

# SHAWN WANG

## EMPLOYMENT

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### American Museum of Natural History

Assistant Curator of Climate Physics

December 2026 - Present

### University of Colorado, Boulder

Postdoctoral Fellow at CIRES

October 2025 - November 2026

### Woods Hole Oceanographic Institution

Postdoctoral Investigator in Physical Oceanography

February 2025 - August 2025

## EDUCATION

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### Massachusetts Institute of Technology

Ph.D. in Climate Science, MIT-WHOI Joint Program in Oceanography

February 2025

*Decadal to centennial-scale climate interactions across the Indo-Pacific region*

### Columbia University

B.A. in Chemistry and Earth Sciences, Columbia College

May 2018

## MANUSCRIPTS

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### SUBMITTED AND IN-PREP

1. **Wang S**, Ummenhofer CC, Denniston RF, Murty SA, Oppo DW Basin interactions drove Austral-Asian rainbelt width during the Common Era (in revision at *Nature Geoscience*)
2. Wolf A, **Wang S**, Do-Trong Q, Breitenbach S, Patterson E, Bolger T, McGee D, Jost A, Griffiths M, Cole J, Johnson K, Changes in onset and withdrawal drive Asian Monsoon trends in past and future (in revision at *Nature Geoscience*)
3. **Wang S**, Capotondi A, Karanaskas K, Sanchez S, The diversity of tropical North Atlantic warming events is explained by interactions between two Atlantic modes of variability (in prep for *Journal of Climate*)
4. Murty SA, Ummenhofer CC, **Wang S**, Gruenburg L, Biastoch A, Boning C, Drivers of Indo-Pacific upper ocean heat and freshwater variability using a synthesis of coral proxies and ocean models (in review at *Climate Dynamics*)

### PUBLISHED

1. Hess A, **Wang S**, Ummenhofer CC, Rosenthal Y, Oppo DW (2026) A strong Pacific Walker Circulation during the Little Ice Age *Science Advances* (accepted)
2. **Wang S**, Ummenhofer CC, Oppo DW (2026) Coupling of Pacific and Indian Ocean climate variability disrupted by 19th century volcanism *Nature Communications* (in press)
3. **Wang S**, Waitzmann D, Oppo DW, Ummenhofer CC (2025) Remote and regional drivers of the Indonesian Throughflow under future warming: Implications for inter-basin freshwater transport *Geophysical Research Letters*

4. Papalia A, Dawson C, Anton LL, . . . **Wang S**, Carlone L, Kumar V, Rus D, Fernandez JE, Wu C, Kantor G, Young D, Singh H (2025) A Roadmap for Climate-Relevant Robotics Research *arXiv*
5. Lu W, Oppo DW, Condron A, Liu Z, Zhu C, Lynch-Stieglitz J, Guo W, Hess A, **Wang S** (2025) Warmer shallow Atlantic during deglaciation and early Holocene due to weaker overturning circulation *Nature Geoscience*
6. **Wang S**, Ummenhofer CC, Murty SM, Nguyen HTT, Buckley B (2024) Quantifying the internal and external drivers of Southeast Asian rainfall extremes on decadal timescales *Climate Dynamics*
7. Willis C, **Wang S**, Walsh A, Jahns M, Halloran K, Kukshtel N, Bhatt E, (2023) Student-led mentoring system designed to lower barriers for graduate school applications *Oceanography*
8. Oppo DW, Lu W, Huang KF, Umling NE, Guo W, Yu J, Curry WB, Marchitto T, **Wang S** (2023) Deglacial temperature and carbonate saturation state variability in the tropical Atlantic at Antarctic Intermediate Water depths *Paleoceanography and Paleoclimatology*
9. **Wang S**, Ummenhofer CC, Oppo DW, Murty SM, Wagner P, Biastoch A (2023) Freshwater Contributions to decadal variability of the Indonesian Throughflow *Geophysical Research Letters*
10. Pavia FJ, **Wang S**, Middleton JF, Anderson RF, Murray R (2021) Trace Metal Evidence for Deglacial Ventilation of the Abyssal Pacific and Southern Oceans. *Paleoceanography and Paleoclimatology*
11. Zhou Y, McManus JF, Jacobel AW, Costa KM, **Wang S**, Alvarez B (2021) Enhanced iceberg discharge in the western North Atlantic during all Heinrich events of the last glaciation. *Earth and Planetary Science Letters*

## SELECTED CONFERENCE PRESENTATIONS

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1. **Wang S**, Capotondi A, Sanchez S, Karnaskas K (2025) ENSO teleconnections and TNA diversity explain the exceptional 2023-24 marine heatwave in the tropical Atlantic *AGU Fall Meeting* (Poster)
2. **Wang S**, Ummenhofer CC, Oppo DW, Waitzmann D, Hess A (2025) Paleoclimate and modeling insights into Indonesian Throughflow variability across past, present, and future climates *AOGS Annual Meeting* (Invited Talk)
3. **Wang S**, Waitzmann D, Oppo DW, Ummenhofer CC (2024) Projected weakening of the Indonesian Throughflow and the impacts on heat and freshwater transports *AGU Fall Meeting* (Poster)
4. **Wang S**, Ummenhofer CC, Denniston DF, Oppo DW, Murty SA (2024) Drivers of coherent interhemispheric rainfall variability across Australia-Asia throughout the Common Era *AGU Fall Meeting* (Poster)
5. **Wang S**, Ummenhofer CC, Oppo DW, Denniston RF (2024) Indo-Pacific basin interactions over the past millennium *EGU General Assembly* (Oral)
6. **Wang S**, Oppo DW, Ummenhofer CC, Nguyen HTT (2023) Proxy-based assessment of coupling between the Pacific and Indian Ocean Walker Circulations over the last four centuries *AGU Fall Meeting* (Poster)
7. **Wang S**, Galochkina M, Najaran H, Liu A, Mahesh A, Moskichev R, Nsude C, Willis C, Puxley B (2023) The Graduate Climate Conference: Insights on a community driven student conference and its merits for early-career researchers *AGU Fall Meeting* (Oral)
8. **Wang S**, Ummenhofer CC, Murty SA, Nguyen HTT, Buckley B (2022) Drivers of Decadal Rainfall Variability in Mainland Southeast Asia: Insights from Tree-Ring Reconstructions and the Last Millennium Ensemble *AGU Fall Meeting* (Oral)
9. **Wang S**, Pavia FJ, Anderson RF, & Murray RW (2019). Authigenic Mn as a Proxy for Southern Ocean Bottom Water Ventilation During Last Deglaciation *AGU Fall Meeting* (Poster)

## GRANTS AND AWARDS

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|                                                          |                                        |              |
|----------------------------------------------------------|----------------------------------------|--------------|
| NSF Award #2503122 - The Drivers of Regional...          | (contributed significantly to writing) | 2025-Present |
| NSF Award #2303513 - Disentangling Drivers...            | (contributed significantly to writing) | 2023-Present |
| NSF Award #2327558 - 17th Graduate Climate Conference... | (contributed significantly to writing) | 2023-2024    |
| CIRES Postdoctoral Fellowship (recipient)                |                                        | 2025-Present |
| MIT Student Assistance Fund (recipient)                  |                                        | 2022, 2024   |

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|---------------------------------------------------------------|-----------|
| NCAR University Data Analysis Allocation (project lead)       | 2022-2024 |
| Jorgensen Graduate Fellowship (declined)                      | 2019      |
| Columbia University Margolis Family Named Scholar (recipient) | 2018      |

## INVITED TALKS

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|-----------------------------------------------------------------|------|
| CESM Annual Workshop, High Resolution Modeling Section          | 2026 |
| University of Colorado Boulder, Department Colloquium           | 2026 |
| NOAA Physical Sciences Laboratory, Division Meeting Seminar     | 2026 |
| Woods Hole Oceanographic Institution, Climate and Paleo Seminar | 2025 |
| Yale University, Climate Science Seminar                        | 2024 |
| University of British Columbia, Physical Oceanography Seminar   | 2024 |
| US CLIVAR, Climate Dynamics Panel Annual Workshop               | 2022 |

## SYNERGISTIC ACTIVITIES

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### COMMUNITY SERVICE

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|-----------------------------------------------------------------------------------------------|------------|
| AGU Session: Advancing Paleoclimatology by Combining Data, Models, and Theory (Convener)      | 2024-2026  |
| AGU Session: Past Climates and Environments of Southeast Asia and the Indo-Pacific (Convener) | 2023, 2026 |
| MIT Robotics and Climate Workshop (Co-founder)                                                | 2024       |
| Graduate Climate Conference (Organizer, Co-chair)                                             | 2021-2023  |
| WHOI Graduate Student Government (President)                                                  | 2021-2022  |
| Joint Program- Application Support Knowledgebase (Executive Board Member)                     | 2019-2022  |

### TEACHING AND OUTREACH

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|----------------------------------------------------------------------------------------|------------|
| CU Boulder Python Summer Bootcamp (lecturer)                                           | 2026       |
| CU Boulder: Physical Oceanography and Climate, Past Climate Dynamics (guest lecturers) | 2025, 2026 |
| MIT-Nord Anglia Education (guest lecturer)                                             | 2024       |
| MIT Summer Math Refresher (taught course)                                              | 2023       |
| MIT Education Studies Program (designed and taught course)                             | 2023       |
| MIT: Global Warming Science Course (Teaching Assistant)                                | 2020       |
| Columbia University: General Chemistry Lab (Teaching Assistant)                        | 2018       |

### MENTORING

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|----------------------------------------------------------|--------------|
| Joshua Rehlinghaus (University of Hamburg Undergraduate) | 2025         |
| Daniel Waitzmann (Kiel University Masters Student)       | 2022-Present |
| Logan Smith (Cornell College Undergraduate)              | 2024-Present |
| Enzo Eckert (Falmouth High School Student)               | 2024         |
| Haikal Bakar (CU Boulder Undergraduate)                  | 2022-2023    |

### REVIEW ACTIVITIES

Journal Articles: *Nature Climate Change*, *Nature Communications*, *JGR-Atmospheres*, *JGR-Oceans*, *Climate Dynamics*, *Paleoceanography and Paleoclimatology*, *PLOS One*, *Geophysical Research Letters*