



Partnership Group for Science and Engineering (PAGSE)

Partenariat en faveur des sciences et de la technologie (PFST)

PAGSE Annual Activity Report

1 July 2016 – 30 June 2017

The Partnership Group for Science and Engineering (PAGSE; www.pagse.org) is a cooperative association of national organizations in Science and Engineering. It was formed in June 1995 at the invitation of the Academy of Science of the Royal Society of Canada. The national organizations that comprise PAGSE represent almost 60,000 individual members from industry, academia, and government sectors. They work collectively to represent the Canadian science and engineering community to the Government of Canada, and to advance research and innovation for the benefit of Canadians. PAGSE is *not* a lobby group. It does not seek an audience to advance the cause of specific science and engineering initiatives. Rather, its intent is to address the broader issues of science and engineering policy at the national level.

PAGSE Members and Representatives

Maria DeRosa, Carleton University, is the Chair of PAGSE.

A full list of PAGSE Member Organizations and representatives can be found appended to this report and at www.pagse.org/en/links.htm.

Bacon & Eggheads

PAGSE, in partnership with the Natural Sciences and Engineering Research Council (NSERC), CANARIE Inc, and many other organizations sponsors a monthly breakfast meeting held on Parliament Hill, known as “*Bacon and Eggheads*”. Speakers at the meetings inform parliamentarians about recent advances in science and engineering. In 2016 PAGSE organized the presentations listed below.

[Living with Forest Fires: Lessons from Fort McMurray](#)

Mike Flannigan, University of Alberta

Thursday September 29, 2016

[The great biodiversity challenge: Conserving nature through a century of unprecedented change](#)

Jeremy Kerr, University of Ottawa

Thursday October 27, 2016

[Canadian nanorobots: an option for fighting cancer?](#)

Sylvain Martel, Polytechnique Montréal

Thursday December 1, 2016

[Unnatural tremors: the science of fracking and earthquakes](#)

Gail Atkinson, Western University

Thursday February 9, 2017

[Can I Help You? The Future of Socially Assistive Robots in Healthcare](#)

Goldie Nejat, University of Toronto

Thursday March 9, 2017

[Building a climate-smart world: How development research helps the global population adapt to climate change](#)

Robert Hofstede, International Development Research Centre

Thursday April 6, 2017

[Next-generation technologies for tomorrow's crops: Getting to the roots of global food security](#)

Leon Kochian, University of Saskatchewan

May 4, 2017

SciEng Pages (formerly SciencePages)

SciEng Pages is an initiative undertaken by the Partnership Group for Science and Engineering (PAGSE) to provide brief, evidence based assessments of topical science and engineering topics to Parliamentarians and the public. The Science Media Centre of Canada (SMCC) was asked for 3 SciEng Pages as a trial by the Federal S&T Secretariat on these topics: Genomics, Why Science Matters, and Evidence-Based Decision Making. The SMCC submitted these in March 2017, and they are awaiting approval from the Science minister's office. Upon approval, the goal will be to promote these three documents on the PAGSE website and at the Bacon and Egghead Breakfasts.

To view all the SciEng Pages publications please visit the SciEng Pages website. <http://sciengpages.ca/> or <http://sciengpages.ca/fr/>

PAGSE Council Meetings

Guests, representing science and engineering in the government and industry sectors, are invited to PAGSE Council meetings to present their perspectives on science and engineering in Canada, on the activities of their organizations, as well as the potential issues and challenges that they would like to see PAGSE address. Members also consider federal activities and reports and how best to promote and sustain Canada's scientific base. The meetings are held at the University of Ottawa. During the last year PAGSE has welcomed the following guests:

- February 3, 2016: **Alain Beaudet**, President and CEO, Canadian Institutes of Health Research
- June 1, 2016: PAGSE Council Business Meeting
- September 29, 2016: **Eric Meslin**, President and CEO, Council of Canadian Academies
- November 29, 2016: **Iain Stewart**, President, National Research Council
- April 25, 2017: Ted Hewitt, President, Social Science and Humanities Research Council
- June 12, 2017: Martha Crago, Member of the Fundamental Science Review Panel and Incoming Vice Principal (Research and Innovation), McGill University

Meetings with Other Organizations

- December 2016: Josh Bowie, Senior Science Policy Advisor, Federal S&T Secretariat
- March 2017: Canadian Federation for Earth Sciences Annual General Meeting

Submissions to Parliamentary Committees and Consultations

House of Commons Finance Committee

PAGSE submitted a brief to the House of Commons Standing Committee on Finance in August 2016.

Summary of the August 2016 Submission

Canadians recognize the value of science, technology, and innovation (STI) as drivers of economic productivity and growth, and as providers of sustainable solutions to promote our social and environmental well-being. Canada is home to some of the world's leading researchers and an emerging innovation agenda that will help ensure our future prosperity and global competitiveness. The four recommendations presented here are key to fostering Canada's leadership in STI by supporting a stable foundation for the discovery-based research that fuels innovation, building infrastructure to accelerate productivity and resilience in northern communities, making talented students more mobile to facilitate knowledge sharing and address the skills gap, and modernizing the system of federal support for industrial research to accelerate progress through the ideas-to-impact pipeline.

The Partnership Group for Science and Engineering (PAGSE) recommends that the federal government:

- **Increase investments in science and technology to match those in comparator countries.** This recommendation addresses the Innovation Agenda theme of “Supporting global science excellence” as well as the 2017 pre-budget consultation focus on federal measures that would support the contributions of Canadians to economic growth.
- **Build smart grid technologies in northern communities to improve resilience and sustainability, and to lower energy costs.** This recommendation addresses the Innovation Agenda theme of “Accelerating clean growth” and the 2017 pre-budget consultation focus on federal measures that would ensure that remote communities can contribute to economic growth.
- **Establish Canada Opportunity Scholarships to facilitate graduate student mobility for training.** This recommendation builds upon Canada's impressive track record of investing in human capital through STI training scholarships. It focuses on the Innovation Agenda theme of “Promoting an entrepreneurial and creative society” and “Supporting global science excellence”. It also addresses the 2017 pre-budget consultation focus on federal measures that would support the contributions of Canadians to economic growth.
- **Modernize the support system for industrial research.** This recommendation focuses on rebalancing the ratio of direct to indirect funding of industry research and highlights a strategy to accelerate the pathway from ideas to innovation by bringing applied research labs closer to key sources for cutting edge discovery. It addresses the Innovation Agenda theme of “Building world-leading clusters and partnerships” as well as the theme of “Improving ease of doing business”. Furthermore, it addresses the 2017 pre-budget consultation focus on federal measures that would assist Canadian businesses to contribute to economic growth.

[The complete submission is available on the PAGSE website](#)

Submission to the government consultation on Climate Change:

As many of our members are contributing to research on climate change mitigation and adaptation, as well as in clean tech and innovation, PAGSE presented a written submission to the government's climate

change consultation based on discussions with our participating societies. The brief outlined three recommendations: 1) Support the coordination of scientists, engineers, and economists to estimate and communicate the cost of climate change to Canadians. 2) Work towards decarbonization of the electricity supply by 2030 3) Support smart grid technologies in northern communities.

Submission to the government consultation on funding for basic research:

Following discussion with our twenty four professional and scientific member organizations, PAGSE presented a written submission to Canada's Fundamental Science Review. The brief summarized the key messages received from our community on how to nurture science and engineering research in Canada, specifically by 1) Strengthening and rebalancing the federal science funding ecosystem; and 2) Supporting innovation through inclusivity, diversity, and interdisciplinarity.

For further information on PAGSE activities, please visit our website www.pagse.org

PAGSE Members

Canadian Academy of Engineering (Representative: *Kevin Goheen*)
Canadian Aquatic Resources Section of the American Fisheries Society (Representative: *Steven Cooke*)
Canadian Association for Neuroscience (Representative: *Katalin Toth*)
Canadian Association of Physicists (Representative: *Francine Ford*)
Canadian Conference for Fisheries Research (Representative: *Steve Cooke*)
Canadian Federation of Earth Sciences (Representative: *Chris Burn*)
Canadian Geophysical Union (Representative: *TBA*)
Canadian Meteorological and Oceanographic Society (Representative: *Gordon Griffith*)
Canadian Physiological Society (Representative: *Eric Accili*)
Canadian Quaternary Association (Representative: *John P. Smol*)
Canadian Rivers Institute (Representative: *Karen Kidd*)
Canadian Society of Microbiologists (Representative: *Thien-Fah-Mah*)
Canadian Society of Plant Biologists (Representative:)
Canadian Society of Zoologists (Representative: [Katie Gilmour](#))
Canadian Society for Chemical Engineering (Representative: *Roland Andersson*)
Canadian Society for Chemical Technology (Representative: *Roland Andersson*)
Canadian Society for Chemistry (Representative: *Roland Andersson*)
Canadian Society for Ecology and Evolution (Representative: *Jeremy Kerr*)
Canadian Society for Molecular Biosciences (Representative: *Kristin Baetz*)
Chemical Institute of Canada (Representative: *Roland Andersson*)
Engineering Institute of Canada (Representative: *Branislav Djokic*)
IEEE Canada (Representative: *Voicu Groza*)
Society of Canadian Limnologists (Representative: *Jérôme Marty*)
Statistical Society of Canada (Representative: *Agnes M. Herzberg*)

Supporting Organizations

Canadian Science Publishing
CANARIE Inc.
Coherent Advice
Genome Canada
Google Canada
Insurance Bureau of Canada
International Development Research Centre
Natural Sciences and Engineering Research Council (NSERC)
Royal Society of Canada (RSC)
WWF Canada

University of Ottawa
Polytechnique Montréal
Western University
Department of Mechanical and Industrial Engineering, University of Toronto
University of Saskatchewan