NOELLE ECKLEY SELIN

Massachusetts Institute of Technology
77 Massachusetts Avenue (E17-381), Cambridge, MA 02139-4307 USA, +1 617 324-2592
selin@mit.edu http://mit.edu/selin/

EDUCATION

Ph.D., Earth and Planetary Sciences, Harvard University (2007)
M.A., Earth and Planetary Sciences, Harvard University (2000)
B.A., Environmental Science and Public Policy, Harvard University, *magna cum laude* with highest honors (2000)

ACADEMIC AND PROFESSIONAL HONORS

Honorable Mention (Runner-Up), Harold and Margaret E. Sprout Award for Best Book in International Environmental Politics, International Studies Association, for *Mercury Stories* (2022)
Best Paper Second Runner-Up, *Environmental Science: Processes and Impacts* (2020) for Thackray et al.
McKinnon Walker Trust Fellowship, University of Wollongong, Australia (2020) *Cancelled due to COVID-19
Invited speaker, U.S.-E.U. Frontiers of Engineering (2019)
Best Paper Nominee, *Environmental Science: Processes and Impacts* (2018), for Giang et al., and Perlinger et al.
Second Runner-Up, Best Feature, *Environmental Science and Technology* (2018) for Chen et al.
Hans Fischer Senior Fellowship, Technical University of Munich-Institute for Advanced Study (2018)
Joseph A. Martore (MIT 1975) Award for Exceptional Contributions to Education in the MIT Institute for Data, Systems and Society (with K. Oye) (2018)
Best Environmental Policy Paper, *Environmental Science and Technology* (2016) for Wolfe et al.
AAAS Leshner Leadership Institute Public Engagement Fellow (2016-2017)
Best Environmental Policy Paper, *Environmental Science and Technology* (2015) for Giang et al.
Kavli Fellow: Invited Participant, U.S. National Academies Kavli Frontiers of Science Symposium (2015)
Esther and Harold E. Edgerton Career Development Professorship, Massachusetts Institute of Technology (2013-2016)
Member, Global Young Academy (2014-2018)
MIT Technology and Policy Program Faculty Appreciation Award (2013)
Leopold Leadership Fellow (2013-2014)
U.S. National Science Foundation CAREER award (Atmospheric Chemistry) (2011-2017)
Invited participant, Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS X) (2009)
Invited participant, Dissertations Initiative for the Advancement of Climate Change Research (DISCCRS) (2008)
U.S. Environmental Protection Agency Science to Achieve Results (STAR) Graduate Research Fellowship (2005-7)
National Science Foundation Graduate Research Fellowship (2002-5)
Fulbright fellowship, Denmark (2000-1)
Harvard University Sally and Cresap Moore Prize (for energy and enthusiasm for interdisciplinary learning) (2000)
Radcliffe College Elizabeth Cary Agassiz and Josephine L. Murray Traveling Fellowships, Harvard University (2000)

PROFESSIONAL EXPERIENCE

PROFESSOR, Massachusetts Institute of Technology, Institute for Data, Systems and Society and Department of Earth, Atmospheric and Planetary Sciences, Cambridge, MA, USA, July 2021-pres.
INTERIM DIRECTOR, Institute for Data, Systems, and Society, Massachusetts Institute of Technology, Cambridge, MA, USA, July 2023-pres.
DIRECTOR, Technology and Policy Program, Massachusetts Institute of Technology, Cambridge, MA, USA, September 2018-June 2023.
ASSOCIATE DIRECTOR, Institute for Data, Systems, and Society, Massachusetts Institute of Technology, Cambridge, MA, USA, September 2018-June 2023.

ASSOCIATE PROFESSOR, **Massachusetts Institute of Technology, Institute for Data, Systems and Society and Department of Earth, Atmospheric and Planetary Sciences,** Cambridge, MA, USA, July 2015-June 2021 (with tenure as of 2017)

CO-DIRECTOR, Superfund Research Program, Massachusetts Institute of Technology Center for Environmental Health Sciences, Cambridge, MA, USA 2019-2021.

CO-DIRECTOR, Policy Laboratory, Massachusetts Institute of Technology Center for International Studies, Cambridge, MA, USA, September 2017-2020.

ASSOCIATE DIRECTOR, Technology and Policy Program, Massachusetts Institute of Technology, Cambridge, MA, USA, September 2015-December 2017.

ASSISTANT PROFESSOR, **Massachusetts Institute of Technology,** Engineering Systems Division and Department of Earth, Atmospheric and Planetary Sciences, Cambridge, MA, USA, January 2010-July 2015.

RESEARCH SCIENTIST, **Massachusetts Institute of Technology,** Center for Global Change Science and Joint Program on the Science and Policy of Global Change, Cambridge, MA, USA, May 2009-December 2009.

POSTDOCTORAL ASSOCIATE, **Massachusetts Institute of Technology,** Center for Global Change Science and Joint Program on the Science and Policy of Global Change, Cambridge, MA, USA, November 2007-May 2009.

GRADUATE RESEARCHER, Harvard University, Atmospheric Chemistry Modeling Group, Department of Earth and Planetary Sciences, Cambridge, MA, USA, September 2002-November 2007

TEAM LEADER, WRITER, EDITOR AND ISSUE EXPERT, International Institute for Sustainable Development (IISD), **Earth Negotiations Bulletin and Linkages,** June 2003-December 2005

RESEARCH ASSOCIATE, Harvard Kennedy School, Initiative on Science and Technology for Sustainability, and **MANAGING EDITOR,** Forum on Science and Technology for Sustainability, Cambridge, MA, September 2001-September 2002

FULBRIGHT FELLOW, European Environment Agency and University of Copenhagen, Copenhagen, Denmark, September 2000-September 2001

RESEARCH FELLOW, Harvard Kennedy School, Global Environmental Assessment Project, Cambridge, MA, September 1998-September 2000

ENVIRONMENTAL CAREERS ORGANIZATION ASSOCIATE, **U.S. Environmental Protection Agency,** Office of Pollution Prevention and Toxics, Chemical Control Division, Washington, DC, June 1999-August 1999
Office of International Activities, Washington, DC, June 1998-August 1998, June 1997-August 1997

INTERN, United States Senate, Office of Senator John F. Kerry, Washington, DC, March 1996-June 1996

PUBLICATIONS[1]

Book

1. Selin, H. and **N. E. Selin**. 2020. *Mercury Stories: Understanding Sustainability through a Volatile Element.* Cambridge, MA: MIT Press.

Peer-Reviewed Journal Articles [indicates supervised postdoc or student]*

115. A. Siddiqi, J. M. Wescoat Jr, and **N.E. Selin.** 2024. "Evolution of system connectivity to support food production in the Indus Basin in Pakistan." *Proceedings of the National Academy of Sciences (PNAS)* in press.

114. *A. Feinberg, M. Jiskra, P. Borrelli, J. Biswakarma, and **N. E. Selin.** 2024. "Deforestation as an anthropogenic driver of mercury pollution." *Environmental Science and Technology,* 58(7), 3246-3257.

113. *P. Maji and **N. E. Selin**. 2024. "A systems analysis of sustainability impacts of agricultural policies in India." *Earth's Future,* 12, e2023EF003667.

112. *P. Picciano, M. Qiu, S. D. Eastham, M. Yuan, J. Reilly, and **N. E. Selin**. 2023. "Air Quality Related Equity Implications of U.S. Decarbonization Policy." *Nature Communications*, 14, 5543.

111. **N. E. Selin**, A. Giang, and W. C. Clark. 2023. "Progress in Modeling Dynamic Systems for Sustainable Development." *Proceedings of the National Academy of Sciences (PNAS),* 120(40), e2216656120.

110. *L. M. Freese, G. Chossiere, S. D. Eastham, A. Jenn, and **N.E. Selin**. 2023. "Nuclear Power Generation Phaseouts Redistribute U.S. Air Quality and Climate Related Mortality Risk." *Nature Energy*, 8:492-503.

[1] Note: Prior to 2004, publications are under N. Eckley

109. S. D. Eastham, E. Monier, D. Rothenberg, S. Paltsev, and **N. E. Selin**. 2023. "Rapid estimation of climate-air quality interactions in integrated assessment using a response surface model." *ACS Environmental Au*, 3(3):153-163.

108. T. Carter, C. L. Heald, and **N. E. Selin**. 2023. "Large mitigation potential of smoke $PM_{2.5}$ in the US from human-initiated fires." *Environmental Research Letters*, 18:014002.

107. *F. Kinniburgh, H. Selin, **N. E. Selin**, and M. Schreurs. 2023. "When private governance impedes multilateralism: The case of international pesticide governance." *Regulation and Governance*, 17:425-448.

106. H. Selin and **N. E. Selin**. 2023. "The Human-Technical-Environmental Systems Framework for Sustainability Analysis." *Sustainability Science*, 18:791-808.

105. *M. Qiu, C. M. Zigler, and **N. E. Selin**. 2022. "Impacts of wind power on air quality, premature mortality, and exposure disparities in the US." *Science Advances*, 8(48) eabn8762.

104. H. Selin and **N. E. Selin**. 2022. "From Stockholm to Minamata and Beyond: Governing Mercury Pollution for a More Sustainable Future." *One Earth*, 5(10):1109-1125.

103. *W. Atkinson, S. D. Eastham, Y.-H. H. Chen, J. Morris, S. Paltsev, C. A. Schlosser, and **N. E. Selin.** 2022. "A Tool for Air Pollution Scenarios (TAPS v1.0) to enable global, long-term, and flexible study of climate and air quality policies." *Geosci. Model Dev.*, 15:7767–7789, https://doi.org/10.5194/gmd-15-7767-2022.

103. *M. Qiu, C. M. Zigler, and **N. E. Selin**. 2022. "Statistical and machine learning methods for evaluating trends in air quality under changing meteorological conditions." *Atmospheric Chemistry and Physics* 22, 10551-10566.

101. *A. Feinberg, *T. Dlamini, M. Jiskra, V. Shah and **N. E. Selin**. 2022. "Evaluating atmospheric mercury (Hg) uptake by vegetation in a chemistry-transport model." *Environmental Science: Processes and Impacts*, 24, 1303-1318.

100. A.T. Schartup, A. L. Soerensen, H. Angot, K. Bowman, and **N. E. Selin**. 2022. "What are the likely changes in mercury concentration in the Arctic atmosphere and ocean under future emissions scenarios?" *Science of the Total Environment*, 836:155477.

99. M. Yuan, A. Barron, **N. E. Selin**, *P. Picciano, L. Metz, J. Reilly and H. Jacoby. 2022. "Meeting U.S. Greenhouse Gas Emissions Goals with the International Air Pollution Provision of the Clean Air Act." *Environmental Research Letters*, 17(5):054019.

98. A. Hrdina, I. N. Kohale, S. Kaushal, *J. Kelly, **N. E. Selin**, B. P. Engelward, and J. H. Kroll. 2022. "The Parallel Transformations of Polycyclic Aromatic Hydrocarbons in the Body and in the Atmosphere." *Environmental Health Perspectives* 130(2).

97. *H. Angot, *E. Rutkowski, M. Sargent, S. C. Wofsy, L. R. Hutyra, D. Howard, D. Obrist, and **N. E. Selin.** 2021. "Atmospheric mercury sources in a coastal-urban environment: A case study in Boston, Massachusetts, USA." *Environmental Science: Processes & Impacts*, 23, 1914-1929.

96. *J. Kelly, P. Ivatt, M. J. Evans, J. H. Kroll, A. Hrdina, I. N. Kohale, F. M. White, B. P. Engelward, and **N. E. Selin.** 2021. "Global Cancer Risk from Unregulated Polycyclic Aromatic Hydrocarbons." *GeoHealth*, 5, e2021GH000401.

95. *Y. Zhang, S. Eastham, A.K.H. Lau, J.C.H. Fung and **N.E. Selin**. 2021. "Global Impacts of Domestic and International Shipping." *Environmental Research Letters*, 16, 084055.

94. **N. E. Selin.** 2021. "Lessons from a Pandemic for Systems-Oriented Sustainability Research." *Science Advances*, 7, eabd8988.

93. H. Selin, *Y. Zhang, R. Dunn, **N.E. Selin** and A. K. H. Lau. 2021. "Mitigation of CO_2 emissions from International Shipping through National Allocation." *Environmental Research Letters*, 16(4):045009.

92. *M. Qiu, Y. Weng, J. Cao, **N. E. Selin** and V. J. Karplus. 2020. "Improving evaluation of energy policies with multiple goals: Comparing *ex ante* and *ex post* approaches." *Environmental Science & Technology* 54(24):15584-15593.

91. *K. M. Mulvaney, **N. E. Selin**, A. Giang, M. Muntean, C-T. Li, D. Zhang, H. Angot, C. P. Thackray, and V. J. Karplus. 2020. "Mercury benefits of climate policy in China: Addressing the Paris Agreement and the Minamata Convention Simultaneously." *Environmental Science & Technology* 54(3):1326-1335.

90. *C. P. Thackray, **N. E. Selin**, and C. J. Young. 2020. "Global atmospheric chemistry model for the fate and transport of PFCA and their precursors." *Environmental Science: Processes and Impacts*, 22, 285-293.

89. T. R. Khan, D. Obrist, Y. Agnan, **N. E. Selin**, J. A. Perlinger. 2019. "Atmosphere-terrestrial exchange of gaseous elemental mercury: Parameterization improvement through direct comparison with measured ecosystem fluxes." *Environmental Science: Processes and Impacts,* 21, 1699-1712.

88. G. G. Singh, V. F. Farjalla, B. Chen, A. E. Pelling, E. Ceyhan, M. Dominik, E. Alisic, J. Kerr, **N. E. Selin**, G. Bassioni, E. Bennett, A. H. Kemp, K. M. A. Chan. 2019. "Researcher engagement in policy deemed societally beneficial yet unrewarded." *Frontiers in Ecology and the Environment,* 17(7):375-382.

87. *E. Dimanchev, S. Paltsev, M. Yuan, *D. Rothenberg, C. Tessum, J. Marshall, and **N. E. Selin**. 2019. "Health co-benefits of sub-national renewable energy policy in the U.S." *Environmental Research Letters*, 14, 085012.

86. *M. Li, D. Zhang, C.-T. Li, **N. E. Selin**, and V. J. Karplus. 2019. "Co-benefits of China's climate policy for air quality and human health in China and transboundary regions in 2030." *Environmental Research Letters*, 14, 084006.

85. C. Wagner, H. Amos, C. Thackray, Y. Zhang, E. Lundgren, G. Forget, C. Friedman, **N. E. Selin**, R. Lohmann, and E. Sunderland. 2019. "A global 3-D ocean model for polychlorinated biphenyls: Benchmark compounds for understading the impacts of global change on neutral persistent organic pollutants." *Global Biogeochemical Cycles*, 33, GB006018.

84. *S. Song, *H. Angot, **N. E. Selin**, H. Gallée, F. Sprovieri, N. Pirrone, D. Helmig, J. Savarino, O. Magand, and A. Dommergue. 2018. "Understanding mercury oxidation and air-snow exchange on the East Antarctic Plateau: A modeling study." *Atmospheric Chemistry and Physics*, 18:15825-15840.

83. *H. Angot, *N. Hoffman, *A. Giang, C. P. Thackray, A. N. Hendricks, N. R. Urban and **N. E. Selin.** 2018. "Global and Local Impacts of Delayed Mercury Mitigation Efforts." *Environmental Science & Technology*, 52(22):12968-12977.

82. *A. Giang, *S. Song, M. Muntean, G. Janssens-Maenhout, *A. Harvey, *E. Berg, and **N. E. Selin.** 2018. "Understanding factors influencing the detection of mercury policies in modelled Laurentian Great Lakes wet deposition." *Environmental Science: Processes & Impacts,* 20:1373-1389.

81. *B. Brown-Steiner, **N. E. Selin,** R. Prinn, S. Tilmes, L. Emmons, J.-F. Lamarque, and P. Cameron-Smith. 2018. "Evaluating Simplified Chemical Mechanisms within CESM Version 1.2 CAM-chem (CAM4): MOZART-4 vs. Reduced Hydrocarbon vs. Super-Fast Chemistry," *Geosci. Model Dev*. 11:4155-4174.

80. A. J. Jefferson, M. A. Kenney, T. M. Hill and **N. E. Selin**. 2018. "Universities Can Lead the Way Supporting Engaged Geoscientists." *Eos*, 99, doi:10.1029/2018EO111567.

79. C. Chen, C. Driscoll, C. Eagles-Smith, C. Eckley, D. Gay, H. Hsu-Kim, S. Keane, J. Kirk, R. Mason, D. Obrist, H. Selin, **N. E. Selin,** M. Thompson. 2018. "A Critical Time for Mercury Science to Inform Global Policy." *Environmental Science and Technology*, 52:9556-9561.

78. *B. Brown-Steiner, **N. E. Selin,** R. G. Prinn, E. Monier, S. Tilmes, L. Emmons, F. Garcia-Menendez. 2018. "Maximizing Ozone Signals Among Chemical, Meteorological, and Climatological Variability." *Atmospheric Chemistry and Physics*, 18:8373-8388.

77. **N. E. Selin.** 2018. "A proposed global metric to aid mercury pollution policy." *Science* 360(6389):607-609.

76. *M. Li, D Zhang, C. T. Li, *K. M. Mulvaney, **N. E. Selin**, and V. J. Karplus. 2018. "Air Quality Co-Benefits of Carbon Pricing in China." *Nature Climate Change*, 8:398-403.

75. M. Muntean, G. Janssens-Maenhout, *S. Song, *A. Giang, **N. E. Selin**, H. Zhong, Y. Zhao, J. G. J. Olivier, D. Guizzardi, M. Crippa, E. Schaaf, F. Dentener. 2018. "Evaluating EDGARv4.tox2 speciated mercury emissions ex-post scenarios and their impacts on modelled global and regional wet deposition patterns." *Atmospheric Environment*, 184:56-68.

74. *S. Y. Kwon, **N. E. Selin**, *A. Giang, V. J. Karplus, D. Zhang. 2018. "Present and Future Mercury Concentrations in Chinese Rice: Insights from Modeling." *Global Biogeochemical Cycles*, 32(3):437-462.

73. J. A. Perlinger, N. R. Urban, *A. Giang, **N. E. Selin**, A. N. Hendricks, H. Zhang, A. Kumar, S. Wu, V. S. Gagnon, H. S. Gorman, and E. S. Norman. 2018. "Responses of Deposition and Bioaccumulation in the Great Lakes Region to Policy and Other Large-Scale Drivers of Mercury Emission." *Environmental Science: Processes & Impacts*, 20:195-209.

72. D. Obrist, J. Kirk, L. Zhang, E. Sunderland, M. Jiskra, and **N. E. Selin**. 2018. "A review of global environmental mercury processes in response to human and natural perturbations: changes in emissions, climate, and land use." *Ambio*, 47(2):116-140.

71. H. Selin, S. E. Keane, S. Wang, **N.E. Selin**, K. Davis, and D. Bally. 2018. "Linking Science and Policy to Support the Implementation of the Minamata Convention on Mercury." *Ambio*, 47(2):198-215.

70. A. M. Carlton, J. de Gouw, J.L. Jimenez, J. L. Ambrose, A. Attwood, S. Brown, K. R. Baker, C. A. Brock, R.C. Cohen, S. Edgerton, C. Farkas, D. Farmer, A. H. Goldstein, L. Gratz, A. Guenther, S. Hunt, L. Jaeglé, D. A. Jaffe, J. Mak, C. McClure, A. Nenes, T. K.V. Nguyen, J. R. Pierce, S. S. de Sa, **N.E. Selin**, V. Shah, S. Shaw, P. B. Shepson, *S. Song, J. Stutz, J. Surratt, B. J. Turpin, C. Warneke, R. A. Washenfelder, P. O. Wennberg, X. Zhou. 2018. "Synthesis of the Southeast Atmosphere Studies: Investigating fundamental atmospheric chemistry questions." *Bulletin of the American Meteorological Society (BAMS),* 99(3):547-567.

69. *E. Czaika and **N. E. Selin**. 2017. "Model Use in Sustainability Policy Making: An experimental study." *Environmental Modelling and Software*, 98:54-62.

68. *J. Holt, S. Solomon, and **N.E. Selin**. 2017. "Sensitivity of inorganic aerosol radiative effects to U.S. emissions." *Journal of Geophysical Research: Atmospheres*, 122(12):6379-6390.

67. J. Bieser, F. Slemr, J. Ambrose, C. Brenninkmeijer, S. Brooks, A. Dastoor, F. DeSimone, R. Ebinghaus, C. Gencarelli, B. Geyer, L. E. Gratz, I. M. Hedgecock, D. Jaffe, P. Kelley, C.-J. Lin, V. Matthias, A. Ryjkov, **N.E. Selin**, *S. Song, O. Travnikov, A. Weigelt, W. Luke, X. Ren, A. Zahn, X. Yang, Y. Zhu, and N. Pirrone. 2017. "Multi-model study of mercury dispersion in the atmosphere: Vertical distribution of mercury species." *Atmospheric Chemistry and Physics*, 17:6925–6955.

66. O. Travnikov, H. Angot, P. Artaxo, M. Bencardino, J. Bieser, F. D'Amore, A. Dastoor, F. De Simone, M. del Carmen Diéguez, A. Dommergue, R. Ebinghaus, X. Feng, C.N. Gencarelli, I.M. Hedgecock, O. Magand, L. Martin, V. Matthias, N. Mashyanov, N. Pirrone, R. Ramachandran, K.A. Read, A. Ryjkov, **N. E. Selin**, F. Sena, *S. Song, F. Sprovieri, D. Wip, I. Wängberg, and X. Yang. 2017. "Multi-model study of mercury dispersion in the atmosphere: Atmospheric processes and model evaluation." *Atmospheric Chemistry and Physics*, 17:5271-5295.

65. *F. Garcia-Menendez, E. Monier, and **N. E. Selin**. 2017. "The role of natural variability in projections of climate change impacts on U.S. ozone pollution." *Geophysical Research Letters*, 44(6):2911-21.

64. *C. P. Thackray and **N. E. Selin**. 2017. "Uncertainty and variability in atmospheric formation of PFCAs from fluorotelomer precursors." *Atmospheric Chemistry and Physics*, 17:4585-4597.

63. **N. E. Selin,** *L. C. Stokes, and L. Susskind. 2017. "The need to build policy literacy into climate science education." *WIREs Climate Change* 8(3), e455.

62. *R. K. Saari, *T. M. Thompson, and **N. E. Selin**. 2017. "Human Health and Economic Impacts of Ozone Reductions by Income Group." *Environmental Science and Technology*, 51(4):1953-1961.

61. *R. D. Collins, **N. E. Selin**, O. L. de Weck, and W. C. Clark. 2017. "Using Inclusive Wealth for Policy Evaluation: Application to Electricity Infrastructure Planning in Oil-Exporting Countries." *Ecological Economics* 133:23-34.

60. L. E. Gratz, J. L. Ambrose, D. A. Jaffe, C. Knote, L. Jaeglé, **N. E. Selin**, T. Campos, F. M. Flocke, M. Reeves, D. Stechman, M. Stell, A. J. Weilheimer, D. J. Knapp, D. D. Montzka, G. S. Tyndall, R. L. Mauldin III, C. A. Cantrell, E. C. Apel, R. S. Hornbrook, N. J. Blake. 2016. "Airborne Observations of Mercury Emissions from the Chicago/Gary Urban/Industrial Area during the 2013 NOMADSS Campaign." *Atmospheric Environment*, 145:415-423.

59. H. Angot, A. Dastoor, F. De Simone, K. Gårdfeldt, C. N. Gencarelli, I. M. Hedgecock, S. Langer, O. Magand, M. N. Mastromonaco, C. Nordstrøm, K. A. Pfaffhuber, N. Pirrone, A. Ryjkov, **N. E. Selin**, H. Skov, *S. Song, F. Sprovieri, A. Steffen, K. Toyota, O. Travnikov, X. Yang, and A. Dommergue. 2016. "Chemical cycling and deposition of atmospheric mercury in Polar Regions: review of recent measurements and comparison with models." *Atmospheric Chemistry and Physics*, 16:10735-10763.

58. *P. J. Wolfe, *A. Giang, A. Ashok, **N. E. Selin** and S. R. H. Barrett. 2016. "Costs of IQ Loss from Leaded Aviation Gasoline Emissions." *Environmental Science and Technology* 50(17):9026-9033.

57. **N. E. Selin.** 2016. "Teaching and Learning from Environmental Summits: COP-21 and Beyond." *Global Environmental Politics*, 16(3):31-40.

56. *T. M. Thompson, S. Rausch, *R.K. Saari, and **N.E. Selin.** 2016. "Air Quality Co-Benefits of Sub-National Carbon Policies." *Journal of the Air and Waste Management Association*, 66(10):988-1002.

55. *E. Czaika and **N.E. Selin**. 2016. "Taking Action to Reduce Waste: Quantifying Impacts of Model Use in a Multi-organizational Sustainability Negotiation." *Negotiation and Conflict Management Research*, 9:237–255.

54. *S. Y. Kwon and **N.E. Selin**. 2016. "Uncertainties in Atmospheric Mercury Modeling for Policy Evaluation." *Current Pollution Reports* 2(2):103-114.

53. *S. Song. **N.E. Selin,** L. E. Gratz, J. L. Ambrose, D. A. Jaffe, V. Shah, L. Jaeglé, A. Giang, B. Yuan, L. Kaser, E. C. Apel, R. S. Hornbrook, N. J. Blake, A. J. Weinheimer, R. L. Mauldin III, C. A. Cantrell, M. S. Castro, G. Conley, T. M. Holsen, W. T. Luke, R. Talbot. 2016. "Constraints from Observations and Modeling on Atmosphere-Surface Exchange of Mercury in Eastern North America." *Elementa: Science of the Anthropocene.* 4: 000100.

52. *C. L. Friedman and **N.E. Selin**. 2016. "PCBs in the Arctic atmosphere: determining important driving forces using a global atmospheric transport model." *Atmospheric Chemistry and Physics*, 16:3433-3448.

51. *L. Stokes, *A. Giang and **N.E. Selin**. 2016. "Splitting the South: China and India's Divergence in International Environmental Negotiations," *Global Environmental Politics* 16(4):12-31.

50. V. Shah, L. Jaeglé, L. E. Gratz, J. L. Ambrose, D.A. Jaffe, **N.E. Selin**, *S. Song, T. L. Campos, F. M. Flocke, M. Reeves, D. Stechman, M. Stell, J. Festa, J. Stutz, A. J. Weinheimer, D. J. Knapp, D. D. Montzka, G. S. Tyndall, E. C. Apel, R. S. Hornbrook, A. J. Hills, D. D. Riemer, N.J. Blake, C. A. Cantrell, and R. L. Mauldin III. 2016. "Origin of oxidized mercury in the summertime free troposphere over the southeastern U.S." *Atmospheric Chemistry and Physics,* 16:1511-1530.

49. *A. Giang and **N. E. Selin**. 2016. "Benefits of Mercury Controls for the United States." *Proceedings of the National Academy of Sciences (PNAS)*, 113(2): 286-91.

48. *L. C. Stokes and **N. E. Selin**. 2016. "The Mercury Game: Evaluating a Negotiation Simulation that Teaches Students about Science-Policy Interactions." *Journal of Environmental Studies and Sciences*, 6:597.

47. L.E. Gratz, J.L. Ambrose, D.A. Jaffe, V. Shah, L. Jaeglé, J.Stutz, J. Festa, M. Spolaor, C. Tsai, **N.E. Selin**, *S. Song, X. Zhou, A.J. Weinheimer, D.J. Knapp, D.D. Montzka, F.M. Flocke, T.L. Campos, E. Apel, R. Hornbrook, N.J. Blake, S. Hall, G.S. Tyndall, M. Reeves, D. Stechman, M. Stell. 2015. "Oxidation of mercury by bromine in the subtropical Pacific free troposphere." *Geophysical Research Letters*, 42(23):10,494-10,502.

46. *C. P. Thackray, *C. L. Friedman, Y. Zhang and **N. E. Selin**. 2015. "Quantitative assessment of parametric uncertainty in Northern hemisphere PAH concentrations." *Environmental Science and Technology*, 49(15):9185-9193.

45. *S. Song, **N. E. Selin**, A. L. Soerensen, H. Angot, R. Artz, S. Brooks, E.-G. Brunke, G. Conley, A. Dommergue, R. Ebinghaus, T. M. Holsen, D. A. Jaffe, S. Kang, P. Kelley, W. T. Luke, O. Magand, K. Marumoto, K. A. Pfaffhuber, X. Ren, G.-R. Sheu, F. Slemr, T. Warneke, A. Weigelt, P. Weiss-Penzias, D. C. Wip and Q. Zhang. 2015. "Top-down constraints on atmospheric mercury emissions and implications for global biogeochemical cycling." *Atmospheric Chemistry and Physics* 15:7103-7125.

44. *F. Garcia-Menendez, *R. K. Saari, E. Monier, and **N. E. Selin**. 2015. "U.S. air quality and health benefits from avoided climate change under greenhouse gas mitigation." *Environmental Science and Technology,* 49:7580–7588.

43. *A. Giang, *L. C. Stokes, D. G. Streets, E. S. Corbitt, and **N. E. Selin**. 2015. "Impacts of the Minamata Convention on mercury emissions and global deposition from coal-fired power generation in Asia." *Environmental Science and Technology* 49, 5326-5335.

42. *J. Holt, **N. E. Selin**, and S. Solomon. 2015. "Changes in inorganic fine particulate matter sensitivities to precursors due to large-scale US emissions reductions." *Environmental Science and Technology* 49(8):4384-4841.

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39. *T. M. Thompson, S. Rausch, *R. K. Saari, and **N. E. Selin**. 2014. "A Systems Approach to Evaluating the Air Quality Co-Benefits of U.S. Carbon Policies." *Nature Climate Change* 4:917-923.

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36. C. Lamborg, K. Bowman, C. Hammerschmidt, C. Gilmour, **N. E. Selin**, and C-M. Tseng. 2014. "Mercury in the Anthropocene Ocean." *Oceanography*, 27(1):26-87.

35. *C. L. Friedman, Y. Zhang and **N. E. Selin**. 2014. "Climate change and emissions impacts on atmospheric PAH transport to the Arctic." *Environmental Science and Technology 48:*429-437.

34. *T. M. Thompson, *R. Saari, and **N. E. Selin**. 2014. "Air quality resolution for health impacts assessment: influence of regional characteristics." *Atmospheric Chemistry and Physics,* 14:969-978.

33. **N. E. Selin**, 2014. Global Change and Mercury Cycling: Challenges for Implementing a Global Mercury Treaty. *Environmental Toxicology and Chemistry,* 33(6):1202-1210.

32. E. M. Sunderland and **N. E. Selin.** 2013. "Future trends in environmental mercury concentrations: Implications for prevention strategies." *Environmental Health,* 12(2).

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19. O.R. Bullock Jr., D. Atkinson, T. Braverman, K. Civerolo, A. Dastoor, D. Davignon, J-Y. Ku, K. Lohman, T. Myers, R. Park, C. Seigneur, **N.E. Selin**, G. Sistla, and K. Vijayaraghavan. 2008. "The North American Mercury

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18. **N.E. Selin** and D.J. Jacob. 2008. "Seasonal and spatial patterns of mercury wet deposition in the United States: Constraints on the contribution from North American anthropogenic sources" *Atmospheric Environment*, 42: 5193-5204.
17. **N.E. Selin**, D.J. Jacob, R.M. Yantosca, S. Strode, L. Jaeglé, and E.M. Sunderland. 2008. "Global 3-D land-ocean-atmosphere model for mercury: present-day versus pre-industrial cycles and anthropogenic enrichment factors for deposition," *Global Biogeochemical Cycles,* 22:GB2011.
16. H. Selin and **N.E. Selin.** 2008. "The Role of Indigenous Peoples in International Environmental Cooperation: Arctic Management of Toxic Substances." *Review of European Community and International Environmental Law*, 17(1):72-83.
15. S. Strode, L. Jaeglé, D.A. Jaffe, P.C. Swartzendruber, **N.E. Selin**, C. Holmes, and R.M. Yantosca. 2008. "Trans-Pacific transport of mercury." *Journal of Geophysical Research Atmospheres,* 113:D15305.
14. E. M. Sunderland, M. Cohen, **N.E. Selin,** and G.L. Chmura. 2008. "Reconciling models and measurements to assess trends in atmospheric mercury deposition." *Environmental Pollution,* 156:526-535.
13. **N.E. Selin**, D.J. Jacob, R.J. Park, R.M. Yantosca, S. Strode, L. Jaeglé and D. Jaffe, 2007. "Chemical cycling and deposition of atmospheric mercury: Global constraints from observations." *Journal of Geophysical Research-Atmospheres*, 112:D02308.
12. S. Strode, L. Jaeglé, **N.E. Selin**, D.J. Jacob, R.J. Park, R.M. Yantosca, R.P. Mason, and F. Slemr, 2007. Air-Sea Exchange in the Global Mercury Cycle. *Global Biogeochemical Cycles*, 21:GB1017.
11. **N.E. Selin** and H. Selin. 2006. "Global Politics of Mercury Pollution: The Need for a Multi-Scale Approach." *Review of European Community and International Environmental Law* 15(3):258-269
10. P.C. Swartzendruber, D.A. Jaffe, E.M. Prestbo, P. Weiss-Penzias, **N.E. Selin**, R. Park, D. Jacob, S. Strode, and L. Jaeglé, 2006. "Observations of Reactive Gaseous Mercury in the Free-Troposphere at the Mt. Bachelor Observatory." *Journal of Geophysical Research-Atmospheres*, 111:D24301.
9. **N.E. Selin**. 2005. "Mercury Rising: Is Global Action Needed To Protect Human Health and the Environment?" *Environment* 47(1):22-35.
8. **N. Eckley** and H. Selin. 2004. "All Talk, Little Action: Precaution and its Effects on European Chemicals Regulation." *Journal of European Public Policy* 11:1 February 2004, 78-105.
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5. B. L. Turner II, P.A. Matson, J. J. McCarthy, R. W. Corell, L. Christensen, **N. Eckley**, G. Hovelsrud-Broda, J. X. Kasperson, R. E. Kasperson, A. Luers, M. L. Martello, S. Mathiesen, R. Naylor, C. Polsky, A. Pulsipher, A. Schiller, H. Selin, and N. Tyler. 2003. "Illustrating the Coupled Human-Environment System for Vulnerability Analysis: Three Case Studies." *Proceedings of the National Academy of Sciences (PNAS)* 100(14):8080-8085.
4. H. Selin and **N. Eckley**. 2003. "Science, Politics, and Persistent Organic Pollutants: Scientific Assessments and their Role in International Environmental Negotiations." *International Environmental Agreements: Politics, Law and Economics* 3(1):17-42.
3. **N. Eckley**. 2002. "Dependable Dynamism: Lessons for Designing Scientific Assessment Processes in Consensus Negotiations." *Global Environmental Change* 12:15-23.
2. **N. Eckley**. 2001. "Traveling Toxics: The Science, Policy, and Management of Persistent Organic Pollutants." *Environment* 43(7):24-36.
1. B. D. Rodan, D. W. Pennington, **N. Eckley**, and R. S. Boethling. 1999. "Screening for Persistent Organic Pollutants: Techniques to Provide a Scientific Basis for POPs Criteria in International Negotiations." *Environmental Science*

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Other Journal Articles, Reviews, Reports, and Commentaries (selected/recent)

N.E. Selin. 2023. "Mercury's Complex Legacy." *Proceedings of the National Academy of Sciences (PNAS)* (Commentary), https://doi.org/10.1073/pnas.2310784120

N.E. Selin. 2023. "Health Effects of a Global Carbon Price." Nature Sustainability (News & Views).

N. E. Selin, A. Schartup, A. Soerensen, H. Angot, and K. Bowman. 2021. "What are the likely changes in mercury concentration in the Arctic atmosphere and ocean under future emissions scenarios?" Chapter 8 in 2021 Arctic Monitoring and Assessment Programme Mercury Assessment, forthcoming.

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N. E. Selin, M. A. Kenney, A. J. Jefferson, J. S. Dukes, T. M. Hill, L. Schmitt Olabisi, and M. A. Duffy. 2018. "Call for New AAAS Harassment Policy." *Science* (Letter), 361 (6406):984.

N. E. Selin and S. Y. Kwon. 2018. "Another problem with China's coal: Mercury in Rice." *The Conversation,* 3 May. https://theconversation.com/another-problem-with-chinas-coal-mercury-in-rice-92974

H. Hsu-Kim, C. Eckley and **N. E. Selin.** 2018. "Modern science of a legacy problem: mercury biogeochemical research after the Minamata Convention." *Environmental Science: Processes and Impacts* 20:582-583 (Editorial).

N. E. Selin, 2018. "Anthropogenic Enrichment of mercury greater than that of vanadium." *Proceedings of the National Academy of Sciences (PNAS)* (Letter), doi:10.1073/pnas.1722284115

J. Perlinger, H. Gorman, E. Norman, D. Obrist, **N. E. Selin**, N. Urban, and S. Wu. 2016. "Measurement and Modeling of Atmosphere-Surface Exchangeable Pollutants (ASEPs) to Better Understand their Environmental Cycling and Planetary Boundaries." (Viewpoint). *Environmental Science and Technology,* 50, 8932-8934.

N. E. Selin and *A. Giang. "Are tighter EPA controls on mercury pollution worth it?" 2016. *The Conversation*, 9 February. https://theconversation.com/are-tighter-epa-controls-on-mercury-pollution-worth-it-53551

M. S. Gustin, D. C. Evers, M. S. Bank, C. R. Hammerschmidt, A. Pierce, N. Basu, J. Blum, P. Bustamante, C. Chen, C. T. Driscoll, M. Horvat, D. Jaffe, J. Pacyna, N. Pirrone, and **N.E. Selin**. 2016. "Importance of Integration and Implementation of Emerging and Future Research into the Minamata Convention." (Viewpoint) *Environmental Science and Technology* 50:2767-2770.

N. E. Selin. "Why new U.S. ozone standards aren't enough to protect health and the environment." 2015. *The Conversation,* 6 October. https://theconversation.com/are-tighter-epa-controls-on-mercury-pollution-worth-it-53551

N. E. Selin. "The not-so-invisible damage from VW diesel cheat: $100 million in health costs." 2015. *The Conversation*, 29 September. https://theconversation.com/the-not-so-invisible-damage-from-vw-diesel-cheat-100-million-in-health-costs-48296

D. A. Jaffe, S. Lyman, H. M. Amos, M. S. Gustin, J. Huang, **N. E. Selin**, L. Levin, A. ter Schure, R. P. Mason, R. Talbot, A. Rutter, B. Finley, L. Jaeglé, V. Shah, C. McClure, J. Ambrose, L. Gratz, S. Lindberg, P. Weiss-Penzias, G. R. Sheu, D. Feddersen, M. Horvat, A. Dastoor, A. J. Hynes, H. Mao, J. E. Sonke, F. Slemr, J. A. Fisher, R. Ebinghaus, Y. Zhang and G. Edwards. 2014. "Progress on understanding mercury hampered by uncertain measurements" (Viewpoint). *Environmental Science and Technology*, 48(13):7204-7206.

Book Chapters

6. E. Saikawa and **N. E. Selin.** "The Impact of China's Vehicle Emission Regulations on Regional Air Quality and Welfare in 2020." Chapter in: D-C. Shin, ed. Hazardous Air Pollutants: Case Studies from Asia. CRC Press, 2016, p. 151-168.

5. R. D. Collins,* V.Sakhrani,* **N. E. Selin**, A. Alsaati, and K. M. Strzepek. "Using inclusive wealth for policy evaluation: the case of infrastructure capital," Chapter 8 in: UNU-IHDP and UNEP (2014). *Inclusive Wealth Report 2014. Measuring progress toward sustainability.* Cambridge: Cambridge University Press.

4. **N.E. Selin**, "Atmospheric Chemistry, Modeling and Biogeochemistry of Mercury." 2012. Book chapter in: M.S. Bank, ed. *Mercury in the Environment: Pattern and Process.* Berkeley, CA: University of California Press.
3. L. Jaeglé, S.A. Strode, **N.E. Selin**, and D.J. Jacob**.** 2009. "The GEOS-Chem model." Book chapter in: N. Pirrone and R. Mason, eds. *Mercury Fate and Transport in the Global Atmosphere*. New York: Springer.
2. **N.E. Selin**. 2006. "From Regional to Global Information: Assessment of Persistent Organic Pollutants (POPs)." Book chapter in: Ronald B. Mitchell, William C. Clark, David W. Cash, and Frank Alcock, eds. *Global Environmental Assessments: Information, Institutions, and Influence.* Cambridge, MA: MIT Press.
1. **N.E. Selin**. 2005. "Applying Assessment Lessons to New Challenges: Sulfur and POPs." Book chapter in: Alex Farrell and Jill Jäger, eds. *Assessments of Regional and Global Environmental Risks: Designing Processes for the Effective Use of Science in Decisionmaking.* Washington, DC: Resources for the Future.

INVITED LECTURES AND PRESENTATIONS (since 2018)

Stanford Doerr School of Sustainability, Climate Science in Service of Solutions workshop (March 2023); Health Effects Institute Annual Meeting (virtual, June 2022); Frontiers of Atmospheric Chemistry Seminar Series (virtual, April 2022); Global Food+ Symposium, Weatherhead Center for International Affairs, Harvard University (virtual, February 2021); Harvard Kennedy School Energy Policy Seminar Series (virtual, February 2021); IIT Hyderabad, India (virtual, February 2021); University of Regina, Canada, Department of Biology (virtual, January 2021); Mercury Australia Symposium (virtual, December 2020); MIT Alumni Faculty Forum (virtual, December 2020); MIT China Innovation and Entrepreneurship Forum (virtual, November 2020); STS Circle, Harvard University (virtual, November 2020); Peking University, College of Environmental Sciences (virtual, October 2020); University of Bonn Distinguished Lecturers Series (virtual, September 2020); University of Toronto (January 2020); U.S.-E.U. Frontiers of Engineering, Stockholm, Sweden (November 2019); Harvard University, Department of Earth and Planetary Sciences Colloquium Series, Cambridge, MA (October 2018); Symposium on Science, Technology and Public Policy, ETH Zurich, Switzerland (September 2019); Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany (July 2019); Carnegie Mellon University, Engineering and Public Policy Seminar, Pittsburgh, PA (April 2019); University of Waterloo Institute for Complexity and Innovation, Waterloo, Canada (March 2019); International Institute for Applied Systems Analysis, Vienna, Austria (January 2019); Institute of Science, Technology, and Policy, ETH, Zurich, Switzerland (November 2018); ACM/IEEE 21st International Conference on Model Driven Engineering Languages and Systems (MODELS) (keynote), Copenhagen, Denmark (October 2018); Swiss Federal Institute of Aquatic Science and Technology (EAWAG), Zurich, Switzerland (September 2018); Technical University of Munich-Institute for Advanced Study Annual meeting (June 2018); Libby Lecture in Natural Resource Policy, University of Maine (April 2018); Swedish University of Agricultural Sciences, Uppsala, Sweden (March 2018); Stockholm University, Analytical Chemistry and Environmental Sciences Seminar (February 2018); Linköping University, Sweden, Higher Seminar (February 2018); Stockholm Resilience Centre (January 2018)

TEACHING

MIT Courses

"Professional Development: Policy Hackathon" (IDS.448, Graduate), Fall 2023
"Science, Technology, and Public Policy" (17.310/IDS.412/STS.482 Graduate, 17.309/IDS.055/STS.082 Undergraduate), Fall 2017 (with K. Oye), Spring 2019, Spring 2020 (with K. Oye); Spring 2021 (with K. Oye)
"People and the Planet: Environmental Governance and Science" (12.387/IDS.063/15.874), Fall 2017 (with S. Solomon and J. Sterman), Fall 2019, 2020, 2021, 2022
"Modeling and Assessment for Policy" (IDS.410/12.844, previously ESD.864), Spring 2011, 2012, 2013, 2014, 2016, 2017, 2023
"Global Environmental Science and Negotiations" (IDS.062/IDS.525/12.846/12.346, previously ESD.110), Fall 2011, Fall 2013, Fall 2014, Fall 2016, Fall 2017.
"Global Environmental Negotiations: Climate and COP-21" (ESD.S30), Fall 2015
"Global Environmental Negotiations: Mercury" (ESD.S50), IAP (January term) 2013
"Sustainability: Principles and Practice", MIT Professional Short Program (ESD.45s), Summer 2011-2014
"Sustainability Science and Engineering Seminar" (ESD.120J/12.845J), Fall 2010, Fall 2012.
"Systems Modeling and Assessment for Policy" (ESD.936), Spring 2010.

"Global Climate Change: Economics, Science and Policy" (Co-instructor, 15.023/15.026/12.848/ESD.128), Spring 2010.

Graduate Students

As advisor:

Yuang Chen, Ph.D. student in Social and Engineering Systems
Eric Roy, Ph.D. student in Earth, Atmospheric, and Planetary Sciences
Lexia Cicone, Ph.D. student in Earth, Atmospheric, and Planetary Sciences
Emmie Le Roy, Ph.D. student in Earth, Atmospheric, and Planetary Sciences
Fiona Kinniburgh, Ph.D., Technical University of Munich, Bavarian School of Public Policy, 2023 (co-advised with Prof. M. Schreurs, TUM, and Prof. H. Selin, Boston University; now postdoc, TUM)
Elisabeth Freese, Ph.D. in Earth, Atmospheric, and Planetary Sciences, 2023 (now postdoc, Carnegie Institution for Science)
Christina Chen, M.S. in Technology and Policy, 2023 (now at Ramboll)
Thandolwethu Dlamini, M.S. student in Technology and Policy, 2022 (now at Sunnova Energy)
Disha Trivedi, M.S. in Technology and Policy, 2023 (now at E3)
Paul Picciano, M.S. in Technology and Policy, 2022 (now at E3)
William Atkinson, M.S. in Technology and Policy, 2022 (now at RMI)
Minghao Qiu, Ph.D. in Social and Engineering Systems, 2021 (now postdoc, Stanford University; as of 2024: Assistant Professor, Stony Brook University)
Mingwei Li, Ph.D. in Earth, Atmospheric and Planetary Sciences, 2019 (now Assistant Professor, Tsinghua University)
Amanda Giang, M.S. Technology and Policy 2013, Ph.D., Engineering Systems, 2017 (now Assistant Professor, University of British Columbia)
Shaojie Song, Ph.D in Earth, Atmospheric and Planetary Sciences, 2016 (now Professor, Nankai University, China)
Colin Pike-Thackray, Ph.D. in Earth, Atmospheric and Planetary Sciences, 2016 (now research scientist, Harvard University)
Jareth Holt, Ph.D. in Earth, Atmospheric and Planetary Sciences, 2016 (co-advised with Prof. S. Solomon) (now postdoc, Stockholm University)
Emil Dimantchev, M.S. in Technology and Policy, 2018 (now PhD student, NTNU, Norway)
Kathleen Mulvaney, M.S. in Technology and Policy, 2017 (now at RMI)
Rebecca Saari, Ph.D. Engineering Systems, 2015 (now Associate Professor, University of Waterloo)
Ellen Czaika, Ph.D. Engineering Systems, 2015 (now Google, Zurich)
Genevieve Flanagan, M.Sc. in System Design and Management, 2012 (co-advised with Prof. O. deWeck)

As committee member or research co-supervisor at MIT:

Andrew White, Ph.D. Candidate in Aeronautics and Astronautics
Chris Womack, Ph.D. Candidate in Aeronautics and Astronautics
Mengying Wu, Ph.D. in Social and Engineering Systems, 2023
Tess Carter, Ph.D. in Civil and Environmental Engineering, 2022
Sidhant Pai, Ph.D. in Civil and Environmental Engineering, 2022
Akshat Agarwal, Ph.D. in Aeronautics and Astronautics, 2021
Ines Sanz Morere, PhD in Aeronautics and Astronautics, 2021
Guillaume Chossiere, Ph.D. in Aeronautics and Astronautics, 2020
Megan Lickley, Ph.D. in Earth, Atmospheric, and Planetary Sciences, 2020
Sam Silva, Ph.D. in Civil and Environmental Engineering, 2019
Ross Collins, Ph.D. Engineering Systems, 2015 (research co-supervisor)
Philip Wolfe, Ph.D. Aeronautics and Astronautics, 2015
Danya Rumore, Ph.D. Urban Studies and Planning, 2015
Leah Stokes, Ph.D. Urban Studies and Planning, 2015 (research co-supervisor; general exam committee)
Tao Feng, M.Sc. in Earth, Atmospheric and Planetary Sciences, 2017
Caleb Waugh, M.S. Technology and Policy 2011 (co-supervisor)

As committee member/reviewer/reader outside MIT:

Charikleia Gournia, Ph.D. Candidate, Jožef Stefan Institute, Ljubljana, Slovenia (evaluation committee)

Alkuin Koenig, Ph.D., 2023, University of Grenoble (external examiner)
Natalie Szponar, Ph.D. 2022, Department of Earth Sciences, University of Toronto (external examiner)
Lindsey Weger, Ph.D. 2021, University of Potsdam (external reviewer)
Yiqi Zhang, Ph.D. 2020, Environmental Science, Policy, and Management, Hong Kong University of Science and Technology
Karl Seltzer, Ph.D. 2019, Earth and Ocean Sciences, Nicholas School, Duke University
Tanvir Kahn, Ph.D. 2018, Environmental Engineering, Michigan Technological University
Efstathios Reppas-Chrysovitsinos, Ph.D. 2018, Stockholm University (examining committee member)
S. Morteza Mesbah, Ph.D. 2014, Environmental Engineering, Carleton University, Ontario, Canada

Undergraduate Students

Azzo Seguin, Earth, Atmospheric, and Planetary Sciences, summer 2020 (undergraduate research assistant); Yuka Perera, Mechanical Engineering, summer 2020 (undergraduate research assistant); Nicholas Pape, Earth, Atmospheric, and Planetary Sciences, fall 2019 (undergraduate research assistant); Emma Rutkowski, Earth, Atmospheric, and Planetary Sciences, 2018-2019 (undergraduate research assistant and undergraduate thesis); Nick Hoffman, Earth, Atmospheric, and Planetary Sciences, 2017-2018; 2014-2015 (undergraduate research assistant and undergraduate thesis); Elizabeth Rider, Earth, Atmospheric and Planetary Sciences, 2016-2017 (undergraduate research assistant and undergraduate thesis); Siyi Zhang, Civil and Environmental Engineering, 2015-2016 (undergraduate research assistant and capstone project); Elisabeth Berg, Earth, Atmospheric and Planetary Sciences, 2015-2016 (undergraduate research assistant and undergraduate thesis); Abby Harvey, Earth, Atmospheric and Planetary Sciences, 2015-2016. (undergraduate research assistant); Libby Koolik, 2014 (undergraduate research assistant); Rebecca Silverman, Department of Urban Studies and Planning, 2013-2014 (undergraduate thesis advisor); Jessica Haskins, Earth, Atmospheric and Planetary Sciences, 2011-2014 (concentration advisor); Kathryn Buggs, Political Science, Fall 2013-Spring 2014 (undergraduate research assistant); Anthony Longboat, Chemistry, Summer 2011 (undergraduate research assistant); Anastasia Maheras, Earth, Atmospheric and Planetary Sciences, 2010-2011 (undergraduate research assistant and undergraduate thesis); Kristen Watkins, Department of Urban Studies and Planning /Political Science, spring 2011 (undergraduate research assistant); Abby Koss, Earth, Atmospheric and Planetary Sciences, fall 2010 (undergraduate research assistant)

Postdoctoral trainees

Zehui Liu (Ph.D. Peking University), 2023-pres.
Moala Keshei Bannavti (Ph.D. University of Iowa), 2023-pres. (co-supervised by P. Gschwend)
Björn Lütjens (Ph.D., MIT), 2023-pres. (co-supervised by R. Ferrari)
Paolo Giani (Ph.D. University of Notre Dame), 2023-pres. (co-supervised by A. Fiore)
Anthony Y.H. Wong, (Ph.D, Boston University), 2022-pres.
Aryeh Feinberg (Ph.D., ETH-Zurich), 2021-2023 (as of 2024: Marie Curie postdoc, IQFR-CSIC, Madrid)
Poushali Maji (Ph.D., University of British Columbia), 2019-2021, now Impact Fellow, MIT Climate and Sustainability Consortium
Jamie Kelly (Ph.D., University of Edinburgh), 2019-2021, now Air Quality Analyst, Centre for Research on Energy and Clean Air
Helene Angot (Ph.D. University of Grenoble), 2017-2018, now CNRS Research Scientist, Institut des Géosciences de l'Environnement, Grenoble, France
Amanda Giang (Ph.D. MIT), 2017, now Assistant Professor, University of British Columbia
Daniel Rothenberg (Ph.D. MIT), 2016-2017, now Technical Lead, Atmospheric Science, Waymo
Sae Yun Kwon (Ph.D. University of Michigan), 2015-2017, now Assistant Professor, School of Environmental Sciences and Engineering, Pohang University of Science and Technology, South Korea
Benjamin Brown-Steiner (Ph.D. Cornell University), 2015-2017 (co-supervised with Prof. R. Prinn), now Program Director, U.S. National Science Foundation
Fernando Garcia Menendez (Ph.D. Georgia Tech), 2013-2015, now Associate Professor, North Carolina State University
Carey Friedman (Ph.D. University of Rhode Island), 2010-2015, now Associate Professor, Maine Maritime Academy

Evan Couzo (Ph.D. University of North Carolina), 2014-2015, now Associate Professor, University of North Carolina-Asheville

Tammy Thompson (Ph.D. University of Texas), 2010-2013, now Senior Air Quality Scientist, Environmental Defense Fund

PROFESSIONAL SERVICE

MIT Service

Co-Chair, MIT Climate Nucleus (2021-pres.); MIT Press Editorial Board (2017-pres.); Chair, Technology and Policy Program Admissions Committee (2016-2017, 2019-2023); Member, IDSS SES Admissions Committee (2023); Member, Search Committee for IDSS Director (2022); Member, Search Committee, EAPS-College of Computing (2021-pres.); MIT Energy Initiative Energy Council (2021-pres.); Member, Search Committee for Associate Dean for Diversity-Equity-Inclusion, College of Computing (2021); Member, Search Committee, College of Computing (2019, 2020, 2021); Climate Grand Challenges Committee (2020); Campus Sustainability Incubator Fund Advisory Committee (2017); Chair, Technology and Policy Program Curriculum Committee (2017); Technology and Policy Program Admissions Committee (2017, 2019); MIT Sustainability Task Force (2015-2017); Internal Advisory Committee, MIT Center for Environmental Health Sciences (2015-pres.); Freshman Advisor (2012-2013; 2015-2017); Member, School of Science Faculty Search Oversight Committee (2011-2013); Member, Engineering Systems Division education committee (2012-2014); Member, Engineering Systems Division admissions committee (2010-2011; 2011-2012; 2012-2013; 2013-2014); Member, Earth, Atmospheric and Planetary Sciences admissions committee (2010-2011; 2011-2012); Member, Earth, Atmospheric and Planetary Sciences Program in Atmospheres, Oceans and Climate General Exam Committee (2013-2014); Member, Search Committee, Earth, Atmospheric and Planetary Sciences (Sedimentology) (2011-2012; 2012-2013); Member, Search Committee, Engineering Systems Division (Service Science) (2010-2011); Member, Engineering Systems Division Undergraduate Curriculum Committee (2010-2011); Member, Search Committee, Earth, Atmospheric and Planetary Sciences (Atmospheric Chemistry) (Spring 2010); Member, Technology and Policy Program Curriculum Committee (Spring 2010); Led 25 freshmen on climate change themed walking tour of Boston for MIT Energy Initiative Freshman Pre-Orientation Program (DELTA FPOP, Fall 2010)

External Service

Associate Editor, *Science Advances* (2021-2023); Editorial Advisory Board, *Environmental Science & Technology* (2021-pres.); International Advisory Board for UN Environment's International Environmental Technology Center (2018-pres.); Chapter lead author, Arctic Monitoring and Assessment Programme 2021 Mercury Assessment; Advisory Board, *Environmental Science: Processes and Impacts* (2018-pres.); Scientific Steering Committee, 2021 International Conference on Mercury as a Global Pollutant; Earth Leadership Program selection committee (2020); Scientific Steering Committee, 2019 International Conference on Mercury as a Global Pollutant; Executive Committee, 2017 International Conference on Mercury as a Global Pollutant (2015-2017); Scientific Advisory Committee, Center for Air, Climate, and Energy Solutions (CACES) (Carnegie Mellon University, University of Washington, and others) (2017-pres.); Co-chair, Chemistry-Climate Working Group, Community Earth System Model (CESM) (2014-2016); Co-Chair, Mercury and POPs Working Group, International GEOS-Chem Steering Committee (2011-2015); Member, Task Team, Joint Group of Experts on the Scientific Aspects of Marine Environmental Pollution, GEF/IOC/UNEP Trans-boundary Waters Assessment (2014); Co-Convener of American Geophysical Union Fall Meeting sessions: "Interactions between Tropospheric Chemistry and Climate" (2013, 2012, 2011); "Mercury Cycling in Heterogeneous Environments: Global and Local Factors" (2011); "Pathways of Mercury Transport and Exposure at Multiple Scales" (2009); Contributing Editor, *Environment: Science and Policy for Sustainable Development* (2005-2017)*;* Peer reviewer/proposal reviewer for *Atmospheric Chemistry and Physics, Atmospheric Environment, Environmental Science and Technology, Geophysical Research Letters, Global Environmental Change, Global Environmental Politics, Journal of Atmospheric Chemistry, Journal of Environment and Development, Journal of Geophysical Research-Atmospheres, Nutrition Reviews, Science of the Total Environment, Policy & Politics, Proceedings of the National Academy of Sciences, Science, Nature, Water Resources Research, National Science Foundation, National Aeronautics and Space Administration;* Reviewer for 2010 Assessment on Hemispheric Transport of Air Pollution, Convention on Long-Range Transboundary Air Pollution, Task Force on Hemispheric

Transport of Air Pollution; Member, Global Warming Solutions Project advisory committee, Environmental League of Massachusetts, 2010-2011; Member, American Geophysical Union (2006-pres.), Society for Environmental Toxicology and Chemistry (2011-pres.), American Chemical Society (2011-pres.), AAAS (2016-pres.).