

ISSP

INSTITUT DE RECHERCHE SUR LA SCIENCE,
LA SOCIÉTÉ ET LA POLITIQUE PUBLIQUE
INSTITUTE FOR SCIENCE, SOCIETY AND POLICY

Annual Report

2013-2014

Annual Report 2013-2014

Towards a Graduate Program



uOttawa

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About the Institute for Science Society and Policy

The Institute for Science, Society and Policy (ISSP) offers a unique, holistic and non-partisan approach to understanding the social implications of science and technology. The Institute informs science and technology policy through various channels and points of view.

Centered at the University of Ottawa, the ISSP carries out research, teaching, and public engagement on the relationship between society and science, innovation and technology, and fosters networks of people and organizations interested in this relationship.

The objective of the Institute is to improve the governance of science, technology and innovation. It does this by integrating research, education and public engagement at every stage of innovation – from developing science policy and improving how science and technology are regulated to understanding their social implications.

The ISSP's long-term goal is to develop highly skilled people and produce top quality research that will inform and improve decision-making about science and technology, both at home and internationally.

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I. Note from the Director

Dear Reader,

The academic year 2013-2014 was very significant for the ISSP because we achieved a major milestone: the University of Ottawa Senate unanimously approved both of our Graduate Diploma and Collaborative Master programs. Getting to this point with a multi-disciplinary (and indeed multi-faculty) proposal is a major accomplishment, and both the Associate Director of Graduate Studies, Professor Scott Findlay (Faculty of Science) and our Research Consultant, Rachel So, deserve a lot of credit.

A second key accomplishment was our delivery of an international conference, “Science and Society 2013: Emerging Agendas for Citizens and the Sciences”, in close collaboration with SituatingScience. We were the beneficiaries of the funding from twelve supporting organizations and could showcase the ISSP as a major player in the national and international “STS” scene (Science and Technology Studies).

With this fourth annual report, I believe we can claim that we are on our way to becoming a well-established organization. Here, we continue our tradition of delivering a detailed, academic annual report. We hope it serves its purpose as both a record keeper and an informative brief.

As always, we welcome your interest, participation and contributions to the ISSP (issp@uottawa.ca).

Marc Saner
Director, Institute for Science, Society and Policy
University of Ottawa

II. Capacity Building

The ISSP is proud to have talented people at our institute and significant communication channels to engage various publics. During 2013-2014, the Institute built upon capacity developed over the previous three years, both in terms of its team and communication reach. The ISSP remains an institute with considerable human capital, spanning disciplines and sectors, with the means to get its message out to stakeholders through various communication channels.

New Members

During 2013-2014, the Institute made key additions to its membership categories (Advisory Committee, Affiliates and Fellows), as well as its team of dedicated staff and student interns.

Advisory Committee

Pierre-Gerlier Forest is Director of the Institute for Health and Social Policy, and Professor at the Bloomberg School of Public Health, at John Hopkins University.

Maureen McTeer is Head of the International Health and Maternal Health Policy Group at Joe Clark and Associates. She is also an Adjunct Professor in the Faculty of Common Law at the University of Ottawa.

Affiliates

Roberto Chica is Assistant Professor in the Department of Chemistry at the University of Ottawa. His research specializes in the innovation, design and development of novel proteins for applied industrial and research uses.

Monica Gattinger is Associate Professor in the School of Political Studies at the University of Ottawa. Her research interests include the influence of North American economic integration on domestic and cross-border public policy, administration and governance, and the origin and evolution of Canadian federal and provincial cultural policy in comparative interprovincial and international perspective.

Daniel Lane is Full Professor and Coordinator for the Operations Management and Information Systems (OMIS) Section in the Telfer School of Management at the University of Ottawa. His research interests include decision-making processes, simulation modeling and control of dynamic systems, especially in the area of natural resource management and Canadian coastal fisheries, aquaculture and oceans policy analysis.

Kevin Orr is Associate Professor in the Department of Theatre at the University of Ottawa. His fields of interests include directing, new play creation, artistic direction, and

training actors and directors. He recently directed excerpts from the award-winning play *Copenhagen* by Michael Frayn as part of the *Science and Society 2013* symposium co-organized by the ISSP, which explored the moral and ethical dilemmas faced by past prominent scientists.

Sandra Schillo is Assistant Professor in the Telfer School of Management at the University of Ottawa. Her research and professional experience include research and innovation management and entrepreneurship, with respect to science and technology, as well as improving methodologies for the measurement of innovation and entrepreneurship and their impact.

André Vellino is Associate Professor in the School of Information Studies at the University of Ottawa. His research interests include formal logic and automatic reasoning, information retrieval, philosophical and cognitive science aspects of Artificial Intelligences, recommender systems for digital libraries, and scientific research data management.

Michael Wolfson is the Canada Research Chair in Population Health Modeling/Populomics in the Faculty of Medicine at the University of Ottawa. His research focuses on integrating evidence from large population data sets to understand what makes people healthy or ill, in order to provide evidence-based support and improve health-care policy and planning.

Fellows

Kamiel Gabriel, appointed as an ISSP Senior Fellow, is a Professor in the Faculty of Engineering and Applied Science at the University of Ontario Institute of Technology (UOIT). Kamiel is the founding Associate Provost of Research and Graduate Programs at the UOIT, and the co-founder and past president of the Durham Strategic Energy Alliance (DSEA). He was DSEA's president and Chair of the Board from 2007 to 2009. In 2009, Kamiel was seconded to the Ontario Ministry of Research & Innovation as the Assistant Deputy Minister of Research and its first ever Science Adviser. Most recently, Kamiel was invited by the Abu Dhabi government to assist with the creation of a Research Funding Agency to support competitive research efforts in the federal and private higher education institution in the United Arab Emirates.

Banting Fellow

The ISSP played a role in attracting Banting Postdoctoral Fellow, Dr. Roger Stanev, who will be working with a number of research groups, along with the ISSP, to develop decision-making tools for the interim analysis of whether clinical trials should proceed or not, using methodological and ethical considerations of evidence-informed decision-making.

ISSP Staff

The ISSP has always engaged outside expertise to assist on Institute projects, and 2013-2014 was no different. The ISSP was fortunate to have the following talented people contribute to Institute projects:

Alin Charrière conducted research for several ISSP publications, such as the timelines regarding biofuels and nanotechnology regulations, *Future of Work* proposal and Women in STEM.

Katherine Fafard provided the ISSP with her expertise in process management and communications strategies for university-based research institutes. Katherine facilitated the Institute's transition from having a full-time Project and Public Affairs Manager by streamlining and managing daily operational processes.

Sarah Farewell managed our invoice accounts, as well as many additional important elements of managing our office.

Barbara Kubica provided communication and website support for the Institute, coordinated the publication of the *SSP News* e-newsletter.

Dara Marcus assisted in organizing *Science and Society 2013: Emerging Agendas for Citizens and the Sciences* and drafting the results document from the symposium.

Rachel So provided office and reporting support for the Institute. She also contributed significantly to the development of the successful proposal to create our graduate programs in Science, Society and Policy.

Moxi Zhang assisted with coordination and planning of the 2014 D. Allan Bromley Memorial Lecture Event. She also conducted research for the biofuel timeline and assisted ISSP Senior Fellow Margaret McCuaig-Johnston with research on China's science, technology and innovation policies.

It was with mixed emotions that the ISSP said farewell to Jeremy Geelen, the full-time Project and Public Affairs Manager, in December 2013. Jeremy worked with the Director and Core Group in developing and implementing ISSP strategy. He was integral to the Institute's many successes, co-managing and overseeing the Institute's day-to-day operations and research mandate.

ISSP Member Accomplishments

Members of the ISSP network have also had a successful year, with a number of accomplishments and achievements:

- ISSP Senior Fellow Kamiel Gabriel participated in the Chief Scientists and Opinion Leaders Meeting in Montréal on June 10, 2014. Assembled by Québec chief scientist Rémi Quirion, this meeting examined different perspectives on

science policy and the models for integrating science advice and decision-making.

- ISSP Fellow Paul Dufour participated and presented in the first ever Science and Diplomacy Course in June 2014, sponsored by The World Academy of Science and the American Association for the Advancement of Science in Trieste, Italy.
- ISSP Affiliate Mitia Rioux-Beaulne was awarded the University of Ottawa's Faculty of Arts 2013 Young Researcher of the Year Award. The award recognizes the outstanding achievements of Professor Rioux-Beaulne, who is in the early stages of his academic career in the Department of Philosophy.
- ISSP Fellow Gregor Wolbring was awarded the Queen Elizabeth II Diamond Jubilee Medal in the fall of 2013. The medal "serves to honour significant contributions and achievements by Canadians". Gregor was also recently been awarded tenure by the University of Calgary.
- ISSP Advisory Committee Member Michael Geist was awarded the Social Sciences and Humanities Research Council's (SSHRC) inaugural 2013 Impact Connection Award. The award is given to a SSHRC-funded researcher with an outstanding record of effective engagement with and beyond the social sciences and humanities research community.
- ISSP Senior Fellow Margaret McCuaig-Johnston was appointed to the Board of Directors for the SNOLAB, a specialized underground science laboratory currently conducting research in dark matter physics. The SNOLAB facility expands on previous research conducted in the Sudbury Neutrino Observatory (SNO) solar neutrino experiment.

III. Education

During 2013-2014, the Institute continued to develop its role as an educator by offering engaging curricula, making great strides towards the development of a graduate program, and continued with initiatives to enrich the student experience at the University of Ottawa.

Courses on Science, Society and Policy

Though the ISSP does not yet have courses of its own in the strict sense of the term – until the education program is launched, courses must be offered through the auspices of University of Ottawa departments – ISSP Director Marc Saner and Adjunct Professor Paul Dufour offered courses similar to what students will find in the SSP graduate program.

Marc Saner

GEG 5105: Decision-making at the Interface of Science and Policy (Fall 2013)

This interactive seminar concerned the integration of evidence and judgment, facts and values, and science and policy in decision-making. Students looked at the broad spectrum of related topics: How scientific are risk assessments? Are evidence-based policy decisions really based on policy? Are we not rather sometimes dealing with “policy-based evidence making”? How is ethics integrated in decision-making? How are issues that have an important science component communicated to the public? How is public and citizen science included in decision-making? How do scientists and policymakers work together?

Paul Dufour

BPS 4103: A Primer on Science Policy (Winter 2014)

This course provided students with an overview of the nature of science policy (policy for science and science in policy), including its impact on the public policy process. Students learned that science policy is a key dimension of virtually all decision-making within the public sphere and they explored the various aspects of science policy in an interactive series of seminars and special guest lectures. Each class began with a general discussion of key events that engage science with and in policy. Students developed a short annotated outline of a policy brief for the mid-term and the final exam involved the development of a succinct document articulating the impact of a science policy issue aimed at a Parliamentary Committee hearing.

Graduate Programs Overcome Hurdles

In 2013-2014, the ISSP continued to lay the foundations of the *Science, Society and Policy* (SSP) education program and continued to demonstrate through stakeholder engagement that the proposed SSP program is filling an important market niche in graduate education.

In the past year, Dr. Scott Findlay, Associate Director of Graduate Studies, Dr. Marc Saner, Director of the ISSP, and Rachel So, Research Consultant, continued to make great strides in the development and approval process of the SSP program. The graduate education program, consisting of a collaborative Master's and graduate diploma program, received unanimous approval by the University Senate on June 9, 2014. It is anticipated that the ISSP will launch both graduate education programs in September 2015.

Second Student Survey

A second student survey was administered in February 2014, to elaborate on the initial student interest survey conducted in June 2013. The online survey was administered through SurveyMonkey in order to improve on the response rates from graduate and undergraduate students in the Faculty of Arts. Of the 520 student responses received, 112 students stated that they were highly interested in SSP graduate studies, with an additional 66 students stating that they were extremely interested in SSP graduate studies. The survey results are summarized in the report entitled *Second Student Survey on the Emerging ISSP Program*. Based on the results of both student surveys conducted in 2013, there is a demonstrated existence of large numbers of highly interested students and faculty.

SSP Curriculum Development

Throughout the summer of 2013, the ISSP refined the proposed curricula of the graduate program. The ISSP identified and confirmed eight faculty members to deliver the SSP program coursework. The SSP program will offer a total of five courses for graduate study, with one of the courses already offered through the ISSP as GEG 5105.

Descriptions of the courses offered by the ISSP as part of the SSP program are provided below.

SSP 5101 (E): Decision-making at the interface of science and policy (3 cr)

SSP 5501 (F): Prise de décision à l'interface de la science et les politiques publiques (3 cr)

This course explores a number of critical issues in the design and implementation of science (or, more generally, evidence)-based policy. Topics will include: the nature of scientific evidence; who has standing in the provisioning of scientific evidence; the science and non-science of risk assessment; ethical dimensions of

policy design and implementation; the role of science in policy design and implementation; the policy making process; and science policy performance evaluation.

SSP 5102 (E): Science & Technology governance and communication (3 cr)

SSP 5502 (F): Gouvernance et communication en sciences et technologie (3 cr)

This course explores a number of critical issues in the governance of science and technology (S&T) in democratic societies, with particular emphasis on the Canadian context. Topics will include: the history of S&T governance and communication in both Canada and abroad; an overview of the Canadian S&T policy and regulatory landscape; the role of government, the private sector and civil society in S&T governance; policy and regulatory experiments in fostering innovation (and the success thereof); the evolution of public S&T communication strategies and governance of emerging technologies.

SSP 5903 (E/F): Science, Society and Technology Capstone Practicum / Stage en sciences, société, et technologie (3 cr)

This course is designed to partner students with external public, non-governmental or private institutions engaged in activities relating to the science and technology policy, regulation, governance or communication. Students will undertake, either singly in groups, a research project co-directed by both an internal supervisor from ISSP, as well as an external supervisor from the sponsoring institution.

Support for the SSP across campus

Five academic units across three faculties at the University have committed resources in facilitating coursework for the overall SSP program. Eleven academic units from four faculties at the University have confirmed their participation in the collaborative Master's program, with written support obtained by the Faculty Deans.

Internal Approval Milestones for the SSP Programs

Throughout the last year, the ISSP has successfully reached a number of milestones in the approvals process for the collaborative Master's and graduate diploma programs. In the spring of 2013, the ISSP finalized two Letter of Intent (LOI) that provided the framework for both SSP graduate programs. The LOIs were approved by the Faculty of Arts Executive and Faculty of Arts Council in September 2013, and subsequently the Faculty of Graduate and Post-doctoral Studies (FGPS) Faculty Council Meeting in November 2013.

Over the 2014 winter semester, the ISSP continued to refine and develop additional program details in full proposal and budget reports. The budget for the SSP program received approval by the Dean of Arts Antoni Lewkowicz, Vice-President Academic and Provost Christian Detellier, and the University Administration Committee throughout April and May 2014. During this same period, the Full Proposal for the SSP program received

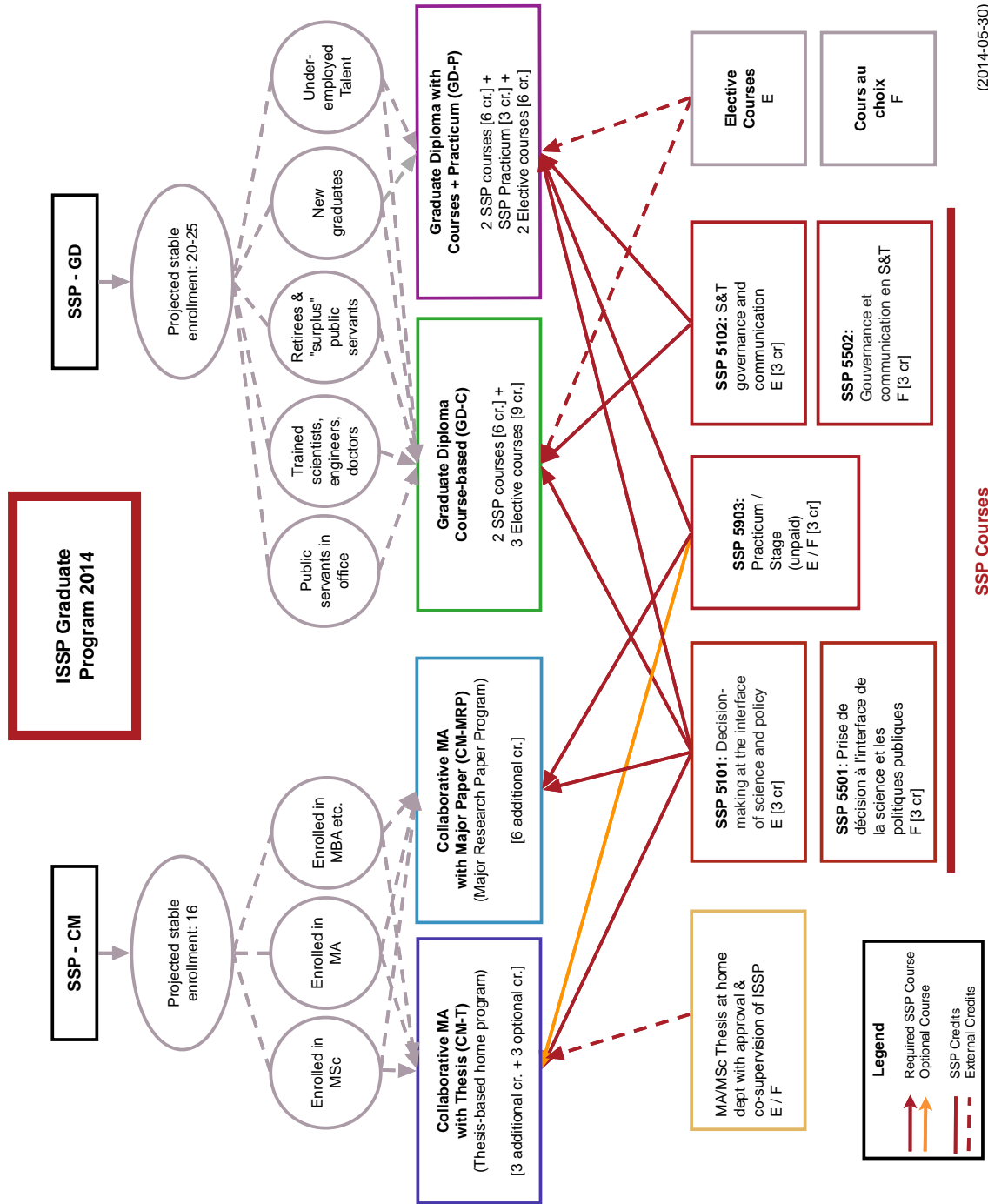
approval by FGPS Graduate Program Subcommittee, Executive Committee of Senate, cumulating with the Senate approval in June.

Currently, both programs are under external review at the Ontario Universities Council on Quality Assurance.

Cross-Appointments (ISSP Teaching)

In December 2013, Associate Professor in Communication Rocci Luppicini was cross-appointed with the ISSP.

In April 2014, Associate Professor in the Graduate School of Public and International Affairs Patrick Fafard was appointed to teach in the SSP program by his Dean.



Enriching the Student Experience Across Campus

The ISSP understands that education extends beyond the classroom. It pursues and supports initiatives across campus that allow students to hone and develop their skills, learn about science policy and reflect on their future careers. Each of the following projects was open to students from all faculties at the University of Ottawa.

Bromley Lecture and Event 2014

The 2014 Bromley Memorial Lecture and Event were hosted by the ISSP at the University of Ottawa on April 24 and 25. The event brought 19 students, participants and faculty from 4 different countries (**Canada, India, France, and the United States**) from 5 different universities to the National Capital Region. The delegation attended lectures by a number of speakers, including **Chad Gaffield**, President of SSHRC; **Keira Torkko**, Executive Director of the National Research Council; **Rob Annan**, Vice President of Policy at MITACS; **Gretchen Teitje**, Science Attache at the United States' Embassy; **Daniel Duguay**, Executive Vice Present of Communications Research Centre; and, **Marc Legault**, Associate Director of the Science, Technology and Innovation Council. In addition to the workshops, students also enjoyed a visit to the Canada Science and Technology Museum and Parliament Hill.



Bromley Memorial Lecture keynote speaker **Professor Mu Rongping**

The 2014 Bromley Memorial Lecture featured keynote speaker **Professor Mu Rongping**, Director of the Institute of Policy and Management, Chinese Academy of Sciences, and the Vice President of the Chinese Association for the Science of Science

Policy and S&T Research. Professor Mu shared the Chinese experience in innovation policy-making and long-term foresight.

The lecture was recorded and is available at: <http://vimeo.com/96615617>.

Student Poster Competition in the Science and Society 2013 Symposium

As part of the *Science and Society 2013* symposium, a student poster competition was organized to promote discussion of the central theme of the interplay between science and society (see Section IV). The poster session attracted nine student participants from six different universities, with the winning poster from Dalhousie University law student Maryana Hnatyshyn, entitled *Undermining Public Trust in Vaccination Laws: An Ontario History Lesson*.

IV. Networks

ISSP networks bring together talented people from various backgrounds to discuss current developments and address challenges at the intersection of science, society and policy.

During 2013-2014, the ISSP significantly expanded its network both locally and internationally. These networks bring together talented people from varying backgrounds to raise awareness, address challenges, and discuss current developments within the framework of science, society and policy.

Local

The ISSP continues to grow as a hub at the University of Ottawa, and in Ottawa more generally, for people interested in and government practitioners of, science and technology policy. From the numerous ISSP network development activities and events, such as the Distinguished Speaker Series, the Institute has established a strong presence among science, technology and society experts in the local community. From the number of new opt-in subscribers to the *ISSP News* that grew to 1,100, it is clear that local science and technology enthusiasts are interested in remaining connected with on-goings at the ISSP.

Science Policy Roundtable

In January 2014, the ISSP began jointly hosting and facilitating a series of bimonthly roundtable discussions on campus. Chaired by Eric Gagné (Director General S&T Strategies at Environment Canada), Jeff Kinder (S&T Strategy Manager at Natural Resources Canada and ISSP Fellow), Rob Annan (Interim Chief Executive Officer & Scientific Director, Mitacs), and Marc Saner, ISSP Director, the discussions sought to further local science policy dialogue, focussing on specific questions and issues, and possible approaches to solutions. The group discusses crosscutting topics such as: the Federal Science and Technology Strategy, open science, communicating the impacts of science, understanding the place of science in policy value chains, and connecting the community of science policy practitioners.

International

In a globalized world, science, technology and innovation policy extends beyond national borders. With this in mind, the ISSP continues to build its international connections and strengthen its formal network at the international level.

International Partnerships and the Bromley Memorial Event

Under the leadership of Jonathan Linton (ISSP Core Group Member and Associate Director of Technology Innovation), the ISSP strengthened its international connections abroad through the establishment of new partnership agreements. In 2013, the ISSP formally partnered with Visvesvaraya Technological University in Belgaum, India to offer international students the opportunity to participate in the Bromley Memorial Event and Lecture Series. In April 2014, the University of Ottawa and l'Université de Lyon also signed a far-reaching agreement overseeing multiple collaborations between both institutions, of which, the Bromley lecture and event were included. Dr. Linton is also in discussions with a number of additional universities abroad, in China, South Africa and Mexico, regarding the possibility of future Bromley event participation.

Dr. Linton also acts as the Co-Head of the Laboratory for Science and Technology Studies at Higher School of Economics (HSE) Institute of Statistical Studies and Economics of Knowledge (ISSEK) in Moscow, Russia, which may provide additional opportunities for new partnerships at the international policy stage.

Throughout 2013-2014, the ISSP has also strengthened its relationships with a number of institutions in China. In the fall of 2013, ISSP members met with visiting delegations of researchers and experts from the Institute of Scientific and Technical Information of China (ISTIC) as well as the Chinese Academy of Science and Technology for Development (CASTED) within the Ministry of Science and Technology.

In October 2013, at the invitation of the Department of Foreign Affairs, Trade and Development, ISSP Senior Fellow Margaret McCuaig-Johnston attended in Beijing a meeting of the Canada/China Joint Committee of Science and Technology of which she was a member since its inception in 2007. In November, at the invitation of the Association of Canadian Community Colleges, Ms. McCuaig-Johnston gave a keynote speech in Beijing to a forum of leaders of Canadian colleges and Chinese Institutes of Technology on the potential for collaboration through research.

V. Interdisciplinary Research

The public policy challenges at the interface of science, society and policy require an interdisciplinary perspective. That's why the ISSP routinely assembles multidisciplinary teams on its research projects.

In 2013-2014, the ISSP continued to maximize its research output through collaboration and network development.

Research Capacity

The ISSP maintained and strengthened ties among its research network of academics, independent researchers, practitioners and students. It made gains in increasing its research capacity through actively participating in the Fulbright Research Chair selection process, and is hiring a new Canada Research Chair in the history of innovation policy in Canada.

Canadian Science Councils Archive

Initiated in 2012, the ISSP formally launched its Canadian Science Councils Archive website (www.sciencecouncils.ca) in December 2013. The website serves as a virtual archive of published studies and reports by two core institutions historically central to Canadian science policy: the Science Council of Canada (1966-1992) and the Council of Science and Technology Advisors (1996-2007). The aim of the Canadian Science Councils Archive is to ensure that these reports are accessible to the public and that they continue their contribution to public debate on science policy in Canada. The website is intended not only to serve an educational and historical purpose but also to inform current debate on science policy in Canada – where Canadian science policy has been and where it is going. The ISSP plans to expand the site continually.

Sciences, Technologies, and Publics

In the 2012-2013 academic year, the ISSP was one of thirteen organizations honoured with an invitation to collaborate on a project entitled *Sciences, Technologies, and Publics*. The project, lead by Principal Investigator Bernard Lightman (York University), won a Letter of Intent for a Social Sciences and Humanities Research Council (SSHRC) Partnership Grant. In 2013-2014, the ISSP provided leadership for one of the three overarching categories in the project, overseeing the Policy and Decision-making research themes. Marc Saner (ISSP Director) and Rocci Luppicini (ISSP Affiliate) participated in a series of development workshops with the research consortium, and provided their expertise on collaborative decision-making and science and technology policies for post-human futures. While the research consortium did not receive the SSHRC Partnership Grant, the ISSP's efforts strengthened relationships with other major players in the Science and Technology Studies (STS) community.

Fulbright Visiting Research Chair in Science and Society

In the fall of 2013, the University of Ottawa was selected to host a Fulbright Visiting Research Chair in Society and Society, with the ISSP participating closely in the candidate selection process. In April 2014, the Fulbright award to Canada was awarded to Dr. Tee Guidotti, an international consultant and scholar in occupational and environmental health.

Dr. Guidotti is currently Vice-President for Health/Safety, Environment, and Sustainability at Medical Advisory Services (a division of the NMAS Group), the Editor in Chief at *Archives of Environmental and Occupational Health*, and is an honoured recipient of the William S. Knudsen Award for Lifetime Achievement.

Dr. Guidotti will bring his wealth of knowledge and expertise to the University, and will pursue risk anticipation research with respect to environmental, health and sustainability issues within Canada from a social sciences perspective. Dr. Guidotti also has a special interest in evidence-based medical dispute resolution, that is, the application of scientific evidence to law, adjudication and policy.

Dr. Guidotti will begin his six-month appointment as the Fulbright Visiting Research Chair at the University of Ottawa in January 2015.

Tier 2 CRC in History of Science and Technology Policy

In the fall of 2013, the ISSP announced that it will be inviting applications for a Tier 2 Canada Research Chair (CRC) in the history of science and technology policy at the University of Ottawa. The call for applications was to seek researchers working on innovation and Canadian policies in a global context from an historical perspective. Attracting a CRC chairholder to the Institute will enable the ISSP to act as a leading institute in Canada for research, teaching and knowledge transfer in the area of science, society and policy, and a major contributor to international dialogue, particularly on the topic of emerging technologies. The chairholder will assume a leadership role and contribute to teaching and outreach at the ISSP. Candidate applications are currently being reviewed by the ISSP.

ISSP Research

The ISSP continues to engage in multiple research projects, including charting the development of cutting edge technologies, making contributions towards preserving and better understanding the history of Canadian science policy, and embarking on a major initiative to support innovation policy making in Canada.

ISSP Publications

- Institute for Science, Society and Policy. (2013) *Science and Society 2013: Emerging Agendas for Citizens and the Sciences*. Symposium Results. 78 pp.

The report follows the international symposium, *Science and Society 2013: Emerging Agendas for Citizens and the Sciences*, which took place in Ottawa from October 21-29, 2013. Co-organized by the ISSP and the Situation Science SSHRC Strategic Knowledge Cluster, the symposium brought together academics, students, policy makers, stakeholders, and the general public with the aim of understanding and addressing key issues at the interface of science, technology, society, and policy. Additional information on the symposium is provided in Section VI.

- Jacob Berkowitz. (2013) *Op-Ed: Recalibrating the Science-Media Conversation*

Published as an *ISSP News Blog Post*, ISSP Writer in Residence Jacob Berkowitz explores issues about science communication, with a focus on how scientists and journalists can better present science in the media. Rather than training scientists and improving science literacy of the general public, there are cross-cultural and psychological differences between audiences that must first be addressed.

- Richard Hawkins, Fred Gault, Paul Dufour, Jeremy Geelen and Marc Saner. (2014) *Canada's Future as an Innovative Society: A Decalogue of Policy Criteria*. Endorsement Edition.

There is a growing concern that Canadian public policy is losing its way when it comes to addressing how and when governments can play productive roles in fostering innovation and capturing its benefits, in order to build and sustain a prosperous Canada. Much of the innovation-specific policies are largely focused in the manufacturing and technology goods sectors, aimed primarily at upstream activities (such as producing new ideas and transforming them into inventions) as well as the “commercialization” of such inventions. Moreover, current Canadian policy has seldom recognized that most of the value of innovation is associated with diffusion – leaving a gap in the overall innovation policy framework. To respect the full richness and complexity of the innovation system, a holistic framework is required, one which links industries, goods, human capital and institutions together in new and often unanticipated ways.

Throughout 2012 and 2013, the ISSP worked closely with Dr. Hawkins and conducted extensive consultations with innovation experts, practitioners and senior public servants to develop an Innovation Decalogue. The Decalogue team sought to create a public document that would serve as a framework to support a coordinated, evidence-based approach to innovation policy development and assessment in Canada. The ISSP's Innovation Decalogue is a distillation of our innovation policy work to date.

In October 2013, the Decalogue team integrated feedback received from S&T policy and innovation experts and practitioners, and condensed the overall framework into *The Endorsement Edition* of the Innovation Decalogue. The final form of the Decalogue offers Canadian decision-makers with a concise, holistic framework to assess innovation policy and develop new options. The document sets out ten criteria that are essential to move Canadian innovation policy to the next level.

In September 2013, Richard Hawkins prominently featured the Innovation Decalogue in his inaugural lecture for the *Big Thinking Lecture Series* (formerly known as the *Breakfast on the Hill* lectures), organized by the Federation for the Humanities and Social Sciences. The Innovation Decalogue, initially endorsed by eleven leaders in the Canadian innovation community, was formally launched on October 3, 2014 and made available for public endorsement. To date, the Decalogue has been endorsed by almost 30 individuals, as well as the Presidents' Committee on Science, Technology and Innovation, Association of Canadian Community Colleges (ACCC).

In February 2014, the ISSP provided copies of the Innovation Decalogue to then Minister of State for Science and Technology, the Honourable Greg Rickford. The Decalogue has been a key guiding document available for the federal government's review of its Science, Technology and Innovation Strategy.

- Margaret McCuaig-Johnston. (2014) *Op-Ed: The Best and the Brightest*

Published as an *SSP News Blog Post*, ISSP Senior Fellow Margaret McCuaig-Johnston explored how Canada might be able to better fund and support its top researchers, in order to facilitate greater collaboration at the international level. While there is little doubt that Canadian researchers are performing well given modest resources, the issue remains that Canadian research and development trails behind many other countries and there remain constraints due to the limitations of research funding.

ISSP Policy Briefs

With support from a SSHRC Public Outreach grant, the ISSP developed a series of policy briefs. The goal of this series is to mobilize academic research beyond the walls of universities and to engage public servants working at the science/policy interface in Canada and abroad. Each brief was designed to highlight themes and findings in academic literature for the purpose of synthesis, knowledge transfer, and discussion.

- Matthew Gaudreau and Marc Saner. (2014) *Researchers are from Mars; Policymakers are from Venus: Collaboration across the System*. 16 pp.
- Matthew Gaudreau and Marc Saner. (2014) *From Many to One: Integration of Knowledge and Values in Decision-making*. 16 pp.
- Matthew Gaudreau, Michael Bordt and Marc Saner. (2014) *Dealing with Not Knowing: Evaluating and Communicating Uncertainty at the Science/Policy Interface*. 20 pp.
- Sasha Kebo and Marc Saner. (2014) *Making it Work: Incentives to Improve the Science/Policy Interface*. Workshop Background. 20 pp.
- Michael Bordt and Marc Saner. (2014) *Top Five Management Incentives to Improve the Science/Policy Interface*. Workshop Report. 16 pp.
- Marc Saner. (2014) *A Map of the Interface between Science & Policy*. 20 pp.
- Bill Jarvis. (2014) *The Role and Responsibilities of the Scientist in Public Policy: A Discussion Paper on Science and Government*. 52 pp.
- Bill Jarvis. (2014) *A Question of Balance: New Approaches for Science Based Regulations*. 52 pp.

ISSP Technology Policy Timelines

In collaboration with Carleton University's Regulatory Governance Initiative, the ISSP has developed three timelines that outline significant events related to policy and regulation in the fields of bioenergy, nanotechnology and synthetic biology in Canada and abroad.

- Alin Charrière and Moxi Zhang. (2014) *Timeline: Bioenergy, Policy and Regulation in Canada and the United States*. 20 pp.

This timeline was created to provide an overview of the important events related to bioenergy policy and regulation developments in Canada and the United States since 2000, with an emphasis on biofuels and the forestry sector. The timeline summarized the various renewable energies that can be generated from biomass, such as biofuels, biopower and bioheat. For background purposes, the research team has also chosen to include broader developments in energy policy as well as significant events outside Canada where deemed appropriate.

- Alin Charrière and Beth Dunning. (2014) *Timeline: Nanotechnology, Policy and Regulation in Canada, Australia, the European Union, the United Kingdom, and the United States*. 40 pp.

This timeline was created to provide an outline of important events related to nanotechnology policy and regulation in Canada, Australia, the European Union, the United Kingdom and the United States with an emphasis on developments since 2000.

- Barbara Kubica. (2014) *Timeline: Synthetic Biology: Science, Policy and Regulation in Canada, Australia, the European Union, the United Kingdom & the United States*. 22 pp.

This timeline was created to provide an overview of the important events related to synthetic biology science, policy and regulation in Canada, Australia, the European Union, the United Kingdom and the United States. In the timeline, synthetic biology refers to genetic engineering —the ability to design and construct new biological parts, devices and systems.

Contracted Research for the Government of Canada

In addition its own research projects, the ISSP also conducted research for the Government of Canada.

Regulatory Cooperation Council

The Regulatory Cooperation Council at the Privy Council asked Marc Saner to develop a model framework regarding the international regulation of emerging technologies.

- Marc Saner and Gary Marchant. (2014) *Model Framework for Canada-US Bilateral Collaboration in the Regulation of Emerging Technologies*.

The report was created to highlight the opportunities for regulatory cooperation and alignment that arise in the context of the regulation of emerging technologies. It was conceived in the context of the Canada-United States Regulatory Cooperation Council (RCC) and its Joint Action Plan. One of the Joint Action Plan items, the “cross-sectorial issues and the regulatory approach to nanomaterials” theme, served as a starting point. The report was developed for senior managers and regulators in Canada and the US, with existing RCC work and interviews with regulatory experts in both countries serving as key inputs for the model framework.

ISSP Director, Core and Affiliate Contributions (selected publications)

ISSP Director Marc Saner and the Institute's Core and Affiliate members published research on various themes at the interface of science, society and policy.

Director Publications

- Saner M. (2013) The Role of Adaptation in the Governance of Emerging Technologies in Marchant, G. E., Abbott, K. W., and Allenby, B. (eds.), *Innovative Governance Models for Emerging Technologies*, (Edward Elgar Publishing, Northampton, MA), pp. 92-107.

This chapter provides a challenge to the reliance on a governance-by-control paradigm in the case of certain emerging technologies – in particular those that challenge regulators due to accelerated pace, broad diffusion, or certain ethical issues. In these cases the full suite of governance tools, including measures for societal adaptation, is required. A classification of the full suite of governance tools is provided and the place for social adaptation is located within this classification. Furthermore, the case is made that technology governance can mirror challenges seen in climate change adaptation where an initial focus on mitigation is often replaced by a focus on adaptation. The analogy is sufficiently robust to render worthwhile the evaluation of existing climate change adaptation tools in the context of technology governance. Examples are the international climate change adaptation framework, climate change adaptation research, the climate change adaptation fund, and the adaptation private sector initiative.

Core and Affiliate Research (Selected Publications)

Core Group

Jennifer Chandler

Michael Purcell, Jennifer A. Chandler, J. Paul Fedoroff, (2014, in press) "The use of phallometric evidence in Canadian criminal law" (forthcoming in Journal of the American Association of Psychiatry and Law)

Eric Racine, Tristana Martin Rubio, Jennifer Chandler, Cynthia Forlini, Jayne Lucke, "The value and pitfalls of speculation about science and technology in bioethics: The case of cognitive enhancement," (2014) *Medicine, Health Care and Philosophy* DOI 10.1007/s11019-013-9539-4.

J.A. Chandler, A. Mogyoros, T. Martin Rubio, E. Racine, "A second look at the legal and ethical consequences of pharmacological memory dampening: The case of sexual assault" (2013) 41(4) *Journal of Law Medicine and Ethics* 859-871.

J.A. Burkell, J.A. Chandler and S.D. Shemie, "Attitudes toward Reciprocity Systems for Organ Donation and Allocation for Transplantation," (2013) *Journal of Health Politics, Policy and Law* DOI: 10.1215/03616878-2334674 (11,000 words).

Jackie Dawson

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Dawson, J., Johnston, M.E., and Stewart, E.J., "Governance of Arctic expedition cruise ships in a time of rapid environmental and economic change", *Ocean and Coastal Management*, 89, 88-99, 2014.

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Patrick Fafard

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Jonathan Linton

Note: Jonathan Linton is also Editor-In-Chief of *Technovation*, where he regularly writes editorials.

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Affiliates

Jeremy de Beer

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Rocci Luppicini

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Kevin Orr

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Mitia Rioux-Beaulne

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VI. Public Engagement

S&T policy and governance are among the most important challenges faced by our society and global community – and often the most polarizing. The ISSP believes that it is essential to foster open discussion between opposing views and disparate groups if these challenges are to be met.

This past year was no different, as the ISSP continued with its many initiatives to maintain and expand the dialogue about issues at the interface of science, society and policy.

Communications: Continuing the Conversation

The ISSP continued with the regular publication and development of its electronic newsletter, the *SSP News*. There has been extensive growth in the number of opt-in newsletter subscribers within the past year. Since May 2013, the SSP has welcomed 482 new (opt-in) subscribers, with a total of 1160 subscribers in June 2014. The newsletter's open rate at 50% is regularly double that of the industry average (20%).

The ISSP also strengthened its online presence by further developing its website and expanding the availability of content online:

- Innovation Decalogue (www.decalogue.ca): Formally launched in the fall of 2013, the website contains information on the Innovation Decalogue project, crowdsourcing versions of the paper, and lists of all Decalogue endorsers. The website also currently provides the general public with a means to directly endorse the Innovation Decalogue.
- Canadian Science Councils Archive (www.sciencecouncils.ca): This website was formally launched in the fall of 2013. The site serves as an online archive and provides information and reports from the Science Council of Canada (1966-1992) and the Council of Science and Technology Advisors (1996-2007).
- Science and Society 2013 Symposium website (www.scienceandsociety2013.ca): Completed the website for the international symposium, *Science and Society 2013: Emerging Agendas for Citizens and the Sciences*. During the event, the website provided symposium participants with easy-to-access schedules and program information. Following the event, the website was updated to include an extensive summary report from the symposium as well as links to multimedia from the various events.
- D. Allan Bromley Event website (<http://artsites.uottawa.ca/bromley/>): Expanded online content to provide additional coverage from past event, dating back to 2005) as well as the alumni network.

- Online multimedia: Launched an online collection of photographs and videos from ISSP events through Flickr (<https://www.flickr.com/people/108692536@N06/>) and Vimeo (<http://vimeo.com/isspuottawa/videos>), respectively.

Events at the Interface of Science, Society and Policy

Science and Society Symposium 2013

The 3-day international symposium was held during National Science and Technology Week from October 21 to 23, at the University of Ottawa. The symposium was co-organized by the ISSP and the Situating Science SSHRC Strategic Knowledge Cluster, and sponsored by the Canadian Commission for UNESCO, Situating Science, Canadian Climate Forum, Social Sciences and Humanities Research Council of Canada (SSHRC), Canada Science and Technology Museums Corporation, The Professional Institute of the Public Service of Canada, Institute for Ethics and Emerging Technologies, Atomic Energy of Canada Limited, University College London, Embassy of the United States as well as the British High Commission in Ottawa. The ISSP received generous support for the conference and received various sponsorships from embassies and public service unions (over \$28,000) as well as a SSHRC Connection Grant (valued at \$21,000).

The symposium was attended by more than 100 participants, with the event fostering dialogue between academics, students, public servants, policy makers, stakeholders, and members of the general public. Participants addressed how we can examine and improve the interface between science, technology and society, with the aim of understanding and addressing key issues at the interface of science, technology, society and policy. The symposium consisted of two complementary components: an invitation-only academic component during the day, and a public component during the evening.



Yves Gingras (UQAM) speaking at the opening lecture

Among many highlights, the symposium featured a variety of events:

- Opening lectures by Yves Gingras (ISSP Advisory Committee member and Canada Research Chair, History and Sociology of Science, at Université de Québec à Montréal) and Sheila Jasanoff (Harvard Kennedy School) about the transformations in the relations between and among science, policy and citizens, and science and its publics.

Yves Gingras spoke about the traditional relations between scientists, policy makers, and citizens that has transformed over the last fifteen years. Scientists were used to providing science for policy makers who were eager to listen, while citizens were relatively confident in the judgments of scientists. However, the more recent cases of scientific and public controversies have shown us that citizens have more power now than ever before to influence policies in matters relating to scientific research. This raises the pressing issue for us as citizens: How do we give a central place to a scientific culture that is adapted to the 21st century?

Sheila Jasanoff spoke on the second day about the dependence, disenchantment and deliverance between science and its publics. Despite the general interest and support in both past achievements and future promises of science, there is a perception that remains that science is in trouble. The talk explored some of the more controversial issues in science, e.g. climate change and genetically-modified organisms, that challenge the objectivity of science and the need for understanding the function of scientific organizations.



Robert Smith (UAlberta), left, and **Ted Hsu** (MP), right, at the *Copenhagen* event.

- *Uncertain Science, Uncertain Times* (Theatre Play)
This unique event consisted of stage readings of from the Tony Award-winning play *Copenhagen*, followed by a panel discussion.

ISSP Affiliate Kevin Orr directed the stage readings of excerpts from Michael Frayn's Tony Award-winning play *Copenhagen*. Based on the final meeting between Werner Heisenberg and Niels Bohr in 1941, the issues raised by

Copenhagen concerning science, ethics and politics remain as pressing as ever. The stage readings were followed by a panel and audience discussion of the social and ethical questions raised in *Copenhagen*. Science journalist and author Jay Ingram moderated the discussions, with commentaries provided by panel participants Dr. Robert Smith (University of Alberta), Dr. Shohini Ghose (Wilfred Laurier University and the Perimeter Institute) and Dr. Ted Hsu (MP and Science and Technology Critic for the Liberal Party of Canada).

- A *Science Policy 101* workshop led by Jason Blackstock, Jeff Kinder, and Marcius Extavour.

The ISSP hosted an intensive one-day intensive workshop regarding science policy. The workshop provided scientists and science students with an overview of how science can help guide policy decisions, whilst providing policymakers with an overview of how to leverage scientific knowledge to be more effective in the professional world. Facilitated by Jason Blackstock (University College London), Marcius Extavour (University of Toronto) and Jeffrey Kinder (Natural Resources Canada), the workshop provided a highly interactive session for science policy enthusiasts to explore the core themes, institutions, and methods of modern science policy. The workshop was well received, with over 35 registrants participating from the academic, public and private sectors.

- An *Influencers Panel Discussion*

The *Science and Society 2012 Influences panel* invited prominent practitioners from the science policy community to reflect on the discussions and recommendations proposed by participants throughout the 3-day symposium. The discussion included comments on how to better understand and improve the interplay between science and society, and improve science policies for the future. Panellists included Denise Amyot (Association of Canadian Community Colleges), Scott Findlay (University of Ottawa, Evidence for Democracy), Pat Mooney (ETC Group) and Louise Vandelac (UQAM, UNESCO).



(L-R) **Pat Mooney** (ETC Group), **Scott Findlay** (Evidence for Democracy), **Denise Amyot** (ACCC), and **Louise Vandelac** (UQAM and UNESCO)

- A student poster competition
See Section III for more information on the Student Poster Competition in the *Science and Society 2013 Symposium*.

Throughout all of the sessions, participants focused on addressing a central unifying question: *how can we understand and improve the interplay between science and society, and improve science policies for the future?* The discussions and responses to this question formed the basis for a results report entitled *Science and Society 2013: Emerging Agendas for Citizens and the Sciences*. The results report contains recommendations on how to understand and improve the science-society interface and improve science policy.

Science and Society Distinguished Lecture Series

Launched in 2012, the ISSP continued to host its Science and Society Distinguished Lecture Series in 2013-2014. Led by ISSP Associate Director for Academic Outreach Daniel Paré, the Lecture Series brings experts and practitioners within the fields of science, society and policy to uOttawa to share their research and insights. Promoted through various channels including UO Cal, uOttawa media calendar, Gazette, Faculties, SSP News and other ISSP Networks, three lectures were offered in the 2013-2014 series.

- The Hon. Konrad W. von Finckenstein, Q.C. Arbitrator and Mediator, JAMS, “Canada’s existing legislative and institutional frameworks and competition policies: Is there a need for reform in light of the digital revolution?” in January 2014.

The Hon. Konrad W. von Finckenstein reflected on the regulatory and governance challenges fostered by rapid technological innovation, including whether Canada’s existing legislative frameworks and competition policies are up to the task of encouraging and promoting innovation in its broadcasting and telecommunications systems.

- Munir Sheikh, former Chief Statistician of Canada, Executive Fellow at the School of Public Policy at the University of Calgary and Distinguished Fellow at the School of Public Policy at Queen’s University, “The Critical Need for Evidence in Developing Good Public Policies” in April 2014.

Dr. Sheikh reflected on how public policy can contribute fully to enhancing our quality of life if it is evidence-based. Professor Sheikh’s talk concentrated on examples to illustrate the need to do better on developing evidence as well as using this evidence appropriately.

This event was organized in collaboration with Evidence for Democracy, and partially funded by the University of Ottawa’s Graduate Student Association (GSAÉD).

- Stathis Psillos, Rotman Canada Research Chair in Philosophy of Science, Department of Philosophy, Western University, “From the ‘Bankruptcy of Science’ to the ‘Death of Evidence’: Science and its Value” in April 2014.

Dr. Psillos reflected on what were and are the key external and internal criticisms of science and evidence in particular, how are these tied to a particular image of science, and what is needed to defend science and its claim to objectivity and truth.

This event was organized in collaboration with SSHRC's Situating Science Strategic Knowledge Cluster.

UK Science Policy and Diplomacy Talk and Panel Discussion

The ISSP was honoured by a visit in February 2014 by a contingent of senior science policy experts from the UK. The event featured a talk by UK Minister David Willetts (UK Minister of State for Universities and Science), as well as a panel discussion that included Dr. Martyn Poliakoff (Foreign Secretary, Royal Society), and Professor Mary Bownes (Vice Principal, University of Edinburgh). Chaired by ISSP Director Marc Saner, the panel examined how science advice to government translates into informing government policies. The panellists also discussed the UK's Parliamentary Office of Science and Technology (POST) and how it operates.



Minister David Willetts (UK Minister of State for Universities and Science)

The event was organized in partnership with University of Ottawa's Centre for International Policy Studies and the British High Commission, and was also captured by local media in the Ottawa Citizen (see below).

Third International Gender Summit

Catherine Mavriplis, ISSP Affiliate and NSERC/Pratt & Whitney Canada Chair for Women in Science Engineering for Ontario, participated in the 3rd International Gender Summit held in Washington, DC over November 13-15, 2014. Participants included key leaders and policy makers in STEM (Science, Technology, Engineering and Mathematics). According to the Summit's organizers and participants, despite the progress made in the past to facilitate and make careers in STEM available to women, they are still

underrepresented. Women are essential to increasing the pool of talent and bring an element of diversity into these fields. By focusing on several aspects of gender equality and diversity, the summit was able to develop a series of recommendations.

Science Matters: A Panel Discussion on Science and Democracy in Canada

In October 2013, ISSP Core Members, Patrick Fafard and Rees Kassen participated in an expert panel on the health of public-interest science in Canada. Organized by Evidence for Democracy, the panel discussed a number of hot topic issues regarding the communication of research findings by government scientists, the allocation of public resources to fund research ranging from basic research to technological innovation and commercialization, and how scientific evidence can be used in decision-making.

The ISSP proudly sponsored the following events:

- Governance of Emerging Technologies: Law, Policy and Ethics, held by the Center for Law, Science & Innovation at Arizona State University, on May 27-29, 2014
The second annual conference brought together experts from various sectors and disciplines to discuss the regulation, governance, legal, policy, social and ethical aspects of various emerging technologies, ranging from nanotechnology, synthetic biology, and genomics to telecommunications, surveillance and robotics. ISSP Director, Marc Saner, also participated in this conference and gave a talk (see below).
- Jacques Ellul, 20 Years On: Communicating Humanly in an Age of Technology and Spin: Jacques Ellul in the 21st Century, held jointly by Carleton University and Dominican University College in Ottawa on July 13-15, 2014
Two decades ago, philosopher Ellul raised concerns about the societal implications of the increasing sophistication of technological devices and control. With the growing prominence of social media along with the enhancement of communications and surveillance technology, these themes remain no less observable today than they were in Ellul's time. The conference is intended to elicit thinking about the influence of modern communications technologies on thinking and living.

Spreading the Word about the ISSP

Personnel at the ISSP strive to spread the word about the Institute's objectives and research activities whenever they get a chance. In 2013-2014, the following members of the ISSP gave presentations at various meetings:

- Marc Saner, ISSP Director, gave a presentation to delegates from Institute of Scientific and Technical Information of China (ISTIC) as well as the Chinese Academy of Science and Technology for Development (CASTED), when they visited the University of Ottawa in October.

Director Presentations

Marc Saner gave the following presentations:

- ““Life Cycle Governance: From Responsible Innovation to Disaster Management” at the 2nd Annual Governance of Emerging Technologies: Law, Policy and Ethics conference, at Arizona State University, May 28, 2014.
- “The Regulation of Emerging Technologies at the Interface of Evidence, Values and Culture” at The Science Policy Interface: International Comparisons workshop, at University of Waterloo, May 22, 2014
- “ISSP and Innovation Decalogue” at the Partnership Group for Science and Engineering (PAGSE) meeting, at University of Ottawa, March 20, 2014.
- “Workshop/Symposium 1: Science Policy: Nuts and Bolts”, at the Canadian Science Policy Conference 2013, Toronto, November 20, 2013.
- “The Institute for Science, Society and Policy – in Brief”, at the Fulbright Ceremony at University of Ottawa, November 6, 2013
- “The Institute for Science, Society and Policy – in Brief”, at the Chinese Academy of Science and Technology for Development (CASTED) delegation meeting at University of Ottawa, November 5, 2013
- “Transformative Technologies & ‘Technoself’”, at the 18th Biennial International Conference of the Society for Philosophy and Technology (SPT) in Lisbon, July 3, 2013

ISSP in the News

Coverage about the ISSP

An article covering UK Minister David Willette’s visit to the University of Ottawa was featured in the Ottawa Citizen, “British scientists’ advice welcomed by government, minister says”. February 10, 2014.

Members in the News

The following ISSP members were either published or interviewed in news media:

Marc Saner (Director)

- Marc Saner, Could WiFi in Schools Be Harming Our Kids?, in The Globe and Mail. May 2014.
- Marc Saner, British Scientists’ Advice Welcomed by Government, Minister Says, in Ottawa Citizen, February 2014.

- Marc Saner, Federal science hobbled by cuts and policies, poll says, in CBC News. February 2014.
- Marc Saner, Université d'Ottawa - Le futur est parmi nous, in Le Devoir. Available only in French. November 2013.

Jackie Dawson (Core Member)

- Feature on Jackie Dawson's research, Experts on Ice, in uOttawa's Tabaret magazine. April 2014.
- Jackie Dawson, There's more behind Arctic shipping than climate change, in The Globe and Mail. February 2013.

Scott Findlay (Core Member)

- Scott Findlay, The Uses of Evidence in Politics, in Ottawa Citizen. June 2014.
- Scott Findlay, Why We Need Public Science (audio), on Habitat Radio. March 2014.
- Scott Findlay and Paul Dufour, Calling for a 21st Century STI strategy, in Re\$earch Money. Available only with subscription. March 2014.
- Scott Findlay, Science and business innovation clash - Professor Findlay, in Net News Ledger. February 2014.
- Scott Findlay, Canadian government accused of destroying environmental archives, in Nature News. January 2014.
- Scott Findlay and Paul Dufour, Why Canada needs a science watchdog, in iPolitics. November 2013.

Patrick Fafard (Core Member)

- Patrick Fafard, A clash of ideas is not a war on science, in Ottawa Citizen. October 2013.

Rees Kassen (Core Member)

- Rees Kassen presented a statement at the inauguration ceremony of the Scientific Advisory Board of the Secretary-General of the United Nations.
- Rees Kassen issued a position statement on global research as co-chair of the Global Young Academy.

Peter Calamai (Fellow)

- Peter Calamai, The Energy Conundrum, part of The Walrus Talks Energy event. October 2013.

Paul Dufour (Fellow)

- Paul Dufour, Becoming a Northern Minerva: Injecting Science into Canada's Foreign Policies in National Approaches to Science Diplomacy: An Education Resource. June 2014.
- Paul Dufour, Do science ministers really matter? in iPolitics. April 2014.

- Paul Dufour, Harper's pick for new minister unlikely to inflame science community, cited in Globe and Mail. March 2014.
- Paul Dufour, Canada needs a senior science and innovation minister, in The Hill Times. February 2014.
- Paul Dufour, Dispute over the future of basic research in Canada, in The New York Times. February 2014.
- Scott Findlay and Paul Dufour, Calling for a 21st Century STI strategy in Re\$earch Money. Available only with subscription. March 2014.
- Paul Dufour, Engineering science policy for the nation in Re\$earch Money. Available only with subscription. February 2014.
- Paul Dufour, Let Canadian science off the leash, in iPolitics. October 2013.
- Scott Findlay and Paul Dufour, Why Canada needs a science watchdog, in iPolitics. November 2013.

Jeffrey Kinder (Fellow)

- Jeffrey Kinder, GovScience 4.0: The Rise of 'Social' Science, in Canadian Government Executive. March 2014.

Gregor Wolbring (Fellow)

- Gregor Wolbring, starring in Fixed: The Science/Fiction of Human Enhancement. 2013.

Yves Gingras (Advisory Committee)

- Yves Gingras, L'évaluation des universités, une «farce» ?, in Le Devoir. Available only in French. February 2014.
- Yves Gingras, The abuses of research evaluation, in University World News. February 2014.

Political Outreach

The ISSP continued forging political connections. The Institute held meetings with Members of Parliament Ted Hsu, Hélène LeBlanc, Geoff Regan and Kennedy Stewart, Senator Kelvin Ogilvie and Minister Gary Goodyear's Chief of Staff and Director of Policy to discuss the Innovation Decalogue. Senator Ogilvie also peer reviewed and is among the initial endorsers of the document.

In addition, Member of Parliament Ted Hsu has agreed to participate in *Science and Society 2013* on a panel discussing Michael Frayn's Tony Award-winning play *Copenhagen*.

The Institute provided copies of the Innovation Decalogue document, *Canada's Future as an Innovative Society: A Decalogue of Policy Criteria*, to the Minister Greg Rickford, Minister of State for Science and Technology in February 2014.

Appendix I - ISSP Network

Appendix IA – Advisory Committee Members



Denise Amyot (Chair)
President and CEO
Association of Canadian Community Colleges (ACCC)



Jason Blackstock
Deputy Head of Department
Department of Science, Technology, Engineering and
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University College London (UCL)



Pierre-Gerlier Forest
Professor and Director
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David Forrest
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Ruby Heap
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Associate Vice-President, Research
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Michèle S. Jean
Quebec's Permanent Representative to UNESCO
The Canadian Commission for UNESCO



Avrim Lazar
President and CEO
Forest Products Association of Canada



Gordon McQuat
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Situating Science



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Ontario Human Rights Commission



Penny Park
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Robert Slater
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Appendix IB - ISSP Core Group



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Appendix IC - ISSP Affiliates



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Appendix ID - ISSP Fellows



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The Institute for Science, Society and Policy

The Institute for Science, Society and Policy offers a unique, holistic and non-partisan approach to understanding the social implications of science and technology. We're interested in how to use these different perspectives to inform science and technology policy.

Centered at the University of Ottawa, the ISSP carries out research, teaching and public outreach on the relationship between society and science, innovation and technology.

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