

Dr Shuai Wang | Assistant Professor | University of Delaware

CONTACT INFORMATION

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Newark, DE 19716, United States

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EMPLOYMENT

**University of Delaware - Department of Geography and Spatial Sciences
- Data Science Institute**

2023 - Assistant Professor (Tenure-Track)
Undergraduate Program Director (Meteorology & Climate Science)

**Princeton University - Program in Atmospheric and Oceanic Sciences
NOAA - Geophysical Fluid Dynamics Laboratory**

2022 - 2023 Associate Research Scholar

Princeton University - Department of Civil and Environmental Engineering

2020 - 2021 Postdoctoral Research Associate

Imperial College London - Department of Physics

2017 - 2019 Postdoctoral Research Associate

SOAS University of London - School of Finance and Management

2018 - 2019 Joint Research Fellow (Environmental Management)

EDUCATION

Imperial College London, UK

2013 - 2017 Ph.D. in Atmospheric Science

Ocean University of China, China

2011 - 2013 M.S. in Meteorology

Ocean University of China, China

2007 - 2011 B.S. in Atmospheric Science

RESEARCH INTERESTS

Extreme Weather | Climate Modeling | Tropical Cyclones | Climate Risk & Service

SELECTED PUBLICATION

Google Scholar statistics [link]. Citations: 1234. *h*-index: 20.

Wang, S., Murakami, H., and Cooke, W.. Anthropogenic forcing changes coastal tropical cyclone frequency. [link]. *npj Climate and Atmospheric Science*.

Wang, S., Murakami, H., and Cooke, W.. Anthropogenic Effects on Tropical Cyclones near Western Europe. [link]. *npj Climate and Atmospheric Science*.

Wang, S. and Toumi, R.. Recent Migration of Tropical Cyclones toward Coasts [link]. *Science*.

Wang, S. and Toumi, R.. Recent tropical cyclone changes inferred from ocean surface temperature cold wakes [link]. *Scientific Reports*.

Wang, S., Lin, N., and Gori, A.. Investigation of hurricane complete wind models and application in storm surge simulation [link]. *Journal of Geophysical Research - Atmospheres*.

Li, Y., Tang, Y., **Wang, S.**, Toumi, R., Song, X., and Wang, Q.. Recent Increases in Tropical Cyclone Rapid Intensification Events in Global Offshore Regions [link]. *Nature Communications*.

Wang, S. and Toumi, R.. An analytic model of tropical cyclone outer size [link]. *npj Climate and Atmospheric Science*.

Shukla, P., Nath, P., **Wang, S.**, and Quilodrán-Casas, C.. Forecasting tropical cyclones with cascaded diffusion models. [link]. *2024 International Conference on Learning Representations (ICLR) workshop*.

Xi, D., **Wang, S.**, and Lin, N.. Relationship Between Tropical Cyclone Intensity and Rain Rate [link]. *Journal of Climate*.

- Li, Y., Tang, Y., Toumi, R., and **Wang, S.** Revisiting the definition of rapid intensification of tropical cyclones by clustering the initial intensity and inner-core size [link]. *Journal of Geophysical Research - Atmospheres*.
- Li, Y., Tang, Y. and **Wang, S.** Rapid growth of outer size of tropical cyclones: A new perspective on their destructive potential [link]. *Geophysical Research Letters*. **Editor's Highlight** on EOS [link].
- Wang, S.** and Toumi, R.. More tropical cyclones are striking coasts with major intensities at landfall [link]. *Scientific Reports*.
- Wang, S.** and Toumi, R.. On the intensity decay of tropical cyclones before landfall [link]. *Scientific Reports*.
- Wang, S.**, Toumi, R., Ye, Q., Ke, Q., Bricker, J., Tian, Z.* and Sun, L. (2021). Is the tropical cyclone surge in Shanghai more sensitive to landfall location or intensity change? [link] *Atmospheric Science Letters*.
- Sparks, N., Hon, K., Chan, P., **Wang, S.**, Chan, J., Lee, T., and Toumi, R.. Aircraft Observations of Tropical Cyclone Boundary Layer Turbulence over the South China Sea [link]. *Journal of the Atmospheric Science*.
- Wang, S.** and Toumi, R. Impact of dry midlevel air on the tropical cyclone outer circulation [link]. *Journal of the Atmospheric Science*.
- Wang, S.** and Toumi, R.. A historical analysis of the mature stage of tropical cyclones [link]. *International Journal of Climatology*.
- Wang, S.** and Toumi, R.. Reduced sensitivity of tropical cyclone intensity and size to sea surface temperature in a radiative-convective equilibrium environment [link]. *Advances in Atmospheric Science*.
- Bruneau, N., Toumi, R. and **Wang, S.** Impact of wave white-capping on landfalling tropical cyclones [link]. *Scientific Reports*.
- Wang, S.** and Toumi, R.. On the relationship between hurricane cost and the integrated wind profile [link]. *Environmental Research Letters*.
- Wang, S.**, Toumi, R., Czaja, A. and Van Kan, A.. An analytic model of tropical cyclone wind profiles [link]. *Quarterly Journal of the Royal Meteorological Society*.

PROFESSIONAL
SERVICE

Editorship

Associate Editor of *Journal of Climate*
Editorial Board of *Environmental Research: Climate*

Peer Review

National Science Foundation

The National Climate Assessment

Journals Active Reviewer for *Nature Climate Change*, *Nature Communications*, *Journal of Climate*, *Monthly Weather Review*, *Environmental Research Letters*, *Climate Dynamics*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *Journal of Hydrometeorology*, *International Journal of Climatology*, *Natural Hazards* (among others)

Membership

American Meteorological Society, American Geophysical Union, Royal Meteorological Society