Xiaoming SHI

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University of California, Berkeley
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EDUCATION & EXPERIENCE

2015 – *current* Postdoctoral scholar CIVIL & ENVIRONMENTAL ENGINEERING
University of California, Berkeley
Advisor: Fotini Katopodes CHOW & Robert L. Street

2013 – 2015 Ph.D. ATMOSPHERIC SCIENCES
University of Washington, Seattle
Committee: Dale DURRAN (chair), John M. WALLACE, Dennis HARTMANN, David BATTISTI, Dargan FRIERSON
Dissertation: *Studies of Climate Dynamics with Innovative Global-Model Simulations*

2010 – 2013 M.S. ATMOSPHERIC SCIENCES
University of Washington, Seattle
Advisor: Dale DURRAN

2005 – 2009 B.S. ATMOSPHERIC SCIENCES
Lanzhou University, Lanzhou, China

PUBLICATIONS

SHI, X., D. KIM, Á. F. ADAMES, J. SUKHATME, 2018: MJO-like Intraseasonal Oscillations in an Aquaplanet Simulation: A Manifestation of the Observed MJO, or a Different mode? ***J. Adv. Model. Earth Syst.***, in preparation.

CHOW, F. K., C. SCHAER, N. BAN, K. LUNDQUIST, L. SCHLEMMER, **X. SHI**, 2018: Crossing Multiple Gray Zones in the Transition from Mesoscale to Microscale Simulation over Complex Terrain. ***Atmosphere***, in preparation.

SHI, X., F. K. CHOW, R. L. STREET, G. H. BRYAN, 2018: Evaluation of LES-type Turbulence Closures for Simulating Deep Convection at Kilometer-Scale Resolution. ***J. Adv. Model. Earth Syst.***, in preparation.

SHI, X., F. K. CHOW, R. L. STREET, G. H. BRYAN, 2018: An Evaluation of Traditional LES Turbulence Models for Scalar Mixing in the Stratocumulus-Capped Boundary Layer. ***J. Atmos. Sci.***, 75, 1499–1507.

SHI, X., H. L. HAGEN, F. K. CHOW, R. L. STREET, G. H. BRYAN, 2018: Large-Eddy Simulation of Stratocumulus-Capped Boundary Layer with Explicit Filtering and Reconstruction Turbulence Modeling. ***J. Atmos. Sci.***, 75, 611–637.

SHI, X. & D. R. DURRAN, 2016: Sensitivities of Extreme Precipitation to Global Warming Are Lower over Mountains than over Oceans and Plains. ***J. Climate***, 29, 4779-4791.

SHI, X. & D. R. DURRAN, 2015: Estimating the Response of Extreme Precipitation over Mid-latitude Mountains to Global Warming. ***J. Climate***, 28, 4246-4262.

SHI, X. & C. S. BRETHERTON, 2014: Large Scale Character of an Atmosphere in Rotating Radiative-Convective Equilibrium. ***J. Adv. Model. Earth Syst.***, 06.

SHI, X. & D. R. DURRAN, 2014: The Response of Orographic Precipitation over Idealized Mid-Latitude Mountains Due to Global Increases in CO_2. ***J. Climate***, 27, 3938-3956.

PROFESSIONAL ACTIVITIES

SEPT 2016 **Visiting Scientist**
Mesoscale and Microscale Meteorology Laboratory
National Center for Atmospheric Research (NCAR), Boulder, CO

SEPT 2014 **Summer School on Using Satellite Observations to Advance Climate Models**
NASA's Earth Science Division & Caltech's Keck Institute for Space Studies
Pasadena, CA

JULY 2012 **Summer School on Atmospheric Modeling**
Geophysical Fluid Dynamics Laboratory (GFDL), Princeton, NJ

TEACHING/MENTORING

2017 SUMMER **Undergraduate research mentor**
for Michael Liu
Summer Research Program
Department of Civil and Environmental Engineering, Stanford University

2016 SUMMER **Undergraduate research mentor**
for Barrett Travis
Vice Provost for Undergraduate Education (VPUE) Research Program
Department of Civil and Environmental Engineering, Stanford University

2015 – 2016 **Honors thesis advisor**
for Hannah Hagen
Department of Civil and Environmental Engineering
University of California, Berkeley

2012 SPRING **Teaching assistant**
Global warming—understanding the issues, undergraduate class
Department of Atmospheric Sciences, University of Washington, Seattle

CONFERENCE PRESENTATIONS

American Geophysical Union Fall Meeting, 2017: *Simulation of Deep Convective Clouds with the Dynamic Reconstruction Turbulence Closure*. New Orleans, LA.

17th Conference on Mesoscale Processes, 2017: *Simulation of Stratocumulus and Deep Convective Clouds with the Dynamic Reconstruction Turbulence Closure*. American Meteorological Society, San Diego, CA.

American Geophysical Union Fall Meeting, 2016: *Improving Entrainment for LES of Stratocumulus with the Dynamic Reconstruction Turbulence Closure Model*. San Francisco, CA.

22nd Symposium on Boundary Layers and Turbulence, 2016: *Subfilter-Scale Processes and the Simulation of Convective Clouds in the Terra Incognita.* American Meteorological Society, Salk Lake City, UT.

American Geophysical Union Fall Meeting, 2015: *Global-warming-induced Increases in Extreme Precipitation are Smaller over Mountains.* San Francisco, CA.

16th Conference on Mountain Meteorology, 2014: *The Response of Extreme Precipitation over Idealized Mid-latitude Mountains to Global Warming.* American Meteorological Society, San Diego, CA.

American Geophysical Union Fall Meeting, 2013: *Estimating the Response of Mid-latitude Orographic Precipitation to Global Warming.* San Francisco, CA.

15th Conference on Mesoscale Processes, 2013: *Changes in mid-latitude orographic precipitation due to global warming.* American Meteorological Society, Portland, OR.

MODELING TOOLS

GFDL global models
Weather Research and Forecasting (WRF) Model
NCAR's Cloud Model 1 (CM1)

INTERESTS

Open-source code development, hiking, cycling, traveling.