PETER J. SHERMAN

37 N Beacon Street Apartment 319, Allston, MA 02134

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EDUCATION AND SKILLS

Harvard University Graduate School of Arts and Sciences, Cambridge, MA

Present

- **Postdoctoral fellow** working with Professor Michael McElroy.
- Memberships Sigma Xi, Air & Waste Management Association.
- Journal Reviewer ERL, ERIS, Nature Communications, Science Progress

Harvard University Graduate School of Arts and Sciences, Cambridge, MA

January 2022

- PhD candidate in the Department of Earth Planetary Sciences: focus on climate change and green technology.
- Fellowships Skaff Family Graduate Environmental Fellowship recipient.
- **GPA** 3.85.

Imperial College London, London, UK

June 2017

- **MSc** Degrees in Physics (4-year Bsc/Msci degrees).
- Upper Class Honors 2:1.

Computing Skills

Current

- Modelling skills CESM, GEOS-Chem, UKESM.
- **Programming languages** MATLAB, Python, R, Linux, HPC, AWS, SQL, HTTP.

MENTORSHIP AND TEACHING EXPERIENCE

Research Supervisor, Harvard University:

February 2020 - Present

- Supervise five Harvard undergraduate on projects ranging from offshore wind power in southeast Asia to air conditioning demand in India.
- Published paper in Environmental Research Letters on COVID-19 emissions recovery on India's climate.

Mentor, Science Research Mentorship Program:

October 2020 – Present

- Supervise five local high schoolers on the effects of COVID-19 emissions recovery on India's climate and global offshore wind potential.
- Published paper in Environmental Research Letters on COVID-19 emissions recovery on India's climate.

Teaching Fellow, Harvard University - EPS, Cambridge, MA:

September 2018 – Present

- Fall 2018 SPU14: How to Build a Habitable Planet (Charles Langmuir)*
 - o Authored a TF manual for SPU14: *How to Build a Habitable Planet*.
- Fall 2019 GENED1018: How to Build a Habitable Planet (Charles Langmuir)*
- Spring 2020 GENED1137: The Challenge of Human Induced Climate Change (Michael McElroy)
- Fall 2020 GENED1018: How to Build a Habitable Planet (Charles Langmuir)
- Spring 2021 GENED1137: The Challenge of Human Induced Climate Change (Michael McElroy)*
- Fall 2021 GENED1018: How to Build a Habitable Planet (Charles Langmuir)
- Fall 2021 ESPP 90N: Addressing the Global Climate Crisis (Michael McElroy)*

* The Derek Bok Center Certificate of Distinction and Excellence in Teaching Award

Lab Demonstrator, Imperial College London, London, UK:

March 2017 – June 2017

- Supervised first-year physics students in wave experiments.
- Advised students on writing clear and effective lab reports.

Academic Mentor, EXSCITEC, Imperial College London, London UK:

February 2014 – August 2015

- Taught physics and math to students preparing for A-level examinations.
- Led outreach activities to mentor and inspire youth to study STEM.

PUBLICATIONS

- Jonathan D'Souza, ... Sherman, P., ... 2021. <u>Projected changes in seasonal and extreme summertime temperature and precipitation in India in response to COVID-19 recovery emissions scenarios</u>. Environmental Research Letters.
- Lin, H., ... **Sherman, P.,** ..., 2021. <u>Production of Hydrogen from Offshore Wind in China and Cost-competitive Supply to Japan</u>. Nature Communications.
- Sherman, P., et al., 2021: <u>Sensitivity of modeled Indian monsoon to Chinese and Indian aerosol emissions</u>. Atmospheric Chemistry and Physics.

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- **Sherman, P.**, Song, S., Chen, X., and McElroy, M.B., 2021: <u>Projected changes in wind power potential over China</u> and India in high resolution climate models. Environmental Research Letters.
- Lu, T., **Sherman, P.**, Chen, X., Chen, S., Lu, X., and McElroy, M.B., 2020: <u>India's potential for integrating solar and on- and offshore wind power into its energy system</u>. Nature Communications.
- **Sherman, P.**, Tziperman, E., Deser, C., and McElroy, M.B., 2020: <u>Historical and future roles of internal variability in modulating Greenland Ice Sheet melt</u>. Geophysical Research Letters.
- Sherman, P., Chen, X., and McElroy, M.B., 2020: Offshore wind: an opportunity for cost-competitive decarbonization of China's energy economy. Science Advances.
- Sherman, P., Gao, M., Song, S., Ohiomoba, P., Archibald, A., and McElroy, M.B., 2019: <u>The influence of dynamics and emissions changes on China's wintertime haze</u>. Journal of Applied Meteorology and Climatology.
- Gao, M., ... Sherman, P., ..., 2019: Ozone Pollution over China and India: Seasonality and Sources. Atmospheric Chemistry and Physics.
- Gao, M., Sherman, P., Song, S., Yu, Y., Wu, Z., and McElroy, M.B., 2019: <u>Seasonal prediction of Indian</u> wintertime aerosol pollution using the Ocean Memory Effect. Science Advances.
- Gao, M., ... Sherman, P., ..., 2019: China's emission control strategies have suppressed unfavorable influences of climate on wintertime PM2.5 concentrations in Beijing since 2002. Atmospheric Chemistry and Physics.
- Sherman, P. and Archibald, A., 2019: <u>The Urban Heat Island (UHI) is a major source of uncertainty in projections of population-weighted surface temperature under climate change.</u> EarthArXiv.
- **Sherman, P.**, Chen, X., and McElroy, M.B., 2017: <u>Wind-generated electricity in China: decreasing potential, interannual variability and association with changing climate. Scientific Reports.</u>
- Sherman, P. and van Sebille, E., 2016: <u>Modeling marine surface microplastic transport to assess optimal removal locations</u>. Environmental Research Letters.

POSTERS AND PRESENTATIONS

- India's potential for integrating renewables into its energy system (Presentation) Harvard China Project (July 2020)
- The influence of North Atlantic sea surface temperatures on aerosol loading in China (Poster) AGU (December 2018).
- The influence of North Atlantic sea surface temperatures on aerosol loading in China (Presentation) Harvard University EPS First-Year Symposium (Septemer 2018).
- Modeling marine surface microplastic transport to assess optimal removal locations (Presentation) Centre Councillor for the Chartered Institution of Wastes Management Open Meeting on Offshore Wastes – London Borough of Newham (July 2017).

OTHER WORK EXPERIENCE

Remote Basketball Operations Analyst, Orlando Magic:

September 2021 – Present

- Analyze player tracking data for the Orlando Magic.
- Conduct statistical analysis to inform decision-making processes for player transactions.

Remote Basketball Operations Analyst, Minnesota Timberwolves:

September 2019 – September 2021

- Analyze player tracking data for the Minnesota Timberwolves.
- Conduct statistical analysis to inform decision-making processes for player transactions.

Longform Blog Editor, Science in the News, Harvard University, Cambridge, MA: October 2017 – September 2019

• Managed writing and editing of longform blog articles for Harvard's graduate student-run science outreach website.

LATEST NEWS

- Harvard China Project Researcher Profile Harvard-China Project
- Less wind due to climate change won't impact wind power generation in India and China Harvard SEAS News and
 Events
- <u>India's renewable future</u> Harvard SEAS News and Events
- Opportunity blows for offshore wind in China Harvard SEAS News and Events