

## Christopher P. Barrington-Leigh

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**Appointments** ASSOCIATE PROFESSOR, MCGILL UNIVERSITY Montréal, Canada

*2017-:* Associate Professor with tenure

*2011-2017:* Assistant Professor, jointly appointed in the School of Environment and the Institute for Health and Social Policy, with an Associate appointment in the Economics Department.

INSTITUTE FOR RESOURCES, ENVIRONMENT AND SUSTAINABILITY, UBC

*Feb-July 2011:* Postdoctoral researcher.

CANADIAN INSTITUTE FOR ADVANCED RESEARCH (CIFAR) / UBC ECONOMICS

*2009-2011:* CIFAR Global Scholar in Social Interactions, Identity, and Well-being research programme.

UNIVERSITY OF CALIFORNIA, BERKELEY

Berkeley, California

*November 2000 - February 2002:* Postdoctoral appointment in space physics.

### Education

UNIVERSITY OF BRITISH COLUMBIA

Vancouver, Canada

*January 2009:* PhD Economics.

STANFORD UNIVERSITY

Stanford, California

*January 2001:* PhD Applied Physics.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Cambridge, Massachusetts

*June 1995:* S.B. Physics (with humanities concentration in French).

### Honours

2012: Selection to represent McGill at the Universitas 21 Early Career Researchers Workshop, *Merging Theory into Practice: Ecological Urban Design* (Shanghai Jiao Tong University, Shanghai)

2009-2011: Global Scholar of the Canadian Institute for Advanced Research

2005: Selection for Summer School on Development Economics at the Banff Centre (Bureau for Research and Economic Analysis of Development, Harvard University)

2004-2007: SSHRC Canada Graduate Scholarship (Doctoral)

2003: Graduate Entrance Fellowship, University of British Columbia

2002: Union of Radio Science International (URSI) Young Scientist Award

2002: Elected Associate Member of URSI Commission H

2000: U.S. National Science Foundation Antarctic Service Award Medal

1999: Selection for the 1999 NASA Summer School for High Performance Computational Earth and Space Sciences at the NASA Goddard Space Flight Center's Earth and Space Data Computing Division.

1996: Canadian Federation for the International Space University: Full scholarship for the 1996 Summer Session of ISU in Vienna.

1994: National Undergraduate Fellow in Plasma Physics and Fusion Engineering (U.S. DOE, Princeton Plasma Physics Lab)

1992: Hodgess Prize for the best Freshmen Writing Evaluation Exam essay at M.I.T.

1990: Admission to the Shad Valley Program of Shad International, with full sponsorship

## Published book chapters

- Barrington-Leigh, C. P., “**The role of subjective well-being as an organizing concept for community indicators**,” in *Community Quality of Life and Wellbeing: Best Cases VII*, Meg Holden, Rhonda Phillips and Chantal Stevens (Eds.), Springer, 2017. (20 pp)
- Barrington-Leigh, C. P., “**Rising Life Satisfaction in Korea: a Panel Data Analysis**,” in *Measuring and Explaining Subjective Well-Being in Korea*, Shun Wang (Ed.), Korean Development Institute, 2015. (37 pp)
- Barrington-Leigh, C. P., “**Comprendre l'égalité par le bien-être : le cas du Québec**,” in *Miser sur l'égalité*, Alain Noël and Miriam Fahmy (Eds.), l'Institut du Nouveau Monde, 2014. (13 pp). Also available as English version, “Using measured well-being to understand equality: the case of Québec”
- Barrington-Leigh, C. P., “**Consumption externalities**,” in *Encyclopedia of Quality of Life Research*, Michalos, Alex C. (Ed.), Springer, 2014. [*This contribution was invited and peer reviewed.*] (5 pp)
- John F. Helliwell and C. P. Barrington-Leigh, “**How much is social capital worth?**”, in *The Social Cure: Identity, Health, and Well-being*, pp 55–72, edited by Jolanda Jetten, Catherine Haslam, and S. Alexander Haslam, Psychology Press, 2011.
- John F. Helliwell, C. P. Barrington-Leigh, Anthony Harris and Haifang Huang, “**International Evidence on the Social Context of Well-Being**,” in *International Differences in Well-Being*, pp 291–327, edited by Kahneman, Diener and Helliwell (Oxford University Press), 2010.

## Articles in refereed journals

- Barrington-Leigh, C. P. and Adam Millard-Ball, “**The world’s user-generated road map is more than 80% complete**,” *PLOS One*, doi:10.1371/journal.pone.0180698, August 2017.
- Garipey, Genevieve, Frank J. Elgar, Mariane Sentenac, Britt McKinnon, and C. P. Barrington-Leigh, “**Early-life family income and subjective well-being in adolescents**,” *PLOS One*, doi:10.1371/journal.pone.0179380, July 2017.
- Barrington-Leigh, C. P. and Fatemeh Behzadnejad, “**The Impact of Daily Weather Conditions on Life Satisfaction: Evidence from Cross-sectional and Panel Data**,” *Journal of Economic Psychology*, doi:10.1016/j.joep.2017.01.003, Vol. 59, pp. 145–163, April 2017 (28 pp).
- Barrington-Leigh, C. P. and Adam Millard-Ball, “**More connected urban roads reduce US GHG emissions**,” *Environmental Research Letters*, doi:10.1088/1748-9326/aa59ba, Vol. 12, No. 4, 2017. (24 pp)
- Barrington-Leigh, C. P. and Mark Ouliaris, “**The renewable energy landscape in Canada: a spatial analysis**,” *Renewable & Sustainable Energy Reviews*, Vol. 75, doi:10.1016/j.rser.2016.11.061, August 2017 (online 2016). (60 pp)
- Barrington-Leigh, C. P. and Alice Escande, “**Measuring progress and well-being: A comparative review of indicators**,” *Social Indicators Research*, doi:10.1007/s11205-016-1505-0, 2017. (48 pp)
- Barrington-Leigh, C. P. and Fatemeh Behzadnejad, “**Evaluating the short-term cost of low-level local air pollution: a life satisfaction approach**,” *Environmental Economics and Policy Studies*, 19:269. doi:10.1007/s10018-016-0152-7, 15 April 2017. (51 pp)
- Barrington-Leigh, C. P. and Sabina Sloman, “**Life satisfaction among Aboriginals in the Canadian Prairies: Evidence from the Equality, Security and Community survey**,” *The International Indigenous Policy Journal*, doi:10.18584/iipj.2016.7.2.2, Vol. 7, No. 2, 25 May 2016. (33 pp)
- Barrington-Leigh, C. P., Bronwen Tucker, and Joaquin Kritiz Lara, “**Short-run household, industrial, and labour impacts of the Québec carbon market**,” *Canadian Public Policy*, doi:10.3138/cpp.2015-015, 1 December 2015. (16 pp)
- Barrington-Leigh, C. P. and Adam Millard-Ball, “**A Century of Sprawl in the United States**,” *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1504033112, 15 June 2015. (28 pp)

- Lara B. Akin, C. P. Barrington-Leigh, Elizabeth W. Dunn, John F. Helliwell, Robert Biswas-Diener, Imelda Kemeza, Paul Nyende, Claire Ashton-James, Michael I. Norton, "**Prosocial Spending and Well-Being: Cross-Cultural Evidence for a Psychological Universal**," *Journal of Personality and Social Psychology*, 104(4), 635-652. doi:10.1037/a0031578, 2013.
- Barrington-Leigh, C. P., "**The Québec convergence and Canadian life satisfaction 1985–2008**," *Canadian Public Policy* 39, No. 2, pp. 193–219, June 2013. DOI: 10.3138/CP.39.2.193
- Matthew Brown, C. P. Barrington-Leigh, and Zosia Brown, "**Kernel Regression for Real-Time Building Energy Analysis**," *Journal of Building Performance Simulation*, June 2011. DOI: 10.1080/19401493.2011.577539
- Jon Hall, C. P. Barrington-Leigh, and John F. Helliwell, "**Cutting through the Clutter: Searching for an Over-Arching Measure of Well-Being**," *DICE Report*, Vol. 8, Issue 4, 2011.
- John F. Helliwell and C. P. Barrington-Leigh, "**Measuring and Understanding Subjective Well-Being**," *Canadian Journal of Economics*, Vol. 43, Issue 3, pp. 729-753, August 2010.
- Smith, David M., Liliana I. Lopez, R. P. Lin, and Christopher P. Barrington-Leigh, "**Terrestrial Gamma-Ray Flashes Observed up to 20 MeV**," *Science*, Vol 307, Issue 5712, Feb 2005.
- Moore, R. C., C. P. Barrington-Leigh, U. S. Inan, and T. F. Bell, "**Early/Fast VLF Events Produced by Electron Density Changes Associated with Sprite Halos**," *J. Geophys. Res.* 108, No. A10, 1363, Oct 2003.
- Lin R.P, et al., "**The Reuven Ramaty high-energy solar spectroscopic imager (RHESSI)**," *Solar Physics*, 210 (1-2): 3-32 Nov 2002.
- Barrington-Leigh, C. P., V. P. Pasko, and U. S. Inan, "**Exponential relaxation of optical emissions in sprites**," *J. Geophys. Res.* 107, No. A5, May 2002.
- Barrington-Leigh, C. P., U. S. Inan, and M. Stanley, "**Identification of Sprites and Elves with Intensified Video and Broadband Array Photometry**," *J. Geophys. Res.* 106, No. 2, February 2001.
- Gerken, E. A., U. S. Inan, C. P. Barrington-Leigh, "**Telescopic imaging of sprites**," *Geophys. Res. Lett.* 27, No. 17, September 1, 2000.
- Barrington-Leigh, C. P., U. S. Inan, M. Stanley, and S. A. Cummer, "**Sprites triggered by negative lightning discharges**," *Geophys. Res. Lett.* 26, No. 24, December 1999.
- Barrington-Leigh, C. P., and U. S. Inan, "**Elves triggered by positive and negative lightning discharges**," *Geophys. Res. Lett.* 26, No. 6, March 1999.
- Cummer, S. A., U. S. Inan, T. F. Bell, C. P. Barrington-Leigh, "**ELF radiation produced by electrical currents in sprites**," *Geophys. Res. Lett.* 25, No. 8 , p. 1281, April 15, 1998.
- Inan, U.S., C. P. Barrington-Leigh, S. Hansen, V.S. Glukhov, T.F. Bell, and R. Rairden, "**Rapid Lateral Expansion of Optical Luminosity in Lightning-Induced Ionospheric Flashes Referred to as 'Elves'**," *Geophys. Res. Lett.*, 24, 5, pp. 583-586, 1997.
- Barrington-Leigh, C. P., "**A Mountaineering Accident: Not So Sticky After All**," *The Physics Teacher*, 30, Number 5, May 1992.

## Keynote addresses

- Keynote address on *Diversity and Sustainability through Citizenship: Issues for Social and Economics Educators* at Eighth International Conference of the International Association for Citizenship, Social and Economics Education, Kelowna, June 2009.
- Opening day address to Whistler Forum's *Leadership Sea to Sky*, Whistler, Dec. 2007.

## Invited policy addresses and panels

Invited speaker at workshop with staff of the Government of Québec and OECD, *Vers un indicateur Vivre mieux-québécois*, Québec City, May 2012

Invited speaker, *Exploring the Intersections between Poverty and Gender*, World Bank, Washington D.C., May 2012.

Invited panelist at Metro Vancouver *Future of the Region Sustainability Dialogues*, Surrey and North Vancouver, March and April, 2009.

## Guest lectures and academic panels

**Subjective well-being and the economy**, guest lecture for *Economy of the future*, Dartmouth College, May 2012.

Invited panelist at McGill Business School on *Business Pragmatism and Environmental Ideologies: Finding the Common Ground*, March 2012.

Guest lecture for Ecological Economics class at Quest University Canada, May 2010.

## Other invited addresses

**Rising life satisfaction in Korea: does growth ever get the credit?**, University of Sherbrooke Department of Economics, March 2015.

**The future of monetary exchange systems**, address to the Association des économistes québécois, Section Montréal, 2014 Nov 18

**Happiness, neighbourhoods, and policy: subjective well-being in economics**, address to *Regenerative Neighbourhood Project* workshop, UBC, Vancouver, 10 Sep 2014.

**Social preferences, identity, and well-being: a modern economic account of human nature**, 4th annual GEINH Colloquium, Université de Montréal, March 2014.

**Experimental disentangling of social preferences**, Social Interactions, Identity, and Well-being programme meeting, Canadian Institute for Advanced Research, Montreal, June 2013.

**Urban sprawl: path-dependence and climate policy**, Merging Theory into Practice: Ecological Urban Design, Universitas 21 Early Career Researchers Workshop, Shanghai Jiao Tong University, Shanghai, China, December 2012.

**Well-being and social capital in Québec**, industry/academic workshop with SECOR Consulting, Leger Marketing, UQAM, Université Laval, and others, Montréal, April 2012.

**Relative Income and Happiness: A Global Study**, Sustainable Consumption Research and Action Initiative (SCORAI) 3rd Workshop, Vancouver, March 2012.

Departmental seminars at McGill University, University of Queensland, University of Ottawa, Simon Fraser University, University of Edinburgh (all 2011).

Invited speaker at Canadian Centre for Policy Alternative's invitational think tank on *Prosperity Without Growth?*, March, 2010.

Invited panelist on *Macroeconomic Policy Goals: Growth in GDP, Sustainability & Wellbeing*, Canadian Economics Association Annual Meeting, Toronto, May 2009.

## Conference presentations (selected)

**Do the Less Educated Report Higher Life Satisfaction?: Response Scales, Focal Values, and Mis-Measurement of Subjective Well-Being**, American Economics Association annual meeting, Chicago, January 2017.

- Do the less educated report higher life satisfaction?: response scales, focal values, and mis-measurement of SWB**, CRDCN Conference, 31 October – 1 November 2016, Saskatoon.
- Measuring progress and well-being: A comparative review of indicators**, 2016 Impact Summit, September 2016, Washington, DC.
- Koreas rapid growth and rapid rise in happiness: are they related?**, Canadian Economics Association annual meeting, Ottawa, June 2016.
- Short-Run Household, Industrial, and Labour Impacts of the Québec Carbon Market**, Canadian Resource and Environmental Economics Study Group Annual Conference, University of Sherbrooke, October 2015.
- Life satisfaction and domain satisfactions amid rapid economic growth: the case of South Korea**, European Survey Research Association conference, Reykjavik, July 2015.
- Moving beyond the discrete response in subjective scale survey questions**, European Survey Research Association conference, Reykjavik, July 2015.
- Quantity or quantile? A global study of income, status, and happiness**, Canadian Economics Association annual meeting, Vancouver, May 2014.
- Carbon pricing and endogenous directed change in urban form**, Beijing Forum, Beijing, November 2013.
- Québec’s Quiet Happiness Revolution Continues**, Canadian Economics Association 47th Annual Conference, Montréal, June 2013.
- Carbon pricing and the path-dependence of urban sprawl** (with Adam Millard-Ball), Association of Environmental and Resource Economists 3<sup>rd</sup> Annual Summer Conference, Banff, Canada, June 2013.
- “Sprawl in urban form: path-dependence and climate policy”**, Merging Theory into Practice: Ecological Urban Design, Universitas 21 Early Career Researchers Workshop, Shanghai Jiao Tong University, Shanghai, December 2012.
- “Relative income and happiness: A global study”**, International Society for Ecological Economics, Rio de Janeiro, June 2012.
- Economic inequality and subjective well-being**, Canadian Economics Association annual meeting, Ottawa, June 2011.
- Measuring well-being through repeated cross sections: the case of the Québec convergence, 1985–2008**, Canadian Economics Association annual meeting, Montreal, June 2010.
- Sustainable well-being and relative consumption effects beyond income**, SIRE workshop on Well-being, happiness and the environment, Stirling, UK, April 2010.
- Barrington-Leigh, C. P., **Life satisfaction, income, and sustainability**, Canadian Economics Association annual meeting, Toronto, June 2009.
- Veblen goods and neighbourhoods: endogenising consumption reference groups**, Canadian Economics Association annual meeting, Vancouver, June 2008.
- Empathy and emulation: life satisfaction and the urban geography of Veblen effects**, Canadian Economics Association annual meeting, Halifax, Nova Scotia, June 2007; also presented at the North American Regional Science Council meetings, Savannah, Georgia, USA, November 2007; and at Statistics Canada’s Socioeconomic Conference Ottawa, 2008.
- Smith David, Liliana Lopez, R. P. Lin, C. P. Barrington-Leigh, **RHESSI Observations of Terrestrial Gamma-ray Flashes**, URSI National Meeting, Boulder, Jan 2005.
- Barrington-Leigh, C. P., V. P. Pasko, and U. S. Inan, **Non-spectral measurements of ionization processes in sprites**, URSI General Assembly, Maastricht, Netherlands, August 2002. [Presented by V. P. Pasko.]
- Barrington-Leigh, C. P., **Terrestrial Gamma-ray Flashes After CGRO: Prospects From HESSI**, *EOS Trans. AGU*, 82, 47, 2001.

- Barrington-Leigh, C. P. and U. S. Inan, **Unusually Intense Sprite Events Studied with Video, Photometry, and ULF/ELF/VLF Recordings**, 2000 URSI National Radio Science Meeting, Program and Abstracts, p. 177, Boulder, Colorado, January 4-8, 2000. [INVITED]
- Barrington-Leigh, C. P., U. S. Inan and M. Stanley, **Elves: Photometric and Video Signatures**, *EOS Trans. AGU*, 80, 46, 1999.
- Barrington-Leigh, C. P. and U. S. Inan, **High Speed Photometric Measurements of Thunderstorm Energetic Coupling to the Mesosphere and Lower Ionosphere**, URSI General Assembly, August 1999, Toronto, Canada.
- Barrington-Leigh, C. P., U. S. Inan, E. A. Gerken, **Temporal and Spatial Structure of Sprites: Photometric and CCD Observations**, *EOS Trans. AGU*, 79 1998.
- Brook, M., M. Stanley, P. Krehbiel, W. Rison, C. B. Moore, C. P. Barrington-Leigh, D Suszcynsky, T Nelson, W Lyons, **Correlated Electric Field, Video, and Photometric Evidence of Charge Transfer Within Sprites**, *EOS Trans. AGU*, 78 1997.
- Barrington-Leigh, C. P., M. Stanley, U. S. Inan, **Fast multi-channel photometry, broadband sferics, and intensified video observations of sprites and elves over southwestern United States and Mexico**, *EOS Trans. AGU*, 78 1997. [Presented by U. Inan]
- Inan, U. S., C. P. Barrington-Leigh, S. Hansen, V. S. Glukhov, T. F. Bell, and R. Rairden, **Rapid Lateral Expansion of Optical Luminosity in Lightning-Induced Ionospheric Flashes Referred to as ‘Elves,’** *EOS Trans. AGU*, 77, 46, 1996.
- Barrington-Leigh, C. P., et al., **The Fly’s Eye: A High-speed Photometric Array to Measure the Sub-millisecond Dynamics of Sprites and Elves**, *EOS Trans. AGU*, 77, 46, 1996.
- Paularena, K. I., Barrington-Leigh, C. P., and Lazarus, A. J., **IMP-8 Solar Wind Parameters over Two Solar Cycles**, *EOS Trans. AGU*, 74, 485, 1993.

#### Invited policy articles

- Barrington-Leigh, C. P., “**Author’s Response — Sustainability and Well-Being: A Happy Synergy**,” Great Transition Initiative, Apr 2017.
- Barrington-Leigh, C. P., “**Sustainability and Well-Being: A Happy Synergy**,” *Development*, Vol. 59, No. 3, pp 292–298, July 2017 (also published by Great Transition Initiative, Apr 2017.)
- Barrington-Leigh, C. P., “**The Beginning of the End of Sprawl**,” *Public Sector Digest*, Dec 2015. (10 pages)
- Barrington-Leigh, C. P., “**How does the ability to measure aggregate human happiness impact policy?**”, *Arts Insights*, Summer 2013, p. 9.

#### Reports

- “Evaluation of life-cycle greenhouse gas emissions involved in online purchase versus in-store purchase of MEC goods”, a report produced and presented to Mountain Equipment Co-op management, March 2008.
- “Searching for the Good Life in a Carbon Neutral BC: Meeting BC’s Greenhouse Gas Reduction Targets with Fairness and Equity”, Climate Justice Project Discussion Paper, Canadian Centre for Policy Alternatives, Feb 2008. (Contributor)
- “Response to the draft Terms of Reference for the Environmental Assessment of the Port Mann Bridge / Highway 1 portion of the B.C. government’s Gateway Program”, report for the *Civil Society Development Project*, Dec 2006.
- “Accountability and targets in the B.C. government’s Gateway Program”, report for the *Civil Society Development Project*, May 2006.
- Abela, Marc, et al. Ra: The Sun for Science and Humanity, *International Space University*, 1996.

## Op-eds

- Christopher Barrington-Leigh, “Canada well on its way to a renewable-energy future”, *The Globe and Mail*, 24 December 2016.
- Lovejoy, Shaun, Christopher Barrington-Leigh, and Darin Barney, “McGill must divest its endowment fund of fossil fuels”, *The Gazette*, 10 February, 2015.
- Darin Barney, Christopher Barrington-Leigh, Richard Janda, and Shaun Lovejoy, “McGill doit sortir des énergies fossiles”, *Le Devoir*, 10 February, 2015.
- Barrington-Leigh, C. P., “Quebec attitude changing — for the better”, *The Gazette*, 30 December, 2012.
- Barrington-Leigh, C. P., “Le bonheur québécois”, *La Presse*, 26 November 2012.
- Barrington-Leigh, C. P., “How does the ability to measure aggregate human happiness impact policy?”, *Arts Insights*, Summer 2012.
- Barrington-Leigh, Christopher, Anthony Harris, John Helliwell, and Haifang Huang, “International evidence on the social context of wellbeing”, *VOX*, 24 April 2010. <http://voxeu.org/index.php?q=node/4924>
- Keeling, Paul and Christopher Barrington-Leigh, “Greenwashing Gateway”, *The Tyee*, 19 March 2007.
- Ardiel, Jennifer, Christopher Barrington-Leigh and Katherine Muncaster, “Finding a plug for carbon leaks”, *The Toronto Star*, 3 December 2005.

## Peer Referee

Proceedings of the National Academy of Sciences, Journal of Economic Surveys, Survey Research Methods, Social Indicators Research, Journal of Economic Behaviour and Organization, Canadian Public Policy, Journal of Happiness Studies, Scottish Journal of Political Economy, American Economic Journal: Applied Economics, Journal of Industrial Ecology, Journal of Geophysical Research, Journal of Economics Surveys, World Bank Publications, Journal of Economic Geography, Integrated Assessment Journal, Geophysical Research Letters

## Boards and Committees

- Ongoing panelist of the “World Well-being Panel”, Centre for Economic Performance at the London School of Economics and Political Science (LSE), 2017–
- Advisor to the McGill Office of Sustainability on a carbon strategy for McGill, 2017.
- Member, McGill Sustainability Projects Fund (SPF) Working Group, 2016–.
- Chair, Scientific Committee, international conference on “Building better lives”, 2014–2015.
- Student Programmes committee, Institute for Health and Social Policy, 2013–
- Outreach committee, Institute for Health and Social Policy, 2013–
- Director search committee, McGill School of the Environment, 2012
- Faculty search committee, Institute for Health and Social Policy, 2011-2012
- Scientific Committee, fourth conference of the Sustainable Consumption Research and Action Initiative (SCORAI), Worcester, Massachusetts, June 2013
- Graduate Affairs Committee, McGill School of Environment, 2011–
- UBC representative on Vancouver’s Greenest City 2020 External Advisory Committee, 2010
- UBC Department of Economics Faculty Hiring Committee (PhD representative), 2006-2007
- Cecil and Ida Green Visiting Professorship Committee (UBC), 2006-2008
- Board of Directors, Green College Dining Society, a 0.5M\$/year catering and dining service at UBC’s Green College, 2005-2006
- Founding director and secretary, Civil Society Development Project, 2005-2009

## Research grants

2017–2019	Evaluating sustainable household energy transitions in a large-scale program in Beijing, China (SSHRC IDG)	\$74,966	Co-I.
2016–2017	Policy effectiveness and household economic effects of coal-to-electricity home heating transition in Beijing province (McGill Social Sciences and Humanities Emerging Scholars Accelerator)	\$10,000	P.I.
2016–2022	“Global urban sprawl, climate policy, and well-being” (SSHRC Insight Grant)	\$267,179	P.I.
2016	“Pathways to healthy cities” LOI for Wellcome Trust “Our Planet, Our Health” up to £10M grant	£29,800	Coll.
2014	Geographical information systems processing: understanding urban form (MITACS Globalink)	Indirect	P.I.
2014	“Experimental economics software development,” with Francisco Alvarez-Cuadrado (Arts Undergraduate Research Internship Awards)	\$2,000	Co-I
2013–2015	“Interdependent Preferences and Subjective Well-Being: An experimental approach,” with Francisco Alvarez-Cuadrado (SSHRC IDG)	\$73,996	Co-I
2013–2015	Measurement and analysis of urban well-being (IHSP internal seed grant)	\$19,300	P.I.
2013–2014	“Carbon pricing and the path-dependence of urban sprawl” (Sustainable Prosperity’s Research and Policy Network SSHRC Strategic Knowledge Cluster Grant)	\$8,000	P.I.
2012–2016	“Stratification socio-économique du bien-être subjectif: une étude de quatre pays” (FQRSC New Researcher grant)	\$39,600	P.I.
2012–2015	“Socioeconomic stratification of subjective well-being” (SSHRC IDG) nominated for 2012 SSHRC Aurora Prize	\$74,871	P.I.
2012–2015	“Accounting for international differences in life satisfaction: a global vignette study” (McGill Internal Social Sciences and Humanities Development Grant)	\$5,000	P.I.
2010–2011	“Sustainable water and sanitation in growing urban areas,” with Öberg, G. and eight others, (Martha Piper Research Fund)	\$25,000	Co-I
2009–2014	“Climate Justice Project” (SSHRC Community-University Research Alliance)	\$1,000,000	Coll.

## Completed graduate supervision

### PHD STUDENTS

Fatemeh Behzadnejad, PhD Economics (2015)

PRIMARY SUPERVISOR

### MASTER STUDENTS

Adriene Harding, MA Economics (2017)

PRIMARY SUPERVISOR

Julia Reckermann, MA Environment (UBC, 2014)

COMMITTEE MEMBER

Greg Chang, MA Economics (2013)

PRIMARY SUPERVISOR

## University teaching

### MCGILL UNIVERSITY

2015, 2016 autumns: ENVIRONMENTAL SEMINAR (ENVR650, ENVR652)

2014–2016 autumns: ENVIRONMENT, SOCIETY, AND SUSTAINABILITY (ENVR201)

2014 autumn: ECONOMICS OF WELL-BEING (ECON430 and ENVR430): designer and instructor of new course

2012, 2013 autumns: QUANTITATIVE THINKING IN ENVIRONMENT (as ENVR380): designer and instructor of new course

2012 spring, autumn; 2013 autumn: ENVIRONMENTAL RESEARCH METHODS (team taught,



ENVR301)

2011, 2012, 2013: Guest lectures on the economics of climate change in THE GLOBAL ENVIRONMENT (ENVR200)

UNIVERSITY OF BRITISH COLUMBIA ECONOMICS DEPARTMENT

2009: Microeconomic policy (ECON 210): THE ECONOMICS OF CLIMATE CHANGE: designer and instructor of course

2007: INTRODUCTION TO STRATEGIC THINKING (ECON 221): Head Teaching Assistant

STANFORD UNIVERSITY EDUCATION PROGRAM FOR GIFTED YOUTH

March 2002 - May 2003: Physics Instructor for four undergraduate courses.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

1993, 1994: Instructor, CLASSICAL MECHANICS (8.012, E.S.G.)

## Outreach teaching

COSMOS EDUCATION

Africa

Summer 2003: Through a travelling education program taught and led discussions on science, health, and development topics in dozens of primary and secondary schools, as well as orphanages and places of safety, in South Africa, Swaziland, Botswana, Zimbabwe, and Zambia.

## Selected past employment

UNIVERSITY OF CALIFORNIA, BERKELEY (PROF. BOB LIN)

November 2000 - February 2002: Postdoctoral appointment at Space Sciences Laboratory, under NASA's US\$72M High Energy Solar Spectroscopic Imager spacecraft mission. Research in space plasma and solar physics.

STANFORD UNIVERSITY DEPARTMENT OF ELECTRICAL ENGINEERING (PROF. UMRAN INAN)

September 1995 - September 2000: Research assistant; comprehensive involvement in upper atmospheric and space physics research programme (lightning-driven electrodynamics of upper atmosphere, ionosphere, and magnetosphere; VLF radio propagation), including instrument design and construction, extensive field work, theoretical modelling, grant proposal writing.

M.I.T. PLASMA FUSION CENTER (DR. JOHN RICE)

1994-1995 (September - June): Modelled neutral hydrogen density profiles for undergraduate thesis as part of project to increase efficiency of prototype fusion reactors.

GENERAL ATOMICS (TOKAMAK FUSION GROUP)

San Diego, California

1994 (June-August): Analysis and operation of plasma fusion power experiment.

M.I.T. CENTER FOR SPACE RESEARCH (PROF. ALAN LAZARUS)

1993 to 1994 (February to January): Helped identify a problem with data returned by MIT plasma instrument on IMP-8 spacecraft. Worked on modifying analysis software to overcome the problem and to update data reduction techniques. Analysis of solar wind data.

## Consulting

MAYA BIOSANA

Oaxaca, Mexico

2011-2012: Development of community and regional well-being survey.

SMALL ENERGY GROUP / PULSE ENERGY Vancouver, B.C.  
2008–2011: Real-time power demand prediction algorithms (leading to a patent) for improved efficiency of commercial buildings. Climate policy strategic advising.

MOUNTAIN EQUIPMENT CO-OPERATIVE (MEC) Vancouver, B.C.  
2007–2008: Life-cycle climate impact (carbon emissions) of shipping by mail versus shopping in person.

OFFSETTERS Vancouver, B.C.  
2006: Designed the PHP interface and database backend for Offsetters.ca’s carbon offset customised gift card service.

**Patent**

Matthew Brown, Christopher Barrington-Leigh, Christopher Porter, and Neil Gentleman, “*Systems and methods for predictive building energy monitoring*,” European patent 10196723.0-2213, USA patent 12/646764.