



Partnership Group for Science and Engineering (PAGSE)

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

PAGSE Annual Activity Report

1January2017 – 31December 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. In2017PAGSE organized the presentations listed below.

[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

[Deep Learning and Artificial Intelligence: Is Canada ready for the challenge?](#)

Yoshua Bengio, Université de Montréal
September 28, 2017

[Uncharted Waters: A scientific glimpse into the future of the Arctic Ocean](#)

Jay Cullen, University of Victoria
October 26, 2017

[30 Year Journey: winning the battle against Hepatitis C](#)

Michael Houghton, University of Alberta
November 23, 2017

SciEngPages (formerly SciencePages)

SciEngPages 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 SciEngPages 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 SciEngPages publications please visit the SciEngPages 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:

- 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
- October 10, 2017: Roseann Runte, President and CEO, Canada Foundation for Innovation (CFI)

Meetings with Other Organizations

- March 2017: Canadian Federation for Earth Sciences Annual General Meeting
- October 2017: Council of Ontario Universities

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 2017.

Summary of the August 2017 Submission

Canadians recognize that our health, prosperity, and security depend on science, technology, and innovation (STI).¹ From the tools we use to communicate, to the energy that powers our homes, businesses, and transportation, to the treatments and diagnostics that keep us healthy, STI touches every aspect of our daily lives.

Basic research is the foundation and fuel for STI. Breakthrough advances occur when we have the opportunity to answer fundamental questions about ourselves and the natural world around us. Sustained fundamental research is required to continually advance STI. While Canada has long been a source of high quality and high impact research, in recent years we have witnessed an erosion of our competitiveness in comparison to our international peers. Canada's Fundamental Science Review² affirmed this point and its recommendations on how to reverse the trend have received widespread support from the scientific community³ and the general public.⁴

Given the increasingly competitive global environment and the complexity of challenges we face, investments in basic research have never been more critical for Canadians. In view of the role of research in spurring innovation and increasing productivity, and the need for research to inform evidence-based policy-making and to inspire and educate the next generation of innovators, investing in basic research is one of the most important and highest-yield investments in Canada's competitiveness that our government can make.

The Partnership Group for Science and Engineering (PAGSE) recommends that the Government begin to implement the recommendations from Canada's Fundamental Science Review. In particular, we recommend that the Government:

- **Increase its investment in independent, investigator-led basic research to improve our international competitiveness. (R6.1)**
- **Increase its investment in scholarship and fellowship programs to ensure a stable pipeline of innovators for the future. (R7.1)**

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

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: *Rich Petrone*)
Canadian Meteorological and Oceanographic Society (Representative: *Gordon Griffith*)
Canadian Physiological Society (Representative: *Catherine Chan*)
Canadian Quaternary Association (Representative: *John P. Smol*)
Canadian Rivers Institute (Representative: *Anne Levesque*)
Canadian Society of Microbiologists (Representative: *Thien-Fah-Mah*)
Canadian Society of Plant Biologists (Representative: *Owen Rowland*)
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*)
Geoscientists Canada (Representative: *Mark Priddle*)
IEEE Canada (Representative: *Voicu Groza*)
Society of Canadian Limnologists (Representative: *Jérôme Marty*)
Statistical Society of Canada (Representative: *Jack Gambino*)

Supporting Organizations

Canadian Science Publishing
CANARIE Inc.
Coherent Advice
Genome Canada
Google Canada
International Development Research Centre
Natural Sciences and Engineering Research Council (NSERC)
Royal Society of Canada (RSC)
CanHep C
Li Ka-shing Institute of Virology

Western University
Department of Mechanical and Industrial Engineering, University of Toronto
University of Saskatchewan
Université de Montréal
University of Victoria