Amanda Giang

Institute for Resources, Environment and Resources Department of Mechanical Engineering University of British Columbia 434-2202 Main Mall Vancouver, BC V6T 1Z4, Canada E-mail: amanda.giang@ubc.ca Web: agiang.com; leap-ires.org

PROFESSIONAL APPOINTMENTS

Assistant Professor of Environmental Modelling and Policy

01/2018 - present

University of British Columbia

Institute for Resources, Environment and Sustainability and Department of Mechanical Engineering

Postdoctoral Associate

09/2017-12/2017

Massachusetts Institute of Technology Institute for Data, Systems and Society

Visiting Postdoctoral Fellow

09/2017-12/2017

John F. Kennedy School of Government, Harvard University Program on Science, Technology and Society

EDUCATION

PhD, Institute for Data, Systems and Society

Massachusetts Institute of Technology, June 2017

Dissertation: Science to support toxics governance: tracking mercury and other pollutants from policy to impacts

Committee: Noelle E. Selin (Chair), Elsie M. Sunderland, Lawrence Susskind

Research areas: Environmental Modeling, Environmental Health, Environmental Governance

M.S., Technology and Policy

Massachusetts Institute of Technology, 2013

Thesis: Quantifying the health and economic impacts of mercury pollution: an integrated assessment approach

B.A.Sc. with Honours, Engineering Science

University of Toronto, 2011

Major: Biomedical Engineering

Thesis: Metabolic engineering to improve cellulosic ethanol fermentation by S. cerevisiae

AWARDS AND HONOURS

UBC Sustainability Fellow (2018-2020)

Best Paper Nominee in *Environmental Science: Processes & Impacts* (2018) for Giang et al. and Perlinger et al.

Daniel and Eva Roos Engineering Systems Dissertation Prize (2017)

Best Environmental Policy Paper in Environmental Science & Technology (2016) for Wolfe et al.

Harvard Distinction in Teaching Award, Derek Bok Center for Teaching and Learning (Fall 2016)

Outstanding Student Paper Award - American Geophysical Union Fall Meeting, San Francisco, CA (2016)

Best Paper – Technology Management Policy Graduate Consortium, Cambridge, UK (2016)

Best Environmental Policy Paper in Environmental Science & Technology (2015) for Giang et al.

Martin Family Society of Fellows for Sustainability (2015-2016)

NSERC Canada - Postgraduate Doctoral Scholarship (2015-2017)

MIT Socio-technical Systems Research Center Stokes Fellow (2013-2014)

NSERC Canada - Julie Payette Research Scholarship (2012-2013)

Ontario Graduate Scholarship (Declined)

University of Toronto - Centre for Global Change Science Internship Award (2009)

RESEARCH AND CURRICULUM DEVELOPMENT GRANTS

New Frontiers in Research Fund - Exploration, 2020-2022

Title: Cannabis cultivation in Canada: Assessing the air, health and equity impacts of a growing and uncharted industry

Role: Co-PI (PI: N. Zimmerman, Co-I: Sarah Henderson, Total: CAD \$250,000)

Mitacs Globallink Research Award - Center for Science, Technology and Policy, India, 2020

Title: India Electric Vehicle Transport Sector Analysis

Role: PI (Total: CAD \$6,000)

University of British Columbia Sustainability Initiative Interdisciplinary Education Grant, 2019-2020

Title: Integrating collaborative technology into interdisciplinary sustainability education

Role: Co-Applicant (PI: Naomi Zimmerman, Total: CAD \$8,388)

Northern Contaminants Program, Crown-Indigenous Relations and Northern Affairs Canada, 2019-2020

Title: Influences of environmental change on levels and trends of methylmercury in the Beaufort beluga food

Role: PI (Total: CAD \$15,000)

University of British Columbia Program for Undergraduate Research Experience, 2019-2021

Title: Sustainability Science: An immersive research training experience in socio-ecological systems

Role: Principal Applicant (Total: CAD \$99,360)

Compute Canada Resource Allocation Competition, 2019-2020

Title: Integrated modelling to support air pollution policy decisions

Role: PI (Total in-kind compute and storage valued at: CAD \$8,265)

Marine Environmental Observation Prediction and Response Network of Centres of Excellence, 2019-2021

Title: Air quality co-benefits of decarbonizing maritime shipping for coastal communities

Role: PI (Total: CAD \$75,513)

University of British Columbia Hampton Fund Emerging Scholar Award, 2018-2020

Title: Data-based Environmental Governance: Emerging forms of data production, civic participation, and

policy

Role: PI (Total: CAD \$9,610)

University of British Columbia Sustainability Initiative Interdisciplinary Education Grant, 2018-2019

Title: Integrating case-based learning into the interdisciplinary design of sustainable energy-systems

Role: Principal Applicant (Total: CAD \$8,383)

Compute Canada Resource Allocation Competition, 2018-2019

Title: Simulation and data analysis for air pollution policy assessment Role: PI (Total in-kind compute and storage valued at: CAD \$9,663)

University of British Columbia Faculty of Science, Skylight Development Grant, 2018-2019

Title: Integrating case-based learning about energy systems into ENVR 410

Role: Principal Applicant (Total: CAD \$3,455)

Natural Sciences and Engineering Research Council (NSERC) Discovery Grants, Canada, 2018-2023

Title: Evaluating the impacts of technology and policy on long-range transport of toxic pollutants

Role: PI (Total: CAD \$142,500)

Social Sciences and Humanities Research Council (SSHRC) Insight Grants, Canada, 2018-2022

Title: Environmental justice and air quality in Canada – Identifying and evaluating inequities in the production, distribution, and regulation of industrial air pollution

Role: Co-Investigator (PI: David Boyd, Total: CAD \$201,600)

Cascadia Urban Analytics Co-operative, 2018-2019

Title: Data analytics strategies for understanding and improving urban air quality and health in Cascadia

Role: PI (Total: CAD \$20,000)

REFEREED JOURNAL ARTICLES

* indicates supervised UBC student, postdoc, or research assistant

- 15. **Giang A**, Castellani K*. Cumulative air pollution indicators highlight unique patterns of injustice in urban Canada. (2020) *Environmental Research Letters*. 15(12):124063.
- 14. Mulvaney K, Selin NE, **Giang A**, Muntean M, Li CT, Zhang D, Angot H, Thackray CP, Karplus V. Mercury Benefits of Climate Policy in China: Addressing the Paris Agreement and the Minamata Convention Simultaneously. (2020) *Environmental Science & Technology*. 54(3):1326-1335.
- 13. Angot H, Hoffman N, **Giang A**, Thackray CP, Hendricks AN, Urban NR, Selin NE. Global and Local Impacts of Delayed Mercury Mitigation Efforts. (2018) *Environmental Science & Technology*. 52(22):12968-77.
- 12. **Giang A**, Song S, Muntean M, Janssens-Maenhout G, Harvey A, Berg E, Selin NE. (2018) Understanding factors influencing the detection of mercury policies in modelled Laurentian Great Lakes wet deposition. *Environmental Science: Processes & Impacts.* 20(10):1373-89.
- 11. Muntean M, Janssens-Maenhout G, Song S, **Giang A**, Selin NE, Zhong H, Zhao Y, Olivier J, Guizzardi D, Crippa M, Schaaf E, Dentener F. (2018) Evaluating EDGARv4.tox2 speciated mercury ex-post scenarios and their impacts on modelled global and regional wet deposition patterns. *Atmospheric Environment*. 184:56-68.
- 10. Kwon SY, Selin NE, **Giang A**, Karplus V, Zhang D. (2018) Present and future mercury concentrations in Chinese rice: Insights from modeling. *Global Biogeochemical Cycles*. 32: 437-467.
- 9. Perlinger JA, Urban NR, **Giang A**, Selin NE, Hendricks AN, Zhang H, Kumar A, Wu S, Gagnon VS, Gorman HS, Norman ES. (2018) Responses of deposition and bioaccumulation in the Great Lakes region to policy and other large- scale drivers of mercury emissions. *Environmental Science: Processes & Impacts.* 20(1): 195-209.
- 8. Wolfe PJ, **Giang A**, Ashok A, Selin NE, Barrett SRH. (2016) Costs of IQ Loss from Leaded Aviation Gasoline Emissions. *Environmental Science & Technology*. 50(17):9026-33.
- 7. Stokes LC, **Giang A**, Selin, NE. (2016) Splitting the South: China and India's Divergence in International Environmental Negotiations. *Global Environmental Politics*. 16(4):12-31.
- 6. Song S, Selin NE, Gratz LE, Ambrose JL, Jaffe DA, Shah V, Jaeglé L, Giang A, Yuan B, Kaser L, Apel EC. (2016) Constraints from observations and modeling on atmosphere–surface exchange of mercury in eastern North America. *Elementa: Science of the Anthropocene*. 4(1):000100.
- 5. **Giang A**, Selin NE. (2016) Benefits of mercury controls for the United States. *Proceedings of the National Academy of Sciences*. 113(2):286-91.

- 4. **Giang A**, Stokes LC, Streets DG, Corbitt ES, Selin NE. (2015) Impacts of the Minamata Convention on mercury emissions and global deposition from coal-fired power generation in Asia. *Environmental Science & Technology*. 49(9):5326-35.
- 3. Weiss-Penzias P, Amos HM, Selin NE, Gustin MS, Jaffe DA, Obrist D, Sheu GR, **Giang A**. (2015) Use of a global model to understand speciated atmospheric mercury observations at five high-elevation sites. *Atmospheric Chemistry and Physics*. 15(3):1161-73.
- 2. Csiszar SA, Daggupaty SM, Verkoeyen S, **Giang A**, Diamond ML. (2012) SO-MUM: A coupled atmospheric transport and multimedia model used to predict intraurban-scale PCB and PBDE emissions and fate. *Environmental Science & Technology*. 47(1):436-45.
- 1. Robson M, Melymuk L, Csiszar SA, **Giang A**, Diamond ML, Helm PA. (2010) Continuing sources of PCBs: The significance of building sealants. *Environment International*. 36(6):506-13.

MANUSCRIPTS IN REVIEW

- 3. Barnard-Chumik H*, Cappe N*, **Giang A**. Knowledge Politics in Environmental Impact Assessment: A Case Study of the Muskrat Falls Hydroelectric Project.
- 2. Edwards MR, **Giang A**, Macey G, Magavi Z, Nicholas D, Schulman A. Repair failures call for new policies to tackle leaky natural gas distribution systems.
- 1. Vasquez M*, McIlroy-Young B, **Giang A**, Steel D, Öberg G. Exploring scientists' values by analyzing their framing of nature and uncertainty. (2020)

BOOK CHAPTERS

Gorman HS, Gagnon VS, Giang A, Perlinger JA, Urban NR. (2019). Policy, Science, and Transdisciplinary Research: When Will it Be Safe to Eat as Much Fish as Desired? A Research Agenda for Environmental Management. ed. Halvorsen KE, Schelly C, Handler R, Knowlton JL. Edward Elgar Publishing: 93-106.

INVITED TALKS

Air Quality and Health Workshop, BC Lung Association, Vancouver, BC. February 11, 2020.

Geography Colloquium, University of British Columbia, Vancouver, BC. January 28, 2020.

Mercury Australia Workshop, Australian National University, Canberra, AU. November 7, 2019.

Inuvialuit Game Council Board Meeting, Whitehorse, YT. September 25, 2019.

Atmospheric Science Seminar, University of British Columbia, Vancouver, BC. July 18, 2019

Civil and Environmental Engineering, University of Victoria, Victoria, BC. April 9, 2019

Energy Literacy, Action and Transition Panel, UBC Language & Literacy Education, UBC Sustainability Initiative, University of Alberta Future Energy Systems

Michigan Sustainability Cases Galaxy, University of Michigan, Ann Arbor, MI. June 9, 2018.

Canadian Electricity Association – Sustainable Electricity Steering Committee, Vancouver, BC. March 13, 2018.

Civil and Environmental Engineering Seminar, Michigan Technological University, Houghton, MI. October 16, 2017.

Southern Ontario Centre for Atmospheric Aerosol Research Seminar, University of Toronto, Toronto, ON. November 2, 2016.

Climate and Health Seminar, Columbia University Mailman School of Public Health. October 20, 2016.

SELECTED CONFERENCE PRESENTATIONS/PAPERS

* indicates supervised UBC student, postdoc, or research assistant

- 23. Gardner-Frolick R*, **Giang A** (2020) "Framework for selecting data analytic and modeling methods for environmental justice analysis." Presentation. *American Association for Aerosol Research Conference*, Online, October 6, 2020.
- 22. **Giang A**, Li M*, Barnard-Chumik H* (2019) "Interdisciplinary methods for linking mercury sources, biogeochemistry, and ecosystem and human health." Invited Presentation. *American Geophysical Union Fall Meeting*, San Francisco, CA, December 12, 2019.
- 21. **Giang A**, Barnard-Chumik H*, Castellani K* (2019) "Energy Systems Impacts on Pollution, Environmental Health, and Environmental Justice." Presentation. *Institute for Operations Research and the Management Sciences Annual Meeting*, Seattle, WA, October 22, 2019.
- 20. Gardner-Frolick R*, Tessum C, Marshall J, **Giang A** (2019) "Intervention Model for Air Pollution (InMAP) Performance Assessment in Canada." Poster. *American Association for Aerosol Research Conference*, Portland, OR, October 15, 2019.
- Chakraborty M*, Meiklejohn J, Babaee K, Rogak S, Giang A, Zimmerman N (2019) "Portable Realtime Black Carbon Monitoring Using the MA300: Performance Characterization in Laboratory Environments." Poster. American Association for Aerosol Research Conference, Portland, OR, October 8, 2019.
- 18. Kruemmel E, Li M*, **Giang A** (2019) "Influences of Environmental Changes on Mercury Burden of Beaufort Beluga Food Web: Project Design." Poster. *Northern Contaminants Program Results Workshop*, Whitehorse, YT, October 15, 2019.
- 17. Barnard-Chumik H*, Cappe N*, **Giang A** (2019) "Environmental Impact Assessment as a Tool to Reduce Local Exposure to Methylmercury" Presentation. 14th International Conference on Mercury as a Global Pollutant, Krakow, Poland, September 9, 2019.
- Chakraborty M*, Zimmerman N, Giang A (2019) "Framework for assessing air quality and health impacts of rural emissions in the Indo Gangetic Plain through measurement and modeling" Poster. International GEOS-Chem Meeting, Cambridge, MA, May 8, 2019.
- Castellani K*, Boyd D, Giang A (2018) "Exploring Indicators for Air Pollution and Environmental Injustice in Canada" Poster. American Geophysical Union Fall Meeting, Washington DC, December 10, 2018.
- 14. **Giang A**. (2018) Environmental data justice in the smart city: A research agenda for developing environmental justice indicators. Social Justice and Equity in the Engineering of Smart and Connected Cities Workshop, University of Washington, December 10, 2018.
- 13. Castellani K*, Boyd D, **Giang A** (2018) "Towards a Systematic Review of Environmental Injustice in Canada: National Patterns of Environmental Risks and Benefits" Poster. *Joint Annual Meeting of the International Society of Exposure Science and the International Society for Environmental Epidemiology*, Ottawa, ON, August 29.
- 12. **Giang A.** (2018) "Understanding the epistemic influence of non-state actors in treaty implementation: Case Study of the Minamata Convention." Paper and presentation. *International Studies Association* 59th Annual Convention, San Francisco, CA, April 6.
- 11. **Giang A.** (2017) "Engaging, empowering, and enacting community: Case study of the Superfund Research Program." Presentation. *Annual Meeting of the Society for Social Studies of Science*, Boston, MA, August 30.
- 10. **Giang A**, Monier E, Couzo E, Thackray C, Selin NE. (2017) "Understanding the impact of meteorological variability on global atmospheric mercury monitoring for policy." Presentation. 13th International Conference on Mercury as a Global Pollutant, Providence, RI, July 19.
- 9. **Giang A**, Monier E, Couzo E, Thackray C, Selin NE. (2017). "Understanding Meteorological Drivers of Variability in Atmospheric Mercury." Poster. 100th Canadian Chemistry Conference and Exhibition, Toronto, Canada, June 1.

- 8. **Giang A**, Monier E, Couzo E, Thackray C, Selin NE. (2016) "Implications of climate variability for monitoring the effectiveness of mercury policy." Poster. *American Geophysical Union Fall Meeting*, San Francisco, CA, December 12.
- 7. **Giang A**, Thackray CP, Muntean M, Harvey A, Berg E, Song S, Selin NE. (2016) "Leveraging environmental monitoring networks for policy evaluation." Presentation. *Technology Management Policy Graduate Consortium*, Cambridge, UK, June 28.
- 6. Giang A, Selin NE. (2015) "Developing Monitoring Indicators to Support Community Needs through Modelling: Detecting Anthropogenic Mercury Emissions Changes in the Great Lakes" Poster. Society of Environmental Toxicology and Chemistry North America 36th Annual Meeting, Salt Lake City, UT, November 4.
- 5. **Giang A**, Zhang H, Amos H, Song S, Zhang Y, Selin NE. (2015) "Can we 'see' signals of anthropogenic mercury emissions changes in modelled Great Lakes deposition?" Presentation. *12th International Conference on Mercury as a Global Pollutant*, Jeju, South Korea, June 18.
- 4. **Giang A**, Stokes LC, Streets DG, Corbitt ES, Selin NE. (2014) "Impacts of the Minamata Convention for Mercury Emissions and Transport from Coal-fired Power Generation in Asia." Poster. *American Geophysical Union Fall Meeting*, San Francisco, CA, December 18.
- 3. **Giang A**, Stokes LC, Selin NE. (2014) "Mercury emissions in the Minamata Convention: Asia, North America, and Europe." Paper and presentation. *International Studies Association 55th Annual Convention*, Toronto, ON, March 26-29.
- 2. **Giang A**, Zhang Y, Selin NE. (2013) "Quantifying US Benefits from Mercury Policy: an integrated assessment." Presentation. 11th International Conference on Mercury as a Global Pollutant, Edinburgh, Scotland, July 28-August 2.
- 1. **Giang A**, Selin NE. (2013) "Quantifying the health and economic benefits of mercury policy" Poster. 6th International GEOS-Chem Conference, Cambridge, MA, May 6-9.

OTHER PUBLICATIONS

- 6. Giang A, Selin NE, Angot H, Gorman H, Urban N, Gagnon VS, Perlinger J. "Public Comment to the US EPA on 'National Emissions Standard for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units: Reconsideration of Supplemental Finding and Residual Risk and Technology Review." April 17, 2019.
- 5. Stokes L, Selin N, **Giang A**. "Splitting the South: China and India's Divergence in International Environmental Negotiations." *ISEP Policy Brief*, Initiative for Sustainable Energy Policy, Johns Hopkins University. April 2018.
- 4. Stokes L, Selin N, **Giang A**. "Green Leadership From a Divided South? China and India's Divergence Shape Outlook for International Negotiations." New Security Beat: the blog of the Environmental Change and Security Program., Woodrow Wilson International Center for Scholars. December 5, 2016.
- 3. Selin NE, **Giang A**. "Are tighter EPA controls on mercury pollution worth it?" *The Conversation*. February 9, 2016.
- 2. **Giang A**, Mulvaney K, Selin NE. "Public Comment to the US EPA on 'Supplemental Finding That It Is Appropriate and Necessary To Regulate Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units'." January 15, 2016.
- Selin NE, Stokes LC, Alpert A, Czaika E, Edwards B, Giang A, Rumore D, Saari R, Staples M, van der Hoop J, Wolfe P. "Mercury Science Bulletin Recent Findings from Scientific Research." Fifth Session of the Intergovernmental Negotiating Committee to prepare a globally legally binding instrument on mercury, UN Environment Programme, Geneva, Switzerland. January 13-18, 2013.

TEACHING EXPERIENCE

Instructor

CEEN 525, "Energy Policy," UBC, W2019 T1, W2020 T1 Clean Energy Engineering Master's Program; Graduate Lecture

ENVR 410, "Energy, Environment and Society" (w/ Terre Satterfield), UBC, W2018 T2, W2019 T2 Earth, Ocean and Atmospheric Sciences; Undergraduate Lecture

Faculty Sponsor

Directed Studies in Environmental Science, W2018 T1-T2, W2019 T2 Student Directed Seminar on "Engineering in the Face of Climate Change," Scheduled for W2018 T2

Guest Lectures

MECH2: Anti-Racism and Engineering, UBC, November 2020; RES602: Interdisciplinary Research Design for Sustainability Impact, UBC, February 2020; MECH410U: Air Pollution, Technology and Society, UBC, March 2019; ENVR200: Introduction to Environmental Science, UBC, March 2019, October 2018; VANT150: Sustainability and Engineering Design, UBC, April 2019, March 2018; ENVR373: Air Pollution Formation and Impacts, UNC Asheville, March 2017, April 2019; IDS410: Modelling and Assessment for Policy, MIT, April 2017, April 2016; UN5100: Center for Water and Society Colloquium, MTU, February 2016; STS075: Technology and Culture, MIT, December 2015.

Formal Training

UBC Faculty of Science Paired Teaching Start-Up Program, 2018-2020 Canadian Engineering Education Association Institute of Engineering Teaching, UBC, Spring 2018 Kaufman Teaching Certificate Program, MIT, Spring 2016

RESEARCH SUPERVISION

Graduate Students

 $As \ advisor$

Emma Gillies, MSc in Resources, Environment & Sustainability

Erika Luna-Perez (co-supervised with N Ramankutty), MSc in Resources, Environment & Sustainability Claire Ewing (co-supervised with D Boyd), MA in Resources, Environment, & Sustainability

Imranul Laskar, PhD in Resources, Environment & Sustainability

Rivkah Gardner-Frolick, PhD in Mechanical Engineering

Mrinmoy Chakraborty (co-supervised with N Zimmerman), PhD in Mechanical Engineering

Bassam Javed (co-supervised with M Kandlikar), PhD in Resources, Environment & Sustainability

Hannah Barnard-Chumik, MSc in Resources, Environment & Sustainability (2018-2020)

As committee member

Verena Rossa-Roccor, PhD in Resources, Environment & Sustainability

Sakshi Jain, PhD in Mechanical Engineering

Narayan Gopinathan, MSc in Resources, Environment & Sustainability, 2020

Rudri Bhatt, MSc in Resources, Environment & Sustainability, 2020

Andrea Byfuglien, MSc in Resources, Environment & Sustainability, 2020

Poushali Maji, PhD in Resources, Environment & Sustainability, 2019

Marco Vasquez, MSc in Resources, Environment & Sustainability, 2019

Undergraduate Students

Sophie Thornton, Rochelle Maher, Ashton Kerr (2020), Joy Du (2020), Gabby Doebeli (2019-2020), Natalie Cappe (2019-2020), Chrysen Park (2019), Erika Luna (2018), Carlina Kim (2018-2019)

Postdoctoral Fellows

Sara Elder, co-supervised with H Wittman Miling Li, 2019, now Assistant Professor, University of Delaware

Research Assistants

Bronwyn McIlroy-Young (2019-2020), Kaitlin Castellani (2018-2019), Avery Holliday (2019)

PROFESSIONAL MEMBERSHIPS

Engineer-in-Training, Engineers & Geoscientists British Columbia American Geophysical Union International Society for Exposure Sciences Canadian Engineering Education Association Society of Environmental Toxicology and Chemistry Society for Social Studies of Science

PROFESSIONAL SERVICE

UBC Service

Faculty of Science Inclusion, Diversity, Equity Advisory Committee (2020); UBC Climate Emergency Teaching & Learning Working Group, Member, UBC-wide (2020); Spring Graduate Awards Committee, Science and Health, Member, Faculty of Graduate and Postdoctoral Studies, UBC (2020); Climate Action and Sustainability Committee, Acting Chair and Member, Dept. of Mechanical Engineering, UBC (2019-present); Equity, Diversity and Inclusion Committee, Member, Dept. of Mechanical Engineering, UBC (2019-present); Merit and PSA Committee, Member, Dept. of Mechanical Engineering, UBC (2019); Communications Committee, Member, IRES, UBC (2018-present); Data Science in Graduate Education Working Group, Faculty of Science, UBC (2019-present); Awards Committee, Member, IRES, UBC (2018-2019); Faculty of Science Curriculum Committee, Member, UBC (2018); Women in Science and Engineering Mentor, UBC (2018, 2019)

External Service

Early Career Editorial Advisory Board Member for Environmental Science & Technology, American Chemical Society (2021-present)

Editorial Board Member for Environmental Research Communications, Institute of Physics (2019-present)

Ad hoc reviewer for: <u>Journals</u>. Environmental Science & Technology, Environmental Pollution, Critical Reviews in Environmental Science and Technology, Atmospheric Chemistry & Physics, Journal of Cleaner Production, Nature Communications, Nature Sustainability, Science of the Total Environment, Atmospheric Environment, Journal of Environmental Management. <u>Grants</u>. US National Oceanographic and and Atmospheric Administration Atmospheric Chemistry, Carbon Cycle, and Climate Program; Social Sciences and Humanities Research Fund, New Frontiers in Research Fund

Conference and Workshop Organization: Session Chair for AGU 2020; Lead Co-Organizer for UBC Environmental Justice Knowledge Exchange Symposium (2018-2019); Oral Session Co-Chair, Joint Annual Meeting of the International Society of Exposure Science and the International Society for Environmental Epidemiology (2018); Local Organizing Committee Member for 13th International Conference on Mercury as a Global Pollutant, Providence, RI (2016-2017)

LANGUAGES

Mandarin (advanced oral, beginner written), French (intermediate), German (lower intermediate) Programming: MATLAB, Python, IDL, Fortran, bash, C, C++