

Bor-Ting Jong

Postdoctoral Research Associate

Atmospheric and Oceanic Sciences, Princeton University
Geophysical Fluid Dynamics Laboratory, NOAA
E-mail: bor-ting.jong@noaa.gov & bor-ting.jong@princeton.edu

RESEARCH INTERESTS

- Large-scale climate variability and regional hydroclimate variability
- Predictability and prediction of hydroclimate variability on subseasonal-to-seasonal time scales
- Extreme events such as droughts and floods on different time scales

EDUCATION

Columbia University, New York, NY
Ph.D. in Earth and Environmental Sciences, 2014 – 2019

National Taiwan University, Taipei, Taiwan
M.S. in Atmospheric Sciences, 2011 – 2013

National Taiwan University, Taipei, Taiwan
B.S. in Atmospheric Sciences (Highest honor), 2007 – 2011

ACADEMIC APPOINTMENTS

Postdoctoral Research Associate, 09/2021 – present
Atmospheric and Oceanic Sciences Program, Princeton University &
NOAA Geophysical Fluid Dynamics Laboratory, Princeton, NJ
Team: Seasonal-to-Decadal Variability and Predictability Division

National Research Council (NRC) Postdoctoral Research Associate, 2019 – 2021
NOAA Physical Sciences Laboratory, Boulder, CO
Teams: Attribution and Predictability Assessments & Atmosphere-Ocean Processes

Graduate Research Fellow, 2014 – 2019
Lamont-Doherty Earth Observatory, Palisades, NY
Division: Ocean and Climate Physics

Research Assistant, 2013 – 2014
Research Center of Environmental Changes, Academia Sinica, Taipei, Taiwan
Climate System Research Laboratory (Director: Dr. Chia Chou)
Research: Modulation of Tropical Precipitation by Shallow and Deep Convective Processes

PUBLICATIONS

Jong, B.-T., T. L. Delworth, W. F. Cooke, K.-C. Tseng, and H. Murakami: Increases in Extreme Precipitation over the Northeast United States using High-resolution Climate Model Simulations, *Submitted to npj Climate and Atmospheric Science (minor review)*

- Jong, B.-T.**, M. Newman, and A. Hoell (2022): Subseasonal meteorological drought development over the central United States during spring. *J. Clim.*, **35**, 2525-2547. doi: 10.1175/JCLI-D-21-0435.1
- Jong, B.-T.**, M. Ting, and R. Seager (2021): Assessing ENSO summer teleconnections, impacts, and predictability in North America. *J. Clim.*, **34**, 3629-3643. doi: 10.1175/JCLI-D-20-0761.1
- Jong, B.-T.**, M. Ting, R. Seager, and W. B. Anderson (2020): ENSO teleconnections and impacts on US summertime temperature during multi-year La Niña life-cycle. *J. Clim.*, **33**, 6009-6024. doi: 10.1175/JCLI-D-19-0701.1
- Jong, B.-T.**, M. Ting, R. Seager, N. Henderson, and D.-E. Lee (2018): Role of equatorial Pacific SST forecast error in the late winter California precipitation forecast for the 2015/16 El Niño. *J. Clim.*, **31**, 839-852. doi: 10.1175/JCLI-D-17-0145.1
- Jong, B.-T.**, M. Ting and R. Seager (2016): El Niño's impact on California precipitation: seasonality, regionality, and El Niño intensity. *Environ. Res. Lett.*, **11**, doi:10.1088/1748-9326/11/5/054021.

Other publications:

- Seager R., M. Ting, **B.-T. Jong**, M. Hoerling, S. Schubert, H. Wang, B. Lyon, A. Kumar (2015): What can drought-stricken California expect from the El Niño winter forecast? NOAA Drought Task Force, available:
https://www.drought.gov/drought/sites/drought.gov.drought/files/what_can_california_expect_FINAL3.pdf

HONORS & AWARDS

- AGU 2021 Editor's Citation for Excellence in Refereeing, 06/2022
- National Research Council (NRC) Research Associateship, 2019 – 2021
- Taiwan Ministry of Education Fellowship, 2015 – 2017
- Dean's Fellowship, Graduate Schools of Arts and Science, Columbia University, 2014 – 2015
- Dean's Award in the College of Science for Excellence in Master Thesis, NTU, 2013
- Member of The Phi Tau Phi Scholastic Honor Society, 2011
- Dean's Award in the College of Science, National Taiwan University, 2011
- National Taiwan University Presidential Award (top 5% of class, 5 times), 2007 – 2011

SELECTED CONFERENCE PRESENTATIONS

- Fry, G.** and B.-T. Jong: Large-Scale Dynamics associated with Extreme Precipitation in the Northeast United States (poster) 2022 American Geophysical Union Fall Meeting, Chicago, IL, Dec. 2022
- Jong, B.-T.** and T. Delworth: Increasing occurrence of extreme precipitation over the Northeast United States: Using an ensemble of high-resolution climate model simulations (oral) 2022 US Climate Modeling Summit Workshop, College Park, MD, Aug. 2022
- Jong, B.-T.** and T. Delworth: Using an ensemble of high-resolution climate model simulations to detect, attribute, and project changes in extreme rainfall over the Northeast U.S. (oral) 2022 European Geosciences Union General Assembly, Vienna, Austria, May 2022
- Jong, B.-T., **M. Newman**, A. Hoell: Rapid meteorological drought development over the central United States during spring. (oral) 2022 American Meteorological Society Annual Meeting, Jan. 2022

- Jong, B.-T.**, M. Newman, A. Hoell: The role of stationary Rossby waves in springtime hydroclimate over the central United States. (poster) 2020 American Geophysical Union Fall Meeting, Dec. 2020
- Jong, B.-T.**, M. Ting, R. Seager: Assessing ENSO summer teleconnections and impacts on North America in GCMs. (oral) 2020 CESM Climate Variability & Change Working Group Meeting, Boulder, CO, Mar. 2020
- Jong, B.-T.**, M. Ting, R. Seager: Assessing ENSO summer teleconnections and impacts on North America in GCMs. (oral) 2019 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2019
- Jong, B.-T.**, M. Ting, R. Seager: Seasonal evolutions of ENSO teleconnections and impacts on North America. (oral) 2019 American Meteorological Society Annual Meeting, Phoenix, AZ, Jan. 2019
- Jong, B.-T.**, M. Ting, R. Seager: ENSO teleconnections and impacts on North America during boreal summer. (oral) 2018 Graduate Climate Conference, Seattle, WA, Nov. 2018
- Jong, B.-T.**, M. Ting, R. Seager: ENSO teleconnections and impacts on North America during La Niña summers. (keynote) IV International Conference on El Niño-Southern Oscillation, Guayaquil, Ecuador, Oct. 2018
- Jong, B.-T.**, M. Ting, R. Seager and D.-E. Lee: Why did the 2015/16 El Niño fail to bring excessive precipitation to California? (oral) 2016 American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2016
- Jong, B.-T.**, M. Ting, R. Seager and D.-E. Lee: Why did the 2015/16 El Niño fail to bring excessive precipitation to California? (oral) NOAA's 41st Climate Diagnostics and Prediction Workshop, Orono, ME, Oct. 2016

SEMINAR TALKS

“Subseasonal meteorological drought development over the central United States during spring”, Research Center of Environmental Changes, Academia Sinica, Taipei, Taiwan, 05/04/2022 (*invited*)

“Subseasonal meteorological drought development over the central United States during spring”, NOAA Physical Sciences Laboratory Seminars, 06/22/2021

“Warm season subseasonal to interannual variability of North American hydroclimate”, Department of Atmospheric Sciences, National Taiwan University, 06/08/2021 (*invited*)

SERVICE

Reviewer, 2017 – present

Peer-reviewed journals:

Journal of Climate, Journal of the Atmospheric Sciences, Journal of Applied Meteorology and Climatology, Geophysical Research Letters, Journal of Geophysical Research – Atmosphere, Climate Dynamics, International Journal of Climatology, Earth System Dynamics, Dynamics of Atmospheres and Oceans, Nature Communications

Other: National Science Foundation proposal, NOAA GFDL internal review, National Climate Assessment (NCA5) Second Order Draft

Reviewer, 2020

International Panel on Climate Change (IPCC) – *Sixth Assessment Report (AR6) Climate Change 2021: The Physical Science Basis* (Working Group I, Second Order Draft)

Graduate Student Committee – Alumni and Careers Chair, 2018 – 2019

Dept. of Earth and Environmental Sciences, Columbia University

Student Committee – General Affairs Chair, 2009 – 2010

Dept. of Atmospheric Sciences, National Taiwan University

MENTORING

Cooperative Institute for Modeling the Earth System (CIMES) Summer Research Internships,

Princeton University, Summer 2022

Mentee: Gavin Fry (Dartmouth College)

Topic: Increase in the US Northeast extreme precipitation: past, present, and future

TEACHING

Teaching Assistant, Dept. of Earth and Environmental Sciences, Columbia University

Earth's Environmental System – Climate System (undergraduate level), Fall 2017

Quantitative Models of Climate – Sensitive Natural and Human Systems (Climate and Society Master program), Fall 2016

Introduction to Atmospheric Science (graduate level), Fall 2015

Teaching Assistant, Dept. of Atmospheric Sciences, National Taiwan University

Atmospheric Radiation (undergraduate level), 2011 – 2012

Exploring Taiwan – Geographical Environmental and Resources, Spring 2012

SKILLS & TRAINING

Programming Python, MATLAB, Fortran, NCL, Shell script

Modeling GFDL Spectral Atmospheric Dynamical Core, stationary wave model

Training Community Earth System Model (CESM) Tutorial (2015), NCAR Mesa Lab, Boulder, CO

Language Traditional Chinese (native), English (fluent)

OUTREACH

Presentation on extreme events in changing climate and career paths, AGILE (AAPI in Geoscience: Inclusivity, Leadership, and Experience) Researcher Visit program, Hunter College, New York, NY, Nov 2022

Presentation on extreme events in changing climate at a talk series - “BCC Meets Climate Scientists”, Bronx Community College, New York, NY, Oct 2022

Volunteer, Lamont-Doherty Earth Observatory Open House, 2014

- Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY

Volunteer, “Aiming High for A Low-Carbon Taiwan Exhibition”, 2011

- Ministry of Science and Technology, Taipei, Taiwan

Vice-director, Atmospheric Science Summer Camp for senior high students, 2009

- National Taiwan University, Taipei, Taiwan