CHRISTOPHER B. SKINNER

Environmental, Earth and Atmospheric Sciences
University of Massachusetts Lowell
301B Olney Hall, 265 Riverside St, Lowell, MA 01854
christopher_skinner@uml.edu · (978) 934-3901 · umlclimatesystemdynamics.com

EDUCATION

2014 **Ph.D. Environmental Earth System Science**, Stanford University

2008 **B.S. Atmospheric Science**, Cornell University

APPOINTMENTS

2019 – Present **Assistant Professor**, University of Massachusetts Lowell

2017 – 2018 **Assistant Research Scientist**, University of Michigan

2014 – 2016 **Turner Postdoctoral Fellow**, University of Michigan

PUBLICATIONS

Thompson AJ, **Skinner CB**, Poulsen CJ, Zhu J (2019) Modulation of mid-Holocene African rainfall by dust aerosol direct and indirect effects. *Geophysical Research Letters*, 46, 3917 – 3926, doi:10.1029/2018GL081225.

Skinner CB, Poulsen CJ, Mankin JS (2018) Amplification of heat extremes by plant CO2 physiological forcing. *Nature Communications*, doi:10.1038/s41467-018-03472-w.

Chadwick R, Douville H, **Skinner CB** (2017) Timeslice experiments for understanding regional climate projections: applications to the tropical hydrological cycle and European winter circulation. *Climate Dynamics*, doi:10.1007/s00382-016-3488-6.

Webb MJ, Andrews T, Bodas-Salcedo A, Bony S, Bretherton CS, Chadwick R, Chepfer H, Douville H, Good P, Kay JE, Klein SA, Marchand R, Medeiros B, Siebesma AP, **Skinner CB**, Stevens B, Tselioudis G, Tsushima Y, Watanabe M (2017) The Cloud Feedback Model Intercomparison Project (CFMIP) contribution to CMIP6. *Geoscientific Model Development Discussion*, 10(1), 359-384, doi:10.5194/gmd-10- 359-2017.

Skinner CB, Poulsen CJ, Chadwick R, Diffenbaugh NS, Fiorella RP (2017) The role of plant CO2 physiological forcing in shaping future daily-scale precipitation. *Journal of Climate*, 30, 2319-2340, doi:10.1175/JCLI-D-16-0603.1.

Skinner CB, Poulsen CJ (2016) The role of fall season tropical plumes in enhancing Saharan rainfall during the African Humid Period. *Geophysical Research Letters*, 43, 349-358, doi:10.1002/2015GL066318.

Horton DE, Skinner CB, Singh D, Diffenbaugh NS (2014) Occurrence and persistence of future atmospheric stagnation events. *Nature Climate Change* 4(8), 698-703.

Skinner CB, Diffenbaugh NS (2014) Projected changes in African easterly wave intensity and track in response to greenhouse forcing. *Proceedings of the National Academy of Sciences* 111, 6882-6887.

-- Highlighted article, Nowcast News and Notes, *BAMS*.

Skinner CB, Diffenbaugh NS (2013) The contribution of African easterly waves to monsoon precipitation in the CMIP3 ensemble. *Journal of Geophysical Research – Atmospheres* 118(9), 3590–3609.

Skinner CB, Ashfaq M, Diffenbaugh NS (2012) Influence of 21st century atmospheric and sea surface temperature forcing on West African climate. *Journal of Climate* 25(2), 527-542.

Ashfaq M, Skinner CB, Diffenbaugh NS (2010) Influence of SST biases on future climate change projections. *Climate Dynamics* 36(7-8), 1303-1319.

Skinner CB, DeGaetano A, Chabot B (2010) Implications of 21st century climate change on northeastern United States maple syrup production: impacts and adaptations. *Climatic Change* 100(3-4), 685-702.

AWARDS

Turner Postdoctoral Fellowship, University of Michigan

Graduate Student Award for Scholarly and Research Achievement, Stanford University

Centennial Teaching Assistant Award, School of Earth Sciences, Stanford University

RESEARCH GRANTS

2019 – 2022 Collaborative Research -- Elucidating the drivers and consequences of changes in atmospheric rivers from the last glacial maximum to the present day, NSF Paleoclimate Program, $224,310 to Skinner (PI).

2016 – 2019 Investigation of extratropical mechanisms, land-surface properties, and seasonal precipitation processes on Saharan rainfall and simulation of the African Humid Period, NSF Paleoclimate Program, $330,950 to Poulsen (PI)*

* Served as co-PI. The University of Michigan does not allow postdoctoral fellows to be officially designated as PI/co-PIs

INVITED TALKS

2019 Lowell Center for Space Science and Technology, University of Massachusetts Lowell, Lowell, MA
2018 Department of Geography and Environmental Sciences, University of Colorado Denver, Denver, CO
2018 Department of Earth and Environmental Sciences, Vanderbilt University, Nashville, TN
2018 Department of Earth and Environmental Sciences, University of Illinois at Chicago, Chicago, IL
2018 Department of Environmental, Earth and Atmospheric Sciences, University of Massachusetts Lowell, Lowell, MA
2018 School of Earth and Environment, Rowan University, Glassboro, NJ
2017 Department of Earth and Planetary Sciences, Northwestern University, Evanston, IL
2017 School of the Environment, Washington State University, Vancouver, WA
2017 Department of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI
2014 Department of Earth and Environmental Sciences, University of Michigan, Ann Arbor, MI
2013 Department of Civil and Environmental Engineering, Stanford University, Stanford, CA

CONTRIBUTED TALKS (FIRST AUTHOR ONLY)

Skinner CB, The impact of CO2-driven vegetation changes on wildfire risk, American Geophysical Union Fall Meeting, Dec 14, 2017, San Francisco, CA.

Skinner CB, Poulsen CJ, Amplification of heat extremes by CO2 physiological forcing, American Meteorological Society Annual Meeting, Jan 22-26, 2017, Seattle, WA.

Skinner CB, Chadwick R, Douville H, Diffenbaugh NS, A process-based understanding of regional climate responses to CO2 forcing, CFMIP Meeting on Cloud Processes and Climate Feedbacks, June 8-11, 2015, Monterey, CA.

Skinner CB, Diffenbaugh NS, African easterly waves in CMIP5: Response to enhanced radiative forcing and implications for Atlantic tropical cyclone activity, 4th International Summit on Hurricanes and Climate Change, June 13-18, 2013, Kos, Greece.

Skinner CB, Ashfaq M, Diffenbaugh NS, The influence of convective and land surface processes on the variability of the West African Monsoon, American Geophysical Union Fall Meeting, Dec 13-17, 2010, San Francisco, CA.

POSTER PRESENTATIONS (FIRST AUTHOR ONLY)

Skinner CB, Touma D, Singh D, Poulsen CJ, The impact of rising CO2 on the spatial footprint of extreme heat events, AGU Fall Meeting, Dec 10-14, 2018, Washington DC.

Skinner CB, Poulsen CJ, The role of CO2 physiological forcing in driving future precipitation variability and precipitation extremes, AGU Fall Meeting, Dec 14-18, 2015, San Francisco, CA.

Skinner CB, Poulsen CJ, The role of regional atmospheric circulation changes in shaping climate reorganization in Africa, AGU Fall Meeting, Dec 15-19, 2014, San Francisco, CA.

Skinner CB, Diffenbaugh NS, The impact of projected changes in monsoon season circulation and African easterly waves on Saharan dust transport, AGU Fall Meeting, Dec 9-13, 2013, San Francisco, CA.

Skinner CB, Diffenbaugh NS, African easterly waves in CMIP5: future changes for West African precipitation and Atlantic tropical cyclone activity, AGU Fall Meeting, Dec 3-7 2012, San Francisco, CA.

Skinner CB, Diffenbaugh NS, The response of African easterly waves and associated precipitation to enhanced radiative forcing, AGU Fall Meeting, Dec 5-9, 2011, San Francisco, CA.

Skinner CB, Ashfaq M, Diffenbaugh NS, High resolution climate modeling: a case study of West African summer climate, Department of Energy Office of Biological and Environmental Research Climate and Earth System Modeling PI Meeting, Sept 19-22, 2011, Washington, D.C.

Skinner CB, Ashfaq M, Diffenbaugh NS, The response of African easterly waves and associated precipitation to enhanced radiative forcing, African Weather and Climate Colloquium, July 25 - Aug 5, Boulder, CO.

Skinner CB, Ashfaq M, Diffenbaugh NS, The influence of convective and land surface processes on theWest African Monsoon, Berkley Atmospheric Sciences Center Symposium, Feb 11, 2011, Berkley, CA.

Skinner CB, Ashfaq M, Diffenbaugh NS, A quantification of GHG and SST forcing in West African climate change, AGU Fall Meeting, Dec 14-18, 2009, San Francisco, CA.

Skinner CB, Ashfaq M, Diffenbaugh NS, A quantification of GHG and SST forcing in African climate change, 14th Annual CCSM Workshop, Jun 15-18, 2009, Breckenridge, CO.

ACADEMIC ADVISEES

2015 Alexander Thompson – Senior honors thesis, University of Michigan

PUBLIC AND ACADEMIC SERVICE

2019	Instructor, K-12 Teachers Professional Development Workshop, Integrating Climate Change into the Classroom, Lowell, MA
2019	Invited speaker, REACT Grant Seminar Series, Chelmsford Library, Chelmsford, MA
2018	Invited speaker, Lions Club International, Royal Oak Library, Royal Oak, MI
2017	Invited speaker, 350.org Southeast Michigan Chapter, Ann Arbor, MI
2017	Instructor, University of Michigan Wolverine Pathways Program, Ypsilanti, MI
2016 – 2017	Museum Science Communication Fellow, University of Michigan Museum of Natural History, Ann Arbor, MI
2016 – 2017	Instructor, University of Michigan Earth Camp, Ann Arbor, MI
2015	Judge, Michigan Geophysical Union Conference, Ann Arbor, MI
2005 – 2008	Instructor, Cornell University Teach to Reach Program, Ithaca, NY

WORK EXPERIENCE

2007	Research Assistant, Northeast Regional Climate Center
2006 – 2007	Official Weather Observer, Game Farm Road Weather Station, Ithaca, NY

JOURNAL REVIEW

Atmosphere, Climate Dynamics, Climate of the Past, Current Climate Change Reports, Geophysical Research Letters, Journal of the Atmospheric Sciences, Journal of Climate, Journal of Geophysical Research - Atmospheres, Meteorology and Atmospheric Physics, Nature Climate Change, Nature Geoscience, Water Resources Research

MEMBERSHIPS

2008 – Present	American Meteorological Society
2008 – Present	American Geophysical Union