future” as a result of their work, as well as having the Congress itself contribute to a forward-looking stance on the part of the community, CMOS and CGU. The opportunity to link science to policy, or other action-oriented outcomes, should be seized by participants.

In addition to traditional CMOS and CGU theme sessions, the Scientific Program Committee solicits proposals for special sessions on topics of particular interest. Joint sessions of interest to both the CMOS and CGU participants would be most welcome.

This year marks the first year for the new Solid Earth and Biogeoscience sections of the CGU, so we particularly encourage proposals to highlight these new sections.

In addition to science sessions during the June 1-4, 2010 time frame there is also an opportunity to have related workshops, short courses, business meetings, etc. on either the day before or the day after. There may be associated incremental costs to such activities; therefore proponents should contact one of the Co-Chairs of the Scientific Program Committee to ensure a full exchange of information.

To propose a session, please submit your session proposal (up to 40 characters for the title) through: [https://www1.cmos.ca/abstracts/proposal\\_default.asp](https://www1.cmos.ca/abstracts/proposal_default.asp) The proposal should include information on the designated convener/co-conveners of the session and a short paragraph (up to 300 words) describing the session. The deadline for proposing a theme or special session is September 15, 2009.

Sincerely,

Dick Stoddart ([dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca))

Rod Blais ([blais@ucalgary.ca](mailto:blais@ucalgary.ca))

Co-Chairs of the Scientific Program Committee for the Ottawa 2010 Congress

## **Appel à des propositions de sessions : Congrès conjoint SCMO/UGC**

Le Congrès conjoint SCMO/UGC au lieu du 1<sup>er</sup> au 4 juin 2010 à Ottawa, en Ontario, au Crowne Plaza. Il s'agira du 44<sup>e</sup> Congrès annuel de la Société canadienne de météorologie et d'océanographie (SCMO) et de la 36<sup>e</sup> Rencontre scientifique annuelle de l'Union géophysique canadienne (UGC). Il s'agira de la troisième participation des deux sociétés à un Congrès conjoint. Cette année, le thème du Congrès sera : « La Terre, l'air et l'eau : Notre avenir ». Visitez : <http://cmos.ca/congress2010/indexf.html>

Le thème du Congrès offre l'occasion d'en faire davantage qu'à l'accoutumée lors d'une rencontre scientifique. Qui est d'amener les présentateurs à penser et à parler de « notre avenir » comme résultat de leur travail, ainsi que de faire participer le Congrès lui-même à une position tournée vers l'avenir sur le rôle de la communauté, de la SCMO et de l'UGC. L'occasion de lier la science à la politique, ou autres résultats orientés sur l'action, devrait être saisie par les participants.

En plus des sessions sur les thèmes traditionnels de la SCMO et de l'UGC, le Comité du programme scientifique sollicite des propositions pour des sessions spéciales sur des sujets d'un intérêt particulier. Des sessions conjointes intéressant à la fois des participants de la SCMO et de l'UGC seraient particulièrement les bienvenues.

Cette année marque la première année des nouvelles sections de Terre solide et de Biogéosciences de l'UGC, alors nous encourageons particulièrement les propositions qui souligneront ces nouvelles sections.

En plus des sessions scientifiques qui auront lieu du 1<sup>er</sup> au 4 juin 2010, il sera également possible de profiter d'ateliers, de formations courtes, de réunions d'affaires, etc., soit la veille ou le lendemain. Des coûts incrémentaux peuvent être associés à ces activités; ainsi, les requérants devront contacter l'un des coprésidents du Comité du programme scientifique afin d'assurer un échange complet des renseignements.

Pour proposer une session, veuillez soumettre votre proposition de session (jusqu'à 40 caractères pour le titre) par le biais de : [https://www1.cmos.ca/abstracts/proposal\\_default.asp](https://www1.cmos.ca/abstracts/proposal_default.asp). La proposition devra inclure des renseignements sur l'organisateur/les coorganisateur de la session, ainsi qu'un court paragraphe (jusqu'à 300 mots) décrivant la session. La date d'échéance pour la soumission d'un thème ou d'une session spéciale est le 15 septembre 2009.

Cordialement,

Dick Stoddart ([dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca))

Rod Blais ([blais@ucalgary.ca](mailto:blais@ucalgary.ca))

Coprésidents du Comité du programme scientifique pour le Congrès de 2010 à Ottawa

### **[Scientific Committee on Antarctic Research \(SCAR\) June Newsletter, Issue 19](#)**

Newsletter <http://www.scar.org/news/newsletters/issues2009/jun09.html> contents include:

Planning the 2010 SCAR Conference

- 2010 SCAR Open Science Conference and XXXI SCAR Meeting

Climate Change

- Ice Bridge Supporting Wilkins Ice Shelf Collapses
- Scientists Rethink Sea Level Rise from a Melted West Antarctic
- Carbon Dioxide Emissions Cause Ocean Acidification - Inter-Academy Panel

Statement on Ocean Acidification

- More Greenhouse Gas Methane Emerging from Warming Arctic Permafrost
- Arctic Dipole is the Major Driver for Arctic Sea Ice Minima
- Energy and Climate Change - A Statement from SCAR's Members (the Academies)

- Online Version of the International Antarctic Weather Forecasting Handbook

#### International Polar Year News

- Ministers Sign 2009 Declaration on the IPY and its Legacy
- Treaty Parties Resolve to Commit to Observing Systems and Data Exchange
- Presentations Now Available Online: A Celebration of International Polar Year 2007-2008

#### Biodiversity

- Penguins Scooped by Their Own Poop
- Ancient Ecosystem Discovered Beneath Antarctic Glacier
- SCAR MarBIN Test Drive
- Australia Provides Support for SCAR's Marine Biodiversity Information Network (SCAR MarBIN)

#### Science and Society

- A New Social Contract for Science

#### Data and Information

- Researcher argues for publishing data
- SCAR Representative appointed to ICSU Data Committee

#### Education and Training

- IPY International Early Career Researcher Symposium
- Advanced Biology Training Course in Antarctica, January 2010

#### Outreach

- Want to give a presentation on SCAR? Start here

#### Partnerships

- SCAR and IASC sign Agreement with International Permafrost Association (IPA)

#### Other SCAR-related Newsletters

- NOTUS: The newsletter of SCAR's Antarctica in the Global Climate System
- News from SCAR-MarBIN
- Latest Newsletters from other groups

#### Events

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

Previous newsletters may be found on the CNC/SCOR web site.  
Les bulletins antérieurs se retrouvent sur le site web du CNC/SCOR.

Newsletter #46 will be distributed on October 14, 2009. Please send contributions to [dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca)  
Bulletin #46 sera distribué le 14 octobre 2009. Veuillez faire parvenir vos contributions à [dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca)

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