



### Canadian Science Policy Conference Nov. 7–9, 2018 | Delta Hotel, Ottawa ON

### **CONFERENCE PROGRAM**

Building Bridges Between Science, Policy, and Society



### President



# Prime Minister



Dear Friends,

It is an absolute honour and pleasure that we present to you the 10th annual Canadian Science Policy Conference.

Looking back, the past nine conferences have all been remarkable and have contributed greatly to the science and innovation community. While the first CSPC had 13 panels and tens of speakers, CSPC 2018 features 50 panel sessions with about 250 speakers. This is a testament to the success of CSPC and how it has been received by the science and innovation community. To this, I must add another significant milestone. This year, for the first time, female panelists are the majority, comprising 57% of our speakers. This is the result of our persistence and hard work on equity as a main principle of the conference.

Within the science and innovation policy landscape, the CSPC has made great strides in bridging the gap between sectors, regions, and generations, as well as with civil society. The motto of this year's conference reflects that contribution.

This year's conference is happening at a very different time from the first one. Science Policy is not only on the radar, but is at the forefront of consideration for the main players within the field of scientific innovation. Science Policy has improved connections to the rest of society including the media and the political milieu. There is renewed vigour and focus in the development of new programs which promote the urgency and importance of evidence-based decision making. Canada's Chief Science Advisor is now one year in place and has already made a significant impact. This includes the proliferation of science advisors across various departments.

I am so proud to see how far the Canadian Science Policy Conference has come in the last decade and I am greatly appreciative to all organizations who supported this endeavour as well as so many wonderful minds who have contributed to the betterment of science policy here in Canada.

CSPC 2018 serves as a celebration of the advancements this country has made in science and innovation policy and aims to continue to inspire new young, inventive minds to shape the future of science policy in Canada.

I thank you for attending this exceptional conference and I hope to engage with you all and wish you the very best here at CSPC 2018.

Sincerely,

Mehrdad Hariri
CEO & PRESIDENT
Canadian Science Policy Centre





Dear Friends:

I am pleased to extend my warmest greetings to everyone attending the 2018 Canadian Science Policy Conference.

The Canadian Science Policy Centre has created a national network of science policy stakeholders, and has paved the way for the next generation of scientists and policymakers. This annual conference brings together industry professionals, academics, government officials and other leaders in the field from across Canada to share their knowledge and discuss the latest trends and issues. I am certain that delegates will be inspired by the presentations planned for this event, and will benefit from this opportunity to network with their peers.

I would like to thank the organizers for putting together an informative and stimulating program for everyone in attendance. I hope that participants will also take advantage of this opportunity to explore everything that Ottawa has to offer.

Please accept my best wishes for a productive conference.

The Rt. Hon. Justin P.J. Trudeau, P.C., M.P. PRIME MINISTER OF CANADA



PRIME MINISTER · PREMIER MINISTRE

Chères amies, chers amis,

Je suis heureux de présenter mes salutations les plus chaleureuses à celles et ceux qui assistent à la Conférence sur les politiques scientifiques canadiennes 2018.

Le Centre d'études sur la politique scientifique canadienne a créé un réseau national d'intervenants en matière de politique scientifique et a ouvert la voie à la prochaine

génération de scientifiques et de responsables des politiques. Cette conférence annuelle réunit des professionnels de l'industrie, des universitaires, des représentants du gouvernement et d'autres dirigeants du domaine de partout au Canada qui mettront leurs connaissances en commun et discuteront des tendances et des questions de l'heure. Je suis convaincu que les présentations prévues pour cet événement sauront inspirer les délégués et qu'ils profiteront de cette occasion pour réseauter avec leurs pairs.

Je tiens à remercier les organisateurs d'avoir mis sur pied un programme informatif et stimulant pour tous les participants. J'espère que ces derniers profiteront également de cette occasion pour découvrir tous les attraits d'Ottawa.

Je vous souhaite une conférence des plus productives.

Cordialement.

Le très hon. Justin P.J. Trudeau, C.P., député PREMIER MINISTRE DU CANADA

### General Information



Your badge is your passport to all Conference events, and it is not transferable. Please wear your badge at all times.

#### Location

All Conference activities take place at the Delta Hotel, with the exception of the gala dinner. All floors are accessible by elevator and escalator. The CSPC Gala Dinner, taking place on Thursday, November 8th, will be held at the Canadian Museum of History (100 Laurier Street, Gatineau, Quebec). Shuttles will be available from 6:30am to 8:15pm at the Delta Hotel. Shuttles back to the Delta Ottawa will be available 9:30pm, with the last shuttle leaving at 10:45pm. The Museum can also be accessed by taxi or Uber.

#### **Registration and Information Desk**

The Registration and Information Desk is located in the main lobby beside the elevators (Victoria Salon). Note hours of operation:

Wednesday, November 7	07:00am – 5:00pm
Thursday, November 8	07:00am – 5:00pm
Friday, November 9	07:00am – 1:30pm

#### Dress

Business Casual attire is recommended for all sessions and functions with the exception of the CSPC Gala Dinner where Business Professional attire is suggested. Please remember that meeting room temperatures may vary; it is advised to bring a jacket, scarf/shawl or sweater with you in case it is cool.

#### **Exhibition**

The Exhibit Booths are located in International Ballroom C. Exhibits will be open for visits during all scheduled breaks and lunches during the conference.

#### Social Media

**Twitter:** Follow us at @sciencepolicy and join the conversation during the conference using #CSPC2018.

Facebook: Find us at facebook.com/canadiansciencepolicy

Linkedin: Find us at https://www.linkedin.com/company/

canadian-science-policy-centre/



Ryerson researchers are working to shape new policies and technologies that will improve water quality and conserve a sustainable global water supply.

Through pioneering research and partnerships, they are advancing local, national and international water policy. From investigating Arctic ecosystems to urban water security and evaluating public health impacts, they are solving crucial, real-world problems and creating a groundswell for healthy water, healthy communities and a resilient, sustainable future.



Faculty of Science

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## Fonds de recherche du Québec



### Nos panels

Our panels

Façonner les politiques scientifiques pour favoriser l'équité, la diversité et l'inclusion - Mercredi 7 novembre, 15 h 30

Shaping science policy to improve equity, diversity and inclusion Wednesday, November 7, 3:30 pm

Organismes subventionnaires et sciences participatives au Canada – Jeudi 8 novembre, 8 h 30

Granting agencies and participatory science in Canada Thursday, November 8, 8:30 am

Gouvernance de la recherche : quelles formes peut prendre l'implication de la relève ? – Jeudi 8 novembre, 16 h

Governance of research: how can next generation scientists get involved? Thursday, November 8, 4:00 pm



### Panel Organizers

#### Panel Organizers by Company/ **Organization Name**

- Baycrest Health Sciences / Centre for Aging and Brain Health Innovation
- Bird Studies Canada
- British Columbia Ministry of Health
- Canadian Academy of Health Sciences
- Canadian Association of Postdoctoral Scholars (CAPS)
- Canadian Food Inspection Agency
- Canadian Science Policy Centre
- Cardus Social Cities
- Carleton School of Journalism and Communication
- Centre of Expertise in Geomatics at Canada Centre for Mapping and Earth Observation, Natural Resources Canada
- Colleges and Institutes Canada
- Compute Ontario
- Conference Board of Canada
- Council of Canadian Academies
- David Johnston Research + Technology Park, University of Waterloo
- Federation for the Humanities and Social
- Fonds de recherche du Québec
- Friends of Canadian Institutes of Health Research
- Genome Canada
- Hoffmann-La Roche Ltd.
- Impact Centre, University of Toronto
- Centre for the Study of Canadian and International Higher Education (CIHE-OISE), University of Toronto
- Institute for Science, Society and Policy, University of Ottawa
- Let's Talk Science
- LitScientist
- Mitacs
- National Alliance of Provincial Health Research Organizations (NAPHRO)
- Natural Resources Canada's Office of the Chief Scientist
- NIVA
- The Ontario College of Art and Design University
- Ontario Centres of Excellence
- Ontario Science Centre

- · Pacific Water Research Centre, Simon Fraser University
- Pixels and Plans
- Polar Knowledge Canada
- Public Services and Procurement Canada, Government of Canada
- Pixels and Plans & Art the Science
- Queen's University
- RCIScience
- Research Impact
- Royal Society of Canada College of New Scholars, Artists and Scientists
- Ryerson University
- Ryerson Urban Water, Ryerson University
- Science to Action Consulting
- SHAD
- Social Sciences and Humanities Research Council (SSHRC)
- Space Advisory Board
- Stem Cell Network
- STEM Fellowship
- The Centre for Drug Research and Development
- University of Guelph
- University of Toronto
- University of Waterloo
- WWF-Canada

#### **Community Friends**

- BioNB
- Canadian Association of Postdoctoral Scholars (CAPS)
- Canadian Nutrition Society (CNS)
- Canadian Political Science Association (CSPA)
- Canadian Research Data Centre Network (CRDCN)
- Canadian Society of Evidence Based Policing (CAN-SEBP)
- Canadian Society for the History and Philosophy of Science (CSHPS)
- Carleton University School of Public Policy and Administration
- Concordia University, School of Graduate Studies
- Cybera
- Genome British Columbia
- Institute on Governance

- International Council for Canadian Studies (ICCS)
- Karafarin Canada
- Michael Smith Foundation for Health Research
- Ontario Centres of Excellence (OCE)
- RE\$EARCH Money
- Ryerson University Career Centre Student Affairs
- Science Borealis
- Science & Policy Exchange (SPE)
- Science & Technology Awareness Network (STAN)
- SHAD
- Statistical Society of Canada (SSC)
- Techsploration
- World Wildlife Fund Canada (WWF-Canada)
- Farnscliffe

#### **Exhibitors**

- AGE-WELL Network of Centres of Excellence
- Canadian Space Agency
- Centre for Aging and Brain Health Innovation
- Council of Canadian Academies
- Genome Canada
- Mitacs
- National Research Council of Canada
- Natural Sciences and Engineering Research Council (NSERC)
- NIVA Inc.
- Queen's University
- Ryerson University
- Social Sciences and Humanities Research Council (SSHRC)
- Stem Cell Network
- The Leader's Circle
- University of Toronto



### Partner with creative & solutions-driven minds

The National Research Council of Canada offers options for those looking to push the boundaries of science and research. For over a 100 years, the impact of our work with industry leaders and research organizations has helped shape Canada's future.

Join our team! www.nrc-cnrc.gc.ca/eng/careers

### Travaillez avec des esprits créatifs et novateurs

Au Conseil national de recherches du Canada, nous offrons des possibilités à quiconque cherche à repousser les limites de la science et de la recherche. Depuis plus de 100 ans, nous collaborons avec les dirigeants de l'industrie et des organismes de recherche en vue de façonner l'avenir du Canada.

Faites partie de notre équipe! www.nrc-cnrc.gc.ca/fra/carrieres



Council Canada

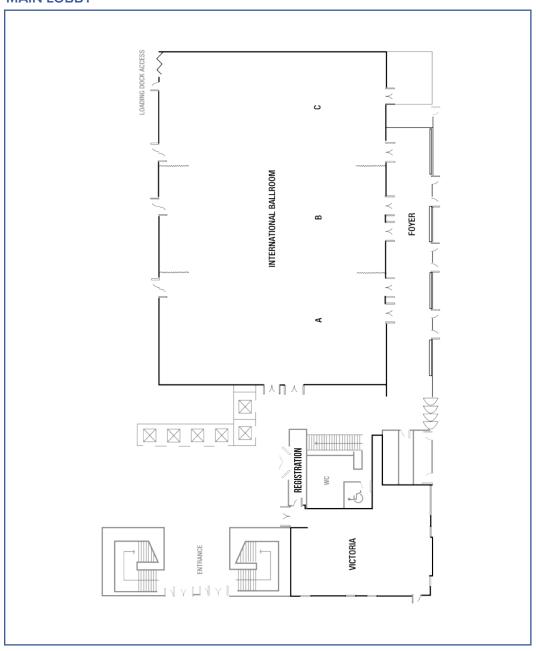
National Research Conseil national de recherches Canada



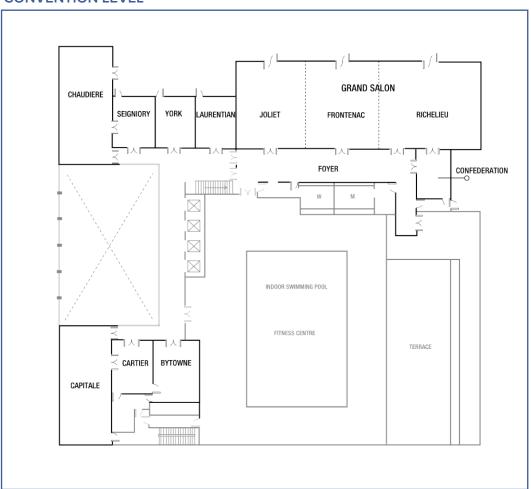
## Floor Map



#### **MAIN LOBBY**



#### **CONVENTION LEVEL**







#### **CSPC Themes**

THEME 1: Science and Policy

THEME 2: Science and Society

THEME 3:
Science, Innovation and Economic
Development

THEME 4: Science and International Affairs

THEME 5: Science and The Next Generation

### Wednesday, November 7

07:00am – 17:00pm	Registration and Information Desk (Hotel Lobby)
8:15am – 8:30am	Opening Remarks (International Ballroom)
8:30am – 10:00am	Plenary Session  122 – How can better Federal-Provincial collaboration strengthen Canada's research ecosystem? (International Ballroom)
10:00am	Coffee Break (Exhibit Hall)
10:30am – 12:00pm	Panel Sessions
	110 – Should regulators define their risk tolerances?: A debate (Richelieu)
	206 – Improvisation for science communication (Joilet-Frontenac)
	212 – The social implications of emerging technologies: Are the most important questions the least studied? (International Ballroom)
	315 – Towards a Canadian life sciences supercluster (Capitale)
	<ul> <li>216 – Incorporating Indigenous ways of knowing into applied research (Chaudière)</li> </ul>
12:00pm – 1:30pm	Luncheon Session — Hosted by Age-Well
	AGE-WELL 2020: Charting the Future of Technology and Aging Research in Canada (International Ballroom Foyer)

4:20: 2:00	Panel Cassiana
1:30pm – 3:00pm	Panel Sessions
	401 – International science and Canada – Addressing global agenda 2030 together (International Ballroom)
	<ul> <li>120- New ways of informing policy by leveraging scientific knowledge: Two models related to public academic collaborations (Joliet-Frontenac)</li> </ul>
	211 – Communication culture: scientists' view and trainers methods to better engage with publics and policymakers (Richelieu)
	208 – The dementia challenge: Facing the rising tide (45 min) (Chaudière)
	308 – Longevity innovation for sustainable aging (45 min) (Chaudière)
	501 – A data native generation's approach to science: Science instruction Vs. Inquiry into science (Capitale)
3:00pm	Coffee Break (Exhibit Hall)
3:30pm – 5:00pm	Panel Sessions
	<ul> <li>116 – Shaping science policy to improve equity, diversity, and inclusion (Richelieu)</li> </ul>
	307 – Innovating science communication (45 min) (Joliet-Frontenac)
	115 – A two-way street: Science informing policy, and policy informing science (45 min) (Joliet-Frontenac)
	314 – Harnessing diversity and inclusion to drive innovation in Canadian science and technology (45 min) (Capitale)
	204 – The logic of inclusive innovation: from inputs to outcomes (45 min) (Capitale)
	214 – The status of science literacy in Canada (International Ballroom)
	316 – Bringing innovative medicines into the hands of patients with Alzheimer's disease (Chaudière)
5:00pm – 6:00pm	CSPC 2018 Welcoming evening reception (Pinnacle and Panorama Salon—Top Floor)
6:00pm – 7:30pm	Keynote Session  New directions for science advice in federal government (International Ballroom)
9:30pm – 12:00am	Special CSPC 2018 Pub Night Party (Delta Hotel)

Thursday, November 8		
7:45am – 8:30am	Breakfast Session  Hosted by MITACS – Science Policy Fellows Special Panel (International Ballroom)	
8:30am – 10:00am	Plenary  209 – Granting agencies and participatory science in Canada (International Ballroom)	
10:00am	Coffee Break (Exhibit Hall)	
10:30am – 12:00pm	<ul> <li>Panel Sessions</li> <li>117 – Water at the science-policy interface: Challenges and opportunities for Canada (Capitale)</li> <li>108 – Risk communication and engagement with the public in the nuclear, climate and artificial intelligence sectors (Joliet-Frontenac)</li> <li>213 – Fake news, Fake therapies: Upping the ante in the fight against unproven stem cell therapies in Canada (Richelieu)</li> <li>305 – Failure to thrive: Why Canada struggles to grow world leading tech companies (International Ballroom)</li> <li>503 – Canada 2067 (45 min) (Chaudière)</li> <li>505 – Supporting the next generation of northern scientists (45 min) (Chaudière)</li> </ul>	
12:00pm – 1:30pm	Lunch (International Ballroom Foyer)	
12:30pm – 1:30pm	A Conversation with Dr. Mona Nemer, Canada's Chief Science Advisor Canada's Chief Science Advisor (International Ballroom)	
1:30pm – 3:00pm	<ul> <li>Panel Sessions</li> <li>217 – Bridging science and Indigenous knowledge systems:         Best practices (Richelieu)</li> <li>301 – Commercializing innovation in Canada: Retaining human and financial capital north of the border (International Ballroom)</li> <li>205 – Mitigating disruption: Integrating social, ethical and policy research into the development of disruptive technologies (Joliet-Frontenac)</li> <li>502 – Science and Inclusivity: Going beyond the slogans (45 min)</li> </ul>	

(Capitale)

- 510 Enabling interdisciplinarity for the next generation of problem solvers (45 min) (Capitale)
   226 Overcoming barriers to knowledge mobilization and science communication (Chaudière)

  Coffee Break
  (Exhibit Hall)
- 3:30pm 5:00pm

  Panel Sessions

  506 The many ways in which the next generation can be involved in the governance of research (Capitale)

  223 Science fact or science fiction? How can science be heard in an age of misinformation? (International Balroom A+B)

  309 Policy considerations around the convergence of high performance computing and artificial intelligence (Richelieu)

  504 Fueling water innovation in Atlantic Canada (45 min) (Chaudière)

  303 What's on the menu? Science-based policies to address new
  - agri-food realities (45 min) (Chaudière)

    103 Connecting science with policy in Canada: How do I do it?
  - (45 min) (Joliet-Frontenac)
  - 101 Federal-Provincial coordination in research and innovation funding (45 min) (Joliet-Frontenac)
- **5:30pm 6:30pm CSPC Reception** (Canadian Museum of History)
- **6:30pm 10:30pm CSPC Gala Dinner** (Canadian Museum of History)

  Shuttles are available in front of the Delta Hotel (5:30pm to 6:15pm)

Keynote Speech by the Honourable Kirsty Duncan, Minister of Science and Sport

CSPC Science Policy Award of Excellence, Presented by the Honourable Kirsty Duncan, Minister of Science and Sport Shuttles are available to return to the Delta Hotel (9:30pm to 10:45pm)

9:00pm – 10:30pm Post-Gala Reception

**Hosted by Bayer,** and featuring mixologists from the Common Eatery (Canadian Museum of History)

#### Friday, November 9

#### 7:45am - 8:30am

Breakfast Session — Hosted by the Institute for Quantum Computing

Waterloo Innovation Agenda — The University of Waterloo Innovation Ecosystem (International Ballroom)

#### 8:30am - 10:00am

#### Short Talk Series (Richelieu)

The Short Talk Series will include seven 10-minute presentations:

- 1. Conspiring together for good: Institutional science and religion
- From artificial intelligence to policy-making: Changing how we make maps to make better decisions
- 3. Amplify: Managing microaggressions and countering stereotypes against women and girls in STEM
- 4. Putting our minds together: Research and knowledge management strategy
- 5. From crisis to confidence: Building science and policy "bridges" in Canada's national blood system
- 6. How a new model of journalism is connecting science and the public
- Mapping the science writing and communication landscape in Canada using new media and traditional survey research tools

#### **Panel Sessions**

- 210 Skills-building and impact in the social sciences and humanities (Chaudière)
- 218 Digital futures: The impact of digital threats to democracy (45 min) (International Ballroom)
- 112 How Canada can create a sustainable national space Infrastructure (45 min) (International Ballroom)
- 508 Where the rubber meets the road: The real life impact of policy on Canadian postdocs (Capitale)
- 222 Who speaks for science? (Joliet-Frontenac)

#### 10:30am - 12:00pm

#### Plenary Session

123 – Science and the next generation: Partnerships and collaborative infrastructure as enablers

#### 12:00pm - 1:00pm

#### Lunch

For Symposium Registered Delegates Only (Laurentian)

#### 1:00pm - 4:30pm

#### **Post-Conference Symposiums**

Science Policy 101 (International Ballroom)

Equity, Diversity and Inclusion in Science: from Policy to Implementation (Joliet-Frontenac)

Brainstorming for Canada's National Water Vision (Richelieu)

Policy and Funding Models for Graduate Students and Post-Doctoral Fellows (Capitale)

Supporting Canada's Energy Transition – Bridging the Gap between Fundamental Research, Industry and Policy (Chaudière)

# TOP TALENT STRENGTHENS OUR GLOBAL IMPACT.

We thank the Government of Canada for creating the Canada 150 Research Chairs program and helping us attract these world-renowned scholars to the University of Toronto.



Prof. Donna Rose Addis
U of T Psychology
Rotman Research Institute





Prof. Miguel Ramalho-Santos
U of T Molecular Genetics
Lunenfeld-Tanenbaum
Research Institute



**BOUNDLESS** 

# The Annual Canadian Science Policy Conference









Nov. 7–9, 2018 Delta Hotel, Ottawa ON



The Canadian Science Policy Centre has made significant contributions in elevating the status of science and innovation policy in Canada by becoming the focal point for connecting various disciplines, sectors, regions, and generations. The CSPC has become the main source of information sharing and has linked the science policy debate to the mainstream media, engaged youth, and brought new faces into the science policy discourse. The Centre has energized the Canadian science policy community.

With a nine-year track record of success, the Centre is now primed for much needed growth to fill the gaps in the quickly changing landscape of science policy and to respond to the community's evolving needs. The centre continues its operation in particular around the following areas;

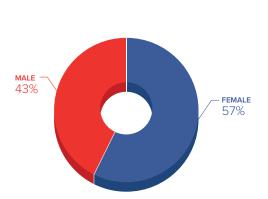
- Strengthen Canadian democratic involvement in public policy in science,
- Bridge formal structures to look at science & innovation policy issues in new ways,

- Convene and promote dialogue among diverse stakeholders in science policy (public, private, academic, NGO, Parliamentary),
- Connect organizations and people, share insights and resources, harness grassroots engagement, bridge among sectors,
- Build human capital, engage youth, train the future leaders of science policy,
- Catalyze research to map and enhance the science policy landscape in Canada.

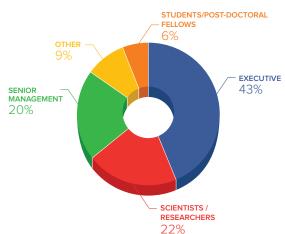
The annual conference has become Canada's most comprehensive, multisectoral, and interdisciplinary forum for addressing emerging and urgent issues of science and innovation policy in the 21st century. It is used as a major platform for various reports and projects from the main science related organizations in the country, where they are presented to be discussed.

### Panelists Breakdown (all data as of October 8, 2018):

#### **GENDER BREAKDOWN**

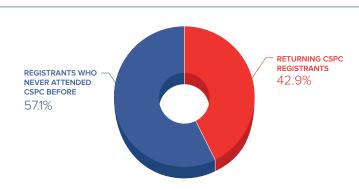


#### POSITIONAL BREAKDOWN

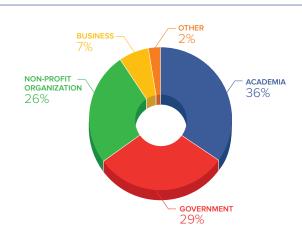


### Delegates Breakdown (all data as of October 8, 2018):

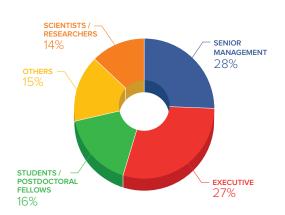




#### SECTOR BREAKDOWN



#### POSITIONAL BREAKDOWN



18 NOVEMBER 7-9, 2018 · OTTAWA, ONTARIO 22%

## CSPC Themes over the years



#### Science and Policy

- What are Canada's likely challenges in the next 50 years, and how can scientific knowledge be used to solve them? (2017, Ottawa)
- How does Canada get the new scientific knowledge it needs? (2017, Ottawa)
- How do we strengthen the environment for the production and integration of new scientific knowledge? (2017, Ottawa)
- How can we more effectively bring new and existing scientific knowledge to bear on Canada's challenges? (2017, Ottawa)
- Science Funding Review: New Visions and New Directions (2016, Ottawa)

#### **Science and Society**

- How do we engage the public in Canada's science system? (2017, Ottawa)
- A New Culture of Policy Making And Evidence-Based Decision-Making: Horizons and Challenges (2016, Ottawa)
- Evidence Based Decision Making (2015, Ottawa)
- Transformation of Science Society and Research in the Digital Age; Open Science Participation Security and Confidentiality (2015, Ottawa)
- Communicating Science and Technology (2013, Toronto)
- Science-Technology-Society-Nexus (2012, Calgary)
- Science, Politics and Culture in Canada (2011, Ottawa)
- Science and Public Engagement (2009, Toronto)
- Workshop/Symposium: Achieving Diversity in STEM, Advancing Innovation (2016, Ottawa)
- Workshop/Symposium: Evidence-Based Decision-Making (2016, Ottawa)
- Workshop/Symposium: Achieving Diversity in STEM, Advancing Innovation (2016, Ottawa)
- Workshop/Symposium: Evidence-Based Decision-Making (2016, Ottawa)
- Workshop/Symposium: Evidence Based Decision Making (2015, Ottawa)
- Workshop: Science Communication (2013, Toronto)

- Workshop: K\* (Knowledge, Mobilization and Dissemination (2010, Montreal)
- Canadian Science and Technology Strategy: Looking Towards 2020 (2014, Halifax)
- Emerging Issues in Canadian Science Policy (2013, Toronto)
- Major Issues in Canadian Science Policy (2011, Ottawa)
- Major Issues in Canadian Science Policy (2010, Ottawa)
- Major Issues in Canadian Science and Technology Policy (2009, Toronto)
- Science and Technology and Canada's Future Challenges (2009, Toronto)

#### Science and the Next Generation

- Graduate Studies and Research Training: Prospects in a Changing Environment (2013, Toronto)
- Creating and Retaining Scientific Talent in Canada (2010, Montreal)
- Workshop: Science Policy 101 (2017, Ottawa)
- Workshop: Nuts and Bolts of Science Policy (2016, Ottawa)
- Workshop: Entrepreneurship and Career Development (2010, Montreal)
- Workshop: Nuts and Bolts of Science Policy (2015, Ottawa)
- Workshop: Nuts and Bolts of Science Policy (2013, Toronto)
- Workshop: Science Policy 101 (2012, Calgary)
- Workshop: Science Policy 101 (2011, Ottawa)

#### **Private Sector and Innovation**

- A New Innovation Agenda for Canada (2016, Ottawa)
- The Impact of Transformative and Converging Technologies on Private Sector Innovation and Productivity (2015, Ottawa)
- Innovation and Partnerships: A Recipe for Success (2014, Halifax)
- Advancing Economic Development and Prosperity with S&T (2014, Halifax)
- Private Sector R&D and Innovation: New Realities and Models (2013, Toronto)

#### **Sector Specific**

- Clean Energy and Climate Change as Global Priorities: Implications for Canada? (2016. Ottawa)
- Big Science in Canada, Realizing the Benefits (2015, Ottawa)
- The Art and Science of Risk Assessment:
   A Global Conversation Risk (2014, Halifax)
- Food, Fuel and Farmers: Agriculture at the Convergence of Multi-Disciplinary Science Policy Issues (2012, Calgary)
- Innovating on Energy Supply and Demand for More Sustainable Resource Management: A Critical Test for the Integration of Science, Technology and Policy (2012, Calgary)
- Re-Imagining Canadian Health Care: How Innovation in Science and Policy Can Contribute to a More Sustainable System (2012, Calgary)
- Exploring the True North, Reflections on Northern Science Policy (2011, Ottawa)
- Special Focus: International Year of Chemistry (2011, Ottawa)
- A Glance at Bioscience in Canada (2010, Montreal)
- Workshop/Symposium: 1st Canadian Symposium on Space Policy (2016, Ottawa)
- Enabling Private Sector Innovation (2011, Ottawa)
- Increasing Canadian Productivity Using Science and Technology (2010, Montreal)
- Scientific Research in Economic Growth and Recession (2009, Toronto)
- Workshop: The Start-Up Meet-Up: A Lean Entrepreneurship Approach to Advancing Innovation (2014, Halifax)

#### Science & International Affairs

- Canada's Return to the International Stage: How Can Science Help Foreign Policy (2016, Ottawa)
- Science and Innovation for Development (2015, Ottawa)
- Emerging Trends in International Trade and Diplomacy: The Role of Science and Technology (2013, Toronto)
- Global Perspectives in Science and Technology (2010, Montreal)
- Science and Technology in the Global Village (2009, Toronto)
- Workshop/Symposium: Science Diplomacy (2016, Ottawa)
- Workshop/Symposium: Diaspora Scientists (2015, Ottawa)
- Workshop/Symposium: Science Diplomacy (2013, Toronto)

### Wednesday, November 7

#### 7:00am - 5:00pm HOTEL LOBBY

#### Registration and Information Desk

8:15am – 10:00am INTERNATIONAL BALLROOM

#### **Opening Remarks**

8:15am—Janet Halliwell, CSPC Chair, Board of Directors



122 – How can better federal-provincial collaboration strengthen Canada's Research ecosystem?

#### THEME 1

Organized by: Friends of Canadian Institutes of Health Research

The 2017 report of the Fundamental Science Review primarily addressed the funding, organization, and oversight of federal support for extramural research. However, a number of observations were made about the interplay of federal and provincial/territorial support for research, innovation, and talent development:

- Very limited Federal Provincial Territorial (FPT) interaction and shared strategizing among senior officials on the science and innovation files
- Obvious imbalance of financial support for research across Ottawa, the provinces, and institutions
- Specific friction points: e.g. sharing of F&A (indirect) costs, federal programs requiring for PT match funding without collaborative adjudication
- Weak alignment on shared challenges such as research infrastructure/infostructure
- Absence of a shared vision and national action plan for developing research-intensive talent

The panel will discuss FPT collaboration in research, and consider how improvements could be affected not only by governments, but also by institutions, non-government funders, advocacy groups, and industry partners.

#### **Keynote Speaker**



David Naylor 2018 Friesen Prizewinner; Professor of Medicine and President Emeritus, University of Toronto

#### **Moderators**



Gilles Patry Executive Director, U15 Group of Canadian Research Universities



André Picard Health Columnist, Globe and Mail

**Speakers** 



**Krista Connell**Chief Executive Officer, Nova Scotia
Health Research Foundation



Janet Rossant
President and Scientific Director,
Gairdner Foundation



Marc LePage President and Chief Executive Officer, Genome Canada



Mona Nemer Chief Science Advisor, Government of Canada



Michael J. Strong President, Canadian Institutes of Health Research

#### 10:00am - 10:30am EXHIBIT HALL

#### Coffee Break

Coffee, tea, water and juice will be available for CSPC participants, in addition to a variety of snacks.

#### 10:30am - 12:00pm JOLIET-FRONTENAC

### 206 – Improvisation for science communication

#### THEME 2

Panel Organizer: Alan Shapiro | LitScientist

Adapting the message to the audience is the single most important skill in communicating science effectively. Typically, scientists and researchers are trained to prepare presentations for colleagues; using the same approach for wider audiences including policymakers, funders, and the public can significantly limit the effectiveness of knowledge mobilization and community engagement efforts. Improvisation offers a wealth of tools and strategies for enhancing presentations and promoting audience engagement. Unlike traditional public speaking approaches, improvisation also supports researchers in responding to unexpected factors, such as challenging questions and unpredictable audiences. In this workshop, participants will work through interactive exercises to develop their communication skills. The workshop centres on individual and group work, and is designed to bring value to participants from both science and policy organizations. The workshop is geared to push participants outside their comfort zones and share concrete strategies that participants can apply for themselves and share within their institutions.

#### **Moderators**



Mitchell Beer
President of Smarter Shift; Publisher of
The Energy Mix



Nikki Berreth
Co-founder, Science Slam; Owner,
STEAM Communication



Alan Shapiro
Co-founder and Director of Science
Slam Canada; Science Communication
Specialist with LitScience

#### **Speakers**



Jeff Dunn
Professor, Department of Radiology,
University of Calgary; Graduate
Program Director, Cumming School
of Medicine

Monica Granados Postdoctoral Fellow, FQRNT and Wildlife Conservation Society Canada



María Cortés Puch Head, National and Regional Networks' Program for the UN Sustainable Development Solutions Network

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#### 10:30am - 12:00pm RICHELIEU

110 – Should regulators define their risk tolerances?: A debate

#### THEME 1

Panel Organizer: Alyssa Daku | Canadian Food Inspection Agency

Setting risk tolerance is considered essential for governmental departments, agencies and private sector entities facing resource constraints. Without an ability to eliminate every risk, organizations must, so the argument runs, distinguish levels of risk that cannot be tolerated from those that can be. Yet, regulators with mandates to protect public health and safety have often struggled to concretely define levels of risk they would be willing to tolerate, as several reports from the Auditor General of Canada have highlighted. Establishing a specific risk tolerance sets a benchmark against which an organization's own performance can be judged, increasing transparency and helping to make risk management more targeted and deliberate. At the same time, declaring a risk tolerance level may create legal liabilities or implicate trade obligations. Moreover, many public health risks are inherently dynamic and complex, and keeping risks to tolerable levels may become difficult as the internal and external risk environments evolve. Finally, admitting a level of risk is tolerable may clash with a public expectation that no risks to human health are tolerable.

In light of these difficulties, risk tolerances are often left vague or undefined. But should they be? Should regulators declare their tolerable levels of risk? Or are the concerns with defining risk tolerance simply too great to make defining risk tolerance worthwhile? Speaking directly to this question, the proposed debate centers on the following motion: "Be it resolved that regulators can and must set concrete, measurable risk tolerances." Moderated by Alyssa Daku, Chief Data and Risk Executive at the Canadian Food Inspection Agency, the panel will bring together a diverse array of panelists

#### **Moderators**



Alyssa Daku Chief Data and Risk Executive, Canadian Food Inspection Agency

#### **Speakers**



**Greg Paoli**Principal Risk Scientist and Chief
Operating Officer, Risk Sciences
International



Pierre Bilodeau Executive Director, Plant Health Science Directorate, Canadian Food Inspection Agency



Robert Wiersma Manager, Public Safety Risk Management, Technical and Standards and Safety Authority, Ontario



**Liane Sauer**Director General, Strategic Planning,
Canadian Nuclear Safety Commission

from Canadian federal agencies, departments, academia and risk management consultin—who will vigorously argue for both sides of the issue.

#### 10:30am - 12:00pm CAPITALE

315 – Towards a Canadian life sciences supercluster

#### THEME 3

Panel Organizer: Barry Gee | The Centre for Drug Research and Development

Canada has a proud history of international leadership in health research, and in supporting innovation in the global life sciences industry. Despite constituting less than 0.5% of the world population, Canadians produce 5% of the world's research publications, with a citation rate that ranks amongst the top 6 nations worldwide. However, Canada doesn't full take advantage of this competitive advantage by translating it into a leading life sciences industry: The winners of the Canadian federal government's 2018 'Supercluster' funding initiative represented a multitude of industries encompassing digital technologies, oceans, mining, artificial intelligence, smart agri-food, and advanced manufacturing. Jarringly, no life sciences proposals were ultimately supported.

This session will debate the government's decision, and discuss how we can tap into the life sciences sector's potential to contribute immensely to Canada's economy and transform into the next Canadian supercluster. Our panelists will share perspectives on two salient topics: (i) the means by which the public and private sectors can best come together to support the growth of Canada's health-sciences ecosystem, and (ii) strategies for the federal government to establish comprehensive public policy and work with the private sector to support basic research, build a robust translational and commercialization pathway, and ultimately attract increased venture capital investment to Canada such that we can scale Canadian SMEs, and establish global Canadian anchors.

#### Moderator



Gordon McCauley President and Chief Executive Officer, The Centre for Drug Research and Development

#### **Speakers**



Raphael (Rafi) Hofstein
President and Chief Executive Officer,
MaRS Innovation



Stéphanie Michaud President and Chief Executive Officer, BioCanRx



Karimah Es Sabar Chief Executive Officer and Partner, Quark Venture Inc.



**Cate McCready** Vice President, External Affairs, BIOTECanada





#### 10:30am - 12:00pm CHAUDIERE

216 – Incorporating Indigenous ways of knowing into applied research

#### THEME 2

Panel Organizer: Anna Toneguzzo | Colleges and Institutes Canada

Indigenous ways of knowing—how First Nations, Métis and Inuit peoples relate to the world around them, through community practices, ritual and relations – have traditionally not been integrated into academic research. This valuable expertise is often overlooked. Recognising this gap, colleges and institutes across Canada are developing partnerships with First Nations, Métis and Inuit communities to advance applied research on some of the most scientifically pressing issues of our time, which results in social innovation in sectors as diverse as food security, climate change and governance. Applied research undertaken by colleges and institutes is demand- driven, based on local and regional community needs. This is important in urban areas, but particularly in rural, remote and northern areas where colleges are key providers of training. work- integrated learning opportunities and applied research. A key characteristic of applied research is to partner with communities to understand and define the problem that needs to be solved and to then design adequate, applicable and relevant solutions. Colleges and institutes, with their expertise in applied research, training and strong employer connections, are able to draw upon their resources, infrastructure and laboratories to support innovation by, for and with First Nations, Métis and Inuit communities. This panel will focus on their experience, lessons learned and the way forward on applied research with First Nations. Métis and Inuit communities. while also taking into account how these communities can develop and engage in their own research initiatives.

#### **Moderators**



Ursula Gobel Associate Vice-President, Future Challenges, Social Sciences and Humanities Research Council



Manon Tremblay
Director, Indigenous Research,
Social Sciences and Humanities
Research Council

#### **Speakers**



Bronwyn Hancok Associate Vice President Research Development, York College



**Émilie Parent** PhD Candidate, Université de Montréal



Pitseolak Pfeifer MA Student, Northern Studies, Carleton University



Krista Robson Chair of the Research Ethics Board and Professor, Red Deer College



**Gabriel Snowboy**President, Nihtaauchin Chisasibi
Center of Sustainability



#### 10:30am – 12:00pm INTERNATIONAL BALLROOM

212 – The social implications of emerging technologies: Are the most important questions the least studied?

#### THEME 2

Panel Organizer: Peter Severinson | Federation for the Humanities and Social Sciences

Rapid development of transformative new technologies—such as social media, artificial intelligence, and new health technologies—is creating important opportunities and challenges for governments, businesses, the research community and society at large. Too often, however, the social implications of such developments are overlooked.

Emerging technologies bring with them important new challenges. In recent years we have learned that our reliance on social media has created new risks to our democracies, with partisans and foreign actors able to rapidly spread falsehoods that exploit social divisions and erode public trust. The rapid development of artificial intelligence is raising questions about whether a new wave of automation threatens to dramatically reduce human jobs and accelerate inequality. Development in the medical sciences continually challenge historic social conventions and ethical norms.

We need to better understand how society is affected by emerging technologies in part to address the risks but also to help us unlock the potential benefits: to train workers able to make the best use of new capabilities, to make smart decisions about how to employ new technologies to address society's most pressing problems, and to ensure the benefits of new technologies are effectively shared throughout our diverse society.

In this session we will explore whether the Canadian policy and research community is doing enough to understand and address the social implications of new technologies. We will consider how multidisciplinary approaches can help us address multiple dimensions of technological change and better understand the roles of diverse actors, including the natural scientist, the philosopher, the engineer, the behavioural scientist, the historian and the policy maker.

#### Moderator



Sonia Vani
Director, Member Engagement and
Communications, Federation for the
Humanities and Social Sciences

#### **Speakers**



**Jaigris Hodson** Assistant Professor of Interdisciplinary Studies, Royal Roads University



Dominic Martin Professor, École des sciences de la Gestion of the Université du Québec à Montréal



**Eric M. Meslin**President and Chief Executive Officer,
Council of Canadian Academies

#### 12:00pm – 1:30pm INTERNATIONAL BALLROOM FOYER

Luncheon Session — AGE-WELL 2020: Charting the Future of Technology and Aging Research in Canada

Hosted by Age-Well

The AGE-WELL Network of Centres of Excellence is leading the way in developing technologies, services, policies and practices that improve the lives of older adults and caregivers. Building on its successes to date, AGE-WELL has launched a major renewal initiative that will set the research and innovation agenda in the technology and aging field in Canada from 2020-2025. AGE-WELL has identified eight key "Challenge Areas" through which it will drive innovation in the sector, influence policy and practice and invest in R&D. The Challenge Areas were generated through a review of Canadian and international policy priorities related to older adults and validated through an extensive stakeholder review process. Join us to learn how we can tackle these important challenges together in order to improve the lives of older Canadians and their caregivers, today and in the future.

#### 1:30pm – 3:00pm JOLIET-FRONTENAC

120 – New ways of informing policy by leveraging scientific knowledge: two models related to public-academic collaborations

#### THEME 1

Panel Organizer: Chantal Barton | Social Sciences and Humanities Research Council of Canada

A dynamic multi-sectoral panel organized by the Social Sciences and Humanities Research Council (SSHRC) that illustrates innovative approaches to inform evidence-based decision-making in policy development. Two successfully implemented models of collaboration between researchers and graduate students and other federal departments/agencies will be showcased. These models are set in the context of SSHRC's Imagining Canada's Future initiative, which positions the social sciences and humanities as essential to addressing complex societal challenges facing Canadians, to the greater benefit of Canada and the world.

The first model features the International Policy Ideas Challenge (IPIC)—a special initiative developed in partnership between SSHRC and Global Affairs Canada (GAC), which taps into the talent base in post-secondary institutions across Canada, with graduate students and emerging scholars poised to inform policy development on key priority areas identified by GAC. In 2017, IPIC included key themes such as promoting democracy in a digital age; implications of climate change for Canadian trade and investment; and identifying best ways for Canada to support fragile and conflict-affected states. Speakers will include Ioanna Sahas Martin, Director, International Assistance Research and Knowledge. GAC and Maïka Sondariee, a SSHRC doctoral candidate, University of Toronto, and 2017 IPIC winner for her policy brief on the topic of, "Inclusive Gender-Based Analysis (GBA)+ in public participation processes".

The second model will be illustrated by the work of Dr. Bipasha Baruah, Canada Research Chair in Global Women's Issues, Western University and Ian Clark, Acting Chief, Economic Research, Science Integration and Outreach, Natural Resources Canada (NRCan). Following a knowledge synthesis report produced by

#### Moderator



Madeline Johnson Foreign Service Officer, Global Affairs Canada

#### **Speakers**



**Bipasha Baruah** Canada Research Chair in Global Women's Issues, Western University



Ian Clark
Chief of the Economic Research,
Science Integration and Outreach
Division, Natural Resources Canada



Ionna Sahas Martin Director for International Assistance Research and Knowledge, Global Affairs Canada



**Maïka Sondarjee** SSHRC Doctoral Candidate, University of Toronto

Dr. Baruah, as part of SSHRC's Imagining Canada's Future initiative, NRCan commissioned Dr. Baruah to produce a dedicated report on "Women in Natural Resources Sectors", which examines current participation rates of women in natural resources industries and formulates recommendations for governments and industry to increase recruitment, retention and advancement of women in the sector.

Both models foster effective collaboration between the academic and public sectors, and will provide a good foundation on which to engage the audience in a discussion about these and other new ways of informing policy through scientific knowledge.

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#### 1:30pm - 3:00pm RICHELIEU

211 – Communication culture: Scientists' views and trainers' methods to better engage with publics and policymakers

#### THEME 2

Panel Organizer: Kathryn O'Hara | Carleton School of Journalism and Communication

Canadian scientists want to engage with non scientists to ensure that policymakers use scientific evidence to form public policy. This rationale for engagement was given top priority in a recent survey of NSERC Discovery guarantees when asked about their communication objectives. The survey was carried out in 2017-18.

Ensuring continued research funding came in second, and in third place, but still with a strong showing was the desire to ensure Canadian culture values science.

Mindful of these priorities, this panel will look at ways and means of how these goals might be realized in practice. How important is communications training? Just over half the survey respondents had some media training. Is it working?

At one time, academics believed that transferring knowledge to non-scientists was adequate and advisable. No longer.

Scientists are taught to use techniques like storytelling, active listening, empathy in the expanding number of workshops and sessions offered by research-informed science communicators in training organizations across North America and Europe.

The panelists all have relevant academic and practical approaches to help scientists communicate more effectively when talking to media, policymakers or interested audiences. The questions about what works best relies on articulating how we measure successful outcomes with the methods used to achieve desired goals. In other words, injecting some science into science communication.

#### Moderator



Kathryn O'Hara Adjunct Research Professor, School of Journalism and Communication, Carleton University

#### **Speakers**



**John D. Besley** Ellis B Brandt Professor, Michigan State University



Sarah Everts
Journalist at the Max Planck Institute & associate professor at Carleton
University (effective January 2019)



Jim Handman
Executive Director, Science Media
Centre of Canada

The moderator will expand on the expertise of the panel by eliciting audience experiences. The session will explore the communication issues and best practices for those who want to ensure that scientific evidence is a vital part of the body politic and an appreciation of science is a fundamental aspect of Canadian culture.

#### 1:30pm - 3:00pm CAPITALI

501 – A data native generation's approach to science: Science instruction Vs. inquiry into science

#### THEME 5

Panel Organizer: Mohammad Asadi Lari | STEM Fellowship

Current class and curriculum structures don't answer a data-native generation's knowledge acquisition needs and practices. This generation has honed its skills through the years of using information technology, the Internet, and yes, gaming. Modern students come to school with already developed learning techniques, which some of them may hide, keeping teachers happy within the current model; however, some cannot and end up getting into trouble by not meeting the curriculum expectations.

Following the paths of social media and open access culture, academic publishers consciously or unconsciously invited a new generation of learners to scholarly communication. Modern scholarly publication formats like Open Access or even Facebook academic journals have a far-reaching effect triggering students' curiosity and challenging them with real scientific findings. Introduction of electronic impact factor indicators like Altmetric went even further, allowing a new generation to become participants of the public "peer-review" process.

The new generation of science learners often start with derivatives of research that they pick up in the form of social network reflections on scholarly publications and academic findings. They grasp the concepts from blogs, news stories and even YouTube and Facebook posts that lead them directly to abstracts and manuscripts. The last often present information far beyond their ability to comprehend, which results in two new science learning phenomena. On one hand, they skim through publications and extract facts and theories within the scope of their understanding. On another, these elements serve as a new motivation for science studies and often leads them to generate unorthodox interdisciplinary ideas and theories. In order to bridge their knowledge gaps they form groups, which are fertile ground for non-institutionalized scholarship. Within these groups, it is possible to observe very interesting forms of scholarly interaction.

#### Moderator



Mohammad Asadi Lari Managing Director, STEM Fellowship; MD/PhD Candidate, University of Toronto

### Speakers



Suzanne Kettely
Executive Director,
Canadian Science Publishing

Sacha Noukhovich
Founder and Executive Director,
STEM Fellowship



Bonnie Schmidt Founder and President, Let's Talk Science

Alan Winter
Innovation Commissioner,
British Columbia

These are collective presentations and Q&As where presenters complement and change each other without formal moderation.

STEM Fellowship (SF) is a unique example of a largely youth-led initiative to bridge these gaps. As a Canadawide community, we focus on bridging gaps in data science (with our acclaimed Big Data Challenges), scientific communication (through challenges, workshops and the Canadian Science Publishing sponsored STEM Fellowship Journal) and community (through a network of high schools and university campuses dotted all across Canada. This panel will not only focus on our experience on the data-native generation's approach to science, but also that of our numerous partners, which also shows how important cross-sector collaborations and discussions are in generating multi-dimensional solutions.



#### 1:30pm - 2:15pm CHAUDIERE

### 208 – The dementia challenge: Facing the rising tide

#### THEME 2

Panel Organizer: Eleanor Fast | Canadian Academy of Health Sciences

Canada's aging population and the increasing prevalence of Alzheimer's disease and other dementias pose a significant challenge for Canadian families and their caregivers, and more broadly, for the health care system.

Recognizing the importance of developing and implementing an effective strategy to address this challenge, the Minister of Health of Canada, through the Public Health Agency of Canada, asked the Canadian Academy of Health Sciences (CAHS) to provide an evidence-informed and authoritative assessment on the state of knowledge to help advance federal priorities under the National Strategy for Alzheimer's Disease and Other Dementias Act.

To address the charge, the CAHS assembled a multidisciplinary, multi-sectoral panel with a range of expertise, experience, and demonstrated leadership in this domain. The panel's report will assess the evidence-based and emerging practices, actions, and programs in jurisdictions within Canada and internationally that improve the care and the lives of people living with dementia and their caregivers.

This session at CSPC will provide attendees with an overview of the panel's approach to providing meaningful input in a complex multi-jurisdictional policy environment.

#### Moderator



#### Howard Bergman

Chair, Panel for the Assessment of Evidence and Best Practices for the development of a Canadian Dementia Strategy, Canadian Academy of Health Sciences

#### **Speakers**



Carrie McAiney
Associate Professor, School of Public
Health and Health Systems, University
of Waterloo



Isabelle Vedel
Assistant Professor, Department of
Family Medicine, McGill University



#### 2:15pm – 3:00pm CHAUDIERE

## 308 – Longevity innovation for sustainable aging

#### THEME 3

Panel Organizer: Allison Sekuler | Baycrest Health Sciences/Centre for Aging and Brain Health Innovation

Canada, and many other countries, are aging faster than at any time in history. There now are more Canadians over 65 than under 15, and by 2030, nearly 1 in 4 Canadians will be 65 or older. This demographic shift will impact every aspect of our lives: from the workforce to recreation, from transportation to healthcare. The so-called silver tsunami brings with it a looming public health crisis: growing numbers of individuals with dementia and complex chronic medical issues, but a shortage of long-term care beds and other care options. It is estimated that 50 million people worldwide already live with dementia, with that number reaching 75 million by 2030. And, although the cost of dementia is immeasurable for those who suffer from the disease and their loved ones and caregivers, economists estimate the worldwide cost at US\$1 trillion, rising to US\$2 trillion by 2030.

But is that future inevitable, or is there a path to sustainable aging? A path to a society in which people can age in peace and thrive throughout their lifetimes; a society in which aging is a process rather than an endpoint; a society in which our demographic changes lead to enhanced cultural, social, and economic prosperity for Canada. The convergence of precision medicine, technology, big data, and artificial intelligence could chart that path. Fully 70% of our economy is driven by baby-boomers, making age-related innovation a critical and growing field. Virtual and augmented reality, assistive bots, social robots, driverless cars, connected homes, smart cities, and personalized and predictive medicine promise to transform a silver tsunami into a silver economy. However, given the size and diversity of Canada, that promise face many challenges, including concerns about data sharing and privacy; inter-regional jurisdiction of health information; cultural

#### Moderator



Allison Sekuler Baycrest Health Science, Centre for Aging and Brain Health Innovator

#### Speakers



#### Carrie Bourassa Chair in Indigenous & Northern Health and Senior Scientist, Health Sciences North Research Institute; Scientific Director, Institute of Indigenous

Peoples' Health, Canadian Institutes of Health Research



Maureen O'Neil

President, Canadian Foundation for Healthcare Improvement



Ritesh Patel

Chief Digital Officer, Ogilvy's Health & Wellness



#### Andrew Sixsmith

Director, Science and Technology for Aging Research Institute; joint Scientific Director of AGE WELL NCE; Professor, Department of Gerontology, Simon Fraser University

differences in healthcare practices; adoption, procurement, and funding of novel technologies; stigmas associated with aging; and the critical need to create a culture of longevity-innovation.

This panel brings together a diverse group of experts in aging, science and technology, innovation, healthcare practice, and policy to explore the challenges, promises, and opportunities for innovation, and to chart a path for sustainable aging in Canada.



1:30pm – 3:00pm INTERNATIONAL BALLROOM A+B

401 – International science and Canada addressing global agenda 2030 together

#### THEME 4

Panel organizer: Gordon McBean

The Global Agenda 2030 covers a wide range of international scientific policy and societal issues pertinent to global economic development. This complex and intersectional Agenda encompasses the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change, and the Sendai Framework for Disaster Risk Reduction. Across these coalitions and programs, there is a great need for scientific work to be effectively coordinated internationally as well as within each country. Presently, international scientific research and development are coordinated through global programs such as the World Climate Research Programme, Global Framework for Climate Services, Future Earth, World Data System, and global observational programs. In parallel, within Canada, our world-class research communities are effectively coordinated through the Networks of Centres of Excellence, CIFAR, government laboratories, and other Canadian research organizations.

This session will present and discuss international and national scientific programs, with a focus on how the scientific community can work together effectively to address critical policy issues and coordinate interdisciplinary research within Canada and internationally. One of the highlights of our session is elucidating Canada's role in the new International Science Council—a merger of the International Council for Science and the International Social Sciences Council—whose vision is to advance all sciences as a global public good.

3:30pm - 3:00pm EXHIBIT HALL

Coffee Break

#### Moderator



Gordon McBean Professor Emeritus, Western University; Past-President, International Council for Science

#### **Speakers**



Alan Bernstein
President and Chief Executive Officer,
Canadian Institute for Advanced
Research



David Grimes
Assistant Deputy Minister,
Meteorological Services Canada;
President of World Meteorological
Organization



**Ted Hewitt**President, Social Sciences and Humanities Research Council



Amy Luers
Executive Director, Future Earth



Maria Uhle
Program Director for International
Activities, Directorate for Geosciences,
National Science Foundation



Wendy Watson-Wright Chief Executive Officer, Ocean Frontier Institute

#### 3:30pm – 4:15pm JOLIET-FRONTENAC

#### 307 — Innovating science communication

#### THEME 3

Panel Organizer: Julia Krolik | Pixels and Plans

Effective and timely science communication is the very vessel that informs decision makers, thereby having a direct effect on the way science policies are generated. Indeed, there have been challenges with science communication, as evidenced by the creation of Evidence for Democracy, a not-forprofit organization promoting the transparent use of evidence in government decision-making in Canada. Currently, the landscape of science communication is shifting with many diverse communication avenues becoming more readily available across all sectors including academia, governments and the public. Our panel on Innovating Science Communication consists of a diverse group of panelists that practice different forms of science communication in Canada.

The group will discuss five different science communication approaches and the milestones achieved. The panel moderator, Julia Krolik of Pixels and Plans, an agency practicing and teaching the art of good data, will present from-the-field case studies of how fusing data science and creative direction to tackle science communication problems helps organizations reach and engage their intended audiences. Dr. Chantal Barriault, Director of the Science Communication Program at Laurentian University will discuss how the curriculum has evolved and what a Science Communication degree means for educating and inspiring future generations of communicators and policymakers. Jonathan Provost, an Environmental Scientist at Indigenous and Northern Affairs Canada, will cover science communication initiatives in the public sector and the complications of speaking to the general public. Catherine Lau, Program Evaluation Officer at Art the Science, a non-profit organization that facilitates artist residencies in science laboratories will present recent residency evaluation findings and discuss the value of including art as a science communication platform.

#### Moderator



Julia Krolik
Founder, Pixels and Plans &
Art the Science

#### **Speakers**



Chantal Barriault
Director of the Science
Communication Graduate Program,
Laurentian University and Science North



Catherine Lau
Program Evaluation Officer,
Art the Science



**Jonathan Provost** Real Property Divestment Program Manager, National Defence



Samantha Yammine
Science Communicator and PhD
Candidate, Department of Molecular
Genetics, University of Toronto

Finally, Samantha Yammine, a PhD Candidate in Neuroscience and Stem Cell Biology at the University of Toronto will discuss her successful use of social media platforms to communicate science and engage diverse audiences as well as incorporate social media metrics on Canadian science policy discussions.

Panel attendees will be presented with an overview of novel and traditional approaches to Science Communication. These methods provide insights to overcoming challenges of communicating science to diverse audiences. Since science communication plays an important role in science policy decision making, the diverse topics covered in this panel are a valuable resource to a Canadian Science Policy audience.

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#### 4:15pm – 5:00pm JOLIET-FRONTENAC

115 — A two-way street: science informing policy, and policy informing science

#### THEME 1

Panel Organizer: The National Alliance of Provincial Health Research Organizations

It has been said that the greatest purpose of scientific inquiry is in its potential, and therefore unpredictable, contribution to the benefit of all people. Various approaches have been at play to enable cross-sectoral decisions, collaborations, investments, and networking that aim to harness that potential and increase the likelihood of moving the value of research towards innovations with broad organizational and societal scope and benefit. To make these approaches effective, on the one hand, decision makers need to understand the ins and outs of the autonomous research process and how best to enable it over the entire timeline from discovery to impact. On the other hand, decision makers can also put challenges to the research community to stimulate research, collaborations, and innovation activities in areas where there are known knowledge gaps.

Policy and science have and have to continue to interact on various levels. Our panel will present pan Canadian perspectives on how this process occurs to establish cross-sectoral culture, to identify and respond to regional and local needs, and to facilitate effective dialogue.

#### Moderator



Deborah Gordon-El Bihbety Chief Executive Officer, Research Canada

**Speakers** 



**Denis Amyot**President and Chief Executive Officer,
Colleges and Institutes Canada



**Krista Connell**Chief Executive Officer, Nova Scotia
Health Research Foundation



Necole Sommersell Manager, Evaluation & Impact, Research Manitoba

#### 3:30pm - 5:00pm RICHELIEU

116 — Shaping science policy to improve equity, diversity and inclusion

#### THEME 1

Panel Organizer: Fanny Eugène | Fonds de recherche du Québec

Progress has been slow in increasing diversity in the scientific community. A recent report from the Canadian Association of University Teachers shows that while the representation of women among university professors has improved over the past decade, they are still highly underrepresented in science, technology, engineering and mathematics (STEM), and their proportion still decreases in all sectors as we move up the academic ranks. Indigenous peoples and some racialized groups are also underrepresented. This panel will present case studies that illustrate how we can improve policies to help increase equity, diversity and inclusion in science. It will bring together perspectives from a university, provincial and federal funding agencies, an international non-profit organization, as well as from the younger generation.

At the institution level, Ryerson University has shown great leadership by intentionally prioritizing equity and inclusion values, as the first university in Canada to create a vice-president post in charge of equity and community inclusion with the mandate of identifying and addressing systemic barriers. At the provincial level, the Fonds de recherche du Québec and the ministry of Economy, Science and Innovation are currently working on UNESCO's SAGA (STEM and Gender Advancement) project, which will help identify gaps and improve Québec's science policies to improve gender equality in STEM. At the federal level, the three granting agencies, including the Tri-Agency Institutional Programs Secretariat are currently putting in place equity, diversity and inclusion (EDI) action plans to embed EDI in every aspect of the research they support. At the international level, the American Association for the Advancement of Science is currently conducting a pilot project

#### Moderator



Maryse Lassonde
President, Conseil supérieur de
l'éducation, Government of Quebec

#### Speakers



Mary-Rose Bradley-Gill Vice-President External Relations, Science & Policy Exchange

Shirley Malcom Director, Education and Human Resources Programs, American Association for the Advancement of Science



**Denise O'Neil Green** Vice-President, Equity and Community Inclusion, Ryerson University

Serge Villemure
Director, Scholarships, Fellowships
and Chairs for Women and Science
in Engineering, Natural Sciences and

Engineering Research Council

called SEA (STEM Equality Advancement) Change, which encourages and recognizes institutions' efforts toward equity, diversity and inclusion, through an award system based on the United Kingdom's Athena SWAN model.

A student perspective will be included on this panel, as students can play an important role in shaping science policy, through initiatives such as #Students4theReport, a social media campaign that encouraged the Canadian government to follow recommendations from the Fundamental Science Review committee, including the development of policies aimed at improving equity and diversity in science.



#### 3:30pm - 4:15pm CAPITALE

314 — Harnessing diversity and inclusion to drive innovation in Canadian science and technology

#### THEME 3

Panel Organizer: Wendy Cukier | Ryerson University

In recent years, Canadian employers, economists and industry analysts have lamented a shortage of qualified personnel to drive science and technology innovation, entrepreneurship, and economic growth (CME/CSTEC, 2017; ICTC, 2017). Leading organizations in Canada's professional, scientific and technical services (PST) sector still struggle to create equitable and inclusive environments for members of diverse groups (Coe & Hariri, 2017). Despite extensive policy and organizational changes, limited progress has been made in addressing barriers to diverse groups in Canada's PST sector (Coe & Hariri, 2017). Many racialized minorities face unconscious bias and limited career opportunities within small- and medium-sized enterprises (SMEs) (Access Alliance, 2011). The "chilly climate" and pay differentials persist for women in STEM (Caranci et al., 2017; Cukier, 2007; ICTC, 2017). Indigenous youth, one of Canada's fastest growing segments (Statistics Canada, 2011), comprise merely 1.2% of ICT workers (ICTC, 2017). Immigrant and female technology entrepreneurs continue to confront gender- related industry barriers (Orser, 2009; Orser et al., 2012; Orser & Riding, 2016; Cukier, 2017). Even though entrepreneurship is a desirable pathway to economic integration for members of diverse groups, particularly immigrants, recent reviews of Ontario's incubator and innovation ecosystem suggest that the governance, processes, and resources do not support those from diverse groups (Canada-US Council for Advancement of Women, 2018). In this complex ecosystem, there is an acute need to leverage diversity to drive change.

This panel will concurrently examine the ways in which diversity produces the innovations that galvanize economic growth and the role of leading-edge tools, applications and approaches in fostering innovation for inclusion in Canada's science and technical sector. Informed by an awareness of the skills gap and applying an ecological approach to

#### Moderator



Wendy Cukier
Professor of Entrepreneurship
and Strategy and Founder of the
Diversity Institute in the Ted
Rogers School of Management,
Ryerson University

#### **Speakers**



Charlie Carter Policy Leader, Public Policy Forum



Mohamed Elmi PhD Candidate, University of Cape Town



**Jaigris Hodson** Assistant Professor of Interdisciplinary Studies, Royal Roads University



**Doaa Mansour** Lead, Advancing Women in STEM, Youth Employment Services Montreal

diversity, this panel of leading technology and entrepreneurship scholars and industry experts will generate a practical alignment and reciprocal engagement between inclusion and innovation. They will identify and assess the potential of technology-enabled applications and tools that promote inclusion and examine how diversity can generate access to top talent and creative imaginations, expanding reach, and improving firm performance through inclusion and engagement. The panel will consider ways to replicate and share innovative tools and build capacity for evidence-based approaches to diversity policy. Finally, it will unpack how policies, practices and tools can advance inclusion by matching diverse job seekers to employers. Overall, this panel will emphasize how employers and policymakers can harness innovation and inclusion to create productive science and technology industries.

#### 4:15pm - 5:00pm CAPITALE

204 — The logic of inclusive innovation: From inputs to outcomes

#### THEME 2

Panel Organizer: Robert Luke | OCAD University What is inclusive innovation? How do we achieve it?

These are important questions to ask as we continue to pivot into a knowledge based global economy. Inclusive innovation is a worthy outcome to strive for. But in order to achieve it, we need to ensure that the inputs are inclusive. We can usefully plot this into a logic model, which provides a way for understanding the relationships between the various inputs, activities and outputs that will help us achieve the outcome(s) commensurate with the focus on inclusive innovation.

When we look at innovation through this lens and work back from the goal of inclusive innovation we can see that there are gaps in the material conditions that would support the outcome of inclusive innovation. Innovation inputs usefully include the pipeline of science and technology and research and development (S&T and R&D), funding, people, culture, activities: those conditions and material supports that are put into play against any innovation effort.

Inclusive innovation means focusing not just on simple-to-count measures such as patents and publications, but on the full spectrum of innovation outputs.

- We need to ask: whose perspective has been left out of innovation?
- What activities and disciplines are needed to facilitate innovation?
- What outputs result from these inputs?

When we look at innovation through this lens and work back from the goal of inclusive innovation we can see that there are gaps in the material conditions that would support the outcome of inclusive innovation.

The authors in this series offer helpful advice, expertise and perspectives on inclusive innovation.

 Dori Tunstall, Dean of Design, OCAD University, on BIPOC entrepreneurship (and Black Panther!)

#### Moderator



Robert Luke
Vice-President, Research & Innovation
and Associate Professor in the

and Associate Professor in the Faculty of Liberal Arts & Science and School of Interdisciplinary Studies, OCAD University

#### **Speakers**



Dominique Bérubé Vice-President, Research Programs, Social Sciences and Humanities Research Council

Ken Doyle Executive Director, Tech-Access Canada



Malavika Kumaran Research Manager, MaRS Data Catalyst



**Dori Tunstall**Dean of Design, OCAD University

- Malavika Kumaran, Research Manager, MaRS Data Catalyst, on women in tech
- Ken Doyle, Executive Director of TechAccess Canada on later-stage applied R&D and experimental development in support of diversity of activity
- Dominique Bérubé, Vice-President, Research Programs, SSHRC will address the role of humanities and social sciences in addressing grand challenges and multidisciplinary research.

Inclusive innovation is a worthy outcome to strive for. In order to achieve it, we need to ensure that the inputs, activities and outputs are inclusive. When we do so, we leverage the full spectrum of capacity from across society, and help to build more resilient social, cultural and economic outcomes.

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#### 3:30pm - 5:00pm CHAUDIERE

316 — Bringing innovative medicines into the hands of patients with Alzheimer's disease

#### THEME 3

Panel Organizer: Angela Bilkhu | Hoffmann-La Roche Ltd.

In 2016, an estimated 747,000 Canadians were living with Alzheimer's Disease (AD) and related dementias. It is estimated that by 2030, 1.4 million Canadians will have AD or related dementias, an increase of 66 percent. By 2050, that number will increase to 2.8 million. As in other major markets, this rapidly increasing prevalence of people with AD and dementia is a significant concern to policymakers who are exploring how they can best support patients with AD and related dementia and their loved ones.

Recognizing the significant need and their commitment to improving the lives of Canadians with dementia, the Government of Canada announced in May 2018 that it was moving forward with a National Dementia Strategy. The Strategy will consider the experience of those living with dementia and will build on existing work being undertaken across Canada in this area. The Strategy poses a unique opportunity to define what is required from a healthcare system readiness perspective.

The objective of the panel will be to explore the current work being undertaken by the Government of Canada to improve the regulatory and healthcare environment in order to bring innovative therapies into the hands of patients. The panel discussion is meant to ignite public policy discourse related to:

 Current state of affairs in Canada and what is required from a healthcare readiness perspective in order to positively impact thelives of patient living with AD and their caregivers

#### Moderator



Soeren Mattke Senior Scientist at USC; Director of the Center for Improving Chronic Illness Care

#### **Speakers**



Christin Bexelius



Andrew R. Frank Cognitive and Behavioural Neurologist; Medical Director, Bruyère Memory Program



K. Jennifer Ingram
Founder, Medical Director and
Qualified Investigator, Kawartha
Centre—Redefining Healthy Aging



Pauline Tardif Chief Executive Officer, Alzheimer Society of Canada

- Understand the current regulatory and market access decision making process and the gaps that exist in bringing innovative diagnostics and therapies to market in the area of Alzheimer's Disease
- Existing healthcare system gaps and existing opportunities to bridge those gaps

#### 3:30pm – 5:00pm INTERNATIONAL BALLROOM A+B

### 214 — The status of science literacy in Canada

#### THEME 2

Panel Organizer: Maurice Bitran | Ontario Science Centre

The level of science literacy and the attitudes of the population towards science and technology are important to the future of technology-based societies like ours. Not only because our economy is dependent on technology, but also because many social issues are affected by science and technology, effectively making science literacy a requirement for meaningful participation in the public policy dialogue. What do Canadians think about science and technology? Do they trust scientists and scientific results? What do they think about science and technology related issues such as climate change or artificial intelligence?

For the third consecutive year, the Ontario Science Centre has conducted an online survey on science literacy and attitudes towards science across Canada. A review of its main results will serve as the background for this discussion in which each panel members will also discuss what their organizations are doing to increase public literacy and public trust in science.

5:00PM - 6:00PM PINNACLE/PANORAMA ROOM

CSPC 2018 CSPC Opening Reception

#### Moderator



Maurice Bitran
Chief Executive Officer and Chief
Science Officer, Ontario Science Centre

#### Speakers



Eugenia Duodu Chief Executive Officer, Visions of Science



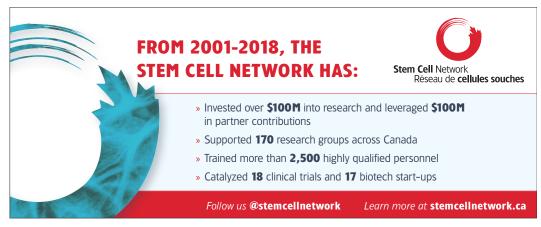
Mona Nemer Chief Science Advisor, Government of Canada



Molly Shoichet University Professor and Senior Advisor to the President on Science and Engineering Engagement, University of Toronto

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#### 6:00pm – 7:30pm INTERNATIONAL BALLROOM A+B

#### **Keynote Session**

## New directions for science advice in federal government

Artificial intelligence...Blockchain...CRISPR-cas9... these are just the ABCs of a broad array of emerging technologies confronting federal decision-makers, who must weigh how to foster these technologies in the interests of Canada's economic competitiveness but also regulate them in the public interest. Similarly, new ideas such as inclusive innovation, open science, digital governance, collaborative research infrastructures, and the inclusion of traditional Indigenous knowledge present both opportunities and challenges to government departments. Meanwhile the broader context is characterized by rising populism, changing citizen expectations, and a post-truth decline of deference to experts.

In this context, timely science advice remains a critical input to agile public policy. As part of the Government of Canada's new vision for science, federal departments and agencies are identifying Departmental Science Advisors (DSAs) to support effective decision-making informed by the scientific evidence. Join us for a dialogue with three DSAs on the new directions for science advice in the federal government.

#### 9:00pm - 12:00am DELTA HOTEL

Special CSPC 2018 Pub Night Party

**Speakers** 



**Toby Fyfe**President of Institute on Governance



Sarah Gallagher Canadian Space Agency Science Advisor



**Donna Kirkwood** Chief Scientist, Natural Resources Canada



**Dan Wayner** Chief Science Advisor, National Research Council



### Thursday, November 8

7:00am - 5:00pm HOTEL LOBBY

Registration and information desk

7:45am – 8:30am INTERNATIONAL BALLROOM A+B

### Breakfast session—Skills and competencies where science and policy meet

MITACS Science Policy Fellows Special Panel

Policy-making is a complex process involving multiple considerations and competing priorities. Ensuring that science and evidence underpin policy-making can be a challenge both for those seeking to influence policy, and for those making policy decisions. What are the skills and competencies needed to navigate this process? What steps can be taken to enhance the capacity of an organization to integrate science in policy-making processes? Join Mitacs, and a panel of experts to explore Canada's approach to building science policy capacity.

#### **Speakers**



**Alejandro Adem** Chief Executive Officer and Scientific Director, Mitacs Inc.



Gail Bowkett
Director, Innovation Policy, Mitacs Inc.



David Castle

Vice-President Research and a Professor in the School of Public Administration with an adjunct appointment in the Gustavson School of Business



Scott Findlay

Professor at the Department of Biology at the University of Ottawa; Director of Graduate Studies at the Institute of Environment



Katie Gibbs

A scientist, organizer and advocate for science and evidence-based policies

#### 8:30am – 10:00am INTERNATIONAL BALLROOM A+B

209 — Granting agencies and participatory science in Canada

#### THEME 2

Panel Organizer: Fanny Magini | Fonds de recherche du Québec

Canadian granting agencies are increasingly interested in strengthening the link between science and society. This link can take various forms, including that of participatory science, in which non-expert citizens are involved in the research process. The Chief Scientist of Québec would like to organize a panel to discuss the role of granting agencies in the funding of participatory science in Canada and the role of citizens in the research process. Panelists will answer questions such as: Do granting agencies already support this type of research? Are there specific research programs to promote and recognize participatory science? Beyond research programming, should citizens have a place on evaluation committees, boards of directors of granting agencies, or other official bodies?

#### 10:00am - 10:30am EXHIBIT HALL

Coffee Break

#### Moderator



Véronique Morin Science Journalist

#### Speakers



Marc Fortin
Vice-President, Research and
Partnerships, Natural Sciences and
Engineering Research Council of
Canada

Ted Hewitt
President, Social Sciences and
Humanities Research Council



Serge Marchand
Directeur scientifique, The Fonds de recherche du Québec—Santé

Louise Poissant
Directrice scientifique, Le Fonds
de recherche du Québec—
Société et culture



Michael J. Strong
President, Canadian Institutes of
Health Research



#### 10:30am - 12:00pm JOLIET-FRONTENAC

108 — Risk communication and engagement with the public in the nuclear, climate and artificial intelligence sectors

#### THEME 1

Panel Organizers: April Killikelly | Science Policy Analyst, Canadian Food Inspection Agency, Patricia Larkin | Policy Analyst, Institute for Science, Society and Policy, University of Ottawa

The connection between policymakers, scientists and the public is an essential bond that allows scientific innovation to translate into tangible benefit in the life of ordinary Canadians. And yet, we are increasingly seeing different perceptions over the nature, extent and capacity to mitigate potential risk and this is translating into protracted controversies that may actually put the public at risk—think nuclear waste management, climate change or artificial intelligence.

As society continues to engage with increased scientific complexity with respect to artificial intelligence entering our lives in multiple sectors, threats from climate change, and nuclear waste storage, the public's adoption and acceptance of innovation is dependent on risk communication that advances both understanding and differences in real and perceived risks. We also need to better understand what drives risk perception in the public—especially the role of values and worldviews—and we need to better understand how different ways of engaging the public in risk decision-making can help to foster support for scientific innovation. This session will contribute to the challenge.

This panel will include an interactive component during individual's remarks and discussion period. We will use Poll Everywhere, an online platform that allows audience members to use their smartphones or other network connected devices to enter live polling data that will be made visible on a screen. The audience's perception of risk will be polled before and after various communication strategies and word

#### Moderator



**Monica Gattinger** Director, Institute for Science, Society and Policy, University of Ottawa

#### **Speakers**



Duane Bratt
Professor and Chair, Department of
Economics, Justice and Policy Studies,
Mount Royal University



Elaine Chatigny Assistant Deputy Minister, Public Health Agency of Canada



Kimberly Girling Science Policy Analyst, Innovation, Science and Economic Development Canada



Margot Hurlbert Fellow of the Earth Systems Governance Project; Lead of the Science, Technology

Project; Lead of the Science, Technology and Innovation Research Cluster at Johnson Shoyama Graduate School of Public Policy; Professor and Fedoruk Fellow, Centre for the Study of Science and Innovation Policy



**Bob Watts** 

Senior Associate, Consensus Building; VP Indigenous Relations, Nuclear Waste Management Organization

choices have been used. In this way we want to create both a dialogue and experience of risk communication for the audience participants.

#### 10:30am - 12:00pm RICHELIEU

213 — Fake news, fake therapies: Upping the ante in the fight against unproven stem cell therapies in Canada

#### THEME 2

Panel Organizer: Lisa Willemse | Stem Cell Network

Stem cell research is an exciting field of science and holds much promise for the treatment of chronic illnesses and diseases. However, stem cell research is complex and there is much to learn before stem cell-based treatments will be ready for routine clinical use. Today, there are very few stem cell therapies offered by medical professionals as the standard care of practice. Despite this, private clinics worldwide—and increasingly here in Canada—market stem cell-based therapies to people who are vulnerable and seeking relief for a variety of conditions, from arthritis to stroke. Regulatory loopholes have allowed these clinics to expand in many jurisdictions. Recent studies show that the global market for unproven therapies is \$2.4B, with 60,000 patients purchasing treatments each year. Nearly 800 clinics are operating in the United States alone and it is unclear how many are operating in Canada.

These treatments come with high financial costs, little to no medical follow-up, and the risk of adverse outcomes. None have been proven to be effective through clinical trials, the medical gold standard required to determine both safety and efficacy. Nor do these clinics publish their methods or outcomes in peer-reviewed journals, relying instead on anecdotal evidence and patient testimonials to support their claims. By preying upon the hopes of desperate patients, unregulated stem cell clinics are making very tidy profits.

Led by the Stem Cell Network, the stem cell research community has been working nationally and alongside international partners to better understand the issue and provide guidance that fit social, legal and political frameworks. With limited resources dedicated to the massive effort required to effectively debunk existing myths and communicate the risks to the public, scientists

#### Moderator



Torah Kachur Columnist, CBC Radio One

#### **Speakers**



Harold Atikins
Physician, Ottawa Hospital Blood and
Marrow Transplant Program; Associate
Professor of Medicine, University of
Ottawa



Jennifer Molson Research Assistant, Ages Cancer Assessment Clinic, Ottawa Hospital



Cate Murray
Executive Director and Chief Operating
Officer, Stem Cell Network



Amy Zarzeczny

Assistant Professor, Johnson Shoyama Graduate School of Public Policy, University of Regina; Health Innovation Research Cluster Lead, Centre for the Study of Science and Innovation Policy

are facing a losing battle. Action is needed and Canada is well positioned to become a leader for the world in responding to this growing industry and its unethical practices. However, to meet the challenge head-on a coordinated effort is required: one that sees the science community, patient groups, health care providers, media and government all playing their respective part to increase awareness of fake or risky therapies.

With reference to a paper detailing the outcomes of a 2017 workshop (publication expected summer/fall 2018), this panel will explore the current state of the issue in Canada and provide insights on what they believe is needed to mitigate the proliferation of a new market that is offering unproven and risky treatments to the general public.



#### 10:30am - 12:00pm CAPITALE

117 — Water at the science-policy interface: Challenges and opportunities for Canada

#### THEME 1

Panel Organizer: Tatjana Milojevic and Nancy Goucher | The University of Waterloo

Optimum management of water resources is one of the most crucial challenges for Canada in the 21st Century. Safe and adequate water supply is central to sustainable ecosystems, healthy communities and strong economic growth. However, a widening gap between current management practices and increasing scientific knowledge is testing the adequacy of the current regulatory framework in addressing threats to water, such as those posed by nonpoint source contamination. As climate change increases the uncertainty and complexity for the management of water resources, water managers and researchers will need to understand more about the science-policy interface to improve the response to water threats. These threats demand a new approach to regulation for water protection and water management activities, which require adaptive responses. There is considerable variation in our current knowledge of the changing demands on water resources and in the different stages of adaptive management strategies, which might be improved by implementing water monitoring policies and plans.

This panel examines the perceptions of researchers and water managers working at the science–policy interface across Canada and discusses the implications of their role for addressing nonpoint source contamination in the face of climate change. Our discussion themes include: vulnerability and uncertainty, time lag issues, the need for different skill sets throughout the process, and what can be done to enable scientists and policymakers to work together more effectively to address current and future water threats.

#### Moderator



Homa Kheyrollah Pour Research Scientist, University of Waterloo

**Speakers** 



Philippe Van Cappellen Canada Excellence Research Chair in Ecohydrology Laureate



Manager of Canada-U.S. Relations in the International Affairs Branch, Environment and Climate Change Canada

Steve Cobham



Nicola Crawhall Principal, Westbrook Public Affairs



Gail Krantzberg
Professor of Engineering and Public
Policy in the Walter G Booth School of
Engineering Practice and Technology,
McMaster University



Alain Pietroniro
Executive Director for the National
Hydrological Service within the
Meteorological Service of Canada,
Environment and Climate Change
Canada

#### 10:30am - 11:15am CHAUDIERE.

503 — Canada 2067—Lessons learned in building a national vision for STEM education

#### THEME 5

Panel Organizer: Bonnie Schmidt | Let's Talk Science

The panel will discuss key recommendations and lessons learned through Canada 2067, a unique and ambitious national initiative to forge a "made in Canada" action plan for the future of youth science, technology, engineering and math (STEM) education.

Canada's complex education ecosystem demands creative solutions to catalyze large-scale change that can benefit all students. Canada 2067 responded to this need for creativity through the convening of: five summits with high school students; seven Global Shapers' roundtables with young adults; a national leadership conference that included federal and provincial governments and diverse stakeholders; and a social media campaign that resulted in input from hundreds of thousands of Canadians.

Through this process, Canada 2067's collaborative vision and five-year goals reflect the varied perspectives of students, millennials, educators, parents and the general public as well as policy-makers, industry, community organizations and global education researchers. The vision and goals address six areas that were found to align in global research into STEM education policy initiatives published over the past ten years.

Having successfully positioned Canada as a world leader in education at the start of the 21st century, our schools are now working to ensure that this advantage is maintained, not only in the near future, but in decades to come. Increasingly, this means graduating students with a diverse set of skills that go beyond disciplinary knowledge to include those related to critical thinking, problem-solving, creativity, and communication. What types of supports and partnerships do our schools need to ensure that they are successful in

#### Moderator



Bonnie Schmidt Founder and President, Let's Talk Science

#### Speakers



Rob Mariani Senior Vice President, GM Ottawa, Hill + Knowlton Strategies Canada



Rohan Nuttall
Research Assistant at the Urban
Predictive Analytics Lab,
University of British Columbia



**Andrew Parkin**Director, Mowat Centre



Ruth Silver Founder, Groundswell Projects

this endeavour? How supportive is the public of a new vision for education that emphasizes critical thinking over rote learning and a multi-disciplinary approach over traditional subjects? This panel will explore these questions and more by outlining the rationale for Canada 2067, summarizing key recommendations, and ultimately addressing the issue of how schools can help to fuel Canada's innovation agenda.

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#### 11:15am – 12:00pm CHAUDIERE

#### 505 — Supporting the next generation of northern scientists

#### THEME 5

Panel Organizer: Jennifer Sokol | Polar Knowledge Canada

The planet is changing rapidly and nowhere more so than in the Arctic, where a warming climate is already bringing a multitude of environmental, social and economic consequences. This is raising a lot of guestions about what the future is going to look like, how to prepare and the type of research and knowledge necessary to address these changes. This panel will discuss opportunities to grow the base of northern scientists, including Indigenous researchers, across the North. Too often, northerners are participants within Arctic science but not recognized as knowledge holders and researchers themselves. Despite a renewed focus on Indigenous Knowledge systems, few Indigenous researchers are being acknowledged and accredited for their contributions. Northernbased educational institutions and universities that use pedagogical approaches in line with the cultural contexts of the north could help increase the number of northern researchers. During this panel, we will hear from a diverse range of voices including educators, northern youth, and institutions; all working to engage northern Indigenous communities in research.

Hosted by Polar Knowledge Canada, the panel will discuss questions including the following: what tools and support systems are needed to encourage northern youth towards research careers? How can we better reflect Indigenous knowledge and approaches in research? What barriers do northern students face in entering a science career and higher education? What kinds of policy, programming, and coordination are needed to address these barriers, improve northern self- determination in research, and northern research capacity?

#### Moderator



**Jennifer Sokol** Senior Policy Advisor, Polar Knowledge Canada

#### **Speakers**



Joanna Laskey
Director, Pilimmaksaivik (Federal
Centre of Excellence, Inuit Employment
in Nunavut)



**David Silas**First Nations Engagement Advisor,
Yukon College



Kelsey Wrightson
Dechinta Centre for Research
and Learning, Director of Policy
and Programming



Krista Zawadski Curator of Inuit Art, Department of Culture and Heritage, Government of Nunavut

Polar Knowledge Canada's mission is to advance Canada's knowledge of the Arctic and other circumpolar regions including the Antarctic, and strengthen Canadian leadership in polar science and technology, while promoting the development and distribution of knowledge, across the north.

#### 10:30am – 12:00pm INTERNATIONAL BALLROOM A+B

305 — Failure to thrive: Why Canada struggles to grow world leading tech companies

#### THEME 3

Panel Organizer: Weronika Zych | Council of Canadian Academies

For more than 100 years, successive Canadian governments have bemoaned the country's inability to grow firms into large, globally successful industry leaders. While much effort has been expended to address this issue, the results have been middling by most informed accounts. Indeed, over the last decade, several large-scale tech companies that Canada has grown have failed to thrive. That said, Canadians have become expert at describing the host of explanations behind the phenomenon: technical and management skills gaps, weak IP policies, inadequate venture capital, too much (or not enough) tax support, small domestic markets, and other factors. But we have not been equally proficient at identifying the causes and consequences of this failure to grow robust domestic tech companies in Canada. Perhaps a different approach is needed, with a different set of questions: Does it matter that Canada does not grow firms into large industry leaders? Do Canadians really want to scale companies? Or are we content attracting foreign subsidiaries with world leading research capacity and infrastructure, and exporting ideas and innovations to be developed in other markets? The panel includes industry and policy leaders, who will draw on current evidence and their own experiences to debate the causes and consequences of Canada's failure to thrive and what steps (if any) should be taken.

#### Moderator



Eric M. Meslin
President and Chief Executive Officer,
Council of Canadian Academies

#### **Speakers**



**Lisa Crossley**Chief Executive Officer, Reliq Health Technologies, Inc.



Pierre Lortie
Senior Business Advisor, Dentons LLP



Judy Fairburn
Board Director, Public Policy Forum,
Sustainable Development Technology
Canada, Tundra Oil & Gas Inc., Veerum Inc.,
and Calgary Economic Development



Victoria Lennox Co-Founder and Chief Executive Officer, Start-up Canada



Iain Stewart
President, National Research Council



12:30pm - 1:30pm INTERNATIONAL BALLROOM A+B

Luncheon Session: A Conversation with Canada's Chief Science Advisor, Dr. Mona Nemer







At AstraZeneca, we believe in the power of what science can do to transform serious diseases like cancer, heart disease, diabetes, COPD and asthma.

Each and every one of us is bold in the belief that science should be at the centre of everything we do. It compels us to push the boundaries of what is possible. To trust in the potential of ideas and pursue them, alone and with others, until we have transformed the treatment of disease



#### 1:30pm - 3:00pm **INTERNATIONAL BALLROOM A+B**

301 — Commercializing Innovation in Canada: Retaining human and financial capital north of the border

#### THEME 3

Panel Organizers: Claudia Krywiak | Ontario Centres of Excellence and Geraldine Chen | Ontario Centres of Excellence

Commercializing Innovation in Canada: Retaining human and financial capital north of the border

As host of the second-largest ICT cluster in North America outside Silicon Valley and home to worldclass academic and research institutions focused on innovative technologies, Canada has a unique opportunity to be a global leader in innovation. Yet some industry and financial experts have argued there has been a recent trend of investment capital "exodus" to the U.S. that could result in a cascading loss of talent, intellectual property and the next generation of innovators.

Through a collaborative lens, this diverse panel of research and industry experts will discuss strategies to link supply with demand to move the best ideas from the lab to the marketplace, while bringing international visibility to these initiatives that drive economic growth, create high-quality jobs and enhance Canada's global competitiveness.

Topics to be discussed:

- · Highlights of interconnected, game-changing technology projects already underway, driving the digital economy
- Moving innovative technologies out of the research lab and into the marketplace
- Attraction and retention of talent
- Connecting supply with demand
- Retention of IP by commercializing in Canada and bringing tech to global markets

#### Moderator



Tom Corr President and Chief Executive Officer. Ontario Centres of Excellence

#### **Speakers**



Kathrvn Havashi President and Chief Executive Officer, TRIUMF Innovations Inc.

Audrey Mascarenhas President and Chief Executive Officer, Questor Technology Inc.

Elissa Strome Executive Director, Pan-Canadian Artificial Intelligence Strategy, Canadian Institute for Advanced Research

#### Zhou Wang



Co-Founder & Chief Science Officer at SSIMWAVE, University Research Chair and Professor at the University of Waterloo

Rodney Wilson Chief Technologist, Research Networks, Ciena Corporation



Alan Winter Innovation Commissioner, Government of British Columbia



#### 1:30pm - 3:00pm RICHELIEU

## 217 — Bridging science and Indigenous knowledge systems: Best practices

#### THEME 2

Panel Organizer: Natural Resources Canada's Office of the Chief Scientists

Today's issues are multi-facetted and complex. Drawing on various sources of evidence can enhance our ability to identify sensible and practical solutions. Success stories that draw on both science and Indigenous Knowledge systems are often undocumented. Much remains to be done, and discussions of experiences and examples are important for sharing experiential knowledge of the panelists such as lessons learned and best practices.

Moderated by Natural Resources Canada's Chief Scientist and for the benefit of the Government of Canada's Science and Policy Integration community, this panel will provide an opportunity for practitioners in various disciplines to present their experiences including both challenges and enablers. Panelists will discuss the results of their work in bridging science and Indigenous knowledge systems for a common purpose such as sustainable environmental and natural resource management. Case studies presented by the panelists will provide participants with examples of successful integration and partnership practices established between governmental organizations and local/regional and Indigenous groups.

This "Case Study" panel would follow the Short Talk-type panel on the same subject, delving deeper by providing 'grassroots' perspectives.

#### Moderator



Donna Kirkwood Chief Scientist, Natural Resources Canada

#### **Speakers**



Leah Braithwaite
Executive Director, Arctic Net Inc.



Solange Nadeau Senior Forest Sociologist, Canadian Forest Services, Natural Resources Canada



**Scot Nickels**Director, Inuit Qaujisarvingat:
The Inuit Knowledge Centre



Rachel Olsen President, President and one of the Founding Directors, The Firelight Group

#### 1:30pm - 2:15pm CAPITALE

#### 502 — Science and inclusivity: Going beyond the slogans

#### THEME 5

Panel Organizer: Debbie Currie

Everybody's talking about inclusion—and ensuring that Canadians from every sector have opportunities to excel in STEM or now STEAM. That's a good thing. But if inclusion is going to be about more than photo-ops and catchphrases, we have to have real discussions about the challenges of genuine, deep inclusion. Meaningful gender, economic, regional, and philosophical diversity are easy to talk about but tough to achieve in any organization—even in entrepreneurial settings where diversity is widely known to be an engine for creativity. SHAD—Canada's premier enrichment and entrepreneurship program for high school aged youth established in 1980 and based in Waterloo, Ont.—presents four young, diverse SHAD Fellows whose stories show why it's critical to get it right.

#### Moderator



**Tim Jackson**President and Chief Executive Officer,
SHAD

#### Speakers



Alex Bouchard Inaugural Member of the Prime Minister's Youth Council and SHAD 2009



James Flynn SHAD Fellow and Rhodes Scholar



Eva Greyeyes SHAD Fellow 2018



Joseph Tafese Student, University of Waterloo



#### 2:15pm - 3:00pm CAPITALE

## 510 — Enabling interdisciplinarity for the next generation of problem solvers

#### THEME 5

Panel Organizer: Steven Cook | College of New Scholars, Artists and Scientists of the Royal Society of Canada

The concept of interdisciplinarity is used to frame education, scholarship, research, and interactions within and outside the academy. Moreover, given the complexity of problems facing the world today, interdisciplinarity thinking is often considered as "essential" for developing effective solutions. In principle, the premise of interdisciplinarity is a good one; yet, the extent to which this concept is embraced by the current generation of learners and thinkers, the benefits and risks for doing so, and the barriers and facilitators to achieving interdisciplinarity are rarely considered.

We contend that emerging scholars, artists and scientists including students, post docs, and early career professionals have much to contribute to discussions about the ways in which interdisciplinarity can be enabled to equip and empower the next generation with the skills and knowledge to work across and among traditional disciplines. Relatedly, there is a need to identify successful examples/case studies of where interdisciplinarity has been achieved with meaningful results. In this panel session organized by the College of the Royal Society of Canada, we will seek to generate a "Manifesto for Enabling Interdisciplinarity". To generate the "manifesto" we will collate thoughts from the panel as well as the audience and twitter. To engage the audience we will distribute cards during the event and collect ideas.

We will do the same on Twitter for the 24 hrs preceding the session in an attempt to engage the broader community.

#### Moderator



#### Steven Cooke

Canada Research Chair and Professor, Institute of Environmental and Interdisciplinary Sciences at Carleton University

#### **Speakers**



#### Graeme Auld

Director and Associate Professor, School of Public Policy & Administration, Carleton University



#### Shohini Ghose

Professor, Physics and Computer Science; Director, Centre for Women in Science (WinS); Vice-President Elect, Canadian Association of Physicists



#### Vivian Nguyen

2017-18 Mitacs Canadian Science Policy Fellow, Office of the Chief Scientist at Natural Resources Canada



#### Andrea Reid

PhD Candidate, University of British Columbia and Carleton University

#### 1:30pm - 3:00pm CHAUDIERE

226 — Making science matter: Overcoming barriers to knowledge mobilization and science communication

#### THEME 1

Panel Organizer: Sean Young-Steinberg | NIVA

Hi there Ms. Scientist, that looks like some interesting work you are doing there—but please help me understand: what does it really mean, who is implicated, and why should Canadians care? So, Mr. Researcher, you say those are some important results, but how can this information be put into use if it is just sitting there, buried in a journal article that policymakers or other stakeholders won't read, nor comprehend—how do we get this to the actual users so they can act on it?

The billions of dollars spent each year in Canada on scientific research and development by all levels of government, academia, science-based institutions, NGOs, and the private sector, generates a tremendous volume of crucial new knowledge and information about the world we live in including how things work, new and innovative ways for us to interact with it, and the impact humans are having on it.

While these efforts may have great value unto themselves, without the readiness and capacity to effectively communicate the importance of these activities and their results to the general public, policymakers, and other stakeholders, their relevance to Canadians will most certainly wane and fail to garner the attention they deserve or have any impact on related decisions.

Science communication is essentially the art and science of distilling complex information into to its key elements and translating them into accessible plain language tools that deliver messages with impact.

These messages need to be developed with a deep appreciation of the needs and motivations of a given audience. This generally entails messages and visual representations that help information recipients really focus on a message (e.g., data visualization). This is critical when the goal is to engage and bring an emotional connection to an audience, tell a compelling story, and deliver important information to policymakers on which to base decisions.

#### Moderator



#### Anton Holland

President and Chief Executive Officer, NIVA Inc.

#### **Speakers**



#### Aline Dimitri

Executive Director, Food Safety Science Directorate and Deputy Chief Food Safety Officer, Canadian Food Inspection Agency



#### Jim Handman

Executive Director, Science Media Centre of Canada



#### Catherine Paisley

Vice President of Science Education and Experience, Ontario Science Centre



#### Purnima Sundar

Director of Knowledge Mobilization, Ontario Centre of Excellence for Child and Youth Mental Health

There are many types of barriers that prevent this information reaching the right people and having an impact. What are those barriers, and how can they be overcome? This session will explore how knowledge can be mobilized and delivered to move people (including policymakers) to action, enable well-informed decisions, and bring it into active use. Successfully making the connections between research/expertise and policy/practice is critical to achieving desired outcomes and this includes building relationships, trust, and understanding between research producers and users. This approach includes "knowledge brokering" as a means to bridge these two worlds to ensure that the right information is available to the right people, at the right time, and in the right format.



#### 1:30pm – 3:00pm JOLIET-FRONTENAC

205 — Mitigating disruption: Integrating social, ethical and policy research into the development of disruptive technologies

#### THEME 2

Panel Organizer: Rob Annan | Genome Canada

Disruptive technologies are double-edged swords. Social media, artificial intelligence (AI), gene editing—all promise enormous economic and social potential. At the same time, they challenge important social norms, policies, and institutions and create unintended and unpredicted consequences.

Society invests significant public resources to support the science and technology that drive these innovations, but invests relatively little to investigate their potential benefits, risks and consequences. Indeed, these are incommensurable—there are no commonly accepted metrics that allow us to evaluate and compare the benefits and risks. Policymakers and the public, faced with rapidly developing technologies, often succumb to reflexive and emotive policy responses.

Since its establishment, Genome Canada has promoted a globally-innovative program ("GE3LS") to research the ethical, environmental, economic, legal and social issues involved in genomics research. Each large-scale genomics project funded at Genome Canada must integrate a GE3LS research component, promoting a deeper understanding of the broader impact of the research. Dr. Eric Meslin, President of the Council of Canadian Academies and expert on bioethics and science policy, recently led an extensive review of the GE3LS program which identified key lessons for integrating social sciences research into technology development.

Dr. Meslin will chair a session that will explore this topic through two case studies that illustrate how GE3LS works in practice. Each will be co-presented by the project's genomic and social science researchers who will explain:

- Why it was important to integrate social research into the project:
- The challenges and opportunities this integration presented:
- Expected—and unexpected—benefits observed.

The case studies represent disruptive technological research in genomics. The first describes the development

#### Moderator



Eric M. Meslin
President and CEO, Council of
Canadian Academies

#### **Speakers**



Sally Aitken
Professor and Associate Dean,
Research and Innovation, Faculty of
Forestry, University of British Columbia;
Director of the Centre for Forest



Shannon Hagerman
Assistant Professor, Department of
Forest Resources Management of

University of British Columbia

Conservation Genetics



Bartha Maria Knoppers Professor, McGill University; Canada Research Chair in Law and Medicine; Director of the Centre of Genomics and Policy



Jacques Simard
Canadian Research Chair in
Oncogenetics; Professor, Department
of Molecular Medicine. Université Laval

of novel diagnostic technology for breast cancer, the challenges created in supporting informed decision-making by doctors and patients, and the importance of evaluating the cost-effectiveness of the new technology. The second project focuses on forestry genomics and climate change and integrates research into understanding the ecological, socio-economic and institutional factors that affect the adoption of new technologies in forest management. Both projects are led by internationally-recognized and celebrated Canadian researchers.

Following the case study presentations, Dr. Meslin will moderate a brief discussion between panelists and members of the audience to explore how these case studies might inform the larger context of disruptive technology research, with lessons for ongoing work in artificial intelligence and machine learning, automation and robotics, and beyond.

#### 3:00pm - 3:30pm EXHIBIT HALL

#### Coffee Break

#### 3:30PM – 5:00PM INTERNATIONAL BALLROOM A+B

223 — Science fact or science fiction? How can science be heard in an age of misinformation?

#### THEME 2

Panel Organizer: David Johnston Research + Technology Park | University of Waterloo

Whether its climate change skepticism, falling vaccination rates, or the public pressure to shape policy that contravenes research findings, scientific information in all arenas struggles against waves of misinformation and disinformation that confirm our biases and reinforce the stories we want to tell ourselves about the world and how it works. As journalist Elfa Ýr Gylfadóttir noted in 2017, "It has even been said that, despite the easy access to knowledge, we as a human kind, are now living in the era of misinformation or disinformation." (https://njc.dk/article/the-challenge-in-an-era-of-misinformation-and-disinformation/)

This isn't a new phenomenon—indeed the communication challenges facing science have deep historical roots—however, the rapid acceleration of digital technologies has given rise to a plurality of powerful, non-traditional voices who handily circumvent the gatekeeping and agenda setting functions of traditional institutions and outlets, planting the seeds of skepticism, mistrust and confusion. Meanwhile traditional information outlets continue to find themselves increasingly short on the time and resources necessary to fully investigate these stories, widening the gap between the general public and trusted, evidence-based information. This panel brings together experts from industry, academia, and media to discuss the historical challenges of communication and story-telling facing science and to explore how we can work together to create a stronger public discourse built on sound,

#### Moderator



Mike Pereira

Manager, David Johnston Research + Technology Park, University of Waterloo

#### **Speakers**



Rita Celli Host of Ontario Today, CBC Radio One



Conway Fraser Managing Director, Fraser Torosay



Heather MacDougall Associate Professor, University of Waterloo



Erika Dyck

Professor, Department of History & Canada Research Chair in History of Medicine, University of Saskatchewan

evidence-based information to re-establish public trust and develop better policies. We'll explore the historical challenges of scientific communications and how those are rapidly evolving in the digital era; how institutions, government, and industry and respond and leverage these emerging technologies to share information; and attempt to examine how we can work together to approach science communication at a broader policy level.

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#### 3:30pm - 5:00pm RICHELIEU

309 — Policy considerations on the convergence of high performance computing & artificial intelligence

#### THEME 3

Organized by: Compute Ontario

High Performance Computing (HPC) and Artificial Intelligence (AI) have emerged as fundamental tools for 21st Century research. The Federal government announced as part of its 2018 Budget, a commitment of \$572.5 million over five years with \$52 million per year ongoing to implement a national Digital Research Infrastructure Strategy; reinforcing this point.

Using points of evidence from Compute Ontario's Highly Qualified Personnel and Technology Investment Studies, this panel will examine how the process of conducting collaborative evidence-based planning with others in the digital research space:

- Led to the creation of a converged high-performance computing & artificial intelligence platform which will facilitate new tools, skills development and opportunities for researchers and industry partners
- Identified a significant gap and need for a robust academic-industry collaboration strategy in high performance computing and some of the anticipated challenges
- Reinforced the need to change how we measure value and evaluate return on in digital research infrastructure investments to policymakers
- And considers ways in which regional organization can collaborate to improve coordination and investments in digital research infrastructure to accelerate national planning strategies

This panel will draw on the expertise, skill and experience of senior executives from Compute Ontario, Calcul Quebec and Vector Institute.

#### Moderator



**Nizar Ladak**President & Chief Executive Officer,
Compute Ontario

**Speakers** 



Chris Loken
Chief Technology Officer,
Compute Ontario



Suzanne Talon Chief Executive Officer, Calcul Québec



Alison Paprica
Vice President, Health Strategy and
Partnerships, Vector Institute; Assistant
Professor, Institute for Health Policy,
Management and Evaluation (IHPME),
University of Toronto



Alain Veilleux Chief Technology Officer, Calcul Québec





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#### 3:30pm – 4:15pm JOLIET-FRONTENAC

103 — Connecting science with policy in Canada: How do I do it?

#### THEME 1

Panel Organizer: Silke Nebel | Bird Studies Canada

Scientific knowledge is not easily accessible to policymakers and scientists often do not have a clear understanding of the needs of policymakers. The importance of bridging this gap between science and policy was one of the key topics at the Canadian Science Policy Conference in November 2017. This panel will draw from the insights of experts on the science-policy interface and discuss the following questions:

- Government policy maker: What avenues does she or he take to obtain scientific advice?
- 2. NGOs that work towards improving federal science policy (Future Earth and Ecofiscal Commission): how do they connect with policymakers and how do they access scientific information?
- 3. Scientists who have built successful relationships with policymakers: what was their path to success?
- 4. Research administrators: what are some options to incorporate time spent on the science-policy interface towards the departmental service component of academics?
- 5. Office of the Chief Science Advisor, Canada: how do they source scientific information, and what avenues are open to you to influence federal policy? Is there an opportunity for scientists to engage in the process?

This panel is of interest to all of those who are interested in practical guidance for bridging the gap between science and policy. Increasing the role of science in public debates will ultimately improve evidence-based decision-making at the provincial and federal level in Canada.

#### Moderator



Silke Nebel
Vice President of Science and
Conservation, Bird Studies Canada

**Speakers** 



Mark Daley
Associate Vice-President (Research),
Western University; Associate Professor,
Computer Science, Biology, and Statistics
& Actuarial Science Departments, Western
University; Chairman of the Board of
Directors of Compute Ontario



Scott Findlay
Professor at the Department of Biology
at the University of Ottawa; Director
of Graduate Studies at the Institute
of Environment



**Amy Luers**Executive Director, Future Earth



Frederick John Wrona Chief Scientist, Alberta Environment and Parks



Christopher Ragan Director of McGill University's Max Bell School of Public Policy; Associate Professor, Department of Economics at McGill University; Chair of Canada's Ecofiscal Commission

#### 4:15pm – 5:00pm JOLIET-FRONTENAC

101 — Federal-provincial coordination in research and innovation funding

#### THEME 1

Panel Organizers: Emina Veletanlic and Dr. Creso Sá | University of Toronto

Canada's research enterprise crosses federal-provincial borders. Provincial and federal agencies together fund over 30% of R&D activities in higher education across the country (Statistics Canada, 2017). However, federal-provincial coordination in this area has been largely a "reactive" and "ad hoc activity without a clear organizational structure or mechanism to support it" (M. Tamtik in Science and Public Policy, 2016). This panel will clarify areas of stress as well as opportunities for improvement in policy coordination.

#### **BACKGROUND:**

The 2016 Fundamental Science Review recognized that research supports are "an area where close cooperation and shared planning would make sense, but that is not what the Panel found" (p. 67). A recent Council of Canadian Academies report highlighted this coordination gap as "both a risk and opportunity", particularly for provincial governments (Science Policy: Considerations for Subnational Governments, 2017). Although the expert committee cautions against the risks associated with weak policy implementation, there are significant benefits to be derived from a closer connection between provincial and federal programs—if successfully translated into practice.

In light of the creation of the Canada Research Coordinating Committee (CRCC) to harmonize activities horizontally across the main federal agencies, mechanisms for vertical coordination with the provinces and territories must also be examined.

#### FORMAT:

Our proposed panel will spark new thinking about the coordination challenge and means to overcome the vertical coordination gap that has

#### Moderator



Creso Sá Professor of Higher Education and Director, CIHE-OISE, University of Toronto

#### **Speakers**



Emina Veletanlic University of Toronto, PhD Student, CIHE-OISE; Manager, Strategic Initiatives, Impact Centre



Marc Fortin
Vice-President, Research and
Partnerships, Natural Sciences and
Engineering Research Council of
Canada



**David Moorman**Senior Advisor, Policy & Planning,
Canada Foundation for Innovation



Merli Tamtik
Assistant Professor, Department of
Educational Administration,
Foundations and Psychology, Faculty of
Education, University of Manitoba

been endemic in Canada. Our Panel will harness the collective thinking of our expert panel and the CSPC participants to address questions such as:

- How can past examples of federal-provincial initiatives inform the present?
- What are potential models for intergovernmental coordination?
- How can the federal research councils work with their provincial/territorial counterparts to avoid policy duplication and inconsistencies in research support programs?
- What could be some short- and long-term coordination targets? What is success?



#### 3:30pm - 4:15pm CHAUDIERE

### 504 — Fueling water innovation in Atlantic Canada

#### THEME 5

Panel Organizer: Elizabeth Hendriks | WWF-Canada

What's the biggest threat to Canada's freshwater? It's a myth. The one that tells us our water wealth will last forever. The one that says: water, that's someone else's problem. The truth is, there is nothing Canadians should take more personally than the health of our waters. Engaged communities ask questions, they seek information, they pay attention to changes in their local, and they hold decision-makers accountable.

For decades, Canada has failed to collect real-information on a regional or national scale about the health of our freshwater ecosystems. The good news is that Canada's commitment to freshwater stewardship, conservation, and science-based decision-making is now a national priority. There is a growing awareness that safeguarding our freshwater ecosystems is critical to the future of our economies, our communities and our quality of life. In other words, the people empowered to implement freshwater solutions are now asking for them. The window is wide open.

Trusted water data underpins the goal of abundant, clean freshwater. Communities, governments, citizens and NGOs require the information to make decisions that protect Canada's fresh water supply. Yet, water data deficiencies are widespread. One of the key findings of World Wildlife Fund's (WWF) 2017 Watershed Report was data deficiencies on key water health metrics.

To address this challenge, RBC, WWF-Canada, Gordon Foundation and local community groups have been forging conservation partnerships with river communities, closing knowledge gaps around freshwater health, building capacity behind local water stewards and with the groundswell of regional commitment we are poised to help drive the most important era in Canada's history for

#### Moderator



Elizabeth Hendriks Vice President, Fresh Water Program, WWF Canada

#### **Speakers**



**Angela Douglas**Project Manager, PEI Watershed
Alliance/Hillsborough River Association



Carolyn Dubois
Director of the Water Program,
The Gordon Foundation



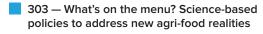
Emma Wattie Director, Atlantic Water Network, Saint Mary's University

freshwater conservation. Here is how: By creating a local network of users at a regional scale we are creating a true tool for evidence-based decision-making. Here's how:

We are pairing the security of blockchain technology (decentralized ledger system) and the nimble nature of open data. We're making comprehensive analysis accessible and available to everyone—watershed advocates, scientists, governments, and everyday citizens—and keeping it updated through Atlantic Datastream, an online data sharing platform. But we're not counting on the data to speak for itself, we're distilling and communicating our findings powerfully through WWF's Watershed Reports.

Together, we'll measure our progress in the adoption of smarter, evidence-based water conservation policies across the country. But the real measure of success will be Canada's ability to bend the curve on our freshwater health on a national scale.

#### 4:15pm – 5:00pm CHAUDIERE



#### THEME 3

Panel Organizer: Malcolm Campbell | University of Guelph

Canadian food systems are likely to look a lot different in the not-too-distant future. Insect-based flour, ingredients from food waste, foodstuffs from tailored crops and livestock, in vitro meat, novel fruits and vegetables, antibiotic-free meats, and cage-free eggs are poised to factor in Canadian diets. In some instances, science-based policy is in place to support the regulation and promotion of next-generation value chains and the uptake of these foods into our kitchens. In other instances, science-based policy is lagging, or is being thwarted by factors other than science. This panel will consider emerging food system trends, and whether policy is prepared to deal with these trends. Gaps in science or policy to address food trends will be considered, and suggestions made to address these gaps.

The panel will consider how innovations in the agri-food sector can enable Canada to lead as a producer of safe, healthy, nutritious, and sustainable food—and the policy challenges associated with this immense opportunity. The panel will be moderated by Professor Malcolm Campbell, Vice-President Research from the University of Guelph, who will open the session with a short, high-level overview. Four panelists will follow with more detailed examination of the opportunities and challenges ahead: (1) Mary Buhr, Dean of University of Saskatchewan's College of Agriculture and Bioresources will discuss the role of emerging on-farm trends and technologies that are impacting global food supply chains; (2) Maria Corradini, from the University of Massachusetts, will talk about how novel packaging and other food science innovations can reduce waste and improve health and sustainability; (3) Dr. Bettina Hamelin, President and CEO of Ontario Genomics will discuss emerging new genome-based technologies such

#### Moderator



Malcolm Campbell
Vice-President Research,
University of Guelph

#### Speakers



Professor Mary Buhr Dean, College of Agriculture and Bioresources, University of Saskatchewan



Professor Maria Corradini Food Science, University of Massachusetts



Bettina Hamelin
President & Chief Executive Officer,
Ontario Genomics



**Deb Stark**Former Deputy Minister of Ontario
Ministry of Agriculture, Food, and
Rural Affairs; board member, Canadian
Agri-Food Policy Institute

as genomic selection and synthetic biology; and (4) Canadian Agri-Food Policy Institute board member, and former Ontario Ministry of Agriculture Food and Rural Affairs Deputy Minister, Dr. Deb Stark will provide insights into policy hurdles and opportunities that could hinder or promote adoption of innovation into our food systems. The panel will then participate in an open discussion with the audience on this subject.

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### Join us for the Gala



#### 3:30pm - 5:00pm CAPITALE

506 — The many ways in which the next generation can be involved in the governance of research

#### THEME 5

Panel Organizer: Madison Rilling, Fonds de recherche du Québec

Science's next generation of researchers, embodied by graduate students and postdoctoral fellows, generates a significant share of scientific output in Canada and contributes to its growth and democratization. More and more, these emerging scientists are getting involved and mobilizing themselves to influence the decision-making processes within the various spheres of the research ecosystem. Taking into account the perspectives of the next generation of scientists ensures that the decisions made reflect their needs and values, and fosters the involvement of student researchers in decision-making and institutional governance. In Canada, this involvement can take many forms, e.g., advisory committees, advocacy groups or representation positions in governance structures. The proposed panel aims to present the various forms of involvement or influence that students can have, namely by putting the spotlight on three concrete examples and their impact: 1) The intersectoral student committee (Comité intersectoriel étudiant—CIÉ) of the Fonds de recherche du Québec (FRQ); 2) Science & Policy Exchange (SPE) and: 3) Science Outside the Lab North (SOtL). These examples will be complemented by the presence of an experienced researcher now working in a federal department. This generational junction aims to highlight the positive repercussions of the involvement of the next generation, for both organizations and students.

The CIÉ advises the Quebec's Chief Scientist and is mandated to identify strategies to promote access to funding for graduate studies, foster excellence of student research, and contribute to the local and international promotion of research stemming from Quebec. Since 2014, the CIÉ has been actively contributing to integrating student researchers within the governance structure of the FRQ. Based in Montreal, SPE is a non-profit organization whose mission is to bridge the gap between academia,

#### Moderator



Paul Dufour Fellow and Adjunct Professor, Institute for Science, Society and Policy in the University of Ottawa

**Speakers** 



Blake Freier
PhD Student, University of Waterloo



**Tina Gruosso**Postdoctoral Fellow, Goodman Cancer
Research Center, McGill University



**Donna Kirkwood** Chief Scientist, Natural Resources Canada



**Madison Rilling** PhD Student, Université Laval

industry and government to inspire evidence-based policymaking. SPE led the #Students4theReport campaign to support the Naylor Report's recommendations for federal reinvestment in fundamental research. The SOtL North organization aims to provide immersion training to students related to issues that affect science, politics and society. In addition to the representatives of these three organizations, the panel will be supplemented by Donna Kirkwood, Chief Scientist at Natural Resources Canada, having herself been involved in and a witness to the training of students during graduate studies. Her experience in both academia and government will provide discussions on the importance of the contribution of the next generation in the development of research in Canada.

TIME: CSPC Reception (5:30pm)
Gala Dinner (6:45pm)

LOCATION: Canadian Museum of History, 100 Laurier Street, Gatineau

Shuttles are available in front of the Delta Hotel (5:30pm to 6:15pm)

Opening Remarks:
Mehrdad Hariri,
CEO & President Canadian

Science Policy Centre



Keynote Address: Honourable Kirsty Duncan, Minister of Science and Sport



## 4<sup>TH</sup> SCIENCE POLICY AWARDS OF EXCELLENCE, YOUTH CATEGORY



Winner: Jessica Kolopenuk

Policy Paper title: An Indigenous

approach to Canada's national missing persons DNA program



Runner Up: Anna Levinsson

Policy Paper Title: Sex, drugs & cardiovascular disease: cardiovascular drug development needs women



Runners Up: Samuel Looper and Claire Velikonja

Policy Paper Title: Wildfire disaster monitoring and management through the Canadian Space Agency

#### POST-GALA RECEPTION

#### Hosted by BAYER INC.

Join us for a post-gala reception in celebration of innovation in Canadian agriculture, graciously hosted by our Innovator Level Partner, Bayer Inc.

Enjoy live entertainment, and cocktails served by molecular mixologists from Ottawa's Common Eatery.

Appetizers will be served.



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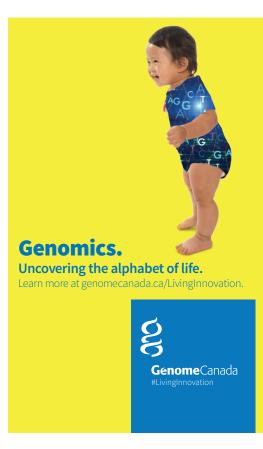




Breakthrough answers to timeless questions.

Des réponses innovantes à de grandes questions.





### Friday, November 9

#### 7:00am - 1:30pm HOTEL LOBBY

Registration and Information Desk

7:45am – 8:30am INTERNATIONAL BALLROOM A+B

### Breakfast Session hosted by the Institute for Quantum Computing

Waterloo's Innnovation Advantage — The University of Waterloo Inovation Ecosystem

#### 8:30am - 10:00am CHAUDIERE

210 — Skills-building and impact in the social sciences and humanities

#### THEME 2

Panel Organizer: Research Impact Canada, the Conference Board | The Collaboration, Social Sciences and Humanities Research Council

Research Impact Canada, the Conference Board have partnered with The Collaborative, a SSHRC funded network dedicated to helping educators foster a better culture around SSH knowledge and skills to offer a new collaborative platform for educators in K12 through PSE. The premise of the project is that students, graduates, researchers, and educators in SSH disciplines benefit from applied skills training, cross-sectoral collaborations, and knowledge sharing. Likewise, collaboration and knowledge sharing skills help extend the reach, engagement, and impact of SSH research and activities. But the models of impact available do not do justice to the nature and diversity of activities in which engagement and knowledge mobilization objectives can be achieved. This panel will offer draw upon the expertise of the speakers and to identify best practices, resources, and next steps for improving our understanding of impact in the social sciences.

#### **Speakers**



Sandra Lapointe Associate Professor, Philosophy, McMaster University



Matthew McKean
Director, Education, Conference
Board of Canada



David Phipps Leader of Knowledge Mobilization Unit, York University



#### 8:30am - 10:00am RICHELIEU

#### **Short Talk Series**

The Short Talks Series will include seven 10-minute presentations:

Conspiring together for good: Institutional science and religion



Milton Friesen Program Director, Cardus Social Cities

From artificial intelligence to policy-making: changing how we make maps to make better decisions



Karen Bronsard

Policy Analyst, Centre of Expertise in Geomatics at Canada Centre for Mapping and Earth Observation, Natural Resources Canada

 Amplify: Managing microaggressions and countering stereotypes against women and airls in STEM



Ana Sofia Barrows Social Media Manager, Lina Duque Consulting

4. Putting our minds together: Research and knowledge management strategy



Nicolette McGuire Director, Research, Partnerships and Innovation Division, British Columbia Ministry of Health

From crisis to confidence: Building science and policy "bridges" in Canada's national blood system



Dana Devine
Chief Scientist, Canadian
Blood Services

6. How a new model of journalism is connecting science and the public



**Lisa Varano**Audience Development Editor,
The Conversation Canada

 Mapping the science writing and communication landscape in Canada using new media and traditional survey research tools



**Tim Lougheed**Science Writers and
Communicators of Canada



Alexandre Schiele Researcher, UQAM East Asia Observatory

#### 8:30am - 10:00am CAPITALE

508 — Where the rubber meets the road: The real life impact of policy on Canadian postdocs

#### THEME 5

Panel Organizer: Joseph S. Sparling | Canadian Association of Postdoctoral Scholars

This panel aims to examine the real life impact of current postdoctoral policies in Canada and to discuss potential policy reforms that could provide solutions to many of the challenges facing Canadian postdoctoral scholars today. The panel will open with two presentations by current/former postdocs affiliated with CAPS/ACSP. The first of those presentations will review the major challenges facing Canadian postdocs based on survey data and front-line stories from postdocs across the country, including issues related to employment status, compensation and benefits, immigration, career development, and personal support. The second presentation will focus on identifying the policies that contribute to those challenges and discussing potential policy-based solutions for improving the status quo for postdocs in Canada. Following the presentations a representative from the Tri-Agency and a postdoctoral administrator from a large Canadian research university will be asked to weigh in on the proposed policy reforms, identify potential barriers to those proposed changes in the current Canadian research landscape, and discuss possible ways to overcome those barriers. The panel will close following questions from the audience and a brief summary statement from the moderator.

#### Moderator



Joseph S. Sparling Chair, Canadian Association of Postdoctoral Scholars

#### **Speakers**



Dominique Bérubé Vice-President, Research Programs, Social Sciences and Humanities Research Council



Jenna Haverfield

Postdoctoral Scholar, McGill University and Vice-Chair Membership, Canadian Association of Postdoctoral Scholars



#### Krishnamoorthy Hedge

Postdoctoral Scholar, Institut national de la recherché scientifique and At-Large Member, Canadian Association of Postdoctoral Scholars



Rachel Fernandez

Associate Dean, Faculty of Graduate and Postdoctoral Studies, University of British Columbia



#### 8:30am - 10:00am JOLIET-FRONTENAC

### 222 — Who speaks for science?

#### THEME 2

Panel Organizer: RCIScience

Great research ecosystems support public outreach.

INVESTING IN CANADA'S FUTURE Strengthening the Foundations of Canadian Research.

In this one sentence lies an entire field of research and practice that is key to moving science forward in Canada. But most science outreach programs in this country are, by their very design, only reaching youth or "science-aware" adults.

Many of us used to be merely concerned about the large group of public who turned away from science early in their lives and now lack any inclination to engage with it. Now, flat Earthers, anti-vaxxers and climate change deniers demonstrate that a public not just disengaged from, but actively skeptical of established science, can become a political force.

Even in the face of this, we have not changed how we engage with adults to try and reach beyond our traditional, science-aware base.

This panel explores ideas and best practices to engage adults from many backgrounds and interests with science, and what these require to be sustainable. The session moves from discussion to practice with a Freestyle Social, an innovative vehicle for public consultation and engagement with current science-related issues. The ultimate goal is to answer the question, who speaks for science in Canada?

#### Moderator



Reinhart Reithmeier Professor, Biochemistry, University of Toronto

Speakers



Carrie Boyce Program Manager, RCIScience



Marianne Mader Executive Director, Canadian Association of Science Centres



Cara Marshall Director of Communications Canada's Chief Science Advisor



Anthony Morgan Broadcaster and Creative Director of Science Everywhere

#### 8:30am - 9:15am **INTERNATIONAL BALLROOM A+B**

#### 112 — How Canada can create a sustainable national space infrastructure

#### THEME 1

Panel Organizer: Michelle Mendes | Space Advisory Board

Canada is known for its high-quality talent in space science and technology and has made many contributions to international initiatives past and present, such as James Webb Telescope, MOST, RADARSAT, the Canada Arm and many more. In order to continue Canada's national space legacy and to participate in future international space projects, a policy must be developed to tolerate a highly competitive, dynamic and changing global environment.

The Canadian Space sector is at a crossroads. Without immediate action, the consequences are dire. At minimum the status quo will lead to a reduction on ability to translate innovation and science into economic development, the exit of highly trained Canadians, loss of access to space activities with international partners, and limited information and data needed to sustain the activities of many Canadians sectors, such as agriculture, environmental management, health and others.

The moderator and the panellists will discuss Canadian space policy to provide a baseline for understanding the existing environment. The panel will then review and analyze recent national directives, made by other nations such as the United Kingdom, the USA, India and others. They will then demonstrate how relatively minor changes can make a significant impact on the future of Canadian space. Furthermore, a discussion about making space a national strategic asset is critical to a long-term plan for the national space sector.

#### Moderator



David Kendall Past Chair of the United Nations Committee on the Peaceful Uses of

### **Speakers**



Kate Howells

Global Community Outreach Manager and National Coordinator for Canada, The Planetary Society



Gordon Osinski

NSERC/MacDonald, Detwiller and Associates Ltd/Canadian Space Agency Industrial Research Chair in Planetary Geology, Western University



Michael Pley

President, Pley Consulting Inc.



Marie Lucy Stojak Executive Director, Mosaic



#### 9:15am – 10:00am INTERNATIONAL BALLROOM A+B

### 218 — Digital futures: The impact of digital threats to democracy

#### THEME 2

Panel Organizer: Eloisa Martinez | Social Sciences and Humanities Research Council

An interactive and forward-looking series of four lightning talks, organized by the Social Sciences and Humanities Research Council (SSHRC), will highlight several key opportunities and challenges presented by the pervasive role of Artificial Intelligence (AI) and other technologies in the daily lives of Canadian citizens within a globalized context. Speakers from across academic, public, community/not-for-profit and business sectors will explore with the audience the transformative impacts of technology related to digital threats to democracy. Following these presentations, a number of possible storylines will emerge based on the key digital trends under discussion. Audience members will be called upon to examine possible societal outcomes for a number of potential futures.

These lightning talks will frame a discussion on digital threats to democracy and the role of evidence- based policy making to address the associated risks and opportunities to democratic processes in the digital age. This session provides an excellent opportunity for cross-sectoral dialogue and insights related to policy implications on these critical issues with a view to imagining our digital futures.

#### Moderator



Ursula Gobel Associate Vice-President, Future Challenges, Social Sciences and Humanities Research Council

Speakers



**Elizabeth F. Judge**Professor of Law at the Faculty of Law,
University of Ottawa



Barrie Kirk
Executive Director, Canadian
Automated Vehicles Centre of Excellence (CAVCOE); President, Canadian
Automated Vehicles Institute (CAVI)



Renee Sieber
Associate Professor, School of Environment & Department of Geography,
McGill University

#### 10:30am – 12:00pm INTERNATIONAL BALLROOM A+B

123 — Science and the next generation:
Partnerships and collaborative infrastructure
as enablers

#### THEME 1

Panel Organizer: Public Services and Procurement Canada | Anne-Marie Thompson

Recognizing the central role that science plays in many aspects of Canadian society, the federal government has developed a vision to foster a culture of evidence-based policy and decision-making. This new vision will lead to enhanced science outcomes for Canadians through greater collaboration and improved infrastructure that will benefit the wider Canadian science ecosystem. Areas of focus include strengthened equity and diversity in science, support for the next generation of scholars, scientists being equipped with the tools and resources they need to succeed, and active engagement in the rapidly evolving global science landscape.

The panel discussion will focus on how scientific research can address today's emerging challenges through new collaboration, supported by innovative and world class science infrastructure. Members will highlight successes with respect to collaboration across jurisdictions to address important scientific questions, how the pace of discovery and innovation is shaping their workplaces and influencing the tools they need, and how they are keeping pace with transforma tive changes in the global scientific landscape.

#### Moderator



Mona Nemer Chief Science Advisor, Government of Canada

#### **Speakers**



Martha Crago Vice-Principal, Research and Innovation, McGill University



Stacey Robinson Research Scientist at Environment and Climate Change Canada; Adjunct Professor at Carleton University



**Dan Wicklum** Chief Executive, Canada's Oil Sands Innovation Alliance (COSIA)



David Castle

Vice-President Research and a Professor in the School of Public Administration with an adjunct appointment in the Gustavson School of Business



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## Symposium



12:00pm - 1:00pm **INTERNATIONAL BALLROOM A+B** 

Lunch (For Symposium Registered **Delegates Only)** 

Symposiums

1:00pm - 4:30pm **INTERNATIONAL BALLROOM A+B** 

#### Symposium 1: Science policy 101

Symposium Organizer: CSPC

Curious about science policy? Whether trying to make a difference or demonstrating impact to funders, the need to engage effectively with policymakers is increasingly part of the research endeavor. But even many of the most experienced research faculty balk at the barriers to bringing their research to the decision-table. For early career researchers and graduate students, the barriers are even higher—as are the rewards

This workshop will provide a gateway into the world of science policy. You will gain an understanding of what science policy is and how it works through an afternoon of interactive exercises and discussion. We welcome active participants from all backgrounds, whether in the sciences, engineering, public policy and administration, business, communications, arts or something else entirely. With an interest in science policy, this workshop is the place to share and expand knowledge, develop skills, and start building a network of interesting people in the world of science policy.

#### **Facilitators**



Jeff Kinder Executive Director, Science and Innovation Institute on Governance



Silke Nebel VP Science and Conservation, Bird Studies Canada

#### **Career Panelists**



Kimberly Girling Policy Analyst, Innovation, Science and Economic Development Canada



Kori St. Cvr Senior Advisor, Science Strategies, Canadian Institutes of Health Research

## Symposium



#### 1:00pm - 4:30pm RICHELIEU

### Symposium 2: Brainstorming for Canada's national water vision

Symposium Organizers: Pacific Water Research Centre and Ryerson Urban Water

Emerging water challenges in Canada can be tied to climate-change impacts on water availability. urbanization and population growth, water pollution, and threats to aquatic ecosystems. A 2017 report from the World Wildlife Fund in Canada (WWF-Canada) indicated that most of the watersheds in Canada are showing significant disruptions from human activities such as hydropower dams, discharges from agricultural and industrial activities, rapid urbanization, extensive application of road salt, and incidents involving natural resources extraction. At the same time, Canada has an unmatched, century-long history of peacefully managing shared water resources with the United States. In recent years, landmark water-sharing agreements have emerged, which engage Indigenous communities as important stakeholders. Canadian companies have developed advanced technologies for water treatment and monitoring.

Public perceptions play an important role in this respect. In a recent survey conducted by RBC, 45% of Canadians believe water is Canada's most important natural resource and 50% believe water is an important part of Canada's national identity. However, only 6% of Canadians say they put extra effort into saving water and only 50% of Canadians say they have an adequate understanding of the impact of climate change on water availability and quality. These findings reveal some contradictory perceptions held by the Canadian public, which value water an important natural resource, and yet demonstrate inattention to water resources under the presumption that it is an abundant resource.

One major stumbling block for Canada is that it does not have a common, ambitious and visionary national strategy to manage its water resources, unlike almost all developed countries in the world including those with similar federated constitutions.

This means, for example, that no federally enforceable standards exist for safety and environmental/economic sustainability for drinking water, wastewater, stormwater and ground water extraction. Further, the absence of a national water vision has led to varied, and sometimes chequered, approaches for addressing the water management challenges in Canada, including disproportionately disadvantaged Indigenous communities, an increasing water infrastructure deficit and failing to declare water as a human right. Development of a common national vision that is jointly developed through engagement of stakeholders at various jurisdictional levels is an important first step in addressing Canada's water challenges.

In this respect, a new comprehensive framework can be used to address these interconnected water challenges in one fell swoop: The Sustainable Development Goals (SDGs) developed by the United Nations that aim to achieve significant and ambitious improvements by the year 2030. Countries across the globe, including Canada, are re-tooling their national development strategies to meet these global targets. Another pertinent development is the designation of 2018-2028 as the International Decade for Action "Water for Sustainable Development." A pan-Canadian alliance of universities, civil society organizations, private sector leaders, and environmental group—called the International Water Decade Alliance (IWDA brings together the SDG implementation with the new water decade.

This symposium will highlight the need for a national water vision in Canada and bring together experts from across Canada to begin a discussion on the opportunities and obstacles of achieving a common vision. This symposium will foster ideas, leading to actionable strategies, and steps necessary for making this visioning process a success.

#### **Speakers**



Zafar Adeel
Professor, Resource and Environmental management at Simon Fraser
University; Executive director,
Pacific Water Research Centre



**Julia Baird**Assistant Professor, Environmental
Sustainability Research Centre at Brock
University



Courtney Bridge
Graduate Student, Simon Fraser
University



Ogimaa Kwe (Chief) Linda Debassige M'Chigeeng First Nation



Mark Fisher Chief Executive Officer, Council of the Great Lakes Region



Elizabeth Hendriks Vice President, Fresh Water Program, WWF Canada



Irving Leblanc
Director, Housing, Infrastructure &
Emergency Services, Assembly of
First Nations



Merrell-Ann Phare Executive Director, Centre for Indigenous Environmental Resources



**Lisa A Prime**Principal Consultant, PRIME Strategy & Planning



**Nick Reid** Executive Director, Ryerson Urban Water Centre



Francis Scarpaleggia
Member of the Canadian Parliament
for Lac-Saint-Louis



Larry Swatuk
Director, Master of Development Practice
(MDP), and Associate Professor, School of
Environment, Enterprise and Development at the University of Waterloo



Banu Örmeci
Professor and Jarislowsky Chair in
Water and Global Health, and Canada
Research Professor, Carleton University





### Symposium Agenda: Brainstorming for Canada's national water vision

TIME	ACTIVITY
1:00pm	<b>Opening remarks</b> Nicholas Reid; Zafar Adeel
1:10pm	Overview of state of play in Canada Courtney Bridge; Zafar Adeel
1:30pm	Foundational panel discussion (5 minute comments by speakers, followed by interactive discussion) Moderator: Banu Ormeci (Carleton U) Irving Leblanc (AFN); Merrell-Ann Phare (CIER); Liz Hendricks (WWF Canada) Lisa Prime (PRIME Strategy & Planning)
3:15pm	Introduction of the second session Oliver Brandes (U Vic)
3:25pm	Forward looking panel discussion (5 minute comments by speakers, followed byinteractive discussion) Moderator: Zafar Adeel (PWRC) Mark Fisher (CGLR); Larry Swatuk (U Waterloo) Francis Scarpaleggia; MP Chief Aaron Sumexhaltza (Lower Nicola Indian Band); Julia Baird (Brock U)
4:50pm	Creating synergies, generating ideas, triggering action Zafar Adeel

#### 1:00pm - 4:30pm CHAUDIERE

Symposium 3: Supporting Canada's energy transition—Bridging the gap between fundamental research, industry and policy

Symposium Organizer: Queen's University

For our prosperity and well-being, Canada must build a low-carbon energy future. The pathway to this future requires political leadership informed by collaboration with various partners—including government, Indigenous peoples, researchers, and industry.

Science and innovation will be key to driving this low-carbon future. Expertise in energy sources (e.g. petroleum, natural gas, renewables, and nuclear) and policy will be critical to informing the technologies, materials, and processes that facilitate this transition. Before this research can inform government processes and policies—and before emerging technologies can be commercialized and mobilized—efforts must be made to translate and effectively bridge the research-industry-government gap. This is not an easy journey, filled with barriers (e.g. regulatory hurdles, training, financial resources), and much promising research gets "lost" along the way.

Building on Natural Resources Canada's (NRCan) Generation Energy initiative and the successful workshop (Envisioning a Competitive Low-Carbon Energy Future: The Role of Nuclear and Renewables) hosted by Queen's University and NRCan in 2017, this symposium will explore how we can facilitate and accelerate knowledge translation and exchange (KTE) to help realize our low-carbon economy. What are the tools for KTE between these various bodies? What role can the various partners play in accelerating KTE?

#### **Speakers**



Carolyn DeLoyd Ph.D Candidate, Geography and Planning, Queen's University



Michel Dumoulin Vice-President Engineering Division, National Research Council



Joy Romero Vice President Technology & Innovation, Canadian Natural Resources Limited



**Michael Fraser** Vice-Principal (University Relations), Queen's University



Monica Gattinger
Director, Institute for Science,
Society and Policy



Praveen Jain
Professor, Canada Research Chair,
Electrical and Computer Engineering,
Queen's University



Warren Mabee Head and Professor, Department of Geography and Planning Queen's University



Ron Oberth President, Organization of Canadian Nuclear Industries



**Laura Oleson**Director General of Energy Policy,
Natural Resources Canada



Kimberly A. Woodhouse Vice-Principal (Research), Queen's University





### **Symposium Agenda:** Supporting Canada's energy transition— Bridging the gap between fundamental research, industry and policy

TIME	ACTIVITY
12:45 PM	VIP Guests arrive to Conference Room, where they will receive a briefing from Melinda Knox, Associate Director, Research Profile and Initiatives, and Kelly Blair-Matuk, Associate Director
	At 12:55, the podium party will be escorted to their seats and the official program will begin
1:00 PM	Warren Mabee welcomes audience and provides overview of the symposium
1:05 PM	Kim Woodhouse provides greetings on behalf of the university and outlines research priorities and engagement in energy arena
1:10 PM	Laura Oleson provides overview and update on the Generation Energy initiative
1:30 PM	Keynote presentation from Monica Gattinger on the current state of energy research in Canada
2:10 PM	Panel discussion on accelerating KTE for energy transition
	Panel moderator: Warren Mabee
	Panel participants:
	Research representatives:
	Praveen Jain
	Monica Gattinger
	Government representatives:
	• Laura Oleson
	Michel Dumoulin
	Industry representatives:
	Ron Oberth
	Joy Romero
	Graduate student representative:
	Carolyn DeLoyde
3:40 PM	Michael Fraser provides closing remarks

#### 1:00pm - 4:30pm CAPITALE

## Symposium 4: Policy and funding models for graduate students and postdoctoral fellows

Symposium Organizer: University of Toronto

Doctoral students and postdoctoral fellows (PDFs) are intrinsic to the postsecondary research that results in benefits for our economy and society. The Fundamental Science Review highlighted this point but also found that, despite significant increases in graduate enrolments, the number of core graduate awards and PDF stipends as well as the amount of the awards, has not changed in more than a decade. In responding to the Review as part of Budget 2018, the federal Government noted that it would undertake work to determine how to better support this next generation of researchers through scholarships and fellowships.

An international keynote speaker and a diverse panel will discuss policy models and opportunities to reinvigorate scholarships and fellowships for graduate students and PDFs, and how the use of these awards can attract diverse talent from Canada and internationally.

# **Symposium Agenda:** Policy and funding models for graduate students and postdoctoral fellows

TIME	ACTIVITY
1:00pm	Welcome and Introductory Remarks
1:20pm	Keynote—Dr. Kay Lund
2:00pm	Panel Discussion and Q&A
3:00pm	Closing Remarks

#### Moderator



### Vivek Goel Vice President, Research and Innovation

Arthur President, Research and Infloyation at the University of Toronto and a Professor in the Institute of Health Policy, Management and Evaluation at the Dalla Lana School of Public Health

#### **Speakers**



#### Alejandro Adem

Chief Executive Officer and Scientific Director, Mitacs Inc.



Martha Crago

Vice-Principal, Research and Innovation, McGill University



#### Bonnie Le

Banting Postdoctoral Fellow, Rotman School of Management at the University of Toronto



P. Kay Lund

Director of the Division of Biomedical Research Workforce, NIH Extramural Research Training Officer in the Office of Extramural Research, Office of the Director, at the National Institutes of Health

## Symposium



#### 1:00pm – 4:30pm JOLIET-FRONTENAC

### Symposium 5: Equity, diversity and inclusion in science: From policy to implementation

Symposium Organizer: Imogen Coe, Faculty of Science, Ryerson University.

The added value to Canadian science of embracing equity, diversity and inclusion (EDI) is increasingly being identified by policymakers, funding organizations, the post-secondary education sector and other parts of the scientific research & development eco-system as an economic imperative. Fully leveraging the talent pool, the human capital and the diversity opportunity that exists in Canada is also a key element in developing and maintaining a stronger innovation ecosystem. Strategies designed to promote and embrace EDI in all aspects of Canadian science currently exist or are in development at various levels. For instance, the federal government, through the tri-councils, has created explicit criteria relating to EDI expectations and requirements (particularly relating to the four designated groups under the Employment Equity Act) for a number of programs including, but not limited to, the Canada Research Chairs (CRCs) and Canada Excellence Research Chairs (CERCs).

Canadian universities, through Universities Canada, have made explicit commitments to implementing principles of EDI details are vague. Moreover, in the recent federal budget (significant new investments in science were framed by expectations for the development of programming (e.g. AthenaSWAN, ADVANCE) that would support the implementation of policies and processes to increase and improve EDI within Canadian science. While these initiatives all speak to a commitment to embracing EDI in science, the reality is that moving from policy to implementation is currently challenged by the low levels of awareness and education around EDI theory and practice within the scientific community. There are limited interactions between the scientific community and academic

#### Moderator



Imogen Coe Professor, Chemistry and Biology, Ryerson University

#### **Speakers**



**Art Blake**Associate Professor and ECI Faculty
Chair, Ryerson University



**Deanna Burgart** Self-proclaimed Indigeneer™; engineer, speaker, and mentor



**Danika Goosney** Associate Vice-President, Tri-Agency Institutional Programs Secretariat



**Steven Murphy**President and Vice-Chancellor,
University of Ontario Institute of
Technology

EDI experts and a general lack of understanding of best practices, which, when combined with inertia and pushback from some parts of the community may limit the effective integration of EDI into Canadian science. Therefore, it is imperative that the scientific community and all stakeholders are actively engaged in the development and implementation of well-designed, data-driven, evidence-informed approaches that raise awareness, drive education, define actions and achieve measurable outcomes that integrate EDI into the scientific enterprise in Canada.

This interactive symposium will bring together experts and practitioners to lead a dialogue on

the current state of our understanding of EDI in science in Canada and to provide specific actionable approaches which will help individuals, departments, divisions, faculties, research

institutes, scientific societies and conferences, and others, move from policy to implementation of EDI principles.

## **Symposium Agenda:** Equity, diversity and inclusion in science: From policy to implementation

what's in your toolbox?

TIME	ACTIVITY
1 – 1.15pm	Arrival and Welcome
1.15 – 2pm	Summary—what we have heard at CSPC2018—actions in support of moving from policy to implementation
2pm – 3pm	What was missing—in action-oriented approaches to EDI implementation
3pm – 3.30pm	Coffee Break (Laurentian)
3.30pm – 4.30pm	Q and A Discussion Summary of actions—take home and implement—

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