EMILE ESMAILI

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EDUCATION

Princeton University *expected 2030*
Ph.D. in Science, Technology, and Environmental Policy (STEP)
Advisors: Prof. Michael Oppenheimer, Prof. Filiz Garip

Columbia University
M.A. in Quantitative Methods in the Social Sciences (QMSS)

Sorbonne Université
B.S. in Mathematics

Université Paris-Dauphine − PSL Research University
M.S. in Financial Engineering, B.S. in Economics

PUBLICATIONS

Working Papers

- *El Niño amplified food insecurity in Early Modern Europe.* **Emile Esmaili**, Michael J. Puma, Francis Ludlow, Eva Jobbova, Janavi Kumar, Poul Holm, Fredrik Charpentier Ljungqvist, Johannes Rom Dahl, John Alphonsus Matthews and Andrea Seim. *Under review*

- *Improving subseasonal Indian summer monsoon rainfall forecasts with U-Net calibration.* **Emile Esmaili**, Andrew W. Robertson, Muhammad Azhar Ehsan, Bohar Singh, Aaron Kaplan, Avijit Dey, Susmitha Joseph. *Under review*

- *ENSO Teleconnections and Seasonal Forecasts of Wet Season Droughts in the Arabian Peninsula* Muhammad Azhar Ehsan, **Emile Esmaili**, Andrew W. Robertson, Md Saquib Saharwardi, Jing Yuan, Matteo Zampieri, Thang Luong, Ibrahim Hoteit. *Under review*

- *A Bayesian hierarchical framework for modeling migration flows.* Aric Cutuli, Upmanu Lall, Michael J. Puma, **Emile Esmaili**, Rachata Muneepeerakul. arXiv:2412.01242

Selected Works in Progress

- *Warfare ignited contagion dynamics in Early Modern Europe.* **Emile Esmaili**, Michael J. Puma, Francis Ludlow, Eva Jobbova, Poul Holm arXiv:2411.18978

RESEARCH EXPERIENCE

Research Scientist Jan 2024 – Jul 2025
NASA Goddard Institute for Space Studies (NASA GISS) / Columbia Climate School

TEACHING EXPERIENCE

Instructor Fall 2023
QMSS Math Camp, Columbia University

Teaching Assistant Fall 2023
GR5073: Machine Learning for the Social Sciences, Columbia University

Teaching Assistant Spring 2023
GR5074: Advanced Projects in Machine Learning, Columbia University

REFEREE SERVICE

Nature Communications, Environmental Research Letters, Earth's Future

SKILLS

Programming Languages	Python, R, MATLAB
Natural Languages	French, English, Farsi