Walter W. Shen

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Harvard University | 20 Oxford Street, Cambridge, MA 02138

EDUCATION

Harvard University	Aug. 2022 – present
Ph.D. Student, Department of Earth and Planetary Sciences (EPS)	*Cambridge, M.A., U.S.A.*
Advisor: Prof. Zhiming Kuang	
Imperial College London	Sept. 2019 – July 2022
BSc Mathematics with Applied Mathematics/Mathematical Physics, First Class Honours	*London, U.K.*
Harvard Extension and Summer Schools	Sept. 2017 – Aug. 2019
Non-Degree Candidate	*Cambridge, M.A., U.S.A.*

RESEARCH

Graduate Research Assistant — Sept. 2022 – Present

Harvard University Department of Earth and Planetary Sciences
- Study of mixing in oceanic shallow cumuli using in situ and simulated data
- Improvement of sub-grid scale parameterization in large eddy simulations using machine learning

Undergraduate Research Assistant — June 2021 – Sept. 2021

Harvard University Department of Earth and Planetary Sciences
Supervised by Prof. Zhiming Kuang
- Simulated turbulent atmospheric flows using the System for Atmospheric Modeling (SAM) on the Harvard FAS Research Computing supercomputer; analyzed simulation output and reviewed literature on atmosphere turbulent flow

Second Year Group Research Project — May 2021 – June 2021

Imperial College London Department of Mathematics
Supervised by Dr. Henrique Helfer Hoeltgebaum
- Identified, analyzed, and forecasted time series and time series models; investigated applications in applied sciences, finance and statistics

Undergraduate Research Assistant — June 2020 – Sept. 2020

Harvard University Department of Earth and Planetary Sciences
Supervised by Prof. Zhiming Kuang
- Analyzed field study aircraft datasets including the EUREC4A field campaign; created and analyzed Paluch mixing diagrams to understand cloud processes

First Year Research Poster Project — May 2020 – June 2020

Imperial College London Department of Mathematics
Supervised by Dr. David Whitney & Dr. Takoua Jendoubi
- Investigated statistical relationship between income inequality and COVID-19 mortality in the United States

Undergraduate Research Assistant — June 2019 – Sept. 2019

Harvard University Department of Earth and Planetary Sciences
Supervised by Prof. Zhiming Kuang
- Explored the application of machine learning in weather forecasting using Harvard supercomputer; investigated the potential of Soil Moisture Active Passive (SMAP) satellite soil moisture data as a weather predictor variable

TEACHING

Teaching Fellow | *Harvard College*
- **GENED 1094**: **Confronting Climate Change** — Fall 2023

Teaching Assistant | *Harvard Summer School*
- **CSCI S-5A**: **Programming in R** | *Student Evaluation: 4.56/5.0* — Summer 2021
- **ISMT S-161**: **Computational Bayesian Inference** | *Student Evaluation: 4.73/5.0* — Summer 2020

Education Coordinator | *Imperial College Robotics Society*
- **3D Printing 101 Workshop** — Oct. 2020

Instructor | *Mathnasium, LLC. Fresh Pond Center, M.A.* — Sept. 2018 – June 2019

Posters

Dec. 2023   American Geophysical Union Fall Meeting, *San Francisco, C.A.*
[In Prep] Study of mixing in oceanic shallow cumuli using in situ and simulated data of the EUREC4A field campaign

June 2020   Imperial College London Department of Mathematics Research Poster Project, *London, U.K. (Virtual)*
COVID-19: Influence of Income Inequality on Mortality in the United States

Academic Recognition

2022 Harvard EPS Merit Award
2022 Imperial Award
2019 U.S.A. National Merit Scholarship Finalist
2018-19, 2017-18 Harvard Extension School Lowell Student Scholarship
2018 American Statistical Association Project Competition Honorable Mention

Student Leadership

Social Fellow | *Student Center at Harvard Griffin GSAS*	Aug. 2023 – Present
Resident Dean | *Harvard Summer School*	June 2023 – Aug. 2023
President's Award | *Royal College of Science Union*	2022
Union Colours Award | *Imperial College Union*	2022
Half Colours Award | *Royal College of Science Union*	2020
Deputy *Broadsheet* Magazine Editor | *Royal College of Science Union*	Aug. 2020 – July 2021
Hall Senior | *Imperial College London Halls of Residence*	Sept. 2020 – July 2022
Horizons Representative | *Imperial College Academic Network*	Nov. 2019 – July 2020

Community Engagement

Environmental Awareness Officer | *Harvard GSAS Graduate Residence Halls Council*	Aug. 2023 – Present
Violinist | *Harvard GSAS Student Center Orchestra*	Sept. 2022 – Present
International Partner Program Liaison | *Harvard Summer School*	June 2023 – Aug. 2023
Events Committee Member | *Harvard GSAS Student Council*	Jan. 2023 – May 2023
Librarian | *Imperial College Choir*	Aug. 2021 – July 2022
Publicity Officer | *Royal College of Science Union*	Aug. 2021 – July 2022
Publicity Officer | *Imperial College Choir*	Sept. 2020 – July 2021
Treasurer | *Imperial College Pembridge Hall Committee*	Sept. 2020 – July 2021
Bronze Medal | *U.S.A. President's Volunteer Service Awards*	2018, 2017, 2016, 2015

Technical Skills

Experienced with Python, MATLAB, R, Java, Mathematica programming; LaTeX, Fusion 360, Excel, InDesign tools.
Foreign Languages: Mandarin (fluent), Latin (proficient)