

**6<sup>th</sup>**

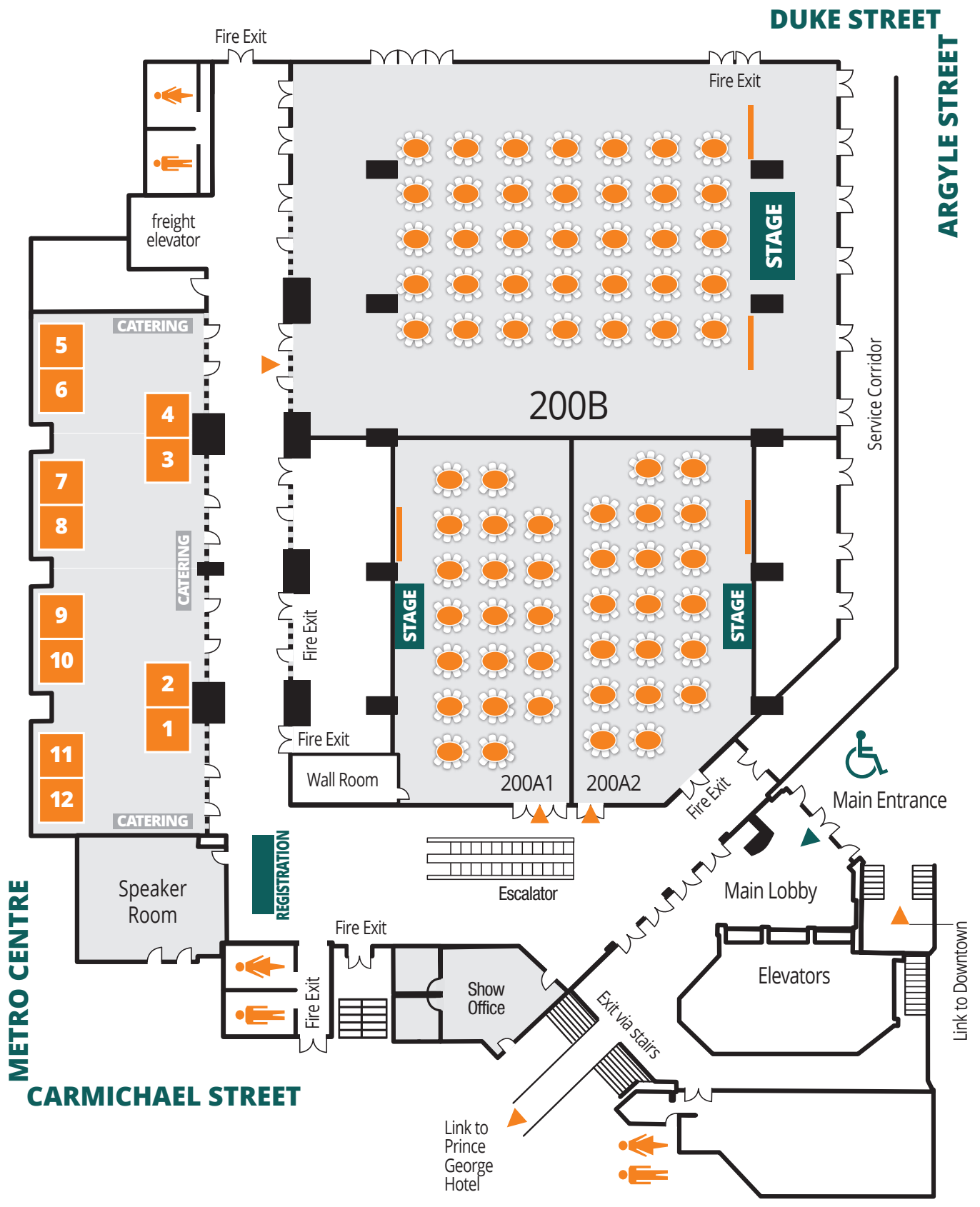


**2014**

**CANADIAN SCIENCE  
POLICY CONFERENCE**

**PROGRAM**

**October 15-17  
Halifax, Nova Scotia**



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# Message from the Prime Minister



I am delighted to extend my warmest greetings to all those attending the 2014 Canadian Science Policy Conference. This annual gathering is a vital forum for academia, industry and government to shape the future of science in our country.

Our Government supports your vision and shares your commitment to advancing a Canadian science and technology strategy for the 21st century. This is essential to realizing our country's research, development and innovation potential and maintaining our position as a globally competitive and prosperous science leader.

We recognize that investments in science and technology are investments in Canada's future. Our Science and Technology Strategy, which is currently being renewed, provides a durable and flexible framework to ensure that Canada remains at the vanguard of scientific and technological achievement. We value the input of our academic and industry partners in formulating our country's science and technology strategy.

Together, we can build on the solid foundation provided by record government investments in science, technology and innovation. Programs like the Canada First Research Excellence Fund are supporting world-leading science. The highest funding for granting councils in a decade is providing opportunities for new partnerships.

Our country has a long history of scientific achievement and the best is yet to come. On behalf of the Government of Canada, I commend the conference organizers and participants for your commitment to Canadian science. Please accept my best wishes for a productive and thought-provoking conference.

Sincerely,  
The Rt. Hon. **Stephen Harper**, P.C., M.P.  
Prime Minister of Canada



Je suis enchanté d'adresser mes plus cordiales salutations à tous ceux qui participent à la Conférence 2014 du Centre de la politique scientifique canadienne. Ce rassemblement annuel est un forum vital pour les représentants des établissements d'enseignement supérieur, du secteur privé et du gouvernement, qui leur permet de forger l'avenir de la science dans notre pays.

Notre gouvernement appuie votre vision et partage votre engagement à donner suite à une stratégie canadienne en matière de science et de technologie pour le 21<sup>e</sup> siècle. Il est en effet essentiel de concrétiser le potentiel de notre pays sur le plan de la recherche, du développement et de l'innovation, ainsi que de conserver notre place à titre de leader scientifique prospère et fécond, compétitif sur la scène mondiale.

Nous reconnaissons que les investissements dans la science et la technologie sont des investissements dans l'avenir du Canada. Notre stratégie en matière de science et de technologie, qui est en cours de renouvellement, offre un cadre durable et souple, qui permettra au Canada de rester à l'avant-garde des accomplissements scientifiques et technologiques. Nous apprécions que nos partenaires du milieu de l'enseignement supérieur et du secteur privé contribuent à façonner notre stratégie nationale en matière de science et de technologie.

Ensemble, nous pourrions poursuivre notre travail à partir de la solide base constituée par les investissements sans précédent du gouvernement en science, en technologie et en innovation. Des programmes comme le fonds d'excellence en recherche Apogée Canada appuient des travaux scientifiques à la fine pointe des connaissances mondiales. Le niveau de financement des conseils subventionnaires, le plus élevé depuis une décennie, offre des occasions de nouveaux partenariats.

Notre pays a une longue tradition de réalisations scientifiques et le meilleur est encore à venir. Au nom du gouvernement du Canada, je tiens à féliciter les organisateurs de la conférence et les participants pour leur engagement envers la science au Canada. Je vous souhaite une conférence fructueuse et stimulante.

Sincèrement,  
Le très honorable **Stephen Harper**, C.P., député  
Premier ministre du Canada

# Message from the Premier



On behalf of the Government of Nova Scotia, I am pleased to extend a warm welcome to everyone participating in this year's Canadian Science Policy Conference.

We're proud to host this year's gathering of leaders from academia and private, public and non-profit sectors focused on advancing

economic development through science and innovation.

Finding ways to connect our businesses with the expertise and creativity of our academic institutions will advance economic growth, and help create a culture of innovation and entrepreneurship. It's an important part of building a bright, prosperous future for our province.

Gatherings such as this provide a wonderful venue for making these connections, and an important opportunity for all of you to network, share information, and discuss best practices, ideas and emerging technologies. This will allow us to strengthen linkages already in place, and create the foundation necessary for future innovations and new partnerships. Thank you to the delegates and organizers.

Best of luck in your discussions and I wish you a very productive conference. Enjoy your time in Nova Scotia. For those visiting, I hope you get time to explore our beautiful province and experience our famous hospitality.

Sincerely,  
Honourable **Stephen McNeil**, M.L.A.  
Premier



# Welcome from CSPC President and CEO



It is my great pleasure to welcome you to the 6th Annual Canadian Science Policy Conference. We are delighted you are joining us in the magnificent city of Halifax, as the CSPC is held in Atlantic Canada for the first time.

In addition to an expansion of the network to Atlantic Canada, CSPC 2014 will feature:

- ▶ A keynote session by our Honorary Co-Chairs: the Honourable Frank McKenna and John Risley.
- ▶ Two plenary sessions that cover important science policy issues.
- ▶ An interactive pre-conference workshop on Entrepreneurship and Innovation.

We are extremely thankful to our supporters, who made this year's conference possible. In particular, I would like to

express my gratitude to the government of Nova Scotia, which provided its support from the very beginning.

As in previous years, the CSPC 2014 would not have been possible without the hard work and dedication of all the volunteers and the insight and advice of the Advisory Committee and CSPC board members, particularly Janet Halliwell, CSPC Chair, and Martha Crago, CSPC board member. Thank you to everyone involved.

In closing, I must thank you for your contribution and engagement, which is so essential to elevating the Canadian science policy discussion to new heights. On behalf of the entire CSPC team I thank you for your participation and look forward to hearing your feedback, as it has always been the best guidance for continuous improvement of the CSPC.

**Mehrdad Hariri**  
CEO and President  
Canadian Science Policy  
Centre



# CSPC A Successful Endeavour

The Canadian Science Policy Conference (CSPC) is the national source for current and emerging issues in science, technology and innovation (STI) policy. Organized by a group committed to furthering Canada's STI agenda, CSPC represents a grassroots, non-partisan organization that brings together diverse stakeholders from academia, government, and industry. Since then, it has received a groundswell of engagement from across Canada's science policy landscape, including the support of more than 200 organizations, 100 community leaders who have served on the CSPC's Advisory and Honorary Committees, and the participation of more than 2000 professionals from various sectors and disciplines who have attended and presented at the five previous CSPC annual conferences. The first five conferences—held in Toronto (2009), Montreal (2010), Ottawa (2011), Calgary (2012) and Toronto (2013)—were resounding successes.

CSPC fills a critical gap in the Canadian science policy environment by providing a permanent national forum

for discussing science policy issues. CSPC is committed to facilitating a flourishing innovation ecosystem by linking a fragmented science and innovation policy community from across the country and across all sectors including industry, academia, students and faculties, government, not-for-profit, media and other relevant organizations agencies.

CSPC provides an open forum where passionate individuals can network, discuss, and gain insights on science policy issues of regional, national, and international concern. This forum also serves to increase stakeholder awareness and appreciation of how S&T policies affect other diverse groups in the national community thus encouraging exchange between policy makers and scientists. Further, CSPC also enhances the breadth and depth of policy knowledge offering new insights and collaborative potential.



## Conference Objectives

The Canadian Science Policy Conference fills a critical gap in the Canadian science policy environment by providing a permanent national forum for discussing science policy issues.

The conference objectives are:

- ▶ to provide an inclusive forum at the national level to identify, discuss and provide insights into the current Canadian science, technology and innovation policy issues;
- ▶ to forge stronger linkages and create networking opportunities among science policy stakeholders;
- ▶ to provide a venue for a new generation of scientists, entrepreneurs and policy makers to interact, innovate and shape the future of Canadian science policy landscape which is required for a knowledge-driven economy;
- ▶ to provide a supportive environment for innovative ideas and projects in science policy, and encourage further collaborations across sectors;
- ▶ to lay the foundation for a centre dedicated to science, technology and innovation policy.

# Honorary Conference Chairs



**Frank McKenna**  
Deputy Chairman  
Toronto Dominion Bank

An influential voice in both politics and business, Frank McKenna is the Deputy Chair of TD Bank Group, the former Canadian Ambassador to the United States, and the former Premier of New Brunswick. During his time at

TD, McKenna has helped expand their North American presence as one of the ten largest banks in the world. His move to the banking world came after a notable legal, diplomatic and political career. A graduate of St. Francis Xavier University, McKenna completed his post-graduate studies in political science at Queen's University, and graduated from the University of New Brunswick Law School as a silver medalist.



**John Risley**  
President & CEO  
Clearwater  
Fine Foods Inc.

John Risley is President of Clearwater Fine Foods Incorporated, a diversified holding company operating internationally.

Its primary assets are a controlling stake in Clearwater Seafoods, Canada's largest fishing company, and Columbus Communications, a provider of network services and cable tv in 21 countries in the Caribbean and Latin America. Until recently it was also the majority shareholder in Ocean Nutrition Canada, the world's largest provider of omega 3 fatty acids to the food and dietary supplement industries. All these companies were founded by Clearwater.

Mr. Risley is very active in community affairs, sitting on the Board of a number of charitable organizations. He is Chair of the Canadian Youth Business Foundation and co-Chair of the Capital Campaign for the Nature Conservancy. He regularly engages in public policy debate, is Chairman of the Atlantic Institute of Market Studies, a member of the World President's Organization, The Chief Executives Organization and is a director of the Canadian Council of Chief Executives. He is also a graduate of Harvard University's President's Program and Leadership.

He was named an Officer of the Order of Canada and was inducted into the Nova Scotia Junior Achievement Business Hall of Fame in 1997. He has received numerous awards, including Atlantic Canadian Entrepreneur of the Year and a Canada Award for Business Excellence in Entrepreneurship. He is a member of the New York Yacht Club and the Royal Ocean Racing Club.

He lives in Chester, Nova Scotia.

The image shows a graphic with several curved lines in various colors (blue, purple, green, yellow) on a white background. Below the lines is the Research Manitoba logo, which consists of a stylized circular emblem with concentric lines in blue, green, and purple. To the right of the logo is the text "Research Manitoba". Below the logo and text is the social media information: "Follow us: @Research\_MB" with a Twitter icon, and "researchmanitoba.ca".

# Advisory Committee

The 2014 Canadian Science Policy Conference is pleased to have a National Advisory Committee made up of prominent members of the Science Policy community.

David Burns, VP Research, University of New Brunswick

George Cooper, President & Vice Chancellor,  
University of King's College

Martha Crago, VP Research, Dalhousie University

Neville Gilfoyl, Owner & Publisher, Progress Media Group

Robert Gilmour, VP of Research & Graduate Studies,  
University of Prince Edward Island

Jim Hanlon, CEO, Institute for Ocean Research Enterprise

Richard Marceau, VP of Research,  
Memorial University of Newfoundland

Wayne Sumarah, Executive Director of Productivity and  
Innovation Branch, Economic and Rural Development and  
Tourism, Government of Nova Scotia

## CSPC Board of Directors

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# Agenda at a Glance

## Wednesday, October 15, 2014

TIME	ACTIVITY
3:00 pm – 7:00 pm	CSPC 2014 Special Workshop and Dinner The Start-Up Meet-Up: A Lean Entrepreneurship Approach to Advancing Innovation

## Thursday, October 16, 2014

TIME	ACTIVITY
8:00 am – 8:15 am	Opening Ceremony
8:15 am – 9:15 am	Keynote Session Conversation with <b>Frank McKenna</b> and <b>John Risley</b>
9:15 am – 10:30 am	Plenary Session Procurement and Industrial Technological Benefits (ITB) and Value Propositions
10:30 am – 11:00 am	Coffee Break
11:00 am – 12:30 pm	Panel 2 Big Problems, Big Networks, Big Data Panel 3 Mitigating the Risk of Marine Geohazards Panel 4 Building Opportunities for Collaboration Between Government and Academia to Inform Public Policy
12:30 pm - 2:00 pm	Luncheon Session Genome Canada and Genome Atlantic; Genomics: Fuelling Canada's Growing Bioeconomy
2:00 pm – 3:30 pm	Panel 5 Partnerships That Move Innovation From Campus to Commerce Panel 6 The Crucial Role of Small and Medium Size Universities for Advancing Canadian Social and Econ Development Panel 7 Industry-Academic Partnerships in Canada: A View from the Trenches
3:30 pm – 4:00 pm	Break and Exhibit Display
4:00 pm – 6:00 pm	Keynote Session The Honourable <b>Michel Samson</b> , Minister of Economic and Rural Development and Tourism and Reception

## Friday, October 17, 2014

TIME	ACTIVITY
8:30 am – 10:30 am	Plenary Session "An Audit for Science! Really?"
10:30 am – 11:00 am	Coffee Break
11:00 am – 12:30 pm	Panel 9 Looking to 2020 and Beyond: Training the Next Generation of Innovation Leaders in Canada Panel 10 From Excellence to Impact: How Large Infrastructure Stimulate Growth Panel 11 Communication and Collaboration: Government Science as a Partner for Innovation
12:30 pm – 1:30 pm	Luncheon Session The Honourable <b>Ed Holder</b> , Minister of State (Science and Technology)
1:30 pm – 3:00 pm	Panel 12 Data Management Plans – Policy and Practice Panel 13 Complex International Science, Technology and Innovation Partnerships: Lessons for Canada Panel 14 Entrepreneurship and Innovation Success in Atlantic Canada
3:00 pm – 3:30 pm	Coffee Break
3:30 pm – 5:00 pm	Closing Panel

# Agenda

**Wednesday, October 15, 2014**

3:00 PM - 7:00 PM DALHOUSIE UNIVERSITY CAMPUS

## CSPC 2014 Special Workshop and Dinner – The Start-Up Meet-Up: A Lean Entrepreneurship Approach to Advancing Innovation

*Organizer:* **Mary Kilfoil**, Assistant Professor, Academic Lead, Start Lean Initiative, Rowe School of Business, Dalhousie University

The role of science and technology is highly recognized as being integral to advancing innovation through Canada's higher education institutions. However less attention is given to understanding what entrepreneurship theory, including creativity, opportunity recognition, entrepreneurial alertness, has to offer in getting research to market and advancing innovation.

This half-day workshop provides a hands-on learning experience for science researchers that want to gain a better understanding of what it's like to actually move an idea from a concept to something that could potentially be implemented in the market. Participants work in teams to apply Design Thinking and lean entrepreneurship approaches and learn how to use a business model canvas to brainstorm each part of a start-up company. The workshop provides a mixture of lecture, discussions with entrepreneurs, and a team-based simulation.

**Thursday, October 16, 2014**

8:00 AM - 8:15 AM ROOM 200B

Opening Ceremony

8:15 AM - 9:15 AM ROOM 200B

Keynote Session: Conversation with **Frank McKenna**, Deputy Chair, TD Bank, Former Canadian Ambassador to the United States and **John Risley**, President and CEO, Clearwater Fine Foods Inc.

9:15 AM - 10:30 AM ROOM 200B

## Panel 1: The Inside Story: Procurement, Value Propositions, and Industrial and Technological Benefits

*Moderator:* **Peter Nicholson**, Chair, Standing Selection Committee, Networks of Centres of Excellence; *Panelists:*

**Christyn Cianfarani**, President, Canadian Association of Defense and Security Industries; **Eric L. Cook**, Executive Director/CEO, Research and Productivity Council (RPC); **Jim King**, Independent Consultant, former Vice-Admiral; **Stephen Lund**, Vice President, Industrial Regional Benefits & Community Relations; *Commentator:* **John Knubley**, Deputy Minister, Industry Canada

Canada's procurement policy and its associated value proposition and Industrial and Technological Benefit (ITB) policies have the potential to create powerful strategic opportunities for Canadian industry and R&D. These include increasing demand-side pull instead of the more common supply-side push. ITBs and value propositions can provide new opportunities for Canadian companies to enter and move up sophisticated global supply chains.

On the other hand, these policies might potentially further complicate an already complicated procurement process and mitigate the primary objective of equipping the Canadian Forces in a timely way. To achieve the significant potential economic development benefits, ITBs and value propositions must be designed and negotiated strategically. This will therefore require priority attention from the responsible departments of government.

An authoritative panel will bring a variety of perspectives to the policy issues. The panel will include members from: a Canadian company with a contract for naval vessel construction; a federal regional development program; a federal ministry responsible for the operation of the policies; a provincial government; and a retired military officer. The panel is chaired by Peter Nicholson who has had extensive experience in science and innovation policy, including its relationship with defense procurement.

10:30 AM - 11:00 AM

Coffee Break

11:00 AM - 12:30 PM ROOM 200B

## Panel 2: Big Problems, Big Networks, Big Data

Organized by *Dalhousie University*

*Moderator:* **Sara Iverson**, Scientific Director of the Ocean Tracking Network (OTN); *Panelists:* **Tony Charles**, Director of the School of the Environment and a professor at Saint Mary's University; **Lucia Fanning**, Professor, Marine Affairs Program, Dalhousie University; **Dr. Ronald Pelot**, Associate Scientific Director, MEOPAR; **Fred Whoriskey**, Executive Director of the Ocean Tracking Network (OTN);

To provide the knowledge to address big problems or complex issues with no obvious solutions, nations are turning to large multi-disciplinary research networks. These networks

draw on researchers from the social and natural sciences, and create large amounts of data. Government departments, coastal communities, and industrial users of the ocean are seeking closer interaction with such academic-led networks. A number of research networks in Canada are nationally-funded to provide information relevant to sustainable ocean developments. These networks address well-defined, relatively narrow research questions, and collect very different types of data. Yet they overlap in their geographic areas of operation, and network results could potentially be integrated to generate new products and knowledge. We bring four, Atlantic-based, ocean-centered networks (Ocean Tracking Network (OTN), Marine Environmental Prediction and Response Network (MEOPAR), Fisheries-Western and Indigenous Knowledge Systems (Fish-WIKS), and Community Conservation Research Network (CCRN) together to consider the strengths and weaknesses of their focuses, the challenges each faced in building their networks and dealing with big data, their strategies to move their knowledge into policy and management spheres, and what synergies could be achieved by integrating these networks in new ways.

11:00 AM - 12:30 PM ROOM 200A1

### Panel 3: Mitigating the Risk of Marine Geohazards

Organized by *University of Victoria*

**Moderator: Martin Taylor**, Emeritus Professor, University of Victoria; **Panelists: Phillip Hill**, Director, Geological Survey of Canada-Pacific, Natural Resources Canada; **Laurie L'Heureux**, Emergency Planning Coordinator, Alberni Clayoquot Regional District; **Kate Moran**, President and CEO, Ocean Networks Canada; **Douglas Wallace**, Canada Research Excellence Chair in Ocean Science and Technology, Dalhousie University;

The cost to Canadians of natural hazard events is substantial and continues to increase. Major Canadian S&T investments, such as the Ocean Networks Canada observatories and the Marine Environmental Observation, Prediction and Response network enhance the capacity of the scientific community to deliver benefits by providing heretofore unavailable marine geo-scientific information that enables Canadians to minimize potential material and economic losses associated with earthquakes, tsunamis, storm surge and underwater landslides. Research outcomes are designed to foster improved understanding and assessment of marine hazards, to support decision makers in utilizing these assessments, and to provide tools to ensure increased preparedness of Canadians for responding to hazard events. As such, the research directly supports Natural Resources Canada's mandate "to ensure Canadians have relevant information to manage their lands and natural resources, and are protected from related risks". Building on the findings of

the recent Council of Canadian Academies assessment, Ocean Science in Canada: Meeting the Challenge, Seizing the Opportunity, and on a session convened for the CPSC 2013 meeting, this panel brings together national and international leaders in marine geohazard research and policy to address how ocean S&T capacity can be optimized to mitigate risks for Canadian coasts and communities.

11:00 AM - 12:30 PM ROOM 200A2

### Panel 4: Building Opportunities for Collaboration Between Government and Academia to Inform Public Policy

Organized by *York University*

**Moderator: Dr. Robert Haché**, VP Research and Innovation, York University; **Panelists: Christine Tausig Ford**, VP and COO, Association of Universities and Colleges of Canada; **Neil Gall**, Executive Director, MEOPAR NCE; **Anthony Giles**, Director General, Strategic Policy, Analysis and Workplace Information, Labour Program of Employment and Social Development Canada;

Canadian academic research in all disciplines is among the best in the world but Canada is not extracting full social and economic value from this research. Reductions in the policy



Saint Mary's University is pleased to support the 6<sup>th</sup> Annual Canadian Science Policy Conference.

[www.smu.ca](http://www.smu.ca)



**Thursday, October 16, 2014**

Agenda continued

capacity within government create opportunities to engage academic researchers in structured policy dialogues on policy areas of strategic importance to Canada. Supporting collaborations on policy research will create an innovative policy environment that will have an impact across government and on Canada's research and graduate student community. Structured policy dialogues on topics important to Canadians will provide an important means to maximize the return on government investments in university research and will build capacity and partnerships to better enable knowledge mobilization and enhance the public benefit of publicly funded research.

This panel will feature experts from the university research and federal policy environments. Panelists will make the case and explore possibilities for growing partnerships between federal policy makers and the broader policy community. The moderator will then seek feedback from the audience in a design session format to inform the development of a process that will maximize the impact of Canada's academic research community on Canada's federal public policy process.

12:30 PM - 1:30 PM ROOM 200B

Lunch

1:30 PM - 2:00 PM ROOM 200B

### **Luncheon Session by Genome Canada and Genome Atlantic; Genomics: Fuelling Canada's Growing Bioeconomy**

Genomes are made out of DNA and contain the "code of life" of any living organism. The work of cracking these codes is unleashing innovations that are helping to address some of the most critical challenges facing the world today, including food security, adaptation to climate change, energy demand and human health. Through a sustained and focused investment of more than \$2.3 billion in genomics over the past 14 years, Canada finds itself among world leaders in this field. Further, we are now perfectly positioned to reap the social and economic benefits enabled by this revolutionary technology across all sectors of the life science-based industries, collectively constituting the bio economy. Genome Canada President and CEO, Pierre Meulien, will discuss this game-changing field of science and technology and what it means for Canada. He will be followed by Genome Atlantic President and CEO, Steve Armstrong, who will explain how these two organizations help Atlantic Canadian companies and organizations benefit from genomics.

2:00 PM - 3:30 PM ROOM 200B

### **Panel 5: Partnerships That Move Innovation From Campus to Commerce**

Organized by CANARIE

*Moderator:* **Jim Ghadbane**, President and CEO, CANARIE; *Panelists:* **Mark Hoddenbagh**, Acting Executive Director, Partnerships and Applied Research, Algonquin College; **Dr. Steve Liang**, Professor and Entrepreneur, University of Calgary; **Laura O'Brien**, Founding Director, Association of University Research Parks (AURP); **Robin Winsor**, President and CEO, Cybera

Canada's knowledge-based economy relies on collaboration more than ever – collaboration is required not only to create new knowledge but also to transform this knowledge into products and services that create socio-economic benefits for all Canadians. One of the key issues identified in the Canadian innovation system is the slow pace of knowledge mobilization from "campus to commerce".

In light of new policy direction from the Government of Canada, as highlighted in Digital Canada 150 framework and Government's Open Data initiative, this panel will bring together experts with unique perspectives on how Canada can incentivize sharing and collaboration among various stakeholders in the innovation ecosystem while leverage existing resources.

The panelists will also describe how their unique partnerships are flourishing and driving tangible benefits for both public and private sector partners. They will discuss how they have taken advantage of new opportunities to add value to their stakeholder communities, and how these partnerships may be replicated and expanded.

2:00 PM - 3:30 PM ROOM 200A1

### **Panel 6: The Crucial Role of Small and Medium Size Universities for Advancing Canadian Social and Econ Development**

Organized by Université du Québec

*Moderator:* **Daniel J. Weeks**, President and Vice Chancellor, University of Northern British Columbia; *Panelists:* **David Cruise Malloy**, VP Research, University of Regina; **André Manseau**, Dean of Research, Université du Québec en Outaouais; **Michael Owen**, VP Research, Innovation & International, University of Ontario Institute of Technology; **J. Kevin Vessey**, Associate VP of Research, Dean of Graduate Studies, and Professor of Biology, Saint Mary's University

Small and medium size universities across Canada are critical for advancing Canadian economic development

# TOP 10

## Ways Canada Can Lead With Genomics

Genomics is a powerful technology that has the potential to transform many of our most important industries.



- 1 Agriculture** Genomics-informed selective breeding in cattle and other livestock can lead to more productive and cost-effective farms. In crops, trait development and pest management strategies can reduce the need for herbicides and pesticides, saving money and decreasing the carbon footprint.



- 2 Aquaculture** Genomics is helping the aquaculture sector improve production, decrease loss from disease and pests, increase traceability, and optimize feed formulas for healthy, profitable and sustainable fish farms.



- 3 Biofuels** Companies are using genomics to gain a deeper understanding of bugs that can help convert biomass to maximize energy outputs.



- 4 Energy** Energy companies are using genomics to better understand the microbes involved in pipeline corrosion, and inform approaches to managing the micro-environment within pipes to mitigate damage.



- 5 Environment** DNA barcoding technology (the equivalent of a human fingerprint) accurately detects the presence (or lack thereof) of various species, which is proving extremely valuable for managing eco-systems and for pre- and post-monitoring of industrial sites.



- 6 Fisheries** Genomics offers powerful tools to monitor wild fish stocks for biodiversity, genetic origins and population health. It can provide critical information for regulation of the fisheries – like DNA traceability, which can identify fish captured illegally.



- 7 Forestry** Genomics-assisted tree breeding programs are dramatically reducing the time it takes – from 31 years down to 10 years – to breed, test and propagate new varieties.



- 8 Health Care** Genomics allows a paradigm shift from a disease-oriented health care system to one that is more personalized, predictive, preventative and cost effective. Canadians are already reaping the benefits with enhanced diagnostics and more informed use of prescription drugs.



- 9 Mining** Genomics is leading to increased understanding of the microbes that safely 'digest' the wastes from mine sites. It's also helping to leverage the microbes involved in precious metal extraction, which can reduce the use of chemicals like cyanide.



- 10 Oceans** As we face environmental challenges such as ocean acidification and climate change, our ability to monitor biodiversity and microbial activity through genomics will be crucial. The lives of all ocean plants and creatures depend on it – and so do we.

Learn more at [genomecanada.ca](http://genomecanada.ca) or contact your local Genome Centre



GenomeCanada



GenomeBritishColumbia



GenomeAlberta



GenomePrairie



OntarioGenomicsInstitute



GenomeQuébec



GenomeAtlantic

## Thursday, October 16, 2014

Agenda continued

and prosperity. Research excellence takes place in all universities and has a strategic and significant impact to the development of a prosperous economy based on science and innovation in all communities in the country. National Science policies too often ignore or underestimate the crucial role and impact of small and medium size universities.

Without the contribution of small and medium size universities, national science capacity would be severely undermined. Likewise, without science policies that recognize the important contributions of these institutions, S&T impact on economic and social development would be severely hampered across the nation, and perhaps more particularly, in smaller communities where these universities are often located.

The panel is composed of key representatives from comprehensive small and medium size research universities across Canada, will present cases of research excellence and their impact on economic and social development, and proposed avenue for advancing Canada's science policy.

Intended outcomes are of two folds: evidence of research excellence across the country and its impact on all communities; and, identification of risks to our national science capacity if the role of small and medium size universities is not adequately recognized and support by science policy in Canada.

2:00 PM - 3:30 PM ROOM 200A2

### Panel 7: Industry-Academic Partnerships in Canada: A View from the Trenches

Organized by *University of Toronto*

**Moderator:** **Marcus Extavour**, Director of Government & Corporate Partnerships at the Faculty of Applied Science and Engineering, University of Toronto; **Panelists:** **Stephen Perelgut**, Senior Relationship Manager for Academic Relations, IBM Canada; **Edward Thomas**, Industry Partnerships Manager, Queen's University

Collaboration and partnerships are the order of the day. From "public-private partnerships" at the level of government agencies, to industry-academic research collaborations that drive technology transfer and commercialization, many of our public and private institutions are under pressure to initiate or expand strategic partnerships. This includes public universities

eager to grow programs and student experience, corporations interested in leveraging intellectual property and know-how flowing from research institutes and government labs, and not-for-profits seeking expert support in basic or applied research, and pathways to greater engagement with consumers, the Canadian citizenry, or a global audience.

But what is the nature of a strategic partnership? How we dig beneath the buzzwords to get at real value, lessons learned, and cautionary tales? How are they devised, created, and sustained? This panel will address these broad themes by drawing on the expertise of seasoned veterans of the industry-academic interface in Canada. In the spirit of the CSPC 2014 theme of "Innovation and Partnerships: A recipe for success", this panel will cover a few key sub-questions, including:

- ▶ What can Canada learn from other nations in this domain?
- ▶ Do regional, national, and international frameworks catalyze partnerships, or do they begin with one-on-one relationships between individuals?
- ▶ What is the role of direct investment from government and private capital, including philanthropy, in seeding and sustaining sustainable partnerships?

3:30 PM - 4:00 PM

Break and Exhibit Display

4:00 PM - 6:00 PM ROOM 200B



Keynote Session and Reception  
The Honourable  
**Michel Samson**,  
Minister of Economic and Rural  
Development and Tourism

## Friday, October 17, 2014

8:30 AM - 10:30 AM ROOM 200B

### Plenary Session: "An Audit for Science! Really?"

**Moderator:** **Janet Halliwell**, Principal, J.E. Halliwell Associates Inc.; **Panelists:** **Alan Bernstein**, President and CEO, Canadian Institute for Advanced Research; **Dr. Martha Crago**, VP Research, Dalhousie University; **Julie Gelfand**, Commissioner of the Environment and Sustainable Development; **Pierre Meulien**, President and CEO, Genome Canada; **Peter Nicholson**, Chair, Standing Selection Committee, Networks of Centres of Excellence

The office of the Auditor General, will be presenting the findings of Canada-Alberta oil sands monitoring program, CEAA 2012, and marine navigation in the arctic.

The need or the benefit of similar programs in science and technology will be discussed among panelists by answering the following questions:

1. Given the federal mandate for science and technology, what are the key things the federal government needs to do well?
2. Which federal activities regarding science and technology are working well?
3. For which federal activities regarding science and technology are there areas for improvement? If so, what are they?
4. What are the biggest risks to the federal activities around science and technology? What would be the impact?

10:30 AM - 11:00 AM

Coffee Break

11:00 AM - 12:30 PM ROOM 200B

### Panel 9: Looking to 2020 and Beyond: Training the Next Generation of Innovation Leaders in Canada

Organized by *Mitacs*

*Moderator:* **Rachel Brighton**, President, Finest Point Periodicals Limited; *Panelists:* **Andre Bezanson**, Postdoctoral Research Fellow, Dalhousie University; **Joe Blomeley**, Senior Associate, Canadian Council of Chief Executives; **Kevin Dunn**, Director, Industry Liaison and Innovation (ILI), Dalhousie University; **Valerie Walker**, Director, Policy, Mitacs

This panel will provide a national-level discussion on the future of graduate student and postdoctoral training in Canada. What does Canada's next generation of innovation leaders look like? What skills will they want and need to succeed? What are their career aspirations and whose responsibility is it to ensure that they are properly prepared for those careers upon completion of their academic training? The panel will examine the evolving research training ecosystem for grad students and postdocs and discuss what challenges need to be overcome to meet the increasing demands of Canada's knowledge-intensive economy. One possibility is to increase the linkages and collaborations that exist between the university and the wider community through research, training and innovation. Practical ways to do this and address other skills training challenges will be discussed, while recognizing the broader goal of ensuring that students and postdocs can succeed as future innovation leaders. This is a timely topic as these questions are being debated across the country and calls are being issued to consider new and re-imagined forms of graduate and postdoctoral research training.

11:00 AM - 12:30 PM ROOM 200A1

### Panel 10: From Excellence to Impact: How Large Infrastructure Stimulate Growth

Organized by *Canadian Light Source*

*Moderator:* **Mark Henderson**, Editor, RESEARCH MONEY; *Panelists:* **Dr. Jonathan Bagger**, Director, TRIUMF; **Robert Lamb**, Executive Director, Canadian Light Source Inc.; **Martin Taylor**, Emeritus Professor, University of Victoria; **Nigel Smith**, Director, SNOLAB

Governments are increasingly concerned with the economic impact and societal relevance of scientific investments. Canada's new knowledge economy is strongly enabled by premier national research institutes that support a broad cross section of academic, government, and industrial users from many different disciplines. Large science facilities are important drivers for growing Canada's future economy and fostering innovation in industry. They include the Canadian Light Source, TRIUMF, SNOLAB, and Ocean Networks Canada, to name a few.

From the training of highly qualified personnel to the engagement of the private sector through unique research capabilities to the transfer of laboratory-developed technology to Canadian businesses, these facilities stimulate growth at both the local and national levels.

The purpose of this symposium is to discuss the unique and complementary manner in which large science facilities drive societal and economic impacts for Canada. The discussion will highlight basic principles, challenge assumptions, and analyze specific examples.

11:00 AM - 12:30 PM ROOM 200A2

### Panel 11: Communication and Collaboration: Government Science as a Partner for Innovation

Organized by *Professional Institute for the Public Service of Canada*

*Moderator:* **Ivan Semeniuk**, Science Reporter, Globe and Mail; *Panelists:* **Thomas J. Duck**, Department of Physics and Atmospheric Science, Dalhousie University; **Katie Gibbs**, Executive Director, Evidence for Democracy; **Michael Halpern**, Union of Concerned Scientists (UCS); **Peter Morand**, Former president, NSERC

Government science is currently undergoing a historic transition that will ultimately re-define its internal structure, the direction of its partnerships and networks, and the future of Canada's science, technology and innovative capacity. Alongside cuts to science-based departments and agencies (SBDAs), government policies and practices are shaping the ways in which government

**Friday, October 17, 2014**

Agenda continued

science collaborates with academia, industry, and the international S&T community.

Government of Canada and departmental-specific strategies highlight the essential role of collaboration and transparency to Canada's innovative capacity, emphasizing the importance of partnering with universities and the private sector. Despite these strong principles, government scientists and science advocacy groups have drawn attention to the ways in which cuts to science funding, restrictive policies on communication, and cumbersome red-tape have limited the ability for scientists to collaborate and, in turn, are stalling Canada's capacity for research and innovation. In response, Canada has seen an unprecedented mobilization of scientists, academics, and public supporters who are leveraging a diversity of tactics to "stand up for science."

This panel will bring together stakeholders from across sectors and disciplines to discuss the gaps between policy and practice, addressing the following questions:

- ▶ Is there still a role for government science in innovation? In the current environment, can federal government scientists still collaborate effectively? If not, what is required to enable them to do so?
- ▶ What are the guiding principles of government science that support open communication and collaboration? What are key enablers and barriers to implementing these principles?
- ▶ What are some examples of successful partnerships between government, industry and academia, and what are some of the lessons learned from these experiences? What avenues do scientists and policy makers have to share ideas and collaborate on ideas and policies?
- ▶ How can we ensure that collaborative networks are inclusive, pan-Canadian, and engage the next generation of young scientists who value creativity, open communication, and autonomy?

12:30 PM - 1:30 PM ROOM 200B



Luncheon Session with the Honourable **Ed Holder**, Minister of State (Science and Technology)

1:30 PM - 3:00 PM ROOM 200B

### **Panel 12: Data Management Plans - Policy and Practice**

Organized by *Research Data Canada (np)*

*Moderator:* **Walter Stewart**, Co-ordinator, Research Data Canada; *Panelists:* **Ted Hewitt**, Executive VP, Social Sciences and Humanities Research Council; **Charles Humphrey**, Research Data Management Services Coordinator, University of Alberta; **Wendy Watkins**

This session is jointly sponsored by Research Data Canada (RDC), the Canadian Association of Research Libraries (CARL), and the Social Sciences and Humanities Research Council (SSHRC) on behalf of federal funders. Walter Stewart, Co-ordinator RDC, will moderate the session. Ted Hewitt, Executive Vice-President SSHRC, will speak to the reasons and the mechanisms for the introduction of a requirement for Data Management Plans (DMP) in Canada and the consultation process underway by the TC3+. Chuck Humphrey, Research Data Management Services Coordinator at the University of Alberta, and Wendy Watkins, Data Librarian at Carleton University, will provide practical advice in preparing a DMP and will demonstrate Web-based tools supporting this. Participants are encouraged to bring a research use case for developing a data management plan in their context.

Participants will come away from the session with:

- ▶ An appreciation of the value of data management plans
- ▶ An understanding of the content that goes into a data management plan and of tools that will help prepare such a plan
- ▶ An awareness of where to go for support in preparing a data management plan.
- ▶ An overview of developments to build research data management infrastructure around the country.

1:30 PM - 3:00 PM ROOM 200A1

### **Panel 13: Complex International Science, Technology and Innovation Partnerships: Lessons for Canada**

Organized by *MIT*

*Moderator:* **Dan Roos**, Japan Steel Industry Professor Emeritus of Engineering Systems and Civil and Environmental Engineering, MIT; *Panelists:* **Pierre Bilodeau**, COO, International Science and Technology Partnerships Canada (ISTPCanada); **Manuel Heitor**, Full Professor, Instituto Superior Técnico, Lisbon; **Mac Hird**, PhD Student, MIT; **Sebastian Pfotenhauer**, Lecturer & Research Scientist, MIT Technology & Policy Program, MIT; **Danielle Wood**, Research Engineer, Johns Hopkins University



Over the past several decades, Complex International Science, Technology, and Innovation Partnerships (CISTIPs) have emerged as an increasingly popular policy instrument through which governments seek to build domestic capacity in science, technology and innovation through collaboration with globally recognized expert organizations. For example, countries like Singapore, Russia, the UAE, Portugal, and Saudi Arabia have hired leading research universities from around the globe, including MIT, Carnegie Mellon, and Harvard, to assist them in jumpstarting or strengthening selected research fields, increase innovation and entrepreneurial activity at their leading national universities, or build whole new universities from scratch. Likewise, countries like Algeria, Chile, Egypt, Indonesia, Malaysia, Nigeria, Thailand and the UAE have entered into collaborative satellite development projects with foreign firms and space agencies from countries such as China, France, South Korea, the United Kingdom and the United States, to obtain access to cutting-edge satellite technology, raise domestic engineering capabilities, and harness the broader socio-economic benefits of space engineering. CISTIPs can also be currently observed in other sectors such as nuclear power and high-speed rail. Canada has been increasingly involved in such partnerships.

While CISTIPs have become widespread, there has been little understanding of the underpinnings of such partnerships — e.g. what design and implementation approaches exist, how they fit (or do not fit) into traditional innovation policy or technology transfer patterns, or how to evaluate them in light of their complex goals and activities. This panel will present a theoretical framework to systematically analyze and design CISTIPs and better understand their roles within national science and innovation strategies. We will discuss implementation patterns and evaluation methods for CISTIPs based on emerging approaches from systems architecture, technology policy, science and technology studies, and network science. Several case studies of CISTIPs, including university partnerships and collaborative satellite development projects, will be presented to highlight successes and challenges in previous or ongoing CISTIPs. Finally, the panelists will draw conclusions about future directions for the current Canadian partnership programs and opportunities to create new partnerships to build innovation capacity in Canada.

1:30 PM - 3:00 PM ROOM 200A2

### Panel 14: Entrepreneurship and Innovation Success in Atlantic Canada

Organized by *Vibazone*

**Moderator: Muthu Singaram**, Chief Mentor, Head of Consulting and Corporate Facilitator, Muthu Singaram

Consulting; **Panelists: David Burns**, VP Research, University of New Brunswick; **Jeffrey Crelinsten**, President and Co-founder, The Impact Group; **Kevin Dunn**, Director, Industry Liaison and Innovation (ILI), Dalhousie University; **Kathleen Rayworth**, Executive Director, Entrepreneur's Forum; **Larry Shaw**, CEO, Knowledge Park Inc.

The objective of this panel is to share individual experiences of successes in supporting effective innovation and commercialization in Atlantic Canada.

The panel will examine the need for collaboration and partnerships among the four key stakeholder sectors of the University, Industry, Government and Community, in order to be effective in supporting innovation and entrepreneurship initiatives. The panel has been drawn primarily from University and business associations that manage innovation and entrepreneurship programs. In addition, some of the panelists have run successful companies before taking their current roles, including international experience. The panel will also discuss good practices to obtain Intellectual property rights around the world (including best practices for protecting university research).

The panel will discuss how effective collaborations (among universities, governments, the private sector and communities) have been designed and built in Atlantic Canada to support the successful commercialization of research. Some relevant international examples will also be outlined by the moderator. This issue is directly linked to two themes of the conference, namely:

- ▶ Best practices in the details of how to achieve effective innovation and commercialization through collaboration are important (what works, what does not work) and need to be identified and examined in order to improve Canada's innovation performance; and,
- ▶ Some of the success factors and issues involved in collaborative approaches to innovation and entrepreneurship. This will help the audience chart out their own policies and road-maps within their own organisations for future innovation and entrepreneurship programs.

3:00 PM - 3:30 PM

Coffee Break

3:30 PM - 5:00 PM ROOM 200B

Closing Panel

# CSPC Speakers

## Dr. Jonathan Bagger

Director, TRIUMF



Dr. Jonathan Bagger was elected Director of TRIUMF effective July 1st, 2014. Prior to his role at TRIUMF, he served as Vice Provost for Graduate and Postdoctoral Programs at Johns Hopkins University, Chair of the Department of Physics and Astronomy, and Krieger-Eisenhower Professor of Physics and Astronomy. He served as the university's Interim Provost and Senior Vice President for Academic Affairs from 2012 to 2013.

Bagger's research centers on high-energy physics at the interface of theory and experiment. Together with Julius Wess, he is the author of the monograph Supersymmetry and Supergravity. Dr. Bagger has twice been a member of the Institute for Advanced Study. He served as Chair of the International Linear Collider Steering Committee, as Vice

A history of innovation –  
a future of infinite possibilities

2014 marks a century of innovation for the members of Canada's Research-Based Pharmaceutical Companies, Rx&D. Visit our timeline of Canada's remarkable contribution to global health care advances at [www.canadapharma.org/100](http://www.canadapharma.org/100)



Chair of the U.S. Department of Energy/National Science Foundation High Energy Physics Advisory Panel, and as a member of the U.S. National Research Council's Board on Physics and Astronomy. He has served on the Fermilab Board of Overseers, the SLAC Scientific Policy Committee, the Space Telescope Institute Council, and the Board of Directors of the National Space Biomedical Research Institute. He is a Fellow of the American Physical Society and the American Association for the Advancement of Science.

Bagger graduated from Dartmouth College in 1977. After a year at the University of Cambridge as a Churchill Scholar, he continued his graduate study at Princeton University. He received his Ph.D. in 1983 and took a postdoctoral research position at the Stanford Linear Accelerator Center. From 1986 to 1989, he was Associate Professor at Harvard University.

## Alan Bernstein

President and CEO,  
Canadian Institute for Advanced Research



Alan Bernstein became CIFAR's President and Chief Executive Officer in May 2012.

Most recently, Dr. Alan Bernstein was executive director of the Global HIV Vaccine Enterprise in New York, an international alliance of researchers and funders charged with accelerating the search for an HIV vaccine. From 2000 to

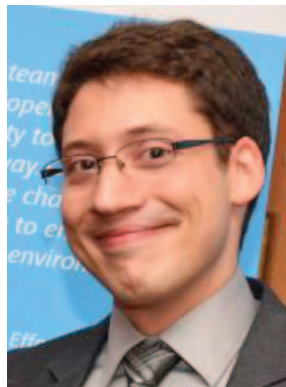
2007, he served as the inaugural president of the Canadian Institutes of Health Research (CIHR), Canada's federal agency for the support of health research. In that capacity, he led the transformation of health research in Canada.

After receiving his PhD from the University of Toronto, and following postdoctoral work at the Imperial Cancer Research Fund in London, Dr. Bernstein joined the Ontario Cancer Institute. In 1985, he joined the Samuel Lunenfeld Research Institute, was named its Associate Director in 1988 and served as Director of Research from 1994 to 2000.

Author of over 225 scientific publications, Dr. Bernstein has made extensive contributions to the study of stem cells, blood cell formation (hematopoiesis) and cancer. He chairs or is a member of advisory and review boards in Canada, the U.S., U.K., Italy and Australia. Dr. Bernstein has received numerous awards and honorary degrees for his contributions to science, including the 2008 Gairdner Wightman Award. He is a Senior Research Fellow of Massey College, University of Toronto and, in 2002, was made an Officer of the Order of Canada.

## Andre Bezanson

Postdoctoral Research Fellow, Dalhousie University



Andre Bezanson is a 4th year Ph.D. student in the School of Biomedical Engineering at Dalhousie University. His research has focused on developing the technology to miniaturize ultrasonic probes to about the size of a pencil eraser so they can be used for endoscopic imaging applications. During his undergrad in mechanical engineering, Andre

discovered a passion for the engineering design process whereby one could see a project evolve from an idea through to a tangible product. During his work with Daxsonics Ultrasound Inc, on a Mitacs-funded internship, he was able to pursue a project successfully developing high-frequency ultrasonic transducers and electronics for dermatological imaging applications. The technology was adopted by the Daxsonics and Andre was offered a key position in the company as a result of the success of the work. Upon completion of his degree, he hopes to turn his developed technology into a commercial product, opening up benefits of ultrasonic imaging to new clinical applications.

## Pierre Bilodeau

Chief Operating Officer, International Science and Technology Partnerships Canada (ISTPCanada)



Dr. Pierre Bilodeau has 15+ years of experience in managing S&T partnerships, program delivery, and R&D activities in both public and private sectors. As ISTPCanada's Chief Operating Officer, he manages and monitors policies and collaboration programs under S&T cooperation agreements between Canada and three trading partner countries: Brazil,

China and India. Previously, Pierre worked at the Natural Sciences and Engineering Research Council (NSERC) as Director in Research Partnerships and Research Grants & Scholarships directorates for five years where he developed and implemented innovative programs to support university-industry partnerships and international collaboration. He also engaged with several external stakeholders on S&T related issues through his active membership on the NRC-AAFC-NRCan Advisory Committee for the National Bio-product Program, the Canadian Association for Graduate Studies

(CAGS), and the Consortia Advancing Standards in Research Administration Information (CASRAI) to name just a few. Prior to joining NSERC, Pierre occupied several R&D leadership positions with Medicago Inc, a clinical-stage biopharmaceutical company developing novel vaccines and therapeutics to address a broad range of infectious diseases worldwide. During this time, he also served as adjunct professor in Plant Sciences at Université Laval in Québec City. This built on his previous experience as a research scientist with the Crop and Plant Business Unit at the Alberta Research Council, and as a postdoctoral fellow with the Commonwealth Scientific and Industrial Research Organization, Division of Plant Industry in Canberra, Australia. Pierre was awarded a Commonwealth Scholarship to attend the Australian National University for his PhD (1997) in plant sciences. He holds a bachelor degree (1990) and a Master's degree (1992) in biochemistry from Université Laval in Quebec City.

## Joe Blomeley

Senior Associate, Canadian Council of Chief Executives



Joe Blomeley is a Senior Associate with the Canadian Council of Chief Executives where he is responsible for education and employment policy. He regularly interacts with HR executives from the Council's member companies and is a key member of the team organizing the Council's new multiyear initiative, Taking Action for Canada: Jobs and Skills for the

21st Century. Before joining the Council, Joe worked at Industry Canada in the Strategic Policy Sector, where his principal role was to review, advise and support departmental cabinet documents. He also contributed to Industry Canada's medium-term planning process and worked closely with the Department of Foreign and Affairs and International Trade, the Privy Council Office and the Department of Finance. From a policy perspective, Joe specialized in foreign direct investment, productivity and innovation, R&D policy and military procurement. Joe holds Master's and Bachelor of Arts Degrees respectively from the Norman Paterson School of International Affairs at Carleton University and the University of Western Ontario.

## CSPC **Speakers** *continued*

### **Rachel Brighton**

President, Finest Point Periodicals Limited



In her work as a reporter, editor, publisher, and freelance writer in Canada and Australia over the past two decades, Rachel Brighton has paid particular attention to the policy angle in her coverage of and commentary on economic development. She is currently a freelance business columnist with The Chronicle Herald in Halifax, a regular columnist with Herald Magazine,

and a contributor to trade publications serving forestry and agriculture in Atlantic Canada. Her staff positions in the Canadian media have included The Daily News in Halifax, The Canadian Press, and Nova Scotia Open to the World magazine (as editor); her magazine articles have appeared in the United States, Ireland, Scotland, and Canada. She is also the author of The Road Here: Stories from Senior Women in Rural Nova Scotia, and an occasional commentator on CBC Radio in Halifax. In Melbourne, Australia, Rachel was business editor of the statewide newspaper, The Sunday Herald Sun.

### **David Burns**

VP Research, University of New Brunswick



As Vice-President Research at UNB since August 2012, Dr. David H. Burns provides leadership and vision in shaping UNB's strategic research direction and agenda. He is building on the success of the Office of Research Services and continues to promote, strengthen and enhance the dynamic culture of research within UNB, further expanding

faculty activity in the area and fostering a general enthusiasm, excitement and motivation for research.

Dr. Burns was previously at McGill University in Montreal, where he spent more than 18 years contributing to the betterment of that institution. In particular, his experience in cultivating the relationship between innovation and entrepreneurship has been valuable to UNB as it continues to work with academic, business, and government partners on the commercialization of ideas.

At McGill, Dr. Burns served as a chemistry professor, scientific director of the Respiratory Health Networks of Centres of Excellence, chief scientific officer of molecular biometrics, and associate dean for the faculty of science. Several aspects of Dr. Burns' work have led to intellectual property which has resulted in patents, licences and two start-up companies.

He has also worked at the University of Washington as a research fellow, research assistant professor and research associate professor.

Dr. Burns earned his PhD in analytical chemistry at the University of Washington ('84) and his bachelor of chemistry and mathematics degree at the University of Puget Sound in Tacoma, Washington ('79). His research has received millions of dollars in funding grants and awards, and his work has been recognized by the Natural Sciences and Engineering Research Council of Canada, the Council for Near Infrared Spectroscopy, BioQuébec, the Chemical Institute of Canada, and the Chemical Society of Canada, among many others.

### **Tony Charles**

Director, School of the Environment  
Professor, Saint Mary's University



Dr. Anthony (Tony) Charles is the Director of the School of the Environment and a professor at Saint Mary's University (Halifax, Nova Scotia, Canada) with a joint appointment in Environmental Science and the Sobey School of Business. Dr. Charles is a Pew Fellow in Marine Conservation, and specializes in interdisciplinary analysis of fisheries, coastal and marine

issues. Particular areas of emphasis include community-based conservation and resource management, small-scale fisheries, integrated ocean and coastal management, the ecosystem approach, marine protected areas, indicator frameworks, and the development of management measures for sustainability and resilience. Dr. Charles is currently Principal Investigator in the Community Conservation Research Network, a global initiative exploring the interaction of communities, environmental challenges and decision making. He is the author of a wide range of publications, including Sustainable Fishery Systems (Blackwell Science), Canadian Marine Fisheries in a Changing and Uncertain World (NRC Press), Nova Scotia GPI Fisheries and Marine Environment Accounts (GPI Atlantic), Integrated Fish Farming (CRC Lewis) and the Community Fisheries Management Handbook. Dr. Charles is a past President of the International Institute of Fisheries Economics and Trade and the Resource Modeling Association, the

founding Director and past Chair of Canada's Ocean Management Research Network, and a member of the editorial board of the American Fisheries Society journal Marine and Coastal Fisheries. Dr. Charles serves as an advisor to fisheries organizations in Atlantic Canada, and internationally he works on fisheries, ocean and coastal management in Asia, Latin America and the Caribbean, as well as with FAO and OECD.

## Christyn Cianfarani

President, Canadian Association of Defense and Security Industries



Christyn Cianfarani was appointed President of the Canadian Association of Defense and Security Industries (CADSI) in September 2014. Ms. Cianfarani was previously Director of Advanced Training Solutions and Government Relations at CAE Inc. She has also held the position of Director of Government Programs, Research and Development, and

Intellectual Property, in addition to managing over her substantial career a wide range of portfolios from product and project management to bids and proposals. Before joining CAE Inc., she served in the Royal Canadian Navy as a MARS Officer.

In 2012, Ms. Cianfarani contributed as an expert advisor in support of Special Advisor Mr. Tom Jenkins in the context of his "Canada First: Leveraging Defence Procurement Through Key Industrial Capabilities" report. This report, submitted to the Minister of Public Works and Government Services, has subsequently informed the Government's Defence Procurement Strategy. Ms. Cianfarani has also represented Canadian industry for Tom Jenkins' Review of Research and Development in Canada, and as a contributor to Hon. David Emerson's Aerospace Review.

In February 2014, she accepted a position on the Interim Board of Directors of the Defence Analytics Institute, working with Government stakeholders from Industry Canada, Public Works and Government Services Canada, and National Defence to establish the function in Canada.

Ms. Cianfarani earned a Bachelor's degree from the Royal Military College of Canada and a Master's degree from the University of Toronto. She is proficient in both official languages of Canada.

**Eric L. Cook**, P.Eng.  
Executive Director/CEO,  
Research and Productivity Council (RPC)



Eric's career includes 25 years of leadership in the application of science and technology in sectors including advanced manufacturing, space science, aerospace, and wireless communications. Eric has served as Executive Director and CEO of RPC since 2004. RPC is New Brunswick's provincial research organization, a crown corporation offering contract

research & development, and technical services. RPC provides technical expertise both regionally and globally to 1000 clients annually serving the environmental, aquaculture, manufacturing, mining and energy sectors. Eric's education includes a bachelor of science in mechanical engineering and masters of business administration, a combination that has served him well in seeking science-based solutions for business problems and opportunities. Eric is an advocate for market-led innovation. He has participated in numerous federal and provincial innovation initiatives. He has served on the Council of Canadian Academies' (CCA) Expert Panel on the State of Science and Technology in Canada and the CCA Expert Panel on the State of Industrial Research and Development in Canada. He is, or has been, an active board member for a number of science and technology organizations including Genome Atlantic, the Center for Nuclear Energy Research, Innoventures Canada and the New Brunswick Environmental Industries Association.

## Dr. Martha Crago

Vice-President (Research) and Professor in Human Communication Disorders, Dalhousie University



Martha Crago is the Vice-President (Research) and Professor in Human Communication Disorders at Dalhousie University. Her previous university administrative positions include Vice-President of International and Governmental Relations at the Université de Montreal, the Dean of Graduate and Postdoctoral Studies and Associate Provost (Academic Programs) at McGill

University. Martha Crago is the Vice Chair of the Vice Presidents (Research) of the U15 group of Canada's research intense universities.

## CSPC **Speakers** *continued*

Dr. Crago is founder and Chair of the Board for the Institute for Ocean Research Enterprise. She is also presently the Canadian academic member of the federal government's Joint Canada-Brazil Committee and of the boards of the Network of Centres of Excellence in Marine Environment Observation Prediction and Response (MEOPAR) as well as the Ocean Network Canada. In addition, she has been on the Advisory Councils of the Department of Fisheries and Oceans of Canada and the National Research Council - Institute of Marine Biosciences.

At Dalhousie University, she chairs a variety of other research institutes governing councils and committees such as the Brain Repair Center Coordinating Committee, the Life Sciences Research Institute Governing Council and the Ocean Tracking Network Council. She has been an active researcher in language acquisition. Her work has been published extensively in scientific journals and books and she is the Editor-in-Chief of Applied Psycholinguistics published by Cambridge University Press. She was Vice President of the International Association for the Study of Child Language from 2007-2010.

Dr. Crago was named Chevalier de l'ordre des palmes academiques by the government of France in 2009 and Femme de Merite de Montreal in 2000. She is also the recipient of the McGill University Prize for her contributions to research.

### **Jeffrey Crelinsten**, Ph.D.

Publisher, RESEARCH MONEY, President and CEO,  
The Impact Group



Jeffrey specializes in innovation policy, research and communications. He has been studying the challenges facing R&D-intensive firms and commercialization intermediaries for over 14 years and is a strong advocate for a customer-focused approach to commercialization.

Jeffrey also specializes in science and technology communications, outreach and education. He created the Engineer-in-Residence program for Professional Engineers Ontario, an initiative aimed at stimulating interest in science, technology, engineering and math (STEM) among youth in elementary and secondary schools. An award-winning science writer, Jeffrey has written television, film and radio documentaries, teaching and learning guides for K-12 educators and students, and two books. He is a frequent speaker on innovation, policy, communications, science for young people, and the history of relativity and Einstein's rise to fame.

He was a director of the Canadian Science Writers Association from 1987 to 1991, serving as President for two years. A strong science literacy advocate, he was a director and Communications Committee Chair of Youth Science Foundation Canada from 1995 to 2001, a member of the Information Technology Association of Canada's Talent Committee and a founding director of the Science and Technology Awareness Network. Jeffrey is a founding Director of the International Commercialization Alliance, a network of innovation intermediaries from 19 different countries, launched in 2011. He also serves as the Chair of the ICA's Projects Committee.

Jeffrey has a B.Sc. in physics from McGill University and a M.Sc. in astronomy from the University of Toronto. He was Assistant Professor of Science and Human Affairs at Concordia University from 1971 to 1977, when he left teaching to obtain his Ph.D. in history of science and science policy at the University of Montreal.

### **Thomas J. Duck**

Department of Physics and Atmospheric Science,  
Dalhousie University



Tom Duck earned his Ph.D. in Physics (1999) at York University, where he studied the dynamics of the Arctic stratosphere. After spending two-and-a-half years at MIT Haystack Observatory in Boston, Massachusetts, he joined the faculty at Dalhousie University where he is now an Associate Professor in the Department of Physics and Atmospheric Science. While at

Dalhousie he co-founded the Canadian Network for the Detection of Atmospheric Change (CANDAC) which operates the Polar Environment Atmospheric Research Laboratory (PEARL) in the High Arctic at Eureka (Nunavut). He was an International Science Team Co-Investigator and lidar specialist on the Phoenix Mars Scout mission that detected water and snowfall on Mars in 2008. He is a fellow of the Broadbent Institute and over the past few years he has been an advocate for science and evidence-based policy making. His work on raising awareness about federal government cutbacks and the loss of scientific capacity at Environment Canada, and in particular the closure of its world-renowned ozone group, earned him the 2011 Neil J. Campbell medal from the Canadian Meteorological and Oceanographic Society.

## Kevin Dunn

Director, Industry Liaison and Innovation (ILI),  
Dalhousie University



As Director at Dalhousie University, Industry Liaison and Innovation (ILI), Kevin Dunn leads the business interaction and industrial relationships for the university as they relate to contract research and issues of intellectual property. Kevin is also serves on several committees locally and nationally, including as chair of the Board for the Alliance for Commercialization of

Canadian Technologies. Prior to joining ILI, Kevin worked with Dalhousie's Technical Cooperative and Career Services, helping engineering coop students find learning opportunities and meaningful employment. Before joining Dalhousie University, Kevin has worked in senior technical sales management positions across North America with both a multi-national companies and a small regional company. Throughout his career his roles have required close interactions with small and medium-sized business clients but also with large organizations throughout Canada, US and globally.

## Dr. Rainer Engelhardt

Chief Science Officer of the Public Health Agency of Canada



Dr. Engelhardt has a career background in science and technology, initially in academic research and teaching, then progressing to commercial and public sector management. Prior to his becoming Chief Science Officer, he held the position of Assistant Deputy Minister for Infectious Diseases in the Public Health Agency, which he joined following a successful twenty

years in the private sector. He was chief executive officer of several innovative companies in the health sector, including the infectious disease domain, served as a director on the boards of numerous technology companies, and chaired BIOTECanada, Canada's national biotechnology trade association. Prior to that, he was a founding officer and a senior executive with the U.S.-based Marine Spill Response Corporation, establishing this billion dollar enterprise.

He has a record as author and editor of over 150 scientific and technical publications, including three books in commercial applications of science and technology, and several patents.

## Marcus Extavour

Director, Government & Corporate Partnerships,  
Faculty of Applied Science and Engineering,  
University of Toronto



Dr. Marcus Extavour is an engineer and physicist working across the fields of technology innovation, clean energy, and science policy. As Director of Government & Corporate Partnerships at the Faculty of Applied Science and Engineering at the University of Toronto, he develops research partnerships and philanthropic relationships that support R&D, students, and

technology commercialization. His past work has included research at the Council of Canadian Academies in Ottawa, political staffing and policy development at the U.S. Senate Committee on Energy & Natural Resources in Washington, D.C, and electricity market risk analysis Ontario Power Generation. Dr. Extavour is a graduate of the Department of Physics at the University of Toronto, where he received the PhD in atomic and optical physics, and of the Division of Engineering Science, where he earned the BASc.

## Lucia Fanning

Director, Marine Affairs Program, Dalhousie University



Lucia has spent the past six years serving as Director of the Marine Affairs Program at Dalhousie University. Prior to that, she was involved in addressing trans-boundary fisheries governance in the Caribbean Sea where some 45 countries and territories with diverse cultures, politics, economics, laws and environments are working towards enhanced decision-making for the long-

term sustainability of the fisheries. Lucia is passionate about including and raising the awareness of the value of all branches and sources of knowledge to better inform decision-making. Lucia lives in a rural part of Halifax where she enjoys her 26 acre lakeshore property, no matter the season! Her research interests include the roles of policy networks in influencing marine policy decisions; the assessment and effectiveness of evolving oceans governance regimes in managing marine uses; and ecosystem-based approaches to the management of coastal and marine space and use. Current projects include governance of transboundary living marine resources at the regional or large marine ecosystem (LME) level, in particular the

## CSPC **Speakers** *continued*

Caribbean LME and the role of key and emerging policy actors, including resource users and members of civil society, in managing marine resources.

### **Neil Gall**

Executive Director, MEOPAR



Appointed the first Executive Director of MEOPAR in June 2013, Neil brings extensive local, national and international experience in the ocean technology industry. Neil has held several leading roles in government, research and academic environments over the past decade, including Executive Director of Bridges, an initiative administered through the

Marine Institute of Memorial University. A proven leader, he is adept in the management of complex multi-disciplinary, multi-institutional organizations.

Neil has considerable international business development and marketing experience and has taught numerous undergraduate business courses in communications and marketing. He received his MBA from McGill University, Bachelor of Commerce (Co-op) degree from Memorial University, and he completed le programme court de 2e cycle en gestion de projet at UQAM. Prior to joining MEOPAR, Neil played a key role in the development and implementation of the Government of Newfoundland and Labrador's ocean technology development strategy, "Oceans of Opportunity."

### **Julie Gelfand**

Commissioner of the Environment and Sustainable Development



Julie Gelfand was appointed as Commissioner of the Environment and Sustainable Development in March 2014. Before joining the Office of the Auditor General, Ms. Gelfand held the positions of Chief Advisor at Rio Tinto Canada and of Vice-President of Environment and Social Responsibility at the Rio Tinto Iron Ore Company of Canada (IOC). Prior to joining IOC, Ms. Gelfand

was Vice-President, Sustainable Development at the Mining Association of Canada and co-chair of the Corporate Social Responsibility (CSR) Centre of Excellence, under the federal CSR Strategy for the Canadian International Extractive Sector. From 1992 to 2008, she served as President of Nature Canada. She also founded and chaired the Green Budget Coalition.

### **Jim Ghadbane**

President and CEO, CANARIE



As President and CEO of CANARIE, Jim is responsible for achieving the company's objectives as stated in its current agreement with the Government of Canada, including the ongoing evolution of the advanced research and education network; technology innovation and the development of research software tools, and stimulating innovation and commercialization in Canada's ICT sector.

During his tenure at CANARIE, Jim has led a number of strategic initiatives, including the creation of the software development team and the launch of DAIR, a cloud computing service for entrepreneurs, and of the Research Middleware program. Additionally, he has led the evolution of CANARIE's backbone network to become 100G (100 Gigabits per second) capable and has overseen the growth and development of CANARIE's identity and access management solution for research and education communities, the Canadian Access Federation.

Prior to joining CANARIE, Jim held a variety of executive positions at leading technology companies, including Bridgewater Systems (now part of Amdocs), Ceyba Corporation, Alcatel Corporation, and Newbridge Networks.

### **Katie Gibbs**

Executive Director, Evidence for Democracy



Katie Gibbs is a scientist, community organizer and advocate for science and evidence-based policies. While completing her PhD at the University of Ottawa researching threats to endangered species, she was the lead organizer of the 'Death of Evidence' rally which was one of the largest science rallies in Canadian history. Katie is a co-founder and Executive



Director of Evidence for Democracy, a national, non-partisan, not-for-profit organization that promotes science integrity and the transparent use of evidence in government decision-making. She has a diverse background organizing and managing various causes and campaigns including playing an integral role in Elizabeth May's winning election campaign in 2011. Katie is frequently asked to comment on science policy issues and has been quoted and published in numerous media outlets, including the CBC, The Hill Times, the Globe and Mail and the National Post.

## Anthony Giles

Director General, Strategic Policy, Analysis and Workplace Information, Labour Program of Employment and Social Development Canada



Anthony Giles is Director General, Strategic Policy, Analysis and Workplace Information in the Labour Program of Employment and Social Development Canada, a position that he has held since 2007. From 2004 to 2007, he was Director General, International and Intergovernmental Affairs in the Labour Program.

Prior to joining the federal government, he worked as Director of Research at the Secretariat of the Commission for Labour Cooperation in Washington, D.C. (2001-04), and as a professor in the Département des relations industrielles, Université Laval (1992-2001) and in the Faculty of Administration, University of New Brunswick (1983-1992). During his academic career, Dr. Giles conducted research on a wide variety of subjects, including comparative and international industrial relations, public policy, collective agreements, industrial relations theory, globalization, the management of work in multinational firms, and work reorganization.

Dr. Giles holds a Ph.D. in Industrial Relations (Warwick University, UK), an M.A. in Public Administration (Carleton University), and a Bachelor of Administration (Concordia University).

## Dr. Robert Haché

Vice-President, Research and Innovation, York University



Dr. Robert Haché is Vice-President Research and Innovation at York University. Prior to that, he served as the associate vice-president research at the University of Calgary, where he was instrumental in moving the university's strategic research priorities forward. He has also held academic appointments in the Department of Cell Biology and Anatomy in

the Faculty of Medicine, and in the Department of Biological Sciences in the Faculty of Science at the University of Calgary. A renowned molecular and cellular biologist and biochemist with a substantial record of publications, Dr. Haché has made invaluable contributions to the understanding of how steroid hormone signaling takes place in cells and how cells respond to DNA damaging agents. Dr. Haché holds a BSc (biochemistry) from McGill University and a PhD (biochemistry) from Queen's University. He has received research grants and awards from the Canadian Institute for Health Research (CIHR), National Cancer Institute of Canada (NCIC), National Science and Engineering Research Council (NSERC) and other organizations.

## Janet Halliwell

Principal, J.E. Halliwell Associates Inc



Janet Halliwell is the Principal of J.E. Halliwell Associates Inc, a company established to offer value-added services in policy and management consultancy relating to post-secondary education and science and technology, particularly publicly-funded R&D.

Recent projects include advising on, and chairing the majority of, the Outcomes Measurement Study reviews for the Canada Foundation for Innovation (CFI); design of a conceptual framework for the measurement of economic impacts for the Michael Smith Foundation for Health Research; work with the Social Sciences and Humanities Research Council on research relating to the Digital Economy; policy and program development for the Canada Excellence Research Chairs (CERC) for the Tri-Council; and developing a handbook on the governance and management of "big science" for federal agencies.

## CSPC **Speakers** *continued*

Janet currently serves on the Board of Directors of Genome BC, the Fields Institute for Mathematics and the Advisory Council of the Cluster on Population Change and Lifecourse. In the summer 2008 she assumed the Chair of CASRAI (Consortia Advancing Standards in Research Administration). She also chairs the International Oversight Committee for the Canadian Longitudinal Study on Aging on behalf of the Canadian Institutes for Health Research (CIHR).

In April 2007 Janet retired from many years of public service – serving in her final years as Executive Vice-President of the Social Sciences and Humanities Research Council (SSHRC), where she had responsibility for corporate affairs, including governance, strategic planning, government relations, and performance measurement.

From 1975-1996 Janet served the research and academic communities in other executive, management and advisory positions. She was Chair of the Nova Scotia Council on Higher Education (1992-1996), Chair of the Science Council of Canada (1990-1992) and an officer of the Natural Sciences and Engineering Research Council of Canada (through to 1990). In a consulting capacity from 1996 to 2001, Janet was active in a diversity of areas of science and technology policy.

Janet holds degrees from Queen's University in Kingston and the University of British Columbia. She has received honorary doctorates from seven Canadian universities and is a recipient of the Walter Hitschfeld Prize for university research administration.

### **Michael Halpern**

Program Manager, Center for Science and Democracy,  
Union of Concerned Scientists (UCS)



Michael Halpern works to promote solutions that ensure government decisions are fully informed by scientific information and that the public understands the scientific basis for those decisions. His work includes successful efforts to defend scientists from harassment, secure White House commitments to restore scientific integrity to federal

policy making, and engage scientists to bring their expertise to the public. Prior to joining UCS, Michael worked as a public awareness director for the Brain Injury Association of Minnesota and as a community organizer in St. Paul,

Minnesota. He has written for and been quoted in numerous media outlets, including the Washington Post, the New York Times, the Associated Press, CNN.com, and National Public Radio. Michael holds a B.A. in sociology and communication studies from Macalester College.

### **Manuel Heitor**

Full Professor, Instituto Superior Técnico, Lisbon



Manuel Heitor is Full Professor at Instituto Superior Técnico, Lisbon, and director of the Center for Innovation, Technology and Policy Research, IN+, which was awarded in 2005 by the International Association of Management of Technology, IAMOT, has one of the top 50 global centres of research on Management of Technology.

From March 2005 to June 2011 he served as Secretary of State for Science, Technology and Higher Education in the Government of Portugal. He was a Visiting Scholar at Harvard in 2011-12.

He earned a PhD at Imperial College, London, in 1985 in combustion research and did post-doctoral training at the University of California San Diego. Then he pursued an academic career at Técnico, Lisbon, where he served as Deputy-President for the period 1993- 1998. Since 1995, he has been Research Fellow of the IC2 Institute (Innovation, Creativity and Capital) of the University of Texas at Austin. He was co-editor of the book series on Technology Policy and Innovation, launched through Greenwood Publishers, Connecticut and continued through Purdue University Press. He was co-founder in 2002 of Globelics – the global network for the economics of learning, innovation, and competence building systems and, in 2004, a founding member of the S&T Council of the International Risk Governance Council, IRGC.

## Mark Henderson

Editor, RE\$EARCH MONEY



Mark Henderson is a veteran journalist specializing in topics relating to Canadian science and technology and research and development. Since 1994, Mr. Henderson has been the editor of RE\$EARCH MONEY, a national newsletter focused on science and technology policy and funding issues. RE\$EARCH MONEY features articles on business R&D spending, academic research and government policy and funding programs pertaining to R&D. Prior to joining RE\$EARCH MONEY, Mr. Henderson wrote for newspapers, magazines, government departments and agencies and corporations on business, municipal politics, cultural and entertainment issues, particularly cinema and music.

Mr. Henderson holds an Honours Bachelor of Journalism from Carleton University and a Honours BA in Film Theory from Queen's University.


## Ted Hewitt

Executive Vice-President, Social Sciences and Humanities Research Council (SSHRC)



Ted Hewitt comes to SSHRC from Western University, where he served as vice-president, research and international relations, from 2004 to 2011. He has served as public policy scholar at the Brazil Institute at the Woodrow Wilson International Center for Scholars in Washington, D.C., and as professor of sociology at Western University. A leading

Canadian authority on Brazil, his work has appeared in monographs, edited works and a range of academic journals. Ted's recent research has focused on national and international innovation systems, with emphasis on the roles played by universities, industry and government in promoting economic prosperity in the 21st-century economy. He holds a PhD in sociology from McMaster University.




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### **Phillip Hill**

Director, Geological Survey of Canada-Pacific,  
Natural Resources Canada



Dr. Philip Hill is a Director of the Geological Survey of Canada-Pacific, Natural Resources Canada, based in Sidney, BC. A graduate of Oxford and Dalhousie Universities, he has more than 30 years of experience in marine geological and geohazard research, including work in the Atlantic, Pacific and Arctic Oceans, as well as in Hudson Bay and the Saint

Lawrence estuary. Following several years as a postdoctoral fellow and research scientist at the Geological Survey of Canada, Phil operated a consulting business for three years and then spent 9 years at the Université du Québec à Rimouski as a Professor of Oceanography. Phil moved back to the Geological Survey of Canada in the Pacific region in 2001 where he conducted multidisciplinary research on marine geoscience. He has managed several large research projects programs related to ocean management, climate change and marine geohazards.

### **Mac Hird**

PhD Student, MIT



Mac Hird is PhD Student in the Engineering Systems Division at the Massachusetts Institute of Technology. His research focuses on how networks of collaboration form between Higher Education Institutions and how such collaborations lead to innovation. He has previously worked at the National Research Council's Board on Science Education and

the Association of American Universities.

### **Mark Hoddenbagh**

Acting Executive Director, Partnerships and  
Applied Research, Algonquin College



Transforming students, faculty, staff and clients through entrepreneurship and applied research has been Mark's focus since 2007 when he joined Algonquin College. This has been accomplished by developing strong internal and external networks with creative, driven and passionate people; leveraging the expertise of faculty and staff; engaging

students in addressing real-world problems and opportunities; and collaborating closely with industry, government and community organizations.

Mark has over twenty-five years of academic and applied research experience in chemistry, environmental sciences, advanced materials, pulp and paper, and biotechnology. At Algonquin his support of sustainability, entrepreneurship, applied research and commercialization has grown to encompass construction and building sciences, smart grid, ICT, photonics, health care, digital and multimedia technologies, business, culinary, engineering technology, sustainable development and education.

Prior to joining the College, Mark worked for the National Research Council of Canada, Millar Western Pulp Limited in Saskatchewan, the Alberta Research Council in Edmonton, and IOGEN Corporation in Ottawa.

Mark holds a Ph.D. in Inorganic Chemistry, a Bachelor of Science (Honours Chemistry) and a Bachelor of Arts (Chemistry/Spanish), from Queen's University.

### **The Honourable Ed Holder**

Minister of State (Science and Technology)



Ed Holder was first elected to the House of Commons in 2008 and was re-elected in 2011. On March 19, 2014, Mr. Holder was appointed Minister of State (Science and Technology). He has been a member of several committees, including the Standing Committees on Industry, Science and Technology; International Trade and Transport, Infrastructure and

Communities. Prior to being elected, Mr. Holder was President of Stevenson & Hunt Insurance Brokers Ltd., one of Canada's largest private insurance brokerages. He has also served with more than 50 community organizations, including serving as President of the Board of the London Chamber of Commerce, Chair of the Board of the London Convention Centre, and served on the Board of Governors of Western University.

In 2003, Mr. Holder successfully led a fundraising initiative to repatriate the Canadian Memorial Cross of Sir Frederick Banting, the Canadian winner of the Nobel Prize in Medicine in 1923. Sir Frederick's World War II medal now hangs in the Banting House National Historic Site of Canada.

Mr. Holder is a Commander of the Order of Saint John, a member of the Canadian Legion and is a recipient of the Queen's Diamond Jubilee medal and the Governor General's Commemorative Medal for the 125th Anniversary of the Confederation of Canada for his service to Canada.

## Charles (Chuck) Humphrey

Research Data Management Services Coordinator,  
University of Alberta



Chuck has worked on several regional, national and international initiatives to increase access to data for teaching and research purposes. Included in these initiatives are the National Data Archive Consultation, the National Consultation on Access to Scientific Research Data, the Canadian Digital Information Strategy Development

Committee, the Association of Research Libraries (ARL) Joint Task Force on Library Support for E-Science, the International Data Forum, the OECD Global Science Forum for Data and Research Infrastructure for the Social Sciences, Research Data Canada, and the CARL ARC project. Chuck was the lead investigator in establishing a centre in the University of Alberta Libraries for the Canadian International Polar Year (IPY) Data Assembly Centres, which has now become the Canadian Polar Data Network. He is a Board Member of CASRAI and the past Chair of the DDI Alliance, an international metadata standards body for research data.

## Sara Iverson

Scientific Director, Ocean Tracking Network (OTN)



Dr. Sara Iverson is the Scientific Director of the Ocean Tracking Network (OTN), both the international joint venture component, funded by the Canadian Foundation for Innovation (CFI), and the 7-year OTN Canada Research Network, funded by the Natural Sciences and Engineering Research Council (NSERC). She is a professor in the Department of

Biology at Dalhousie University and currently holds the title of University Research Professor for distinction in scholarship; she is also a former NSERC E.W.R. Steacie Fellow. Sara received her BSc from Duke University and conducted her PhD in comparative physiological ecology jointly at the Smithsonian Institution in Washington DC and the University of Maryland. Sara's primary research focus is understanding how animals adapt to and exploit their environments, and the physiological and biochemical mechanisms that constrain or provide opportunities for them to do so. Her research program uses a suite of tools ranging from biochemical tracers to energetic measurements to tracking studies to better understand the biology of marine vertebrates (primarily marine mammals and seabirds) and the food webs within which they function.

## Mary Kilfoil, PhD

Assistant Professor, Academic Lead, Starting Lean Initiative,  
Rowe School of Business, Dalhousie University.



Mary has over 20 years experience in the private sector as an entrepreneur and consultant for both government and companies - and has authored several reports and publications in the fields of innovation, entrepreneurship, and economic policy. Since becoming faculty at Dalhousie University, Mary led the team that launched the Starting Lean

course in the Fall of 2012 providing an experiential approach to entrepreneurship by combining Lean Launchpad methodologies, a flipped classroom, and accomplished mentors - listed in Academia's Top 10 courses in Canada 2013. She has also launched a campus-wide Innovation course based on Design Thinking principles open to students from all faculties, where student teams work on real-world problems, developing solutions that can be implemented, many of which

## CSPC **Speakers** *continued*

lead to student-lead initiatives and enterprises. Outside of the classroom, Mary works with passionate and energetic students creating companies and jobs to drive the Nova Scotia economy forward and has been instrumental in launching Dalhousie's on-campus student startup accelerator (Dal's LaunchPad Accelerator which helps student startups become investment ready enterprises), Canada's Business Model Competition, as well as, non-credit entrepreneurship programming for researchers, students and members of the business community. Earlier this year (2014), Dr. Kilfoil received Canada's National Entrepreneurship Educator Award.

**Vice Admiral James King**, CMM, CD, RCN (Retired)  
President, CFN Consultants (Atlantic) Inc.



Vice Admiral Jim King became an independent consultant after a 38-year career in the Canadian Forces, the last four years of which saw him as Canada's Military Representative to the NATO Military Committee in Brussels.

After an extensive career at sea, including command of the destroyer, HMCS Huron, and the

Fifth Canadian Destroyer Squadron, he served in senior staff positions in Canadian Headquarters in Halifax and Ottawa and at NATO Headquarters in Brussels.

He represented Canada on the Canada-US Permanent Joint Board of Defence, and has acted as a senior military advisor to three Chiefs of the Defence Staff and four Ministers of National Defence on key issues involving NATO, the UN, Peacekeeping, NORAD, Ballistic Missile Defence and Canada-US security relations.

Admiral King is the President of CFN Consultants (Atlantic) Inc. specializing in assisting companies with Canadian Government procurement opportunities, Industrial Regional Benefits (IRB), and global supply chain participation. He is Vice-Chair of the Royal Nova Scotia International Tattoo Society, President of the Athenaeum Society of Nova Scotia, a research fellow at Dalhousie University's Centre for Foreign Policy Studies, and a consultant to the NATO project, Building Integrity, on international anti-corruption policy and procedures.

Admiral King is a graduate of McGill University with a degree in International Relations and a graduate member of the Royal College of Defence Studies in London. He is an avid

outdoorsman, sailor and motorcyclist; he and his wife, Barbara, share interests in travel, reading and film. Their son, David, lives in Vancouver.

## **John Knubley**

Deputy Minister, Industry Canada



John Knubley was appointed Deputy Minister of Industry Canada in 2012. Previously, he was Deputy Minister, Agriculture and Agri-Food Canada; Deputy Minister, Intergovernmental Affairs, Privy Council Office; Associate Deputy Minister, Transport, Infrastructure and Communities; Associate Deputy Minister, Natural Resources Canada; and Vice-President,

Nova Scotia, Atlantic Canada Opportunities Agency. Earlier in his career, he worked at Industry Canada, Human Resources Development Canada and the Economic Council of Canada.

John is married and has three children. He has degrees in politics and economics from Yale, Oxford, Harvard and Nice universities.

## **Laurie L'Heureux**

Emergency Planning Coordinator,  
Alberni Clayoquot Regional District



Laurie L'Heureux is the Emergency Planning Coordinator for the Alberni Clayoquot Regional District (ACRD) on Vancouver Island, BC. This role is combined with managing the Occupational Health and Safety Program for the City of Port Alberni, the largest municipality in the ACRD. Laurie is responsible for maintaining, updating and exercising all

aspects of the Alberni Valley Emergency plan which covers the City of Port Alberni and the electoral areas of Sproat Lake, Beaver Creek, Cherry Creek and Beaufort. It also includes the community of Bamfield, and the Hupacasath and Tseshaht First Nations. In this role, she has been successful in bringing a very diverse group together to create an emergency plan that represents the entire Alberni Valley.

Laurie recently developed a door to door campaign focusing on tsunami awareness that was delivered to approximately 4,500 residents who live in Port Alberni's 20 metre inundation

zone. She was a member of the first organizing committee for the ShakeOut BC initiative, and is a contributor to the Simon Fraser University research project "Tsunami "Last Mile" Communication". Laurie holds a BA in Anthropology from the University of Victoria, and has completed extensive emergency management training through the Justice Institute of BC.

## Robert Lamb

Executive Director, Canadian Light Source Inc.



Professor Lamb was educated at Melbourne and Cambridge Universities, and subsequently held academic appointments in England, Germany, the US, Hong Kong and Australia, as well as senior administrative positions in both University and Government. He works at the interface between Physics and Chemistry, has published over 200 papers and 39 patents, and trained 81 postgraduates. A major interest is in the way public and private sectors form relationships to translate science into technology. Along the way he has also been involved in the creation of four companies, the most recent in Hong Kong/China.

Professor Lamb has been a synchrotron light source user in Europe, US and Asia for over 25 years. He was also the founding director of the Australian Light Source.

## Ross Laver

Vice President, Policy and Communications,  
Canadian Council of Chief Executives



Ross Laver is Vice President, Policy and Communications, with the Canadian Council of Chief Executives, an association composed of the CEOs of 150 leading Canadian companies. He has overall responsibility for the Council's communications strategy and engages in policy work in a wide range of areas, including innovation, competitiveness, education and skills development and corporate citizenship. Earlier in his career he spent 23 years in the national media as a reporter, editor and columnist. He has also held marketing roles with two information technology companies. He is the author of two books: *Random Excess*, published by Penguin Books Canada in 1998; and *Savage Messiah*, published by Doubleday in 1993.

## Dr. Steve Liang

Professor and Entrepreneur, University of Calgary



Steve Liang is a researcher, teacher and entrepreneur. Steve is currently an associate professor at the University of Calgary and the founder of SensorUp, a technology startup based in Calgary. Steve's goal is to disrupt the silos of the Internet of Things and to empower anyone to build connected applications by using the information generated from the world around them. For

example, Steve is currently the Standard Working Group Chair of the Open Geospatial Consortium SensorThings API and the Rapporteurs of the ITU-T's Study Group 11/Q12 on the Internet of Things test specifications. The result of both standard works is to provide a uniform way to expose the full potential of the Internet of Things.

Steve received his bachelor degree in Surveying Engineering from Taiwan (NCKU, 1999) and Ph.D. degree in Geographical Information Systems from Canada (York University, 2007). During his Ph.D. study, he also contributed to the development of one of the first virtual globe systems in the world, called GlobeView. GlobeView was later commercialized by GeoTango Corp., and subsequently acquired by Microsoft in 2005. Steve has been an invited speaker at universities and industries in 11 countries. In 2013, Steve was chosen one of Calgary's Top 40 Under 40 by the Avenue Magazine.

## Stephen Lund

Vice President, Industrial Regional Benefits &  
Community Relations, Irving Shipbuilding Inc.



Stephen Lund is a 30-year veteran of the financial industry and brings a broad and professional outlook to Irving Shipbuilding.

Stephen is Vice President with responsibility for the IRB program (spending a dollar in Canada for every dollar received), as well as the Value Proposition program (commitment to invest \$44m in the Marine Industry in Canada). He is also responsible for Community Relations, Government Relations and Communications.

He is the former President and CEO of Nova Scotia Business Inc. (NSBI). Stephen and his team attracted a number of world-

## CSPC **Speakers** *continued*

leading companies to Nova Scotia and worked to proactively help local, home-grown businesses reach new markets and become stronger global competitors through Trade initiatives and Venture Capital investments. In the past year NSBI assisted companies in over 40 countries and through its efforts Nova Scotia was named by FDI Magazine as the top jurisdiction in North America for attracting new investment

Before joining NSBI, Stephen was Vice-President of Working Ventures Canadian Fund, Canada's largest national venture capital firm, where he led investing activities for the fund in Atlantic Canada. His work experience includes running an offshore mutual fund administration company and a lease financing company. He also spent several years in corporate commercial banking.

Stephen is a proud graduate of St. Francis Xavier University, holds an MBA from Queen's University and a designation from the Institute of Corporate Directors (ICD.D). He has also completed a number of executive courses at Queen's and Harvard. Stephen currently serves on the Board of the QE11 Foundation and the Institute for Ocean Research Enterprise (IORE). In 2011, he was inducted into Atlantic Business Magazine's prestigious Top 50 CEO Hall of Fame, and was recently recognized by Dublin-based publication, Financial Centres International, as one of the top 500 most influential people in financial centres worldwide.

### **David Cruise Malloy**

Vice President, University of Regina



David Cruise Malloy, PhD is the Vice President at the University of Regina, Canada. He is the Principal Investigator for the International Healthcare Ethics Research Team at the University of Regina, the Foreign Director of the International Bioethics Research Institute of Shandong Province, China, Principal Investigator and Honorary Dean of the Research Institute for

Multiculturalism and Applied Philosophy at Hunan University, China, and a Fellow of the American Philosophical Practitioners Association in Client Counselling & Organisational Consulting. His research focuses upon applied ethics and philosophy in administrative contexts in health, and non-profit organisations. Specifically his interests include ethical decision-making, codes of ethics, existential hardiness, personhood, and ethical climate/culture. He has published numerous refereed articles and is the co-author of five texts dealing with applied ethics.

Dr. Malloy's current research is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) & the Saskatchewan Health Research Foundation.

### **Dr. André Manseau**

Dean of Research at the Université du Québec en Outaouais (UQO)



Dr. André Manseau is Dean of Research at the Université du Québec en Outaouais (UQO) since 2008. Beginning his career as Professor of Physics in 1981, he has then held increasingly important management positions in different organizations from the public and private sectors. His current teaching and research area is R&D Management. He is a Board Member of five research

centres, including a Social Innovation Research Centre, the Montreal Information Research Centre, the Language Technologies Research Centre, the Gatineau Hospital Research Centre and a Mental Deficiency University Institute. He is also on the Board of the Outaouais Regional Municipalities Council (CRÉO).

Dr. Manseau holds a BSc and an MSc in Science Physics from Université de Sherbrooke, a Master degree in Public Administration (MPA) from the École nationale d'administration publique and a PhD in Management from Université du Québec à Montréal. He is author of significant international publications in the domain of innovation management and policy.

### **Pierre Meulien**

President and CEO, Genome Canada



Pierre Meulien was appointed President and CEO of Genome Canada in 2010. Prior to this appointment, Dr. Meulien was Chief Scientific Officer for Genome British Columbia (2007-2010), where he promoted the organization's ongoing scientific strategy, focusing on the science of genomics, proteomics and bioinformatics within the larger realm of

biotechnology and life sciences. He was also responsible for facilitating the translation of genome-based technologies into end-user communities across many life-science sectors.



From 2002-07, Dr. Meulien was the founding CEO of the Dublin Molecular Medicine Centre (now Molecular Medicine Ireland), which linked the three medical schools and six teaching hospitals in Dublin to build a critical mass in molecular medicine and translational research. The Centre managed the €45 million "Program for Human Genomics" financed by the Irish government and was responsible for coordinating the successful application for the first Wellcome Trust-funded Clinical Research Centre to be set up in Ireland.

For 20 years, Dr. Meulien has managed expert research teams with organizations including Aventis Pasteur, both in Toronto (Senior Vice President of R&D) and in Lyon, France (Director of Research). He also spent seven years with the French biotechnology company Transgene in Strasbourg, France, as a research scientist and member of the management team.

He received his PhD from the University of Edinburgh and held a post-doctoral appointment at the Institut Pasteur in Paris.

## Kate Moran

President and CEO, Ocean Networks Canada



Dr. Kathryn (Kate) Moran joined the University of Victoria in September 2011 as a Professor in the Faculty of Earth and Ocean Sciences and as Director of NEPTUNE Canada. In July, 2012, she was promoted to the position of President & CEO, Ocean Networks Canada. Her previous appointment was Professor at the University of Rhode Island with a joint

appointment in the Graduate School of Oceanography and the Department of Ocean Engineering. She also served as the Graduate School of Oceanography's Associate Dean, Research and Administration. From 2009 to 2011, Moran was seconded to the White House Office of Science and Technology Policy where she served as an Assistant Director and focused on Arctic, polar, ocean, the Deepwater Horizon oil spill, and climate policy issues.

Moran received degrees in engineering from the University of Pittsburgh (BS), University of Rhode Island (MS), and Dalhousie University (PhD). She co-led the Integrated Ocean Drilling Program's Arctic Coring Expedition, which was the first deepwater drilling operation in the Arctic Ocean. This expedition successfully recovered the first paleoclimate record from the Arctic Ocean. She also led one of the first offshore expeditions to investigate the seafloor following the devastating 2004 Indian Ocean earthquake and tsunami. She recently led the developed a new in situ gas hydrate

observatory instrument that was successfully deployed in 2013 offshore the west coast of Canada.

Previously, Moran was a scientist at Canada's Bedford Institute of Oceanography where one of her major research focus areas was the Arctic Ocean. She also served as the Director of the international Ocean Drilling Program in Washington DC; managed mission-specific drilling platform operations in the North Atlantic and Arctic; designed and developed oceanographic tools; participated in more than 35 offshore expeditions; and has served as Chair and member of national and international science and engineering advisory committees and panels.

Professor Moran is active in public outreach (through public lectures, national panel discussions, and teacher training) on topics related to the Arctic, ocean drilling, and global climate change. Moran has testified on climate change to the U.S. Senate Committee on Environment and Public Works. At the University of Rhode Island, Moran spearheaded a research initiative on offshore renewable energy.

## Peter Morand

Former president of NSERC

President, Peter Morand and Associates Inc.



Peter Morand, Ph.D. is President (1996-) of Peter Morand and Associates Inc., a consulting firm that undertakes assignments related to governance, business development, technology management and performance measurement with companies, universities and other R&D organizations in Canada and abroad. At the invitation of the Alberta government, Peter

Morand was a member of the International Review Committee that carried out an assessment of the performance of the Alberta Science and Research Authority for its initial six years of operation. He was also a member of the International Review Committee that carried out an assessment of the performance of Valorisation Recherche Québec, created in 1999 to accelerate and leverage research and innovation in that province. He is past President of the Natural Sciences and Engineering Research Council of Canada and was founding CEO of the Canadian Science and Technology Growth Fund. He is a current and past Board member of many advanced technology start-ups and non-profit organizations (currently Board Chair of SOVAR (ULaval) and of the Medical Devices Commercialization Centre, CECR, UOttawa).

## CSPC **Speakers** *continued*

### **Peter Nicholson**



Peter Nicholson is semi-retired after a career in the public and private sectors during which he was: the inaugural Chief Executive Officer of the Council of Canadian Academies (2006-09), the Deputy Chief of Staff for Policy in the Office of the Prime Minister of Canada (2003-06); Special Advisor to the Secretary-general of the OECD (2002-03); Chief Strategy Officer of BCE Inc.,

Canada's largest telecommunications company (1995-2002). His career has also included senior executive positions in banking and the fisheries industry, as well as in the federal public service where, in 1994-95, Dr. Nicholson was Clifford Clark Visiting Economist in Finance Canada. He holds a BSc and MSc in physics from Dalhousie University and a PhD in operations research from Stanford University. Dr. Nicholson is a Member of the Order of Canada, and has been awarded honorary degrees by Acadia University, Dalhousie University, McMaster University, Queen's University and Université du Québec. He currently splits his time between Annapolis Royal, NS and Austin, Texas.

### **Laura O'Brien**

Founding Director, Association of University Research Parks (AURP)



Ms. O'Brien acts in the capacity as Executive Director for AURP Canada. A founding director of the association in 2007, Ms. O'Brien was its first treasurer and has been a key member of the executive since its inception, leading all government relations, special projects, and park liaison activities on behalf of the association. O'Brien is responsible for spearheading the

development of the Memorandum of Understanding between AURP Canada and CANARIE, an initiative intended to create greater synergies and opportunities for collaboration between the 1,400 companies in the parks and the academic institutions connected to the CANARIE network.

Ms. O'Brien has built an impressive resume in her 18 years of executive experience. An MBA candidate with the University of New Brunswick, she is a founding director of the Association

of University Research Parks (AURP) Canada, past-Chair of the Canadian Advanced Technology Alliance (CATA) CanWIT Atlantic Chapter, a past president of the Fredericton Chamber of Commerce, and past president of the Fredericton Executive Association.

### **Dr. Michael Owen**

Vice-President Research, Innovation & International, University of Ontario Institute of Technology



Dr. Michael Owen is Vice-President Research, Innovation & International at the University of Ontario Institute of Technology. In that capacity, Dr. Owen leads the Office of Research Services, including research ethics, RCR, and technology and knowledge mobilization. He is the senior officer responsible for the development of a long-term strategic vision and the

implementation and management of all policies and procedures related to research, innovation and international activities. He is a Professor with the UOIT's Faculty of Education.

### **Ronald Pelot, Ph.D., P.Eng.**

Professor, Industrial Engineering, Associate Scientific Director, MEOPAR, Dalhousie University



Ronald Pelot is a Professor in the Department of Industrial Engineering at Dalhousie University, and the Associate Scientific Director of the MEOPAR National Centre of Excellence. In 1997, he founded the Maritime Activity and Risk Investigation Network (MARIN) at Dalhousie, and since then his team has developed new software tools and analysis

methods applied to maritime safety (accidents), coastal zone security, and marine spills. His work is in support of various government programs including Search & Rescue planning, marine oil spill detection and response, port and maritime security, arctic traffic and risk modelling, and coastal zone management.

## Stephen Perelgut

Senior Relationship Manager for Academic Relations,  
IBM Canada



Stephen Perelgut is currently IBM Canada's Senior Relationship Manager for Academic Relations. He joined IBM in 1995, and he held various senior positions including manager of special projects in IBM Canada Advanced Studies Group. Prior to joining IBM he was the Vice President and one of the founders of Holt Software Associates. He focuses on key

university partnerships and, in particular, on bringing mutual value to the relationship through connecting roles in recruiting, sales, collaborative research and access to technology and people. Mr. Perelgut has a B.S in engineering sciences and a M.Sc. in Computer Science both from University of Toronto. He was the Chairman of the Board of Directors of CSER, and he sits in the advisory committees of various university programs and initiatives.

## Sebastian Pfothner

Lecturer & Research Scientist, MIT Technology &  
Policy Program, MIT



Sebastian is policy researcher and expert on science, innovation, and higher education policy based at the MIT Technology & Policy Program, the MIT Portugal Program, and the Harvard Program Science, Technology and Society at the Kennedy School of Government. His research interests revolve around strategies for capacity building in innovation and higher

education, international university collaborations, regional and national innovation strategies, the governance of complex socio-technical systems, and the physics of lasers and plasmas. In particular, he is interested in the role of complex international STI partnerships as instruments for economic and societal development, and the global circulation of innovation models and best practices. He is currently co-leading an NSF-sponsored research project on "Technology, Collaboration, and Learning: Modeling Complex STI Partnerships" and has been serving as consultant and advisor to various public and private sector organizations, including the OECD, Skolkovo Foundation in Russia, and the government of Alberta. He also enjoys lecturing graduate level classes in

science and technology policy at MIT. He holds a Master's degree in Technology & Policy from MIT and a PhD in Physics from the University of Jena, Germany.

## Kathleen Rayworth

Executive Director, Entrepreneurs' Forum



Kathleen Rayworth joined Entrepreneurs' Forum as a staff member in 2007 after more than a decade of start-up, operational and management experience in a variety of industries.

Throughout her career as a serial entrepreneur, Kathleen has developed a unique blend of executive acumen and a sharp eye for how businesses can be retooled to become a sleeker,

smoother, strategically focused organization. As a change management driver and an entrepreneur who quickly built her own successful businesses, Kathleen is now truly dedicated to working with other business owners to take their own challenges and turn them into opportunities.

Kathleen is a high energy, fiscally conscious, and goal-driven executive who approaches each new business challenge with her intrinsic flair for innovation, creative problem-solving and measured risk-taking to drive consistent bottom-line improvements and shareholder returns.

## Dan Roos

Japan Steel Industry Professor Emeritus of Engineering  
Systems and Civil and Environmental Engineering, MIT



Dr. Roos is the Japan Steel Industry Professor Emeritus of Engineering Systems and Civil and Environmental Engineering, and Founding Director of the MIT Portugal Program, a five-year, \$40 million initiative partnership between MIT and Portugal focusing on engineering systems. The program involves over 40 MIT faculty from all five schools at MIT. Dr. Roos was the

Founding Director of MIT's Engineering Systems Division (ESD), Director of the MIT Center for Transportation Studies, and Director of the MIT Center for Technology, Policy and Industrial Development. Dr. Roos also served as Special Assistant to the MIT Chancellor and Provost, helping to form large-scale industrial and global partnerships. He had a leadership role in

## CSPC **Speakers** *continued*

partnerships with Ford, Merrill Lynch, and Cambridge University in the U.K.

At MIT, Dr. Roos was Founding Director of the International Motor Vehicle Program (IMVP). He is co-author of *The Machine that Changed the World*, which has been published in 11 languages and has sold over 600,000 copies. Dr. Roos has performed extensive consulting assignments around the world for government and industry, including most recently the Government of Alberta, Canada. He served for 11 years as consultant to the World Economic Forum helping to organize and run the annual Auto Governors Meeting at the World Economic Forum Annual Meeting in Davos Switzerland. The Governors meeting is attended by 30 automotive CEOs. Dr. Roos has chaired and served on numerous committees of the National Research Council including chairing the first National Academy study of intelligent transportation systems, as National Lecturer with the Association of Computing Machinery; and as an officer with the Transportation Research Board, Operations Research Society of America, American Society of Civil Engineers, ITS America, and Council of University Transportation Centers.

### **The Honourable Michel P. Samson**

Minister of Economic and Rural Development and Tourism; Minister of Acadian Affairs; Minister responsible for Nova Scotia Business Inc. and the Innovation Corporation Act



Michel P. Samson is a native of Petit-de-Grat, Richmond County, Cape Breton, and spent his formative years working in the fishery while attending school.

He was elected MLA for the riding of Richmond in March, 1998 at age 25, becoming the second youngest member ever elected to the Nova Scotia House of Assembly. In December, 1998

he was named Minister of the Environment, and thus became the youngest cabinet minister in the history of the Province of Nova Scotia. He is currently Government House Leader in addition to his ministerial portfolios.

Michel has a Bachelor of Arts degree in history from Dalhousie University, graduated from Dalhousie Law School in 1997 with a specialization in Marine Law and was admitted to the Nova Scotia Barrister's Society in November, 1998.

A proud Acadian, Michel is fluently bilingual and has been very active as a French parliamentarian and has acted as an observer for Presidential elections in Senegal, Africa on two occasions. He was also a presenter at parliamentary seminars held in Gabon and Vanuatu. Michel held the position of Chargé

de mission Amérique of l'Assemblée parlementaire de la Francophonie from July, 2005 to July, 2009. He assumed the post again in July, 2013.

### **Ivan Semeniuk**

Science Reporter, Globe and Mail



Ivan Semeniuk is the national science correspondent for The Globe and Mail where he currently reports on all areas of science and science policy. A long time science journalist and broadcaster in Canada and the US, he previously served as the Washington-based news editor for Nature and as a bureau chief for New Scientist. He has been a producer and presenter with

Discovery Channel's science news magazine show Daily Planet and he writes and hosts the astronomy series Cosmic Vistas on Oasis. Ivan has held journalism fellowships at the Massachusetts Institute of Technology and the University of Toronto. He began his career developing exhibits and public programs at the Ontario Science Centre in Toronto and turned to media full time after earning a graduate degree in science journalism at Boston University.

### **Larry Shaw**



Globally successful senior executive with extensive experience including, sales, marketing, customer service, operations, account management, service development, and corporate leadership. International experience in Canada, USA, Europe, and Central America in both start up organizations and multi-billion dollar corporations.

## Muthu Singaram

Chief Mentor, Head of Consulting and Corporate Facilitator,  
Muthu Singaram Consulting



Muthu is parallel entrepreneur having been involved in several startups over last 20 years. Muthu is the Chief Mentor, Head of Consulting and a corporate facilitator at Muthu Singaram Consulting, Muthu's passion is in Entrepreneurial Development, Mentoring, Management of Emerging Technologies and Innovation. Muthu has been a judge and mentor in many

business plan competitions including IIM, IIT, Power of IDEAS, HSBC Business Plan Competition, McKinsey's and several others in the last 15 years. Muthu was responsible in developing the Malaysian National Uniprenuer Development Programme (NUDP) at the Multimedia Development Corporation (MDC). Muthu was also a council member for the National Incubator Network. One of Muthu's project's ODRWORLD an online dispute resolution service was a provider to eBay India. Muthu has over 20 years of experience in Engineering, Management and Entrepreneurship.

Currently Muthu is working on a Virtual international Business Accelerator aka VibaZone based in several locations. The vision is to develop and provide a virtual community of entrepreneurs or anyone wishing to participate in / building or growing a sustainable business in any area or industry. Muthu's recent major consulting assignment is for the Malaysian Government Agency (Agency Innovasi (Innovation) Malaysia) under the Prime Minister's Office on industry driven Innovation, helping research and entrepreneurs in accessing technology and business models. This project requires hand holding of the team to commercialization. Muthu is also a consultant working with WIPO and UN and has travelled to deliver workshops in Indonesia and China recently on Industry and University partnerships for research commercialization. Muthu is a regular speaker at many international Entrepreneurship conferences and a lead facilitator for innovation and other workshops. Currently he is the innovation driver for several companies and Universities in Canada, India and Malaysia. Muthu is a Mentor / Entrepreneur in Residence in several Universities. Muthu is also the author of the book Entrepreneurship: A Hand on Guide To Starting Your Business

## Nigel Smith

Director, SNOLAB



Nigel Smith joined SNOLAB as Director during July 2009. He currently holds adjunct Professor status at Queen's and Laurentian Universities, a visiting research position at the U.K. STFC Rutherford Appleton Laboratory and a visiting Professorial chair at Imperial College, London. He received his Bachelor of Science in physics from Leeds University in the U.K. in 1985 and his Ph. D.

in astrophysics from Leeds in 1991. He served as a lecturer at Leeds University and a Research Associate at Imperial College, London before moving to the Rutherford Appleton Laboratory as Group Leader (Dark Matter) in 1998, subsequently serving as deputy division head for precision weak physics. He has worked in astrophysics studies throughout his career. His early research work was in studies of ultra high energy gamma rays from astrophysical sources using extensive air shower array telescopes in Harrogate, UK and at the South Pole. In 1987 he "wintered-over" as the sole operator of the telescope at the U.S. Amundsen-Scott station at the South Pole, being the first Briton to successfully winter at the Pole itself. From 1992 to his appointment as SNOLAB Director he was actively involved in, and was periodic Spokesperson for, the development and operation of underground detectors at the Boulby underground facility in North Yorkshire, U.K., searching for the Weakly Interacting Dark Matter particles left over from the Big Bang which are thought to make up about 23% of the Universe. As Director he has operational responsibilities at the SNOLAB underground facility hosted at the Vale Creighton mine, and for the development of the science programme.

## Walter Stewart

Co-ordinator for Research Data Canada



Walter Stewart is an independent consultant in technology, organization, and strategic planning. His clients include organizations in the private, public, and not-for-profit sectors. More and more his work focuses on brokering large, multi-stakeholder projects that span across the sectors.

Walter Stewart is currently the Co-ordinator for Research Data Canada, an organization dedicated to ensuring that Canada's research data are

## CSPC **Speakers** *continued*

both preserved and accessible. In that connection, Walter has represented Research Data Canada in meetings in Copenhagen, Washington, Barcelona, and Gothenburg in the establishment of the global Research Data Alliance ( RDA). Walter is the Co-Chair of the Organisational Assembly of RDA and Observer on the RDA Council.

Walter Stewart is a former Chair of the Board of CANARIE, Canada high bandwidth network for research. After his service on the board, Walter continued to serve CANARIE for an additional five years as a consultant on building digital infrastructure in Canada. In that connection he worked closely with a number of universities across the country, operators of research infrastructure, and regional optical networks. Walter's engagement with CANARIE continues from time-to-time most recently in early 2013 to facilitate a consultation process on new business models for the network.

### **Christine Tausig Ford**

Vice-President and Chief Operating Officer, Association of Universities and Colleges of Canada



Christine Tausig Ford has three decades of experience in higher education and association management. She is Vice-President and Chief Operating Officer of the Association of Universities and Colleges of Canada, the national organization representing Canada's 97 universities and university degree-level colleges.

Ms. Tausig Ford oversees the operations of the Ottawa-based organization. She provides high-level strategic advice to the President, Board of Directors and membership on all aspects of the association's work, especially with respect to governance, membership issues, public affairs, research, international relations and leadership development.

Ms. Tausig is a former journalist, and was editor of AUCC's magazine *University Affairs*. She holds an honours bachelor of journalism from Carleton University and a bachelor of arts in English from the University of Toronto's Trinity College. She is a member of the Governing Board of the OECD's Institutional Management of Higher Education Program in Paris and of the Board of Directors of the Science Media Centre of Canada. In 2012, Ms. Tausig Ford received the Queen Elizabeth II Diamond Jubilee Medal for her service to higher education in Canada.

### **Martin Taylor**

Emeritus Professor, University of Victoria



Martin Taylor is Professor Emeritus of Geography at the University of Victoria. He is also adjunct professor in the School of Geography and Earth Sciences at McMaster University, and in the School of Public Health and Health Systems at the University of Waterloo. From 2007-2012, he served as Founding President and CEO of Ocean Networks Canada, the not for profit agency

responsible for the management and development of the VENUS and NEPTUNE Canada ocean observatory programs, and the Ocean Networks Centre for Enterprise and Engagement, a federal centre of excellence for commercialization and research. Before assuming this position, he was for nine years (1998-2007) the University of Victoria's first Vice-President Research. He has extensive governance experience including as: a member of the federal Council of Science and Technology Advisors; a member of the Social Sciences and Humanities Research Council of Canada Board; a board member and chair of the finance committee of TRIUMF; a board member and chair of the Michael Smith Health Research Foundation; a board member and chair of the NSERC Canadian Healthy Ocean Strategic Network; and as board chair of the Propel Centre for Population Health Impact at the University of Waterloo. He served on the Council of Canadian Academies Expert Panel on the assessment of Canadian ocean science (2012-13) and is Special Advisor to Community Based Research Canada. Prior to his appointment at UVic, Martin Taylor served from 1974-98 on the faculty at McMaster University, where his responsibilities included: chair of Geography (1991-97); founding director of the Institute of Environment and Health (1990-96); and Acting VP Research (1994-95). He holds a BA (Hons Geography) from Bristol University and an MA and PhD in Geography from UBC. He is the author of two books and over 100 peer-reviewed publications in the field of environmental and community health.

## Edward Thomas, BSc.Eng., MASC.

Industry Partnerships Manager,  
Queen's University Research Portfolio



Located at Innovation Park, Edward Thomas facilitates engagements between faculty, students, industrial R&D professionals, business executives and public sector managers across the entire innovation cycle: from basic research, to startup acceleration, to product enhancement. He has more than 20 years of experience as a senior

communications and project-management professional as a business journalist, analyst, engineering researcher, communications consultant and university administrator.

## J. Kevin Vessey

Associate Vice President of Research, Dean of Graduate Studies and Professor of Biology, Saint Mary's University



J. Kevin Vessey is the Associate Vice President of Research, Dean of Graduate Studies, and a Professor of Biology at Saint Mary's University. Dr. Vessey received his BSc and MSc in Biology from Dalhousie University and his PhD in Biology from Queen's University, Kingston. Aside from his 16 years as a Professor of Plant Science at the University of Manitoba, he

has also been a Researcher Associate at North Carolina State University, and a Visiting Scientist at the Institut National de la Recherche Agronomique, France. Dr. Vessey's teaching and research area is plant physiology, particularly the functional interactions between crop plants and beneficial microorganisms, and the optimizing of crops as biodiesel and bioethanol feedstocks. He has published over 70 peer-reviewed scholarly articles and book chapters and has co-edited one book. He has directly supervised over 50 undergraduate/graduate students, postdoctoral fellows, and research associates. He has been awarded several regional and national research awards including the C.D. Nelson Award by the Canadian Society of Plant Physiologists. Positions in which Dr. Vessey has recently served, or is currently serving, include Grant Selection Committees of the Natural Sciences and Engineering Research Council; Advisory Committees for the Maritime Provinces Higher Education Commission, the Nova Scotia Health Research Foundation, the Nova Scotia Research

and Innovation Trust, Petroleum Research Atlantic Canada, and TRIUMF (the Tri-University Meson Facility); and the Boards of Directors for the Canadian Association of Graduate Studies, the Offshore Energy Technology Research Association, Plant Inoculants Canada, and Springboard Atlantic Inc.

## Valerie Walker

Director, Policy, Mitacs



As Director of Policy at Mitacs, Val develops and maintains strategic relationships with key policy stakeholders and liaises with policy leaders across Canada to share ideas, promote Mitacs policy work, and maintain Mitacs' reputation as a thought leader for research and innovation. Val was co-lead author on the CAPS-ASPC and Mitacs 2013 Canadian Postdoc

Survey: Painting a Picture of Canadian Postdoctoral Scholars that identified insufficient training and career preparation as major concerns among Canadian postdocs. Prior to joining Mitacs, she worked as a Senior Policy Analyst at the Public Health Agency of Canada, conducting policy research and providing recommendations to senior decision makers at the Agency on topics including social determinants of health, the science-policy interface, and mental health. Val was recruited to the Government of Canada through the Recruitment of Policy Leaders Program following the completion of her PhD in Physiology from McGill's Faculty of Medicine.

## Dr. Douglas Wallace

Canada Research Excellence Chair in Ocean Science and Technology and MEOPAR Scientific Director, Dalhousie University



Douglas Wallace holds the Canada Excellence Research Chair (CERC) in Ocean Science and Technology, based at Dalhousie University in Halifax, NS. Dr. Wallace currently serves as Scientific Director for both the Marine Environmental Observation Prediction and Response Network (MEOPAR) and the Institute for Ocean Research Enterprise (IORE).

Before becoming Canada Excellence Research Chair in Ocean Science and Technology, Dr. Wallace was professor of marine

## CSPC **Speakers** *continued*

chemistry at the Helmholtz Centre for Ocean Research Kiel (GEOMAR). There, he also served as deputy director and head of the Marine Biogeochemistry Research Division. He holds a Ph.D in chemical oceanography from Dalhousie University and a bachelor's degree in environmental science from the University of East Anglia, United Kingdom.

Dr. Wallace spent more than a decade working as a scientist at the prestigious Brookhaven National Laboratory in the United States. He has made significant scientific contributions to his field through the Intergovernmental Panel on Climate Change, and the US Department of Energy, where he developed the first survey to measure the global distribution of fossil-fuel carbon in the oceans.

Dr. Wallace has contributed to building a number of multidisciplinary research teams, including CARBOOCEAN, a five-year study of the ocean carbon cycle, SOLAS, a global project investigating interactions between the atmosphere and the ocean. He also led the development of an ocean and atmosphere observatory on the Cape Verde Islands off the West African coast. His research interests focus on carbon cycle and air-sea exchange of gases.

### **Wendy Watkins**



Wendy Watkins was trained in Sociology and Research Methods and Statistics at Carleton University and the University of Michigan, Ann Arbor. She has spent her career as an educator at every level, with a brief sojourn as a Hockey Sociologist. She is the co-founder of Data Liberation from the academic side and has an abiding passion for evidence-based analysis. She

is currently involved in research data management at the policy and curricular levels and holds the position of Data Librarian at Carleton University.

### **Dr. Daniel J. Weeks**

President and Vice Chancellor,  
University of Northern British Columbia



Dr. Daniel J. Weeks is a cognitive neuroscientist and an internationally-recognized expert on human motor control. His current research examines the influences of brain specialization, skill acquisition, motor control and attention on spatial cognition and decision-making processes. He also has a research program focused on skill acquisition in persons with

Down syndrome and those with other intellectual challenges. He has pioneered new brain imaging techniques to determine the impact of cerebral specialization and information processing on health and behaviour. As a former member of the Board of Directors of Down Syndrome International, Dr. Weeks has also engaged in promoting health and physical activity in developing countries around the world as a fundamental human right for persons with intellectual disabilities. In addition to his research and teaching career, the last several years have increasingly focused on university leadership. In that context he has developed and established numerous university-partnerships and collaborations.

### **Fred Whoriskey**

Executive Director, Ocean Tracking Network (OTN)



Headquartered at Dalhousie University, Nova Scotia, the Ocean Tracking Network (OTN), is a global research infrastructure documenting the movements and survival of aquatic animals, and their links to environmental conditions.

Prior to joining Dalhousie University in 2010, Fred Whoriskey was the Vice

President, Research and Environment of the Atlantic Salmon Federation (ASF). While at ASF, he developed the organization's acoustic telemetry programs, and led science-based public policy activity. Other positions included working as an Assistant then Associate Professor at McGill University from 1986 – 1995, and as a Research Assistant for Woods Hole Oceanographic Institution (1976-1981). He has held appointments as an adjunct professor with the University of Guelph, University of New Brunswick, Dalhousie University and McGill University. He has also served on the Boards of the AquaNet National Center



of Excellence in Aquaculture, the Canadian Rivers Institute, and the Huntsman Marine Science Centre (Chair from 2003-2011). In addition to his science administration work, Fred has published extensively in the area of fish biology and ecology. He has been heavily involved in public policy issues, and has worked broadly in public education and environmental impact evaluation. He received a Gulf of Maine Visionary Award in 2008, the Atlantic Salmon Federation's Lee Wulff Award in 2010, and is a frequent public speaker. Dr Whoriskey received his BSc degree (honors) from Brown University in Providence, Rhode Island (1976), and his Ph.D. degree from l'Université Laval in Quebec City (1984). He held a NATO postdoctoral fellowship at the University College of Wales (now Aberystwyth University) in the UK (1985).

## Robin Winsor

President and CEO, Cybera



Cybera is a not-for-profit organization that works to spur and support innovation, for the economic benefit of Alberta, through the use of cyberinfrastructure. Since joining Cybera in 2009, Robin Winsor has preserved the organization's commitment to research and development, while also increasing Cybera's relevance and engagement with

commercial enterprise. Currently, Winsor's focus is to leverage province-wide infrastructure and expertise to make Alberta the destination of choice for forward-thinking companies. This includes a comprehensive approach towards establishing open-access and cloud-enabled infrastructure for the benefit of all Albertans. Winsor has a strong background in sectors such as oil and gas, seismic, geophysics, and medical science. He is a member of the American Association of Physicists in Medicine and the American Geophysical Union as well as the American Association for the Advancement of Science. Winsor studied geophysics and artificial intelligence at the University of Edinburgh.

## Dr. Danielle Wood

Research Engineer, Johns Hopkins University



Dr. Danielle Wood works as a systems engineer and technology policy researcher within the Systems Institute at Johns Hopkins University. Dr. Wood's research applies engineering and policy to study the complex, socio-technical systems implemented by the public sector to meet critical societal needs around the world. Dr. Wood is currently co-leading a research

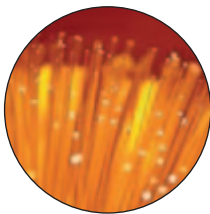
team executing the project entitled "Technology, Collaboration, and Learning: Modeling Complex International Innovation Partnerships;" this is funded by the US National Science Foundation. Previously, Dr. Wood worked as a systems engineer and research fellow at the Johns Hopkins University Applied Physics Laboratory, where she supported the integration and testing of satellite instruments while developing a technology policy research portfolio. Dr. Wood is a graduate of the Engineering Systems Division at the Massachusetts Institute of Technology where she studied aerospace engineering, technology policy and international development. Prior to completing her studies, Dr. Wood pursued diverse experiences with NASA as an intern, guest researcher, graduate fellow, contractor and Student Ambassador. As an intern with Goddard Space Flight Center and NASA Headquarters, Dr. Wood explored new ways that NASA technology spin-offs can be deployed for the benefit of developing countries. In addition Dr. Wood applied her research within the United Nations Office of Outer Space Affairs, which helps to coordinate international dialogue and awareness of space policy issues.



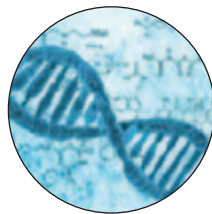
# Community Partner Organizations



CANARIE helps Canada **get there first** by advancing the national knowledge and innovation infrastructure.



**National research and education backbone network** connects Canadians to Big Data and the tools that power innovation



**Research software** unlocks the power of software tools to accelerate discovery



**Identity and access management solutions** enable seamless connectivity and secure access to content across the country and around the world



**Cloud resources for startups** accelerate the commercialization of great ideas



We truly appreciate the support of the following companies  
without whom CSPC 2014 would not be possible.

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**Genome**Canada



**Genome**Atlantic

**THINKER LEVEL**



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**DALHOUSIE  
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**COLLABORATOR LEVEL**



**Research  
Manitoba**



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