



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

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Director of Bedford Institute of Oceanography and Regional Director, Science Maritimes Region

The Maritimes Region of the Canadian Department of Fisheries and Oceans is seeking a **Regional Director, Science** to provide leadership, management, and direction to the Maritimes Region Science Branch. The Branch operates from the Nova Scotia-based Bedford Institute of Oceanography, Canada's largest centre for ocean research, and the St. Andrews Biological Station in New Brunswick. Over 300 research scientists, professional and administrative staff participate in a multidisciplinary research and science program in oceanography, marine ecology, fisheries biology, and hydrography in support of enhancing the Region's capacity to ensure the sustainable development and safe use of Canadian waters.

As the Director, Science you will steward research initiatives that will impact policy and ultimately long term sustainability of our aquatic eco-systems. Manage and direct one of Canada's largest fisheries and oceans research portfolio. Work collaboratively with national and world thought leaders in oceanography, marine ecology, fisheries biology, and hydrography. Participate in developing and executing a national science agenda that influences the federal government's sustainable development agenda. Provide advice to senior officials in support of DFO's mission to provide safe and accessible waterways, healthy and productive aquatic ecosystems, and sustainable fisheries and aquaculture.

As the ideal candidate, you have a post-graduate degree in science, engineering or a related discipline and several years of progressive research and management experience as the foundation for your leadership. You understand Canadian fisheries, aquaculture, environmental and hydrographic science and the social, economic and political contexts that impact the management of aquatic resources and oceans. You are interested in public policy and passionate about directing and translating research to inform policy and operations decision making. You have managed a broad science or research agenda and have demonstrated the ability to translate science to knowledge that informs policy and operations decisions. You are an effective relationship builder, able to forge alliances and work collaboratively. You are seen as a mentor and advisor by your colleagues and peers.

To explore the opportunity to steward one of Canada's largest fisheries and ocean research portfolios, please call Anna Stuart in our Halifax office at 902-424-1144 or submit your resume online at www.rayberndtson.ca/en/careers/8250

Research Scientist in Marine Chemistry

Bedford Institute of Oceanography, Fisheries and Oceans Canada, Dartmouth, Nova Scotia

The Ecosystem Research Division, Bedford Institute of Oceanography, seeks a Research Scientist in marine chemistry. The position covers a broad spectrum of applied and basic, multi-disciplinary oceanographic research and monitoring from coastal eutrophication issues, to continental shelf nutrient dynamics, to long-term climate change. It requires knowledge of marine aquatic chemistry with strong foundations in biogeochemistry, chemical tracers, contaminants and marine environmental quality. Field work from small boats in the coastal zone and from large ocean-going vessels is expected. The position will involve cross-disciplinary collaborations with physical oceanographers, marine biologists, marine geologists and fisheries scientists. See

www.jobs.gc.ca (DFO reference 09J-009280-000390) for details and the on-line application form. Référez vous, s'il vous plait, à www.jobs.gc.ca (référence 09J-009280-000390) pour plus de détails et compléter le formulaire d'application en ligne pour la position de chimiste en sciences aquatiques marines.

Deadline is April 22, 2009. There are a number of annual commitments including environmental overviews for the Atlantic Zone Monitoring Program, NAFO and ICES. Application open to all but preference will be given to Canadian citizens.

Duration: full time staff position

Salary: SE-RES 1 or 4 level (\$46K-\$105K)

Details and Online application: www.jobs.gc.ca (reference # 09J-009280-000390) Closing Date: April 22, 2009

Questions: Dr. Glen Harrison - Email: Glen.Harrison@mar.dfo-mpo.gc.ca

Other: Only online applications accepted.

ADM Distinction Award for Dr. Arthur Collin



At the recent DFO Science Managers meeting, Wendy Watson-Wright presented the ADM Distinction Award to Dr. Arthur Collin.

Dr. Collin began his distinguished career in the service of Canada in 1955 as a research scientist with the Fisheries Research Board of Canada. Over the years, he held a number of senior positions in the Public Service, including: Assistant Deputy Minister, Fisheries Research; Assistant Deputy Minister, Atmospheric Environment Service; Associate Deputy Minister, Department of Energy Mines and Resources; and Science Advisor to the Government of Canada and

Secretary of the Ministry of State for Science and Technology.

As the Dominion Hydrographer of Canada (1967-1972), he established a university accredited Canadian training program for hydrographic science and rebuilt the Canadian Hydrographic Service into a world-class institution that has served as a model for many other Maritime nations.

As Science Advisor to the Government of Canada and Secretary of the Ministry of State for Science and Technology (1984), he was instrumental in the creation of University Research Chairs and the federal Network of Centres of Excellence which continue to exist and flourish today. Later, Dr. Collin became the founding Director of the Institute for Robotics and Intelligence Systems (IRIS), a Network Centre of Excellence. He also left his mark at the Privy Council Office where he was instrumental in developing and moving forward legislation to establish the Canadian Space Agency.

Up until 2006, Dr. Collin served as a member of the Science and Technology Advisory Council to the Government of Canada and the Council of Science and Technology Advisors. During this time, Dr. Collin also made major contributions to the development and growth of the Royal Canadian Geographical Society as President of the Society.

In keeping with his long-time interest in advancing the understanding of climate change and Canada's North, Dr. Collin currently sits as the Chair of the Board of Directors for the Polar Climate Stability Network, funded by the Canadian Foundation for Climate and Atmospheric Sciences (CFCAS).

Over the last eight years, Dr. Collin has been instrumental in providing advice that has helped shape the DFO Science Program through his work as Chairman of the Science Advisory Council, and more recently, representing the Science Advisory Council as a member on the Department's Science Management Board. Wendy expressed her gratefulness to him for this contribution and said "Throughout his public service career and retirement he has exemplified leadership excellence in developing, contributing to, and implementing initiatives that have strengthened the Government of Canada's science and technology capacity in support of public policy and the management of federal science."

11th International Workshop on Wave Hindcasting and Forecasting & 2nd Coastal Hazards Symposium

Halifax, Nova Scotia, October 18-23, 2009

An international workshop on wave prediction and a symposium on hazard assessment in coastal areas, co-sponsored by Environment Canada, the U.S. Army Engineer Research and Development Center's Coastal and Hydraulics Laboratory and the WMO/IOC Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM) will be held at the Prince George Hotel in Halifax, Nova Scotia, Canada from October 18-23, 2009. Please visit the Prince George Hotel website: <http://www.princegeorgehotel.com> A limited block of rooms have been reserved at the Prince George Hotel at the special rate of \$149 CDN per night plus taxes.

The objectives of the workshop are:

- to provide a forum for the exchange of ideas and information related to wind, wave, and surge hindcasting and forecasting, including some special topics related to the evaluation of coastal hazards
- to coordinate ongoing R&D initiatives,
- to discuss priorities for future research and development.

Within the general context of the workshop objectives two specific themes have been identified for this particular meeting. Papers dealing with research related to these themes will be given particular consideration. These two themes are:

(1) prediction of coastal hazards on all time scales up to centennial , including historical and projected wave climate trends as a contribution to total sea level and associated coastal vulnerability, theoretical, numerical, laboratory, and field studies of wind, wave and surge

phenomena in coastal areas, and the assessment of wind, wave and surge hazards in coastal areas;

(2) validity and reliability of wave measurements from the various wave measurement systems, including intercomparison of wave measurements from different platforms, the development of new wave measurement sensors and measurement techniques and their evaluation, and new methodologies for the inter-comparisons for both directional and non-directional data.

Papers are also welcomed on other research and operational aspects of wave hindcasting and forecasting; including operational forecasting; regional hindcasts; data collection and instrumentation; data assimilation into numerical models; wave-current interaction; wave-ice interaction; shallow water and nearshore effects; wind fields for wave hindcasting or forecasting; extremal analysis; case studies.

The program will consist of both presentation and poster sessions; author should indicate their preference, but the final decision rests with the workshop organizers.

Those wishing to present a paper should submit a title and abstract (100-300 words) to the addresses shown below. Each abstract should contain the author's name, mailing address and telephone number. The deadline for receipt of abstracts is May 22, 2009. Full papers will be required by September 18, 2009. To receive further notices, please contact:

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U.S. Army Engineer Research and
Development Center
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Fax: (601) 634-2055
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E-Mail: Val.Swail@ec.gc.ca

Workshop Web Page: <http://www.waveworkshop.org/>

Call for Working Group Proposals for 2009 SCOR Executive Committee Meeting

The SCOR Secretariat will accept proposals for new working groups from now until **31 May 2009**. Model proposals and other information about working groups can be found at <http://www.scor-int.org/wkgrpinfo.htm>

SCOR examines the disciplinary balance of its working groups annually. Each proposal will be evaluated by national SCOR committees in terms of scientific merit and quality, timeliness, and achievability of the proposed terms of reference. SCOR tentatively plans to start two new working groups in 2010, pending availability of adequate funding. Proponents should consider submitting their proposals through their national SCOR committees, although we will also accept proposals from individuals and other organizations. Proponents who wish to attend the 2009 SCOR meeting are welcome to do so, but should be aware that they will be asked to leave the

room when their proposal is discussed. SCOR started this practice in 2005 to avoid any appearance of favoritism toward proposals that are represented at the meeting by a proponent.

Details on the call for proposals may be found at: <http://www.scor-int.org/2009EC/2009EC.htm> (the second entry).

SCOR Visiting Scholars

SCOR is developing the idea of enlisting the services of ocean scientists from the SCOR community, from both developed countries and developing countries, both recently retired and active, to teach short courses and to provide more extended on-site education and mentorship at developing country institutions. Some countries and/or individual institutions have requirements for their scientists to retire at a given age, sometimes as early as 60 years of age. Many retired ocean scientists are still interested in teaching and mentoring, and are supported by pensions after their retirement, so do not need salary support. Some active scientists can also use some of their already-supported work time to work in a developing country.

Hosting visiting scientists, whether retired or active, can have many benefits to host institutions also, such as inspiring, motivating, and informing students and faculty, and leading to future collaborations between the visiting scientist and the host institution.

The idea of this new SCOR activity will be to develop a database of ocean scientists interested in short-term work in a developing country. Such a program would be a partnership, with the host institution providing local accommodation and SCOR finding resources to pay for airfares and other local expenses. The participating scientists will donate their time. The participating scientists might be onsite for as little as two weeks or as long as visa requirements would allow. The Partnership for Observation of the Global Oceans (POGO) has experience with sending active and retired professors to developing country institutions and POGO is implementing a new program focused on ocean observations and modeling (see http://www.ocean-partners.org/index.php?option=com_content&view=article&id=310&Itemid=43). The SCOR program will be complementary with the POGO program, covering all ocean sciences, but not topics included in the POGO program.

This announcement is being distributed to the SCOR community to identify interested individuals and host institutions. Individuals interested in participating in this program should provide the following information:

- Name and contact information of applicant
- Experience in teaching and research – one summary paragraph and short CV
- Languages spoken and written fluently—Many institutions in developing countries seek scientific instruction in English to help prepare them to interact with scientists from the global ocean science community, but may also prefer individuals with some knowledge of their national language.
- Specific teaching and research interests
- Countries/regions of interest
- Willingness to donate time and time of availability

- Coverage by health and accident insurance—Lack of coverage would not rule out any candidate, but would alert SCOR to the need to arrange such insurance.

This information will be made available to potential host institutions, but will not be posted on the Web in open-access format.

Institutions interested in hosting a SCOR Visiting Scholar should provide the following information, in a short proposal describing the visiting scientist's term at the host institution:

- Help requested: teaching, mentoring in research, technology assistance, etc.
- Term of service desired, including specific dates
- Local subsistence provided
- Language abilities desired
- Plans by the host institution to build on the training received

Host institutions will be responsible to identify visiting scientists who will best serve the needs of their institutions for capacity building, training, and mentoring.

SCOR will institute a selection process through its SCOR Committee on Capacity Building to review the applicants and the proposed work assignments at the host institutions. The number of scientists placed each year will depend on the number of applications received and funding available. Criteria for selection will include the following (based on POGO's experience):

- Quality and relevance of the proposal
- Experience of the candidate and fit with the program (language skills, teaching experience, subject areas requested by the institution)
- Needs of the host institution
- Plans by the host institution to build on the training received

SCOR will provide airfares and funds for meals for the visiting scientists, and for insurance costs for those that do not have insurance.

SCOR will serve as a broker of the partnerships, but the individual and institution will be responsible to ensure a successful outcome. SCOR will monitor the results of each partnership with a questionnaire to the visiting scientist and the host institution after the visit, to determine the effectiveness of the program and ways to make it more useful. SCOR will make every effort to create a sustainable program.

SCOR is developing the concept of Regional Graduate Education Networks for Ocean Science (see http://www.scor-int.org/RGSO_Design_Principles.pdf) and it is anticipated that retired oceanographers could serve as integral parts of education teams in these networks, together with active scientists from both developed and developing countries.

Applications are due by **31 May 2009** and selections for placement in 2009 made by **30 June 2009**.

CNC/SCOR Lecture Tours

The CNC-SCOR Lecture Tours for this year will occur during the last two weeks of April 2009.

Dr. Kim Juniper of the University of Victoria will be making the East Coast Tour at the following dates and locations: Rimouski on April 20th, Quebec City on April 21st, Ottawa on April 22nd, Halifax on April 23rd and St. John's on April 24th. The title of his talk is "Hydrothermal vent ecosystems of Pacific Ocean volcanic arcs - Mariana and South Tonga". Dr. Juniper will describe research by his laboratory and collaborators into the ecology of hydrothermal vent biological communities associated with arc volcanism in the western and southern Pacific Ocean. These deep-sea hot springs were discovered during joint Canada-US and Canada-Germany expeditions from 2004-2007. Much of this research is focusing on ecosystem adaptations to unusual habitat features that characterize these submarine volcanoes. These include perturbation by ongoing underwater volcanic activity, photic zone hydrothermalism and potentially hybrid chemosynthetic-photosynthetic food webs, liquid carbon dioxide vents, venting through volcanoclastic sands, and liquid sulphur lakes on the seafloor.

Dr. Bernie Boudreau of Dalhousie University will be making the West Coast Tour at the following dates and locations: April 27th at IOS and UVic, April 29th at the University of British Columbia, April 30th at the University of Alberta, and May 1st in Ottawa (200 Kent). The title of his talk is "Motions in a Veiled World: Bubbles and Animals in Sediments". The combination of personal observations and recorded evidence guarantees that almost everyone in our society knows what an air bubble looks like in water and can describe the rudiments of its rise. The same can be said in reference to a fish swimming in water. Scientists and engineers have build solid theories and models of such motions and can predict the behavior of bubbles and, to a lesser extent, fish. Yet bubbles commonly occur in marine and lacustrine sediments, and one would be hard-pressed to find many who know what such a bubble looks like and what happens when they rise. Near surface sediments also contain abundant worms and other infauna, but few would say they know what happens when these creatures move in this medium. Sediments cover some 70% of this planet, and it seems the height of incongruity that we are ignorant of what happens over most of the earth's surface. A major problem with observing sediments is the fact that they are opaque. To circumvent this limitation, we have employed two recent technologies to image and capture data about bubbles in sediments: CT-scanning and controlled bubble injection. We have also made use of mechanically similar, but transparent media (gelatin). Our research results show that bubbles form and rise by fracturing sediment and gelatin and that linear elastic fracture mechanics (LEFM) provides an excellent description of these dynamics. Working with gelatin microcosms we also show that many types of infauna move via a fracturing process, which also follows LEFM. This latter result goes a long way in explaining the curious morphologies of some benthic organisms.

For more information on timing and locations of all talks please contact the tour coordinator, Marty Taillefer at TailleferM@DFO-MPO.GC.CA

International SCOR Newsletter No. 8 March 2007

The international SCOR Newsletter No. 8 March 2007 is now available at <http://www.scor-int.org/> Articles in the newsletter include information on: Products from the High-CO₂ Symposium; SCOR Panel on New Technologies for Observing Marine Life; SCOR Capacity-Building Activities; SCOR and the International Oceanographic Data and Information Exchange (IODE) work on a joint data publication; various SCOR Working Groups (call for new WGs, and info on WG 125, WG 130 and WG 133); the New IOCCP Director; Large-Scale Ocean Research Projects (GEOHAB, IMBER and SOLAS); International Geosphere – Biosphere Programme (IGBP); Intergovernmental Oceanographic Commission (IOC); the Ocean Mixing Group; various Publications; and upcoming SCOR Annual Meetings.

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 #43 will be distributed on May 15, 2009. Please send contributions to dick.stoddart@sympatico.ca
Bulletin #43 sera distribué le 15 mai 2009. Veuillez faire parvenir vos contributions à dick.stoddart@sympatico.ca

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