

## Curriculum Vitae

April 25, 2016

Email: [jch\\_chiang@berkeley.edu](mailto:jch_chiang@berkeley.edu)

Fax: (510) 642-3370

## JOHN C. H. CHIANG

Department of Geography

547 McCone Hall

University of California

Berkeley, CA 94720-4740

## EDUCATION

- 02/2001 Ph.D., with distinction. Department of Earth and Environmental Sciences, Columbia University, New York, NY. Thesis: *The Intertropical Convergence Zone in Tropical Atlantic Climate Variability*. Advisor: Mark A. Cane.
- 10/1999 M.Phil. Department of Earth and Environmental Sciences, Columbia University, New York, NY. Advisor: Mark A. Cane
- 05/1996 M.S. Department of Physics, Cornell University, Ithaca, NY. Thesis: *Development of a large-scale dynamical model of the atmosphere and application to the study of the response to surface heating at low latitudes*. Advisor: Kerry H. Cook
- 05/1993 B.Sc. Hons, first class. Department of Mathematics, University of the Witwatersrand, Johannesburg, South Africa.
- 05/1992 B.Sc. Hons., first class. Department of Physics, University of the Witwatersrand, Johannesburg, South Africa.

## PRIMARY APPOINTMENTS

- 07/2015- present Full Professor, Department of Geography, University of California, Berkeley.
- 07/2008- 06/2015 Associate Professor (with tenure), Department of Geography, University of California, Berkeley.
- 07/2001- 06/2008 Assistant Professor (tenure-track), Department of Geography, University of California, Berkeley.
- 02/2001- 12/2002 NOAA/UCAR Climate and Global Change Postdoctoral Fellow, Joint Institute for the Study of the Atmosphere and Ocean, University of Washington, Seattle. Host: David S. Battisti
- 07/1996- 12/2000 Graduate Research Assistant, Climate Group, Lamont-Doherty Earth Observatory, Columbia University.
- 06/1994- 12/1995 Graduate Research Assistant, Cook Research Group, Dept. of Soil, Crop, and Atmospheric Sciences, Cornell University.
- 01/1990- 12/1990 Student Research Assistant, Comins Research Group, Dept. of Physics, University of the Witwatersrand.

## OTHER POSITIONS HELD

- 01/2014- 06/2014 Visiting Associate Professor, Research Center for Environmental Changes, Academia Sinica
- 02/2012- Adjunct Associate Professor, Dept. of Atmospheric Science, National Taiwan

present University  
 01/2012- Visiting Associate Research Fellow, Research Center for Environmental Changes,  
 06/2012 Academia Sinica  
 08/2006- Faculty Scientist, Earth Science Division, Lawrence Berkeley National Laboratory  
 present

**RESEARCH INTERESTS:** Climate Dynamics, Ocean-Atmosphere Interactions, Paleoclimate Dynamics, and Applications of Climate Studies to Society

**COURSES TAUGHT**

<b>Course name</b>	<b>Level</b>	<b>Semesters taught</b>
GEOG 40: Introduction to Earth Systems Science	Lower division undergraduate	Spring 2004, Spring 2006, Spring 2008, Fall 2010, Fall 2012, Spring 2016
L&S 70B: Global Warming ("Discovery Course")	Lower division undergraduate	Spring 2007, Spring 2009, Spring 2011, Spring 2015
GEOG 142: Climate Dynamics	Upper division undergraduate	Fall 2003, Fall 2004, Fall 2005, Fall 2007, Spr 2009, Spr 2010, Fall 2011, Spr 2013, Fall 2014
GEOG C139/ EPS C181: Atmospheric Physics & Dynamics	Upper division undergraduate	Spring 2005, Fall 2006, Fall 2009
GEOG 171: Communicating Climate Science	Upper division undergraduate	Fall 2013
GEOG 243: Advances in Environmental Change Science	Graduate seminar	Fall 2005
GEOG 249: Spatiotemporal Data Analysis in the Climate Sciences	Graduate seminar	Fall 2008
GEOG 257: Topics in Climatology	Graduate seminar	Spring 2003: Paleoclimate Modeling Fall 2004: Modern Climate Variability Spring 2006: Introduction to EOF analysis Fall 2006: Tropical Climate Variability Spring 2007: Aspects of Atmos Dynamics Spring 2008: Tropics in Paleoclimate Fall 2008: Extratropical Influences on Tropical Circulation Fall 2009: Interhemispheric Gradient in Tropical

		Climate and Change
		Fall 2010: Aerosols and Climate Change
		Fall 2011: Rotating Tank Experiments
		Spring 2013: Paleoclimate dynamics of the Asian Monsoon
		Fall 2015: Climate Dynamics of the Western US Hydroclimate
GEOG 260	Graduate	Spring 2015: Grad seminar on late Quaternary
Topics in	seminar	Climate Change: GCM reconstruction, Envelope
Biogeography		Modeling, and Climate Proxy Data (w/ Roger Byrne, Cindy Looy, and Richard Dodd)

### AWARDS AND DISTINCTIONS

2013	Friedman et al. (2013) highlighted in “Research Highlights” in the March 2013 issue of <i>Nature Geoscience</i> (volume 6, p158)
2011	Lee et al. (2011) highlighted in a “Research Spotlight” in <i>EOS</i> , Transactions of the American Geophysical Union (v92, 27, 5 July 2011)
2010	Nominated for the Faculty Award for Excellence in Postdoctoral Mentoring, Berkeley Postdoctoral Association
2006	Kavli Frontiers of Science Fellow
2005	Nominated (one of two) by UC Berkeley for the David and Lucile Packard Foundation Fellowships for Science and Engineering
2003	Orlove, Chiang and Cane 2002 (in <i>American Scientist</i> ) won the 2003 Bronze award for Magazines Feature Article, 25,001 to 100,000, awarded by the Society of National Association Publications.
2001-2002	NOAA/UCAR Climate and Global Change Postdoctoral Fellowship
2001	Ph.D. awarded with distinction (Columbia University)
2000	Heezen Memorial Prize (for outstanding achievement in academics and graduate research), Dept. of Earth and Environmental Science, Columbia University
2000	Josephine De Kármán Fellowship
1997-2000	NASA Earth Systems Science Fellowship
1992-1994	University Council Postgraduate Scholarship
1991	William Cullen Medal (most distinguished B.Sc. graduate in the Faculty of Science, University of the Witwatersrand)

### MEMBERSHIPS IN PROFESSIONAL SOCIETIES

1996-present	American Geophysical Union
1997-present	American Meteorological Society
2006-present	Association of American Geographers

## COMMUNITY SERVICE

- 2015-present Co-Chief Editor, *Journal of Climate*
- 04/2013 Guest Editor, *Proceedings of the National Academy of Sciences*
- 10/2012 Symposium Mentor, DISCCRS VII Symposium, Oct 13-19, 2012, La Foret Conference Center, Colorado Springs, CO
- 2011-2014 Editor, *Journal of Climate*
- 2007-2011 Associate Editor, *Journal of Climate*
- 2007 Editor (with Andreas Schmittner and Sidney Hemming) of an AGU monograph "Ocean circulation: Mechanisms and Impacts"

## UNIVERSITY SERVICE

- Fall 2015-Spring 2016 Member, Committee on Course Instruction, UCB
- Fall 2014 Co-organizer, Berkeley Atmospheric Science seminar series
- Fall 2014-Spring 2015 Member, Subcommittee on the Breadth Requirement American Cultures, UCB
- 07/2014-present Head Graduate Advisor, Dept of Geography, UC Berkeley
- 07/2013-06/2014 Equity Advisor, Dept. of Geography, UC Berkeley
- 08/2012-12/2013 Faculty Representative to the UC Berkeley Green Fund Committee.
- 03/2012 Lead, UC Berkeley's membership renewal to UCAR.
- 08/2008-05/2009 Organizer, UC Berkeley Atmospheric Sciences Center seminar series (Fall 2008-Spring 2009)
- 10/2008 Organizer, UC Berkeley Atmospheric Sciences Center Symposium, October 2008.
- 08/2005-12/2008 Organizer, UCB Geography colloquium series
- 2004-present UC Berkeley representative to the University Corporation for Atmospheric Research, 2004-present
- 2004 Lead, UC Berkeley's application for membership to the University Corporation for Atmospheric Research
- 1998 Organizer, Physical Oceanography/Geochemistry seminar series, Lamont-Doherty Earth Observatory of Columbia University

## CONFERENCE and WORKSHOP ORGANIZING

- 2015 Convener (with David Sear, Kim Cobb, Julian Sachs, and Pete Langdon), XIX INQUA Congress in Nagoya 2015 meeting session “Ocean-atmosphere interaction in the tropical South Pacific during the Late Quaternary”
- 2015 Scientific committee co-chair, International Symposium on Tropical Ocean and Climate, June 15-17 2015, Huanghai Hotel, Qingdao China.
- 2014 Symposium organizing committee co-chair: “The Tropics Rule: a Symposium Honoring Mark A. Cane’s Contribution to Climate Science”. Oct 20-21 2014, Lamont-Doherty Earth Observatory, Columbia University
- 2013 Convener (with Leon Rotstayn, Xiaohong Liu, Tim Cowan, and Yi Ming), Asia-Oceania Geophysical Society 10<sup>th</sup> annual meeting special session AS32, “Climatic effects of aerosols over Asia, Oceania, and the surrounding oceans”
- 2012 Convener (with River Shen, Xianfeng Wang, and Hugo Lambert), American Geophysical Union Fall 2012 session, “Tropical Hydroclimates during the Last Glacial-Interglacial Cycle”
- 2010 Convener (with Chia Chou and Shih-Yu Lee), Western Pacific Geophysics Meeting 2010 session, “The Tropics in Past and Future Climates”
- 2009 Convener (with Francoise Vimeux), AGU Fall 2009 session, “Climate Teleconnections in Past, Present, and Future Climates: Observations and Mechanisms”
- 2008<sup>s</sup> Convener (with Ragu Murtugudde and Markus Jochum), Western Pacific Geophysics Meeting 2008 session, “Droughts: Mechanisms, Forcings, and Feedbacks”
- 2007 Organizing Committee Member (with Michela Biasutti, Alessandra Giannini, Isaac Held, and Adam Sobel) of a workshop on Sahel Climate Change, Columbia University, March 2007.
- 2006 Convener (with Anthony Broccoli), AGU Spring 2006 session, “Controls of the Intertropical Convergence Zone in Past Climates: Observations and Models”
- 2005<sup>s</sup> Convener (with Rowan Sutton and Carrie Morrill), AGU Fall 2005 session, “Climate Impacts of Changes to the Thermohaline Circulation”
- 2004 Convener (with Alessandra Giannini and Benjamin Lintner), AGU Fall 2004 session A10, “The Tropical ENSO Teleconnection: Observations and Mechanisms”
- 2003 Convener (with Carrie Morrill), AGU Fall 2003 session PP41, “Rapid Climate Change during the Holocene and Last Glacial”
- 2001 Organizing committee member, US CLIVAR Atlantic meeting, NOAA Climate Diagnostics Center, Boulder CO, June 12-14, 2001.

## REVIEWER

Journal articles Journal of Climate, Journal of the Atmospheric Sciences, Monthly Weather Review, Geophysical Research Letters, Paleoceanography, Journal of Geophysical Research – Atmospheres, Journal of Geophysical Research – Oceans, Science, Nature, Nature Geoscience, Proceedings of the National Academy of Sciences, Climate Dynamics, Atmospheric Chemistry and Physics Discussions, Earth and Planetary Science Letters, Quarterly Journal of the Royal Meteorological Society, Annales Geophysicae, Atmospheric Chemistry and Physics Discussions

Grant            National Science Foundation, National Oceanic and Atmospheric Administration,  
Proposals      Department of Energy, University of California Lab Research, New Jersey  
                    Agricultural Experiment Station

Review        Proposal Review Panelist for NOAA CLIVAR (x2)  
Panels         Proposal Review Panelist for NOAA Earth System Science Program  
                    Proposal Review Panelist for NSF Marine Geosciences

Other          Reviewer for The Hadley circulation: past, present, and future, HF Diaz and R  
Bradley (eds), Springer (2004).  
Reviewer for a climate change textbook published by Pearson Prentice Hall (2011)  
Reviewer for a fact sheet on climate published by the National Environmental  
Education Foundation's Earth Gauge Program (2011)  
Reviewer for an Ocean Sciences Curriculum Sequence for grades 6-8, developed by  
the Lawrence Hall of Science (2012)  
Reviewer for Climate Change: Multidecadal and Beyond, Ghil, Latif, Wallace and  
Chang (eds), World Press (2013)

## INVITED TALKS

04/26/2016    Whole Earth Seminar, UC Santa Cruz  
12/23/2015    Sun Yat Sen University, Guangzhou China  
12/17/2015    AGU Fall Meeting 2015, San Francisco CA, PP34A-01  
10/28/2015    Lawrence Livermore National Laboratory, Livermore CA  
09/16/2015    Workshop on the Annual Cycle of Monsoons and ITCZs in the Holocene and the  
Future. Columbia University  
05/19/2015    Workshop on Monsoons: Past, Present, and Future. Linde Center for Global  
Environmental Science, California Institute of Technology.  
06/11/2014    Academia Sinica, Research Institute for Environmental Changes seminar series  
06/03/2014    Workshop on “Connecting the Tropics to Polar Regions”, Lamont Doherty Earth  
Observatory of Columbia University, Palisades, New York  
06/29/2014    Wallace Forum: Something about Climate, Academia Sinica, Taipei, Taiwan  
05/20/2014    Workshop on Borderland China, Institute of Chinese Studies, UC Berkeley (invited  
discussant)  
04/29/2014    Departmental Seminar, Dept. of Atmospheric Sciences, National Taiwan  
University, Taiwan  
04/24/2014    Institute of Earth Environment, Chinese Academy of Sciences, Xian, China (two  
04/25/2014    talks)  
3/12/2014    Paleoclimate (‘PPP’) group meeting, Dept. of Geosciences, National Taiwan  
3/19/2014    University, Taiwan (three talks)  
5/07/2014  
03/10/2014    Atmosphere-Ocean Research Institute, University of Tokyo, Japan (two talks)  
03/11/2014  
12/2014        AGU Fall 2013 meeting PP31E “Tropical Hydroclimate Changes During the Late  
Pleistocene I”

11/19/2013 Carnegie Institute for Global Ecology, Stanford, CA

09/27/2013 University of Texas at Austin, Institute for Geophysics

07/10/2013 DACA-13 conference, July 2013, Davos, Switzerland; session on “Global Monsoon system: past, present and future”

05/21/2013 Abrupt Climate Change Studies Symposium, Lamont-Doherty Earth Observatory, Columbia University

02/28/2013 Dept. of Atmospheric and Oceanic Sciences, University of Maryland, College Park

02/21/2013 Dept. of Earth Science, UC Santa Barbara

10/02/2012 San Jose State University, Dept. of Meteorology and Climate Science

08/06/2012 Berkeley Summer Research Institute, Institute of East Asian Studies, UC Berkeley

08/06/2012 Lawrence Berkeley National Laboratory, Climate Group Brown Bag

08/2012 AOGS 2012 conference, 13-17 August 2012, Singapore (two invited talks)

05/01/2012 National Taiwan University, Dept of Atmospheric Sciences seminar series

04/17/2012 National Central University, Dept. of Atmospheric Sciences seminar series

04/12/2012 EOS, Nanyang Technological University

04/05/2012 First Institute of Oceanography, Qingdao

04/05/2012 Ocean University of China, Qingdao

03/27/2012 National Taiwan Normal University, Dept. of Earth Science colloquium

02/08/2012 Academia Sinica, Research Institute for Environmental Changes

08/2011 AOGS 2011 Meeting, Taipei, Taiwan

05/17/2011 University of California, Santa Cruz, Dept. of Earth and Planetary Sciences Whole Earth Seminar

12/2010 AGU session on “Regional Patterns of Global Warming: Models, Mechanisms, and Observations”, Fall 2010

11/08/2010 University of California, Davis, Fourth Synergistic Ocean/Atmosphere/ Climate System (SOACS) Seminar Series

09/24/2010 Centre for Ice and Climate, Niels Bohr Institute, University of Copenhagen

10/23/2009 GeoLunch, Geospatial Innovation Facility (GIF), College of Natural Resources, UC Berkeley.

08/18/2009 Chabot Space and Science Center ‘enrichment’ (talk to staff members and volunteers)

12/2008 AGU session on “Transitioning out of the Mid-Holocene Climate: An Evaluation of Land-Ocean Proxy Records and Model Simulations II”, Fall 2008

12/2008 AGU session on “Tracking Abrupt Climate Variability During the Last Glacial Cycle in the Indo-Pacific II”, Fall 2008

05/07/2008 University of Minnesota Department of Geology and Geophysics Departmental

- 05/08/2008 Seminar (two talks)
- 04/01/2008 Berkeley Atmospheric Sciences Seminar
- 11/2007 2<sup>nd</sup> International AMMA conference., Karlsruhe, Germany, Nov 2007
- 09/2007 9<sup>th</sup> International Conference on Paleoceanography, Shanghai, China, Sep 2007
- 07/04/2007 The Fourth International Ocean-Atmosphere Conference (organized by the Chinese-American Oceanic and Atmospheric Association), Qingdao, China, Jul 4 2007
- 02/21/2007 Seminar, Ocean Sciences Dept, University of California, Santa Cruz
- 11/03/2006 18<sup>th</sup> Annual Kavli Frontiers of Science Symposium, National Academy of Sciences, Irvine CA
- 03/07/2006 Texas A&M Dept of Atmospheric Science Colloquium
- 12/29/2005 National Taiwan University Atmospheric sciences departmental seminar
- 05/2005 Sea ice workshop, Bjerknes Centre for Climate Research, University of Bergen, 24-25 May 2005
- 04/13/2005 UCLA Atmospheric Sciences departmental seminar
- 05/06/2004 Harvard, Earth and Planetary Sciences special seminar
- 05/2004 Tropical glaciation workshop, University of Washington, May 13-14 2004
- 04/09/2004 Comer Abrupt Climate Change fellowship conference
- 06/2003 Abrupt climate change meeting, Arden House, NY
- 09/2002 Workshop on the Atlantic ITCZ, International Research Institute for Climate Prediction, Palisades, NY
- 05/2002 American Geophysical Union Spring 2002 meeting
- 11/30/2001 Dept. of Geophysical Sciences, Univ. of Chicago
- 12/1998 Academia Sinica, Institute of Earth Sciences

## **OUTREACH**

- 4/16/2016 Cal Day public Talk at the Lawrence Hall of Science (using the Science on a Sphere): "An exploration of the global climate: past, present, and future"
- 11/10/2015 RCSA Sustainability Event, UC Berkeley: "Current and Future California Drought *Context and Causes*"
- 9/11/2015 Guest lecture for Fall 2015 EPS80 (Lynn Ingram's class): "The developing El Nino and the current California drought"
- 4/18/2015 Cal Day public Talk at the Lawrence Hall of Science (using the Science on a Sphere): "An exploration of the global climate: past, present, and future"
- 10/29/2013 Public Talk at the Lawrence Hall of Science (using the Science on a Sphere): "An exploration of the global climate: past, present, and future"

- 3/21/2013 Panel discussant in a Google+ Hangout with Science On a Sphere® (SOS): “Explore climate change through data visualizations on this multidimensional exhibit”
- 08/06/2012 Berkeley Summer Research Institute, Institute of East Asian Studies, UC Berkeley “A Brief Introduction to Climate Change”
- 04/23/2012 Panel discussant in a “Cross-Straits” Forum on Environmental Issues, organized by the Taiwan Sustainability Development Foundation
- 03/01/2012 Panel discussant in a public event on climate change “The Past is Prologue: Climate Change Past and Future”, Bishops Museum, Hawaii
- 08/18/2009 Chabot Space and Science Center ‘enrichment’: “Tropical Rainfall and Climate Change”
- 04/30/2007 National Academy of Sciences, public symposium “Human Society and Climate Change”
- 06/28/2006 Chabot Space and Science Center ‘enrichment’: “Stars, Spuds, and Serendipity: scientific collaboration of an indigenous climate forecasting method in the Peruvian Andes”
- 04/22/2006 Cal Day public talk: “What’s up with global climate change?”
- 04/09/2005 Tohono O’odham community college, Sells, AZ, Geo101 class: “Indigenous climate forecasting in the Peruvian Andes”

## **UNDERGRADUATE RESEARCH MENTORING**

- 06/2004 - 08/2005 Andrew Friedman (Dept. of Geography, UC Berkeley)
- 07/2006 - 12/2006 Mai Nguyen (Dept. of Geography, UC Berkeley)
- 07/2011 - 08/2011 Chiung-Yin (Jenny) Chang (Dept. of Atmospheric Science, National Taiwan University)
- 02/2015-05/2015 Sol Kim (Dept. of Geography, UC Berkeley)
- 08/2015-12/2015 Sarah Mu (URAP student, UC Berkeley)

## **GRADUATE ADVISING**

### **a. Dissertation Committee Chair**

- Ph.D. 2008 James Johnstone (currently Visiting Scientist at the Joint Institute for the Study of the Atmosphere and Ocean, University of Washington)
- Ph.D. 2010 Hyo-Seok Park (currently Research Scientist at KIGAM, South Korea)
- Ph.D. 2014 Andrew Friedman (starting Sep 2014: postdoctoral scholar at IPSL, France)  
Yuwei Liu (starting Sep 2014: postdoctoral scholar at Stanford)
- Ph.D. in progress Wenwen Kong (Dept of Geography, UC Berkeley)

### **b. Member of Graduate Committee**

- Qualifying Madeline Solomon (Geography), Jennifer Skene (Integrative Biology), Andrew

Exam	Bliss (Geography), Nicole-Jeanne Schlegel (Earth and Planetary Science), Rebecca Anderson (Geography), John Sculley (Integrative Biology), Abigail Swann (Earth and Planetary Science), Alexander Stine (Earth and Planetary Science), Triffid Abel (Geography), Leigh Johnson (Geography), Ian Ferguson (Civil and Environmental Engineering), Hyo-Seok Park (Geography), Youngryel Ryu (Environmental Science, Policy, and Management), Sharon Shearer (Civil and Environmental Engineering), Sarah Dobson (Agricultural and Resource Economics), Dyuti Sengupta (Geography), Andrew Friedman (Geography), Yosuke Adachi (Geography), Kyle Pressel (Civil and Environmental Engineering), Richard Wayne Wagner (Civil and Environmental Engineering), Yuwei Liu (Geography), Aparna Bamzai (Earth and Planetary Sciences), Juli Rubin (Civil and Environmental Engineering), Wayne Lee (Statistics), Raj Singh (Geography), Nikola Marjanovic (Civil and Environmental Engineering), Natalia Villavicencio (Integrative Biology), Jacob Edman (Earth and Planetary Sciences), Ellyn Grey (ESPM), Jiabin Liu (EPS)
Dissertation Committee Member	Kathleen Johnson (Earth and Planetary Sciences), Jeanette Howard (Geography), Andrew Bliss (Geography), Charlie Koven (Earth and Planetary Sciences), Rebecca Anderson (Geography), Abigail Swann (Earth and Planetary Science), Leigh Johnson (Geography), Alexander Stine (Earth and Planetary Science), Ian Ferguson (Civil and Environmental Engineering), Nicole-Jeanne Schlegel (Earth and Planetary Science), Youngryel Ryu (Environmental Science, Policy, and Management), Sharon Shearer (Civil and Environmental Engineering), Dyuti Sengupta (Geography), Yosuke Adachi (Geography), Richard Wayne Wagner (Civil and Environmental Engineering), Kyle Pressel (Earth and Planetary Science), Raj Singh (Geography), Wayne Lee (Statistics), Jacob Edman (Earth and Planetary Sciences), Daniele Rosa (EPS), Natalia Villavicencio (Integrative Biology), Tripti Bhattacharya (Geography), Alan Vaz Lopes (Civil and Environmental Engineering), Jesse Day (Earth and Planetary Science)
Non-UC Berkeley	Christopher Holloway (Dept of Atmospheric and Oceanic Sciences, UCLA; Dissertation Committee Member); Ingo Bethke (Geophysical Institute, University of Bergen; Dissertation Opponent); Shuo-Fu Geng (Dept of Atmospheric Sciences, National Taiwan University; MS thesis committee member); Chun-An Shih (Dept of Atmospheric Sciences, National Taiwan University; MS thesis committee member)

### c. Other

10/2010-05/2011	Ivana Cvijanovic (Niels Bohr Institute, University of Copenhagen) – Research Mentor
02/2013-06/2015	Yugarshi Mondal – Research Assistant
09/2015-present	Leif Swenson – Lab Assistant

### POSTDOCTORAL ADVISING

2003-2005	Dr. Benjamin Lintner (currently Assistant Professor at Rutgers University)
-----------	--

2005-2009 Dr. Yue Fang (currently Research Professor at the First Institute of Oceanography, Qingdao, China)

2005-2007 Dr. Hugo Lambert (currently Senior Lecturer and the University of Exeter, UK)

2006-2009 Dr. Miren Vizcaino (currently Assistant Professor, Technical University Delft)

2008-2011 Dr. Shih-Yu Lee (currently Assistant Research Fellow at Academia Sinica, Taiwan)

2008-2012 Dr. Ching-Yee Chang (currently at RMS, Fremont CA)

2014-present Dr. Da Yang (Miller postdoctoral fellow)

2015-present Dr. Alyssa Atwood (NOAA C&GC postdoctoral fellow)

## GRANTS

2003-2007 NOAA CLIVAR Pacific, “Mechanisms of tropical ENSO teleconnections” (\$294,879)

2004-2008 Comer Mentor Grant (or study of abrupt climate change (\$330,000)

2005-2008 NSF Climate Dynamics, “Collaborative Research: Tropical Marine Climate Feedback to Mid-and-High Latitude Climate Change” (\$307,012)

2007-2009 Comer Mentor Grant (for study of abrupt climate change) extension 2007-2009 (\$220,000)

2008-2012 DOE, Office of Biological and Environmental Research, “The Interhemispheric Pattern in 20<sup>th</sup> century and Future Abrupt Change in Regional Tropical Rainfall” (\$347,134)

2009-2013 NSF Paleoclimate Program, “Collaborative Research: The tropical Pacific in Glacial-Interglacial Climate Dynamics” (\$194,989)

2011-2012 NSF, “RAPID: Long-term trends of the Atlantic Interhemispheric SST Gradient in the CMIP5 20<sup>th</sup> century simulations” (\$32,894)

2012-2014 NSF AGS, “Atmospheric Teleconnection Dynamics of North Atlantic Cooling to the Tropical Climate” (\$129,361)

2012-2015 NSF, “Collaborative Research - Future Scientists Improving the Public's Climate Literacy: Engaging in Outreach Opportunities Incorporating Strategies from the Learning and Social Sciences” (\$218,669) [co-PI; lead PI is Catherine Halversen at LHS]

2014-2017 NSF P2C2, “Role of Westerly Jet Transitions in East Asian Paleoclimate” (\$464,138)

2015-2018 DOE DE-SC0014078, “Paleo-Megadroughts and Abrupt Climate Changes in the Speleothem Records” (\$1,182,838) (PI Inez Fung, co-PI John Chiang)

2015-2016 NSF, “Collaborative Proposal: Exploring Hypotheses of Southern Hemisphere Westerly Wind Changes on Southern Ocean Circulation and Biogeochemistry”

(\$33,038)

## PEER-REVIWED PUBLICATIONS

h-index: 26 (Web of Science Core Collection) Underlined are students or postdocs I advised

\* = papers from graduate research

\*\* = papers from undergraduate research

Submitted Kong, W., L.M. Swenson, and J.C.H. Chiang, Seasonal Transitions and the  
Revised Westerly Jet in the Holocene East Asian Summer Monsoon. Submitted to *Journal*  
In Press *of Climate*, January 2016

2016 Lopez, A., J.C.H. Chiang, S.E. Thompson, and J.A. Dracup, Trend and Uncertainty  
in Spatial-Temporal Patterns of Hydrological Droughts in the Amazon Basin.  
*Geophysical Research Letters*, 43, doi:10.1002/2016GL067738

Wu, C.-H., J.C.H. Chiang, H.-H. Hsu, and S.-Y. Lee: "Orbital Control of the  
Western North Pacific Summer Monsoon". *Climate Dynamics* (2015), doi:  
10.1007/s00382-015-2620-3

2015 Chiang, J.C.H: The Interhemispheric Pattern and Long-Term Variations in  
the Tropical Climate over the 20th and 21st Centuries. Chapter 16 of  
*Climate Change: Multidecadal and Beyond*, pp 255-272 (Editors: CP Chang,  
M Ghil, M Latif, and JM Wallace), World Scientific, 2015.

Rhodes, RH, EJ Brook, JCH Chiang, T Blunier, OJ Maselli, JR McConnell, D  
Romanini, and JP Severinghaus: "Enhanced tropical methane production in  
response to iceberg discharge in the North Atlantic". *Science*, 348.6238 (2015):  
1016-1019

Cai Y.J., Fung I., Edwards R. L., An Z.S., Cheng H., Lee J.-E., Tan L.C., Shen C.-C.  
Wang X.F., Day J.A., Zhou W.J., Kelly M., Chiang J.C.H., Variability of stalagmite-  
inferred Indian Monsoon precipitation over the past 252,000 years. *Proceedings of*  
*the National Academy of Sciences*. doi: 10.1073/pnas.1424035112

Lee, S.-Y., J.C.H. Chiang, and P. Chang: "Tropical Pacific Response to Continental  
Ice Sheet Topography". *Climate Dynamics*, DOI 10.1007/s00382-014-2162-0.

Chiang, J.C.H., I.Y. Fung, C.-H. Wu, Y. Cai, J. P. Edman, Y. Liu, Jesse A. Day, T.  
Bhattacharya, Y. Mondal, and C.A. Labrousse: "Role of Seasonal Transitions and  
Westerly Jets in East Asian Paleoclimate". *Quaternary Science Reviews*, **108**, 111-  
129 (Jan 2015)

2014 Chiang, J. C. H., S.Y. Lee, A. Putnam, and X. Wang: "South Pacific Split Jet, ITCZ  
shifts, and atmospheric North-South linkages during abrupt climate changes of the  
last glacial period. *Earth and Planetary Science Letters*, **406**, 233-246 (15 Nov  
2014)

Swann, L. S., I. Y. Fung, Y. Liu, and J. C. H. Chiang: "Remote vegetation  
feedbacks and the mid-Holocene Green Sahara". *J. Climate*, **27**, 4857-48

- Liu, Y., J. C. H. Chiang, C. Chou, and C. M. Patricola: “Atmospheric Teleconnection Mechanisms of extratropical North Atlantic SST influence on Sahel Rainfall”. *Climate Dynamics*, DOI 10.1007/s00382-014-2094-8, Nov 2014
- Bhattacharya, T., and J. C. H. Chiang: “Spatial Variability and Mechanisms underlying El Nino-induced Droughts in Mexico. *Climate Dynamics*, DOI 10.1007/s00382-014-2106-8 (Dec 2014)
- 2013 Chiang, J. C. H., C.-Y. Chang, and M. F. Wehner: “Long-Term Trends of the Atlantic Interhemispheric SST Gradient in the CMIP5 Historical Simulations. *Journal of Climate*, **26**, 8628-8640.
- Cheng, W., J. C. H. Chiang, and D. Zhang: “Atlantic Meridional Overturning Circulation (AMOC) in CMIP5 models: RCP and Historical Simulations”. *Journal of Climate*. **26**, 7187-7197 (Sep 2013)
- Hsieh, W.-C., W. D. Collins, Y. Liu, J. C. H. Chiang, C.-L. Shie, K. Caldeira, and L. Cao:” Climate response due to carbonaceous aerosols and aerosol-induced SST effects in NCAR community atmospheric model CAM3.5”. *Atmos. Chem. Phys. Discuss.*, **13**, 7349-7396, doi:10.5194/acpd-13-7349-2013, 2013
- Friedman, A. R., Y.-T. Hwang, J. C. H. Chiang, and D. M. W. Frierson: “The Interhemispheric Thermal Gradient over the 20th Century and in Future Projections”. *J. Climate*, **26**, 5419–5433.
- Chou, C., J. C.H. Chiang, C.-W. Lan, C.-H. Chung, Y.-C. Liao, and C.-J. Lee: Increase in the Range between Wet and Dry Season Precipitation. *Nature Geoscience*, doi:10.1038/ngeo1744 (March 2013).
- Cvijanovic, I., and J.C.H. Chiang: “Global Energy Budget Changes to High Latitude North Atlantic Cooling and the Tropical ITCZ Response. *Climate Dynamics*, **40**, 1435-1452 (March 2013)
- 2012 Liu, Y., and J.C.H. Chiang: Co-ordinated abrupt weakening of the Eurasian and North African Monsoons in the 1960’s and links to extratropical North Atlantic Cooling. *Journal of Climate*, **25**, 3532-3548 (May 2012).
- Chiang, J.C.H., and A. R. Friedman: “Extratropical Cooling, Interhemispheric Thermal Gradients, and Tropical Climate Change”. *Annual Review of Earth and Planetary Sciences*, **40**, 383-412 (2012)
- Park, H.-S., J. C. H. Chiang, and S. Bordoni: “Mechanical impact of the Tibetan Plateau on the seasonal evolution of the South Asian Monsoon”. *Journal of Climate*, **25**, 2394-2407 (April 2012).
- Swann, A.L.S., I.Y. Fung, and J.C.H. Chiang: “Midlatitude Afforestation shifts General Circulation and Tropical Precipitation”. *Proceedings of the National Academy of Sciences*, **109**, 712-716 (Jan 2012).
- 2011 Park, H.-S., J. C. H. Chiang, and S.-W. Son: “Reply to comment on ‘The role of the Central Asian Mountains on the midwinter suppression of North Pacific storminess’”. *Journal of the Atmospheric Sciences*, **68**, 2804-2806 (Nov 2011).
- Chang, C-Y, J.C.H. Chiang, M.F. Wehner, A. Friedman, and R. Ruedy: “Sulfate

- aerosol control of Tropical Atlantic climate over the 20<sup>th</sup> century.” *Journal of Climate*, **24**, 2540-2555 (2011)
- Lee, S.-Y., J.C.H. Chiang, K. Matsumoto, and K. Tokos: “Southern Ocean wind response to North Atlantic cooling and the rise in atmospheric CO<sub>2</sub>: Modeling perspective and paleoceanographic implications”. *Paleoceanography*, **26**, PA1214, doi: 10.1029/2010PA002004 (2011).
- 2010 Park, H.-S., J. C. H. Chiang, and S.-W. Son: “The role of the Central Asian Mountains on the midwinter suppression of North Pacific storminess”. *Journal of the Atmospheric Sciences*, **67**, 3706-2720 (Nov 2010).
- Chiang, J. C. H., and Y. Fang: “Was the North Pacific wintertime climate less stormy during the mid-Holocene?”, *Journal of Climate*, **23**, 4025-4037 (15 Aug 2010)
- Vizcaíno, M., S. Rupper, and J. C. H. Chiang (2010), Permanent El Niño and the onset of Northern Hemisphere glaciations: Mechanism and comparison with other hypotheses, *Paleoceanography*, **25**, PA2205, doi:10.1029/2009PA001733.
- Park, H.-S., J. C. H. Chiang, B. R. Lintner, and G. J. Zhang, The delayed effect of major El Niño events on Indian monsoon rainfall. *Journal of Climate*, **22**, 932-946 (Feb 15, 2010)
- 2009 Mölg, T., J.C.H. Chiang, A. Gohm, N.J. Cullen, and G. Kaser: Temporal precipitation variability versus altitude on a tropical high mountain: Observations and mesoscale atmospheric modeling. *Quarterly Journal of the Royal Meteorological Society*, 2009, DOI: 10.1002/qj.461 (August 2009).
- Chiang, J. C. H. The Tropics in Paleoclimate. In *Annual Review of Earth and Planetary Sciences*, pp263-297, v37, 2009, eds. R. Jeanloz and K. H. Freeman, Annual Reviews, Palo Alto, CA
- Chiang, J. C. H., Y. Fang, and P. Chang: Pacific Climate Change and ENSO activity in the Mid-Holocene. *Journal of Climate*, v22, pp 923-939. DOI: 10.1175/2008JCLI2644.1 (Feb 2009)
- 2008 Chiang, J.C.H., Y. Fang, and P. Chang: The interhemispheric thermal gradient and tropical Pacific climate. *Geophysical Research Letters*, **35**, L14704, doi:10.1029/2008GL034166
- Fang, Y., J. C. H. Chiang, and P. Chang: Variation of mean sea surface temperature and modulation of El Niño-Southern Oscillation variance during the past 150 years. *Geophysical Research Letters*, **35**, L14709, doi:10.1029/2008GL033761, 2008
- Lambert, F. H., A. Stine, N. Y. Krakauer, and J. C. H. Chiang: How much will precipitation increase with global warming? *EOS, Transactions of the American Geophysical Union*, **69**, number 21, 20 May 2008
- Chiang, J. C. H., W. Cheng, and C. M. Bitz: Fast teleconnections to the tropical Atlantic sector from Atlantic thermohaline adjustment. *Geophysical Research Letters*, **35**, L07704, doi:10.1029/2008GL033292 (2008)
- 2007 Chang, P., L. Zhang, R. Saravanan, D.J. Vimont, J.C.H. Chiang, L. Ji, H. Seidel,

- and M.K. Tippett: Pacific Meridional Mode and El Niño-Southern Oscillation, **34**, L16608, doi:10.1029/2007GL030302, *Geophysical Research Letters*, Aug 2007.
- Cheng, W., C. M. Bitz, and J. C. H. Chiang: Adjustment of the global climate to an abrupt slowdown of the Atlantic meridional overturning circulation. “*Ocean Circulation: Mechanisms and Impacts*” AGU Monograph, Schmittner, Chiang, and Hemming eds., 2007.
- Lambert, F. H., and J. C. H. Chiang, Control of land-ocean temperature contrast by ocean heat uptake. *Geophysical Research Letters*, **34**, doi:10.1029/2007GL029755, 10 Jul 2007.
- Lintner, B. R., and J. C. H. Chiang: Adjustment of the remote tropical climate to El Niño conditions. *Journal of Climate*, **20**, p2544-2557 (2007).
- Bitz, C. M., J. C. H. Chiang, W. Cheng, and J. J. Barsugli: Rates of thermohaline recovery from freshwater pulse in Modern, Last Glacial Maximum, and Future Climates. *Geophysical Research Letters*, doi:10.1029/2006GL029237, 2007.
- 2005 Vimeux, F., R. Gallaire, S. Bony, G. Hoffman, and J.C.H. Chiang: What are the climate controls on δD in precipitation in the Zongo Valley (Bolivia)? Implications for Illimani ice core interpretation. *Earth & Planetary Science Letters*, **240**, 205-220 (Dec 2005)
- Lintner, B.R. and J.C.H. Chiang: “Reorganization of the tropical climate during El Niño – a weak temperature gradient approach”. *Journal of Climate*, **18**, 5312-5329 (Dec 2005)
- Chiang, J.C.H., and C.M. Bitz: “The influence of high latitude ice on the position of the marine Intertropical Convergence Zone”. *Climate Dynamics*, **25**, 477-496 (2005).
- Chiang, J.C.H. and B.R. Lintner: “Mechanisms of remote tropical surface warming during El Niño”. *Journal of Climate*, **18**, 4130-4149 (2005)
- 2004 Chiang, J. C. H. : Present-day climate variability in the tropical Atlantic: a model for paleoclimate changes? In *The Hadley circulation: past, present, and future*, HF Diaz and R Bradley (eds), Springer (2004)
- Chiang, J.C.H., and D.J. Vimont: Analogous Pacific and Atlantic meridional modes of tropical atmosphere-ocean variability. *Journal of Climate*. **17**, 4143-4158 (2004)
- 2003 Chiang, J.C.H., M. Biasutti, and D.S. Battisti: Sensitivity of the Atlantic ITCZ to Last Glacial Maximum boundary conditions. *Paleoceanography*, **18**, 10.1029/2003PA000916 (2003).
- Lin, I.-I., W.T. Liu, C.-C Wu, J.C.H. Chiang, and C.-H. Sui: Satellite Observations of Modulation of Surface Winds by typhoon-induced ocean cooling. *Geophys. Res. Lett.*, 30(3), 10.1029/2002GL015674 (2003)
- 2002 Kushnir, Y., R. Seager, J. Miller, and J.C.H. Chiang: A simple coupled model of tropical Atlantic decadal climate variability. *Geophys. Res. Lett.*, 10.1029/2002GL015874 (2002).
- Chiang, J.C.H., and A. H. Sobel: Tropical tropospheric temperature variations

caused by ENSO and their influence on the remote tropical climate. *J. Climate*, **15**, 2616-2631 (2002).

\*Chiang, J.C.H., Y. Kushnir, and A. Giannini: Deconstructing Atlantic ITCZ variability: influence of the local cross-equatorial SST gradient, and remote forcing from the eastern equatorial Pacific. *J. Geophys. Res.*, **107(D1)**, 10.1029/2000JD000307 (2002)

2001 \*Giannini, A., J. C. H. Chiang, M. A. Cane, Y. Kushnir, and R. Seager: The ENSO teleconnection to the tropical Atlantic Ocean: contributions of the remote and local SSTs to rainfall variability in the tropical Americas. *J. Climate*, **14**,4350-4543 (2001).

\*Chiang, J.C.H., Y. Kushnir, and S.E. Zebiak: Interdecadal changes in eastern Pacific ITCZ variability and its influence on the Atlantic ITCZ. *Geophys. Res.Lett.*,**27**, 3687-3690(2000).

\*Chiang, J.C.H., S.E. Zebiak, and M.A. Cane: Relative roles of elevated heating and surface temperature gradients in driving anomalous surface winds over tropical oceans. *J. Atmos. Sci.*, **58**, 1371-1394 (2001).

2000 \*Chiang, J.C.H., and S.E. Zebiak: Surface winds over tropical oceans: diagnosis of the momentum balance, and modeling the linear friction coefficient. *J. Climate*, **13**, 1733-1747 (2000).

\*Orlove, B.S., J.C.H. Chiang, and M.A. Cane: Forecasting Andean rainfall and crop yield from El Niño influences on atmospheric clarity. *Nature*, **403**, 68-71 (2000)

Prior to 2000 \*\*Heiss, W.D., and J.C.H. Chiang: Random perturbation of systematic degeneracies and quantum chaos. *Phys. Rev. A*, **47**, 2533-2538 (1993)

\*\*Botha, P.J., J.C.H. Chiang, J.D. Comins, and P.M. Mjwara: Behaviour of elastic constants, refractive index, and lattice parameter of cubic zirconia at high temperatures. *J. Applied Physics*, **73**, 7268-7274 (1993)

## OTHER PUBLICATIONS

Edited Ocean Circulation: Mechanisms and Impacts. Andreas Schmittner, John C. H. Volume Chiang, and Sidney Hemming, Eds. Geophysical Monograph Series, Volume 173, 304 pages, 2007, ISBN 13: 978-0-87590-438-2.

Comment Chiang, J.C.H., and A. Koutavas (2004): "Tropical Flip-Flop Connections" *Nature*, **432**, 864-865

Chiang, J. C. H. and K. M. Cuffey: A simpler interpretation for high-resolution Greenland Ice Core Data. E-letter comment on Steffensen et al. (2008) to Science, 25 November 2008.

Popular Orlove, B.S., J.C.H. Chiang, and M.A. Cane: Ethnoclimatology in the Andes. Interest American Scientist, **90**, 428-435 (Sep-Oct 2002).

- Summary Seager, Richard, JCH Chiang, and J Shaman. "Do the Tropics Rule? Assessing the State of Tropical Climate Science." *Bulletin of the American Meteorological Society* **96**, ES211–ES214 (2015).
- Biasutti, M, A. Giannini, A.H. Sobel, I.M. Held, and J.C.H. Chiang, 2007: Sahel Climate Change: Workshop on Sahel Climate Change, Columbia University, New York, 19-21 March 2007. EOS, **88**, p295, 17 July 2007.
- Cheng, W, J.C.H. Chiang, and D. Zhang: The Atlantic Meridional Overturning Circulation (AMOC) in CMIP5 models: RCP and historical simulations. US CLIVAR Variations, Spring 2013, **11**, 9-12
- Thesis Chiang, J.C.H.:The Intertropical Convergence Zone in Tropical Atlantic climate variability. Ph.D. thesis, Dept. of Earth and Environmental Sciences, Columbia University (2001).
- Chiang, J. C. H.: Development of a large-scale dynamical model of the atmosphere and its application to the study of the response to surface heating at low latitudes. M.S. thesis, Dept. of Physics, Cornell University (1996).
- Proceed- Chiang, J.C.H., and K. H. Cook, 1997: Response of the tropical atmosphere to surface heating in an idealized GCM. Proceedings of the American Meteorological Society 22<sup>nd</sup> conference on Hurricanes and Tropical Meteorology, Fort Collins, CO,, 19-23 May, 1997.