



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

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## Tenure-Track Position in Physical Oceanography

The Department of Physics and Physical Oceanography at Memorial University of Newfoundland invites applications for a tenure-track faculty position from individuals in the area of physical oceanography. The appointment will be made at the Assistant Professor level. The anticipated starting date is September 1, 2009. Applicants should have a doctoral degree in an appropriate discipline, relevant postdoctoral experience and an established publication record. The successful applicant will be expected to develop an active research program and to teach at the graduate and undergraduate levels. Many members of the Department participate in interdisciplinary degree programs in Computational Science and Environmental Science and the successful applicant will have the opportunity to participate in and contribute to these interdisciplinary areas. Opportunities also exist for collaboration with government scientists at the Northwest Atlantic Fisheries Center (DFO) and the Institute for Ocean Technology (NRC). The Department has strong externally funded research programs in several areas of oceanography including ocean modeling, biophysical modeling, ocean circulation, ocean acoustics, coastal oceanography, ocean sensor development, glacial and climate dynamics, laboratory fluids, as well as condensed matter research in biomaterials and soft matter, magnetic and electronic materials, nanoscience and molecular physics, and photonics, spectroscopy and microscopy (for more details, see the Department's web site: [www.physics.mun.ca](http://www.physics.mun.ca)).

Applications, including a C.V., the names of three references and a statement of research interests, should be submitted to: **Dr. B. deYoung, Head, Department of Physics and Physical Oceanography, Memorial University of Newfoundland, St. John's, NL, A1B 3X7.**

Applications must be received no later than **February 20, 2009**. Please quote reference number VPA-PHYS-2008-001.

Memorial University is the largest university in Atlantic Canada. As the province's only university, Memorial plays an integral role in the education and cultural life of Newfoundland and Labrador. Offering diverse undergraduate and graduate programs to over 17,000 students, Memorial provides a distinctive and stimulating environment for learning. St. John's is a safe, friendly city with great historic charm, a vibrant cultural life, and easy access to a wide range of outdoor activities. Memorial University is committed to employment equity and encourages applications from qualified men and women, visible minorities, aboriginal people and persons with disabilities. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

### **A new international research program: Integrated Research on Disaster Risk - The challenge of natural and human-induced environmental hazards**

Report by: Gordon A. McBean, [gmcbean@eng.uwo.ca](mailto:gmcbean@eng.uwo.ca), Chair, ICSU Planning Group on Natural and Human-induced Environmental Hazards and Disasters. (Members of the ICSU Planning Group on Natural and Human-induced Environmental Hazards and Disasters: G. McBean (Canada, Chair); T. Beer (Australia); I. Burton (Canada); C.-J. Chen (Taiwan); O.P. Dube (Botswana); J. R. Eiser (UK); F. Lúcio (Mozambique); H. Gupta (India); W. Hooke (USA); R. Keller (USA); A. Lavell (Costa Rica); D. Murdiyarto (Indonesia); V. Osipov (Russia); S. Sparks (UK); H. Moore (ICSU).)

In December 2004, the great Indian Ocean tsunami spread across the ocean and killed many thousands of people and caused untold hardships across the globe. World Conference on

Disaster Reduction, already planned, was held in Kobe, Hyogo, Japan in January 2005, and called on nations to take actions and agreed on the Hyogo Framework for Action. Environmental and geophysical hazards create many disasters around the world and the impacts have been devastating on many communities and countries. Over the decades there has been significant international scientific response, much of it organized by the International Council for Science (ICSU) and its partners in the United Nations system, especially the World Meteorological Organization and UNESCO. Through the deliberations of an ICSU-sponsored process, a new international research program Integrated Research on Disaster Risk – the challenge of natural and human-induced environmental hazards - has now been initiated, with the support of ICSU, the International Social Sciences Council and the UN International Strategy for Disaster Reduction.

The title **Integrated Research on Disaster Risk – the challenge of natural and human-induced environmental hazards** (acronym: IRDR) was chosen on basis of the rationale of integration, risk and disasters. IRDR is to be a Research Programme of ten or more years' duration. ICSU and the International Social Sciences Council (ISSC) are the IRDR co-sponsors. The United Nations International Strategy for Disaster Reduction (ISDR) has endorsed the Programme. The Science Plan of IRDR focuses on natural and human-induced environmental hazards where a hazard is defined as a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Note that a hazard “may” cause impacts. The other factor is the vulnerability of the system where the vulnerability is determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards. Disasters result when there is the intersection of a hazard and vulnerabilities. Hence to understand the factors involved in disasters it is important to understand both the hazards with their occurrence and characteristics and the factors that make communities vulnerable.

The scoping exercise identified the most significant research gaps to be interdisciplinary cohesion, i.e. the intersections of the natural, socio-economic, health and engineering sciences; and the issue of how knowledge about hazards is, or can be, put to use. Public perception–decision making in the context of natural hazards, risks and uncertainty would be an important research area, as would the study of human behaviour and cultural contexts for vulnerability analysis.

The first IRDR Scientific Objective is Characterization of hazards, vulnerability and risk, with three sub-objectives: identifying hazards and vulnerabilities leading to risks; forecasting hazards and assessing risks; and dynamic modelling of risk. The second IRDR Scientific Objective is Understanding decision-making in complex and changing risk contexts, with three sub-objectives: identifying relevant decision-making systems and their interactions; understanding decision-making in the context of environmental hazards; and improving the quality of decision-making practice. The third IRDR Scientific Objective is: Reducing risk and curbing losses through knowledge-based actions through Vulnerability assessments and Effective approaches to risk reduction. There will be Cross-cutting themes and approaches through: Capacity building; Case studies and demonstration projects; and Assessment, data management and monitoring.

The IRDR Programme will be guided by a Scientific Committee selected by mutual agreement between the joint sponsoring organizations of the Programme (see Figure 1). There are many

international initiatives and activities already existing in the field of natural hazards and disasters. Stakeholder groups include: the international and national scientific programmes either already ongoing or potentially to be initiated, on hazards research and their sponsors; international and national organizations who are involved in development, humanitarian assistance and similar issues; and, in general, governments, private sector and civil society. An ongoing consultative process will be established, using other forums where appropriate.

IRDR will draw upon the expertise and scientific outputs of many *Partners in research*. The Intergovernmental Oceanographic Commission (IOC) of UNESCO promotes the concept of 'end-to-end' tsunami warning systems, in cooperation with ISDR and WMO. The International Geosphere-Biosphere Programme (IGBP) Projects, such as Land-Ocean Interactions in the Coastal Zone, are clearly relevant. The WMO World Weather Research Programme is a ten-year international study aiming to reduce and mitigate natural disasters by transforming timely and accurate weather forecasts into specific and definite information in support of decisions; storm surges are one important example. The World Climate Research Programme (WCRP) has identified a focus on climate extremes including floods and droughts. In the social sciences realms of science, there are programs such as the International Human Dimensions Programme on Global Environmental Change's (IHDP) new Integrated Risk Governance Project. The Global Change System for Analysis Research and Training (START) has ongoing projects to build capacity and regional networks in Africa, Asia and Oceania.

The Hyogo Framework for Action calls for all-hazards approaches, people-centred systems and overall risk assessment. The assessment of the Planning Group was that, despite all the present activities ongoing on natural hazards, there is an imperative for a research programme, sustained for a decade or more, that is integrated across the hazards, the disciplines and the geographical regions, wherein would lie its value-added nature. The coupling of the natural sciences' examination of hazards with the socio-economic analysis of vulnerability and mechanisms for engaging policy decision-making processes will be a major value added. The legacy of IRDR will be an enhanced capacity around the world to address hazards and make informed decisions on actions to reduce their impacts. The legacy will also be the development of science and development of broadly-based capacity and the repository of information and data that have been acquired and that will be of continuing availability and value to the global community.

The sponsors are now establishing an international IRDR Science Committee and an international project office. IRDR will move ahead over the coming months and work with partners for the benefit of global humanity.

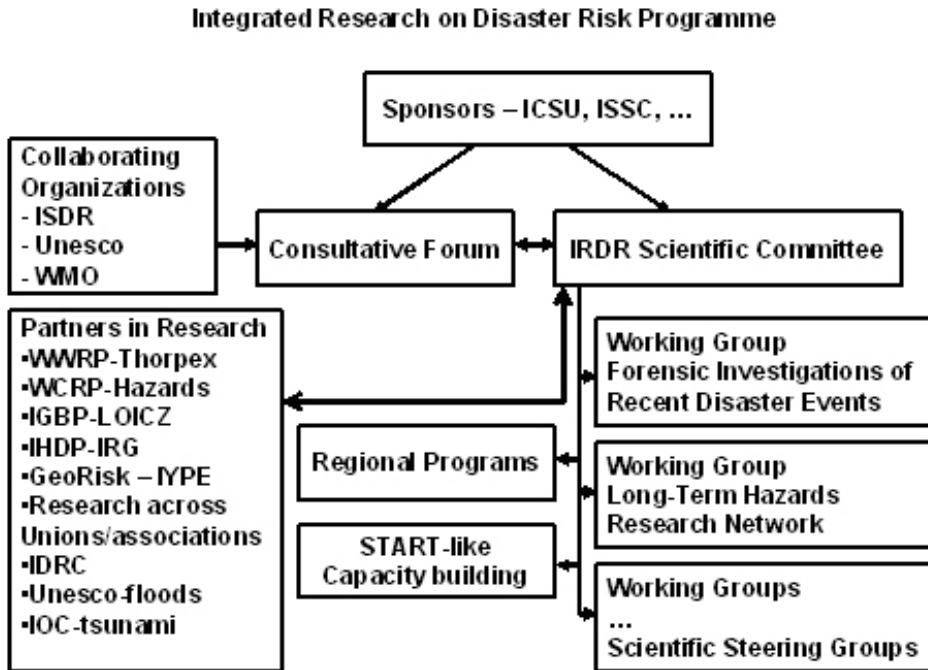


Figure 1. Proposed schematic structure for the IRDR Programme

### **Fifth Prince Albert I Medal of IAPSO**

Lawrence Mysak, President of IAPSO, is pleased to announce that the fifth Prince Albert I Medal of IAPSO will be presented to Professor Harry L. Bryden FRS of the University of Southampton, UK, in recognition of his fundamental contributions to understanding the ocean's role in the global climate system. The Medal will be presented at the upcoming IAMAS-IAPSO-IACS Joint Assembly (MOCA-09) in Montreal at 10.30 on Wednesday, July 22, 2009. After the Medal presentation, Professor Bryden will deliver the Prince Albert I Memorial Lecture.

I hope that many of the readers of the SCOR newsletter will be able to attend this lecture and also present papers at MOCA-09 (<http://www.moca-09.org>). As well as 10 IAPSO-only symposia on a variety of topics on physical, chemical and biogeochemical oceanography, there will be 21 joint symposia involving the IUGG sister associations IAMAS and IACS.

Lawrence Mysak  
 President, IAPSO  
 and  
 Canada Steamship Lines Professor, McGill University  
[lawrence.mysak@mcgill.ca](mailto:lawrence.mysak@mcgill.ca)

## Gordon McBean



Her Excellency the Right Honourable Michaëlle Jean, Governor General of Canada, announced on December 30, 2008 that 60 new appointments were to be made to the Order of Canada. One of the new appointees is Dr. Gordon McBean, the Chair of the Canadian National Committee for SCOR. Gordon received this award for his contributions to the advancement of climate and atmospheric sciences in Canada, and for his leadership in national and international scientific organizations, helping to generate and disseminate research findings to policymakers and stakeholders. Congratulations!!!

## Census of Marine Life (CoML) data and the Intergovernmental Oceanographic Commission (IOC)

Report by Geoffrey Holland, [hollandg@sympatico.ca](mailto:hollandg@sympatico.ca)

The Ocean Biogeographic Information System (OBIS) makes available, online, primary data on marine species. A primary mission element is to support the CoML synthesis in 2010. OBIS integrates data from all data providers across taxa and marine themes. In 2010 the funding from the Sloan Foundation for the Census of Marine Life, and therefore also for OBIS, will end and the future of OBIS beyond 2010 has to be addressed. Canada hosts one of the fourteen regional OBIS nodes at the Centre of Marine Biodiversity in BIO and managed by Tana Worcester. OBIS and the IOC are exploring the possibility for an institutional framework within the IOC to ensure the continuation of OBIS. The IOC requested the IOC Data and Information Management Advisory Group (IODE) to work together with the OBIS Secretariat to develop a document for submission to the 25th Session of the IOC Assembly in 2009.

The first step in the process was an IODE/OBIS Workshop held in Ostende, Belgium, November 24- 26, 2008, attended by invited experts, including several Canadians; Bob Branton and Mary Kennedy, from BIO, and Geoff Holland, who acted as Rapporteur for the meeting. The participants discussed several potential scenarios for a future arrangement and arrived at a final recommendation that would see OBIS become an IOC programme. The recommendation from the Workshop included the need for a joint IOC Group of Experts between OBIS and the IODE to ensure close coordination and compatibility between the two data groups. The next step will be to investigate the proposed arrangement in depth and to prepare documentation for the approval of the OBIS Governing Body and the IOC Assembly in 2009.

## The Timothy R. Parsons Award for Excellence in Ocean Sciences



Fisheries and Oceans Canada (DFO) has established the Timothy R. Parsons Award for excellence in Ocean Sciences to recognize a Canadian scientist for outstanding lifetime contributions to multidisciplinary facets of ocean sciences or for a recent exceptional achievement, while working within a Canadian institution. This award is named after Dr. Timothy R. Parsons, and honours his distinguished career as a Fisheries Research



Board of Canada researcher, university professor, broadly read author and recipient of the 2001 Japan Prize. For more information on Dr. Timothy R. Parsons, please visit: <http://www.dfo-mpo.gc.ca/science/award-prix/parsons/index-eng.htm>

### Eligibility Criteria

The Timothy R. Parsons Medal is:

- Awarded to a Canadian for distinguished accomplishments in multidisciplinary facets of ocean sciences;
- Awarded for excellence during the lifetime of the recipient or for a recent outstanding achievement, both being equally eligible;
- Awarded for accomplishments while working for Canadian institutions for the benefit of Canadian science;
- No posthumous nominations are considered.

To make a nomination, please complete the appropriate nomination form on the Parsons Award website at: <http://www.dfo-mpo.gc.ca/science/award-prix/parsons/about-a-propos-eng.htm>  
Nominations should be received no later than **February 28** of every year at:

Timothy R. Parsons Medal Committee  
Strategic Science Outreach  
Stn. 8W135 – 200 Kent Street  
Ottawa, Ontario, K1A 0E6  
Tel: (613) 991-1021  
FAX: (613) 990-5113  
Email: [sciencebulletin@dfo-mpo.gc.ca](mailto:sciencebulletin@dfo-mpo.gc.ca)

## Mise en candidature pour le prix Timothy R. Parsons pour l'excellence en sciences de la mer



Pêches et Océans Canada a créé un prix visant à rendre hommage à l'excellence dans le domaine des sciences de la mer au Canada. Ce prix porte le nom de Timothy R. Parsons, en l'honneur de la carrière remarquable de ce chercheur du Conseil de recherches sur les pêcheries du Canada, professeur d'université, auteur de publications prestigieuses et lauréat du Prix du Japon en 2001. La médaille Timothy R. Parsons est décernées à des scientifiques



canadiens qui se sont distingués dans un domaine pluridisciplinaire lié aux sciences de la mer et souligne l'ensemble de leur carrière ou une réalisation récente exceptionnelle au sein d'un



établissement canadien. Pour plus d'information au sujet de Timothy R. Parsons, visitez le site web au : <http://www.dfo-mpo.gc.ca/science/award-prix/parsons/index-fra.htm>

### **Critères d'admissibilité**

Le prix Timothy R. Parsons est :

- Décernée à des scientifiques canadiens qui se sont distingués par leur contribution remarquable dans un domaine multidisciplinaire lié aux sciences de la mer.
- Décernée pour souligner l'ensemble de la carrière ou une réalisation exceptionnelle récente, les deux étant également admissibles.
- Décernée pour souligner les réalisations de candidats œuvrant au sein d'une institution canadienne ou au profit de la science canadienne.
- Aucune mise en candidature posthume ne sera acceptée.

Pour soumettre une mise en candidature, veuillez compléter le formulaire sur le site web pour le prix Timothy R. Parsons au :

<http://www.dfo-mpo.gc.ca/science/award-prix/parsons/about-apropos-fra.htm>

Les mises en candidature doivent être reçues au plus tard **le 28 février de chaque année** et être adressées à :

Comité de la médaille Timothy R. Parsons  
Promotion stratégique des sciences  
200, rue Kent, poste 8W135  
Ottawa (Ontario) K1A 0E6  
Tél. : 613-991-1021  
Fax : 613-990-5113  
Courriel : [sciencebulletin@dfo-mpo.gc.ca](mailto:sciencebulletin@dfo-mpo.gc.ca)

### **Nominations for CMOS Awards**

It is time to think about nominations for oceanographers for various CMOS awards; the deadline is **February 15, 2009**. See <http://cmos.ca/awards.html> for details on the various awards and the "call" for nominations for this year. In some previous years CMOS awards, for eligible ocean scientists, have not had any nominations; e.g. the Tully Medal, and the Prize in Applied Oceanography. A list of past winners is listed at <http://cmos.ca/pastaw.html> Oceanographic nominations are encouraged for the Tully Medal, the Prize in Applied Oceanography, the President's Prize, Graduate Student Prizes, the Roger Daley Postdoctoral Publication Award, Environmental Citations, and the Neil J. Campbell Medal for Exceptional Volunteer Service.

Another category for prestigious recognition by CMOS is that of electing CMOS Fellows. The deadline for nominations is **March 15, 2009**. Details on nominations and past elections may be found at: <http://www.cmos.ca/fellows.html>. As well the CMOS undergraduate scholarships applications are also due on **March 15, 2009**; details at <http://cmos.ca/undergradschole.html>

Finally, CNC/SCOR through CMOS, provides a NSERC Scholarship supplement annually in the amount of \$5,000.00 for each of two years to a deserving student in ocean science. The submission deadline for the award is **April 15, 2009** (see [http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/Supplements-Supplements/Oceanography-Oceanographie\\_eng.asp](http://www.nserc-crsng.gc.ca/Students-Etudiants/PG-CS/Supplements-Supplements/Oceanography-Oceanographie_eng.asp))



## **2009 Competition for New NCE Networks**

**Letter of Intent (LOI) Phase; DEADLINE: March 2, 2009**

The Networks of Centres of Excellence (NCE) invites eligible applicants to submit a Letter of Intent for the 2009 NCE Competition for new networks. The 2009 NCE Competition has significant differences from all previous NCE competitions. Details may be found at:

[http://www.nce.gc.ca/comp/NCE2009/nce\\_e.htm](http://www.nce.gc.ca/comp/NCE2009/nce_e.htm), including the [Schedule of 2009 NCE Competition Information Sessions is now available](#)

The 2009 Competition has a target budget of **\$75M over five years**. It is anticipated that **three to four networks** may be funded and begin operations in 2009. These networks will be eligible to receive funding for **up to two five-year terms** for a **total of 10 years**. For networks funded for the full 10 years, a third (and final) term could be available where the network has developed and built on its partnerships to progressively transform itself into a partner-driven network. The NCE Steering Committee has determined that these 13 sub-priorities will be targeted for the 2009 NCE Competition. These priorities and sub-priorities are:

### ***Environmental science and technologies:***

1. water (health, energy, security)
2. cleaner methods of extracting, processing and using hydrocarbon fuels, including reduced consumption of these fuels

### ***Natural resources and energy:***

3. energy production in the oil sands
4. Arctic (resource production, climate change adaptation, monitoring)
5. biofuels, fuel cells and nuclear energy

### ***Health and related life sciences and technologies:***

6. regenerative medicine
7. neuroscience
8. health in an aging population
9. biomedical engineering and medical technologies

### ***Information and communication technologies:***

10. new media, animation and games
11. wireless networks and services
12. broadband networks
13. telecom equipment

The 2009 NCE Competition is looking for a balanced portfolio of networks, and is therefore expecting to support a maximum of one new network in a given S&T priority area. New networks must address one or more of the STIC sub-priority areas.

## **CNC/SCOR Reports**

There are two new reports on the CNC/SCOR web site [www.cncscor.ca](http://www.cncscor.ca), namely:

A report by Bjorn Sundby highlighting the results of the international SCOR meeting at Woods Hole, Oct. 22-24, 2008; see <http://www.cmos.ca/scor/WoodsHole2008.pdf>

and

The 2008 CNC/SCOR Annual Report; see <http://www.cmos.ca/scor/AnnualReport2008.pdf>

## **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 #42 will be distributed on March 26, 2009. Please send contributions to [dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca)  
Bulletin #42 sera distribué le 26 mars 2009. Veuillez faire parvenir vos contributions à [dick.stoddart@sympatico.ca](mailto:dick.stoddart@sympatico.ca)

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