

# HUI LI

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## EDUCATION

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**University of Illinois at Urbana-Champaign** *Dec 2014 - 2018*  
PhD in Atmospheric Sciences

**University of Illinois at Urbana-Champaign** *Dec 2014 - 2018*  
PhD Certificate in Computational Science and Engineering

**University of Illinois at Urbana-Champaign** *Aug 2013 - Dec 2014*  
M.S. in Atmospheric Sciences  
*Thesis: Modeled Sensitivity of the Northwestern Pacific Upper Ocean's Response to Tropical Cyclones in a Fully-coupled Climate Model with Various Ocean Resolution*  
GPA: 3.8/4.0

**Ocean University of China** *Sep 2009 - Jun 2013*  
B.S. in Atmospheric Sciences with honor  
*Thesis: The Impact of Cold Air on Hurricane Sandy*  
GPA: 96/100

## PROFESSIONAL APPOINTMENTS

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**Project Scientist I** *2020 - present*  
Climate & Global Dynamics Lab, National Center for Atmospheric Research

**Postdoctoral Associate** *2018 - 2020*  
Department of Geology and Geophysics, Yale University

**Research Assistant** *2013 - 2018*  
Department of Atmospheric Sciences, University of Illinois at Urbana Champaign

**Research Assistant** *May 2016 - Aug 2016*  
Program in Arms Control & Domestic and International Security, University of Illinois at Urbana Champaign

## PUBLICATIONS

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Li, H., A. V. Fedorov, and W. Liu (2021), AMOC Stability and Diverging Response to Arctic Sea Ice Decline in Two Climate Models, *Journal of Climate*. DOI: 10.1175/JCLI-D-20-0572.1

Li, H., and A.V. Fedorov (2021), Persistent Freshening of the Arctic Ocean and Changes in the North Atlantic Salinity Caused by Arctic Sea Ice Decline, *Climate Dynamics* <https://doi.org/cuucar.idm.oclc.org/10.1007/s00382-021-05850-5>

Li, H., A. Hu, G. Meehl (2021, in preparation), Impact of Tropical Cyclone winds in a Fully-coupled Climate Model, *Journal of Climate*

- Li, H., J. Richter, C-Y.Lee, H.Kim (2021, in preparation), Subseasonal Tropical Cyclone Prediction in CESM2 S2S hindcasts.
- Li, H., and R. L. Sriver (2019), Impact of Air-Sea Coupling on the Simulated Global Tropical Cyclone Activity in the High-Resolution Community Earth System Model (CESM), *Climate Dynamics*. DOI: 10.1007/s00382-019-04739-8
- Sriver, R. L., H. Li (2019), Analyzing Tropical Cyclone-Climate Interactions Using the High-Resolution Community Earth System Model, *Blue Waters 2019 Annual Report*
- Li, H., L. Chen, C. Singer, R. L. Sriver (2019, in preparation), Decision-Making and Climate Modeling with Geoengineering: Using a Climate Action Game Experiment to Inform Climate Decisions, *Climatic Change*.
- Li, H., and R. L. Sriver (2018), Impact of Tropical Cyclones on the Global Ocean: Results from Multi-decadal Global Ocean Simulation Isolating Tropical Cyclone Forcing, *Journal of Climate*. DOI: 10.1175/JCLI-D-18-0221.1
- Sriver, R. L., H. Li (2018), Impact of Ocean Coupling on Simulated Tropical Cyclone Activity in the High-Resolution Community Earth System Model, *Blue Waters 2017 Annual Report*.
- Li, H., and R. L. Sriver (2017), Tropical Cyclone Activity in the High-resolution Community Earth System Model and the Impact of Ocean Coupling, *Journal of Advances in Modeling Earth Systems*, doi:10.1002/2017MS001199
- Huang, A., H. Li, R. L. Sriver, A. V. Fedorov, and C. M. Brierley (2017), Regional Variations in the Ocean Response to Tropical Cyclones: Ocean Mixing Versus Low Cloud Suppression, *Geophys. Res. Lett.*, 44(4), 2016GL072023, doi:10.1002/2016GL072023.
- Sriver, R., Li, H. (2017), Analyzing Tropical Cyclone-Climate Interactions Using the Community Earth System Model (CESM), *Blue Waters 2016 Annual Report*.
- Li, H., Sriver, R. (2016), Effects of Ocean Horizontal Resolution on Simulations of Tropical Cyclone-induced Upper Ocean Responses, *J. Geophys. Res. Oceans*, 121(11), 83058319, doi:10.1002/2016JC011951.
- Sriver, R., Li, H. (2016), Scaling of the CESM to Ultra-high Resolutions for Analyzing Tropical Cyclone-Climate Feedbacks, *Blue Waters 2015 Annual Report*.
- Li, H., Sriver, R., Goes, M. (2015), Modeled Sensitivity of the Northwestern Pacific Upper Ocean's Response to Tropical Cyclones in a Fully-coupled Climate Model with Various Ocean Grid Resolution, *Journal of Geophysical Research-Oceans*, doi: 10.1002/2015JC011226.
- Ruan, X.-Z., HUANG, F., LI, H. (2012), Variation in Core region of the Antarctic Oscillation and Its Synoptic and Intraseasonal Oscillation, *Periodical of Ocean University of China*, 42(Sup.): 241-248.

## PRESENTATIONS

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### - Oral Presentations

- Li, H. (2021): Can Tropical Cyclones Affect the Climate? Invited seminar at the Geophysical Fluid Dynamics Laboratory.
- Li, H., Fedorov, A. V.(2020): Arctic Ocean Freshening Caused by Intensification of Sea Ice Seasonal Cycle, *Ocean Sciences Meeting, AGU 2020*
- Li, H.,(2020): Can Hurricanes affect the Climate? *Climate and Global Dynamics seminar series, National Center for Atmospheric Research*

- Li, H.,(2020): AMOC stability and response to Arctic sea ice decline: contrasting two models, Scientific Report, National Center for Atmospheric Research
- Li, H., Fedorov, A. V.(2019): Arctic Ocean Freshening Caused by Intensification of Sea Ice Seasonal Cycle, 15th Conference on Polar Meteorology and Oceanography
- Sriver, R. and Li, H.(2019): The Response of Tropical Cyclone Activity to Increasing CO<sub>2</sub> in the Community Earth System Model (CESM), 2019 Blue Waters Annual Symposium
- Li, H. (2018): Investigating Tropical Cyclone-Climate Interactions Using the High-resolution Community Earth System Model (CESM), Atmosphere, Ocean and Climate Dynamics Seminar Series at Yale
- Li, H., Sriver, R. (2018): Sensitivity of global TC activity to ocean-atmosphere coupling and atmospheric CO<sub>2</sub> using the high-resolution Community Earth System Model, 2018 AGU Fall Meeting
- Li, H., Sriver, R. (2018): Interactions Between Tropical Cyclones and The Global Ocean on Seasonal to Interannual Timescales Using the High Resolution Community Earth System Model, 2018 Ocean Science Meeting
- Li, H., Sriver, R. (2017): Impact of Ocean Coupling on the Simulated Tropical Cyclone Activity in the High-resolution Community Earth System Model, 2017 Aegean Conference – The 6th International Summit on Hurricanes and Climate Change
- Li, H., Sriver, R. (2017): Simulating Tropical Cyclones Using the High-resolution Earth System Model, Invited talk to Vrije Univerteit Amsterdam (VU Amsterdam)
- Bock, D., Li, H., Sriver, R. (2017): Simulation and Visual Representation of Tropical Cyclone-Ocean Interactions, The International Conference for High Performance Computing, Networking, Storage and Analysis (SC17)
- Sriver, R., Li, H. (2017): Simulating and Visualizing Hurricane-Ocean Interactions using High-Resolution CESM, NCSA Faculty Fellow Brown Bag
- Li, H., Sriver, R. (2016): Analyzing tropical cyclone-climate interactions using the high resolution Community Earth System Model, 2016 Blue Waters Annual Symposium
- Li, H., Sriver, R. (2015): Effect of tropical cyclones on the upper ocean – the role of horizontal ocean grid resolution, 2015 AGU Fall Meeing
- Li, H., Sriver, R., Goes, M. (2015): Analyzing the sensitivity of the northwestern Pacific upper ocean's response to tropical cyclones in a fully-coupled climate model, The 5th International Summit on Hurricanes and Climate Change
- Poster Presentations**
- Li, H., Sriver, R. (2019): Impact of air sea coupling on the simulated global tropical cyclone activity in the high-resolution Community Earth System Model, 2019 Blue Waters Annual Symposium
- Li, H., Sriver, R. (2017): Impact of Ocean Coupling on the Simulated Tropical Cyclone Activity in the High-resolution Community Earth System Model, 2017 Aegean Conference – The 6th International Summit on Hurricanes and Climate Change
- Li, H., Sriver, R. (2017): Impact of ocean coupling on simulated tropical cyclone activity in the High-resolution Community Earth System Model, 2017 Research Review of the School of Earth, Society and Environment

Li, H., Sriver, R. (2016): Effect of ocean horizontal resolution on simulations of tropical cyclone-induced upper ocean responses, 2016 Research Review of the School of Earth, Society and Environment

Sriver, R., Li, H. (2015): Tropical cyclone-ocean interactions in a high resolution earth system model, 2015 AGU Fall Meeting

Li, H., Sriver, R., Goes, M. (2014): Modeled sensitivity of the northwestern Pacific upper ocean's response to tropical cyclones in a fully-coupled climate model with various ocean grid resolution, 2014 AGU Fall Meeting

Li, H., Sriver, R., Goes, M. (2014): Modeled sensitivity of the northwestern Pacific upper ocean's response to tropical cyclones in a fully-coupled climate model with various ocean grid resolution, 2015 Research Review of the School of Earth, Society and Environment

## HONORS AND AWARDS

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- Blue Waters allocation award (1 million node hours), Co-PI for *Response in climate and weather extremes to increasing atmospheric carbon dioxide in the High-Resolution Community Earth System Model (CESM)* 2019
- University of Illinois Graduate College Dissertation Completion Fellowship (\$20,000) 2017
- Blue Waters allocation award (500,000 node hours), Co-PI for *Simulating tropical cyclone-climate interactions under anthropogenic global warming using high-resolution configurations of the Community Earth System Model (CESM)* 2017
- Blue Waters allocation award (50,000 node hours), Co-PI for *Assessing CESM scalability for hierarchical model ensembles* 2017
- Honorable Mention for Ogura Outstanding Student Research Paper Award 2017
- Blue Waters allocation award (660,000 node hours), Co-PI for *Analyzing tropical cyclone-climate interactions using the Community Earth System Model (CESM)* 2016
- Ogura Outstanding Student Research Paper Award 2016
- Focal Point project grant for *Climate Action Policies and International Policy Negotiations* Graduate College, University of Illinois at Urbana-Champaign 2015-2016
- National Science Foundation (NSF) Student Travel Award, 2015 Aegean Conference 2015
- Best Student Presentation Award, 2015 Aegean Conference 2015
- Best Student Research Poster Award (First Place), School of Earth, Society and Environment Research Review 2015
- Blue Waters allocation award (50,000 node hours), Co-PI for *Scaling the Community Earth System Model (CESM) to ultra-high resolutions for analyzing tropical cyclone-climate feedbacks* 2015
- National Scholarship (top %1) 2010-2011
- First-class Scholarship for Excellent Academic Performance (top 4%) 2009-2012
- The Honor of Outstanding Student 2009-2013
- The Honor of Outstanding Volunteer 2011-2012

## SERVICE AND OUTREACH

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- Reviewer for Climate Dynamics
- Reviewer for Geophysical Research Letters
- Reviewer for Journal of Geophysical Research-Oceans
- Reviewer for Journal of Geophysical Research-Atmosphere
- Reviewer for Meteorological Applications
- Reviewer for Ocean Modeling
- Reviewer for International Journal of Climatology
- Member of American Geophysical Union
- Organizer of the Atmosphere, Ocean, climate dynamics seminar series at Yale University 2019
- Invited lecture for GG/535 (Topics on Tropical Meteorology and Oceanography) in the Department of Geology and Geophysics at Yale 2019
- Invited lecture for NPRE/483 (Energy and Security) in the Department of Nuclear, Plasma, and Radiological Engineering of University of Illinois at Urbana-Champaign – A short introduction to climate models 2016
- Invited lecture for ATMS/509 (Risk Analysis) in the Department of Atmospheric Sciences of University of Illinois at Urbana-Champaign 2016
- Secretary General of the Department of Atmospheric Sciences Student Organization 2014-2015
- Student Representative in Academics Committee, Department of Atmospheric Sciences 2015
- Participant in the National Center for Atmospheric Research Advanced Study Program (NCAR ASP) Summer Colloquium: Uncertainty in climate change research 2014
- Volunteer of the 4th International Blue Economy Summit Forum 2012