

Kerry Harrison Cook
Professor, Jackson School of Geosciences
Department of Geological Sciences
1 University Station C1100
The University of Texas at Austin
kc@jsg.utexas.edu

Education

Ph.D 1984, Atmospheric Sciences, North Carolina State University, Raleigh NC.
M.S. research, 1975-1977, Space Physics, Rice University, Houston TX.
B.S. 1975, Astronomy, Physics minor. Villanova University, Villanova PA.

Employment History

8/08-present: Professor, Department of Geological Sciences, Jackson School of Geosciences, The University of Texas at Austin
8/91-8/08: Assistant, Associate, Full Professor of Atmospheric Science, Department of Earth and Atmospheric Sciences, Cornell University, Ithaca, NY
2006 – 2008: Director of Graduate Studies for Atmospheric Science, Cornell
1999-2004: Director of Undergraduate Studies, Science of Earth Systems, Cornell
11/85-7/91: Research Scientist, Geophysical Fluid Dynamics Laboratory (GFDL), Princeton University/NOAA, Princeton NJ.
9/84 - 9/85: Postdoctoral Research Associate, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge TN
5/81 - 8/84: Global Change Research Fellow, Institute for Energy Analysis, Oak Ridge Associated Universities, Oak Ridge TN.

Professional Activities (Selected)

Chair, Climate Variations and Change Committee, American Meteorological Society Annual Meeting, September 2018 – present. Member since 2014.
“Climate Change in the Tropics”, session organizer and chair with Rob Korty, AMS Meeting on Hurricanes and Tropical Meteorology, New Orleans, May 2020 (postponed to 2021)
Chair, Manabe Climate Award selection committee for AMS, 2020-2021
Advisory Committee for NSF Directorate for Geosciences, 2020-2023
Advisory Committee for NSF Division of Atmospheric and Geospace Sciences (2020- 2023)
Search Committee for Executive Director of the American Meteorological Society (2020-2021)
Post tenure review in Dept. Geological Sciences, UT Austin, Spring 2019
Faculty Advisor, University of Texas Climate and Meteorology Society (2018 – present)
Selection Panel, NSF Science and Technology Center UT Internal Competition, Spring 2019
Evaluation Committees for Associate Director, IBS Center for Climate Physics at the University of Pusan, Korea. 2018 and 2019
Program Chair, American Meteorological Society, Climate Variations and Change Conference, January 2018

Evaluation for Research Chairs in Climate Change Science for the African Institute for Mathematical Sciences, Rwanda. August 2018

US CLIVAR Working Group: Changing Width of the Tropics. 2016-present

Advisory Board, Future Climate for Africa Program, UK Dept. Of International Development (2016 – 2019)

Associate Editor, Journal of Climate (2016 – 2019)

NSF Review Panel, Sept 2017

Editor, Journal of Climate (2011 – 2015)

Awards Nominating Committee, American Meteorological Society (2015 – 2017)

Guest Editor, Special issue of *Earth Systems Dynamics* on “Climate, Land Use, and Conflict in Northern Africa”, European Geosciences Union, 2015 - present

Climate Change and African Political Stability Program, The Robert S. Strauss Center for International Security and Law, LBJ School of Public Policy, University of Texas at Austin, Core Science Team, 2010-2015.

Workshop on the U.S. Response to IPCC’s 2016 Planning Document (2015)

Board of Trustees, University Corporation for Atmospheric Research, 2008-2014, elected by University Member Representatives to UCAR

Executive Committee, Board on Oceans and Atmosphere, National Association of State Universities and Land-Grant Colleges (2007 - 2016)

American Meteorological Society, Committee on Communicating Climate Change (2010 – 2018)

Scientific Organizing Committee, Workshop on Climate Change, Land Use and Conflict in Northern Africa, Max Planck Institute, Hamburg, Germany, Sept 2014.

Director, with Arlene Laing, of the NCAR/ISP Graduate Colloquium on African Climate and Weather, July 26-Aug 5, 2011

Editor, Earth System Dynamics (2009-2011)

Member, US Atlantic Meridional Overturning Circulation Science Team, US CLIVAR Program

Workshop on the West African Monsoon System, AMMA meeting in Ouagadougou, Burkina Faso, July, 2009. Member of Scientific Organizing Committee

Convener, Session on African Climate, Climate Variations and Change Conference, AMS Annual Meeting, January 2008

Convener, Workshop on the West African Monsoon Modeling Experiment, AMS Annual Meeting, January 2008 with Yongkang Xue

Organizer, Workshop on African Drought, May 2008, ICTP Trieste, with Filippo Giorgi

Convener, AGU Joint Assembly, May 2007: session on African and South American Hydroclimate, with Yongkang Xue and William Lau

Organizer, CLIVAR Workshop on the Predictability of Southern and East African Precipitation, Dar es Salaam, Tanzania, July 2006, with Chris Reason

UCAR Board of Trustees Budget and Planning Committee, Chair, 2010-2012

UCAR Member's Nominating Committee, Chair 2005-6

UCAR University Relations Committee, 2004-2008, Chair 2007-2008

International Scientific Steering Committee of the African Monsoon Multidisciplinary Analysis (AMMA) program (2009 – 2012)

National Geographic World Atlas, 2005, contributing writer
US-African Monsoon Multidisciplinary Analysis (AMMA) Science Team
External review team for the Department of Earth and Atmosphere Sciences, Iowa State University, March 2006 and March 2013
Steering Committee, West African Monsoon Modeling and Evaluation
Tenure and promotion evaluations for University of Botswana, University of Texas at Austin, University of Cape Town, Florida State University, SUNY Albany, University of Michigan, and the International Research Institute for Climate and Society
Member, CLIVAR Panel on African Variability, World Climate Research Programme, World Meteorological Organization, Geneva (2001-2006)
Advisory Board, NCAR's Climate and Global Dynamics Division (2005)
Committee on Weather and Climate of the Southern Hemisphere (2000-2006)
NSF External Reviewer of the Climate and Global Dynamics Division at the National Center for Atmospheric Research (1996, 2002)
Reviews for numerous journals, and reviews and panels for proposals submitted to NSF, NOAA, National Geographic, and NASA

Invited presentations (selected):

- Laboratory seminar, Developing a physical understanding of the seasonality and decadal trends in East African rainfall, Geophysical Fluid Dynamics Laboratory, NOAA/Princeton University, Feb 2021
- Core Scientific Keynote, AMS January 2021: Current Understanding of African Climate Dynamics and Prediction, K.H. Cook, Dept. Geosciences, University of Texas at Austin
- Invited seminar at National Autonomous University of Mexico (UNAM): Role of Tropical Easterly Waves in Organizing Caribbean Precipitation, Kerry H. Cook, Dept. Geosciences, University of Texas at Austin September 2020 (postponed due to COVID)
- "The global monsoons in current, future and palaeoclimates and their role in extreme weather and climate events" European Geophysical Union General Assembly, Vienna, May 2020 (cancelled due to COVID)
- "Projecting Regional Climate Change in the Tropics", Kerry H. Cook. Annual Meeting of the American Meteorological Society, January 2020, Boston MA Special session on "Women in the Tropics"
- "Global and Regional Aspects of Climate Change and Air Quality", Institute for Basic Science, Pusan National University, Pusan, Korea, August 2019
- Keynote Speaker, *Developing Communication Skills in Early Career*, American Meteorological Society Conference for Young Professionals, 6 January, 2018.
- *Regional Climate Sensitivity: A Tale of Two Rainforests* Conference Title: 31st Conference on Climate Variability and Change, January 2018
- *The Public Face of Climate Science*, Symposium for the American Association of Physical Anthropologists annual meeting on "Ventilating

Silos: Framing biological anthropology's public message on global climate change" April 14, 2018

- *The Need for and Benefits of High-Resolution Climate Modeling*, Dickinson Symposium on Earth System Modeling, May 15, 2018
- "Determining and Understanding Global and Regional Climate Change" Institute for Basic Science, Pusan National University, Pusan, Korea, August 2018
- *Understanding Observed and Projected Climate Change over Africa*, Department of Geology, Baylor University, Waco TX, 9 November 2018
- *Using Convection-Permitting Modeling to Understand the Processes that Control the Diurnal Cycle of Rainfall over West Africa*, GEWEX Convection-Permitting Climate Modeling Workshop II. Boulder CO, September 4-6, 2018
- *Modeling African Climate Change at UT*, Undergraduate Geological Society, UT, Austin, 17 October 2018
- *Understanding Observed and Projected Climate Change over Africa*, NASA Goddard, Greenbelt MD, 29 November 2018
- "Amplified warming of the Sahara and Implications for Regional Precipitation", 4th World Conference on Climate Change, October 19-21, 2017 Rome Italy
- Invited lectures, Advanced School on "Tropical-Extratropical Interactions on Intra-Seasonal Time Scales", 16-27 October 2017, International Center for Theoretical Physics, Trieste, Italy
- Keynote speaker at the Earth Science Symposium, October 12, 2017, Baylor University
- Woods Hole Oceanographic Institute/MIT, invited seminar speaker October 2015
- Keynote speaker for AGU Chapman Conference on The Hadley Circulation in a Changing Climate, Santa Fe, July 2015
- "Regional Climate Change Projections for Austin", Topics in Sustainable Development: Urban Forestry and Infrastructure, School of Architecture, University of Texas at Austin, 13 February 2014
- "Climate Change and Austin", invited presentation to the Austin Generation Resource Planning Task Force, June 2014, Austin City Hall
- "Development of the West African Rainy Season", Fall Meeting of the American Geophysical Union, 9-14 December 2013 (Invited)
- "Climate Prediction for Austin", Climate Resilience and Adaptation Strategies: A Capital Area Symposium, October 4, 2013 (Invited) LBJ School of Public Affairs, The University of Texas at Austin
- "Impact of climate change on mid-21st century growing seasons in Africa", Annual Meeting of the American Meteorological Society, January, 2013, Austin TX
- "Dynamics of the West African Monsoon System", Noble Seminar series, Dept. Geological Sciences, University of Toronto (Invited)

- “Regional Simulations for Impacts Analysis”. *Workshop on Climate Dynamics of Tropical Africa*, November 15-16, 2012. Johns Hopkins University, Baltimore MD (Invited)
- “Global Warming and the State of the Climate: 2012”, EarthLabs Teacher Workshop, June 2012 (Invited)
- “Regional Climate Modeling Activities at The University of Texas”. K.H. Cook, E.K. Vizy, N. Neupane, and J. Cretat, Gulf of Mexico Regional Climate Modeling Workshop, May 2012, Texas A&M. (Invited)
- “Dynamics of the West African Monsoon Onset.” International Union of Geodesy and Geophysical Meeting, Melbourne, Australia, July 2011 (Invited)
- “Toward confident and useful climate change projections”. BIARI Institute on Climate Change and its Impacts, Brown University, June 2011 (Invited)
- Workshop on Climate Change and African Political Stability, LBJ School of Public Policy, The University of Texas at Austin (May 2011)
- Workshop on Coupled Ocean-Atmosphere-Land Processes in the Tropical Atlantic, March 2011 (Invited)
- Workshop on Northern Africa: Past, Present, and Future Climate Changes, Max Planck Institute, Hamburg, GR, February 2011 (Invited)
- “Toward confident and useful climate change projections: West Africa and the Sahel”, Conference on Climate Variations, Annual Meeting of the American Meteorological Society, Seattle WA, January (2011)
- Department of Energy PI meeting on Climate Change and Variability, Greenbelt, MD, March 2010
- Africa Conference on Developing Country’s Vulnerability of Climate Change, International Center for Theoretical Physics, University of Botswana, Gaborone, Botswana, 19-23 April 2010
- “Theory and Observations of West African Monsoon Onset”, American Meteorological Society, Conference on Tropical Meteorology and Climate, Tucson AZ May 2010
- Africa Conference on developing country’s Vulnerability of Climate Change, International Center for Theoretical Physics, University of Botswana, Gaborone, Botswana, 19-23 April 2010
- “Climate Change in West Africa”, University of Miami, Rosensteil School of Marine and Atmospheric Sciences, April 2010
- “West African Monsoon Onset and Demise: Connecting Theory and Observations to Aid Prediction”, 3rd International AMMA Conference, Ouagadougou, Burkina Faso, July 2009
- “Climate Change in West Africa: Regional Projections and the Potential for Abrupt Change”, NASA Goddard, Sept 2009
- “Climate Change and Water Resources in Northern Africa”, African Water Resources Workshop, Centre for Energy Studies, University of Cambridge, October 2009
- “Abrupt Climate Change: Atmospheric Tipping Points”, UCLA, Dept. of Civil and Environmental Engineering, April 2009

- “Abrupt Climate Change: Atmospheric Tipping Points”, Texas A&M, Dept. of Atmospheric Science, May 2009
- “Abrupt Climate Change: Atmospheric Tipping Points”, Conference on Climate Change: Global Risks, Challenges, and Decisions, Copenhagen March 2009
- NOAA’s 33rd Climate Diagnostics and Prediction Workshop, CLIVAR Drought Workshop CLIVAR drought workshop, Lincoln, Nebraska (October 2008)
- 55th Annual NSF Systematics Symposium, Missouri Botanical Garden: Climate Change and Biodiversity in Africa and Madagascar 17-18 October 2008.
- Keynote invited lecture, Goldschmidt Conference on Geochemistry, Vancouver, BC, July 2008 (declined)
- NSF-USDA funded International Workshop on Supercomputing Applications in Climate Sciences and Remote Sensing, Cairo Egypt May 2008
- University of Michigan, Ann Arbor, Department of Geological Science Smith lecture series, November 2007
- Workshop on the Response of North African Ecosystems to Abrupt Climate Change, Bremen, Germany, November 2007
- University of Nebraska, Lincoln, Department of Geosciences seminar, September 2007
- Institute for the Study of Continents Workshop, Cornell (September 2007)
- Geoscience Academics in the Northeast Writing Retreat, July 2007
- Florida State University, Department of Meteorology, March 2007
- Workshop on Sahel Climate Change, Columbia University, March 2007
- 3rd WGNE Workshop on Systematic Errors in Climate and NWP Models, San Francisco, February 2007
- One Day University, Global Climate Change lecturer (declined)
- Women in Math, Science and Engineering Symposium, Florida State University, March 2007
- AGU Fall 2006 meeting, session on “Past Climate Variability From the Last Glacial Maximum to the Holocene in South America and Surrounding Regions”
- African Monsoon Multidisciplinary Analysis Program, SOP Debriefing and Preparation of Process Studies, Toulouse, France, November 2006
- CLIVAR Workshop on Climate and Weather Prediction for Southern and Eastern Africa, Dar es Salaam, Tanzania, July 2006
- Also recent seminars at NOAA’s Climate Prediction Center, University of Maryland, NASA Goddard, Georgia Tech, Duke University, University of Wisconsin, Columbia University, and Cornell

University Community Activities (Current and Recent, Selected)

Graduate Faculty Assembly, University of Texas at Austin (elected, 2019-2022)

Continuing, Professional and Online Education Leadership Council, University of Texas at Austin (2020-2022)

Academic Committee of the Graduate Faculty Assembly, University of Texas at Austin (2019-2021)

Campus Climate and Meteorology Society, Academic Advisor (2018-present)

Speaker, “Climate Change Update” for the Campus Environmental Center, University of Texas at Austin, October 2020

Jackson School of Geosciences Endowment Committee, University of Texas at Austin, Chair. 2014-2019

Undergraduate research mentoring, University of Texas at Austin: Emily Verdoia (EVS, 2019-2020), Pranav Nair (Physics, 2019-2020), Hunter Wilks (EVS, 2019), Skylar Turner (Physics, 2017-2018), Sydney Selman (EVS, 2018-2019), Venus Santos (BDP, 2014), Jenna Hartin (EVS, 2016-2017)

Faculty Search Committee, Orbits and Controls positions, Dept. Aerospace Engineering and Engineering Mechanics, Cockrell School of Engineering, UT Austin

Climate System Science Education and Research Group, UT Austin, Education and Research Group Director, 2008-2009

University of Texas Faculty Council, Departmental representative, 2010

Cornell University Nominations and Elections Committee, 2006 – 2008

Cornell Academic Programs and Policy Committee 2005 - 2008

University Corporation for Atmospheric Research (UCAR), Cornell representative (1999 - present)

Graduate Field Memberships: Atmospheric Sciences, Geological Sciences, Computational Science and Engineering

Cornell Academic Programs and Policy Committee 2005 - 2008

Departmental Diversity Committee, 2006 – present, chair

Science of Earth Systems Curriculum Committee, 2003 - present

Atmosphere Science Curriculum Committee, 1991 - present

Engineering College Committee on Energy and the Environment (2004)

Cornell Health Careers Program, faculty evaluator (2004-2006)

Task Force on the Future of Computing and Information Science at Cornell, 1999-2000 (Appointed by Provost)

University Faculty Senate, 1996-1999 (Elected through departmental vote)

Community/University Outreach (Recent)

- “Climate Change Update”, Campus Environmental Center, University of Texas at Austin, Sept 2020
- Invited contribution to Texas Climate News (Bob Henson)
- Seasonality of East African Rainfall Trends, Invited article for The Conversation
- Invited editorial for the Daily Texan Forum, September 2020, “The climate is destabilizing: What to do?”
- Interview, “Understanding Climate Change”, for *That Time of the Month* Livestream event, April 18, 2020
- “Understanding Contemporary Climate Change”, The Garden Club of Austin (April 2020; postponed)
- “The Science of Global Warming”, South Texas Geological Society, San Antonio (April 2020; postponed)

- San Antonio Nov 8, 2019 Second Annual San Antonio City Fest, Panel on “What Science Tells Us: Climate Change in Texas”
- University of Texas Humanities Institute; Commentary on screening of Merchants of Doubt at Austin Public Library, August 2019
- Climate Change Panel, Georgetown Community Forum, July 2018
- Eco-mentoring, Huston-Tillotson University, April 21, 2018
- Radio/live audience interview, “That Time of the Month”, Coldtowne Theater, April 21, 2018
- Global warming and cold snaps, with Mose Buchele of KUT (Austin NPR) for The Texas Standard (January, 2018)
- Invited speaker on “The Science of Global Warming”, Smithville Green Expo, 10 February 2018
- “Climate Change Science and Denial”, Austin Women’s Racket Club (Oct 15, 2017)
- “The Science of Climate Change”, Baylor University Museum, Public Climate Change Teach-In, Waco TX (Oct 11, 2017)
- “Climate Change and San Antonio”, College of the Incarnate Word, , San Antonio (Oct 10, 2017)
- Texas Undergraduate Research Journal, Panel discussion on Climate Change and Solutions, UT (Oct 5, 2017)
- Shades of Green Radio Show, KOOP, Austin (Sept 14, 2017)
- “Climate Change and Austin”, Austin City Hall, Public Citizen Climate Change Tour launch event (Sept 6, 2017)
- Guest on Texas Week with Rick Casey, KLRN (San Antonio PBS), Feb. 23, 2017.
- Climate Voices. A clearinghouse for climate change speakers of the University Corporation for Atmospheric Research. (2015 – present)
- Training for Pflugerville High School and Middle School Science Teachers, August 2015.
- Regional Science Fair Judge, Austin Energy, February 2015
- SXSW Eco, speaker on Climate Change predictions for Austin, Oct 2012
- Preparatory workshop for EarthLabs Teacher Workshop, March 2012: Preparing 7 high school teachers for the full training program to be held over the summer.
- EarthLabs Teacher Workshop, June 2012. Training program for Texas high school teachers held at the University of Texas
- Institute for Geophysics
- Consultant to Citizens Climate Initiative, Sept 2012
- KXAN TX interview, Sept 2012
- Edible Austin, July 2012
- SXSW Eco – commentator, invited by Austin Mayor’s office, Oct 2012
- Consultant to Austin’s Citizen’s Climate Committee, Oct 2012
- Texas Master Naturalist Program (January 2011)
- Global Warming, The University of Texas Parent’s Weekend, (October 2011)
- American Association of Physics Teachers/American Physical Society, luncheon speaker on Abrupt Climate Change (March 2010)

- TXESS Revolution Professional Development for Educators (October 2010)
- UT Austin Honors Colloquium (July 2010)
- Climate Change in Africa, LBJ School of Public Policy (November 2009)
- Climate Change basics – Tech Session at Dept. Geological Sciences, UT Austin (October 2009)
- Rotary Club of Austin (June 2009)
- Climate Change in the Sahel, NPR’s Earth and Sky (May 2009)
- Explore UT, Austin TX (March 2009)
- Boyce Thompson Institute, Cornell University. Effects of 21st century climate change on the Amazon rainforest (Apr 2008)
- Focus the Nation – Teach In on Climate Change at Cornell (Feb 2008)
- Panels to discuss “An Inconvenient Truth” at Cornell Cinema and various local churches and civic groups
- Guest on “1370 Connection with Bob Smith”. One hour call-in radio program on WXXI, the NPR affiliate in Rochester NY (2007)
- Cornell Engineering Graduate Student Association (October 2007)
- Cornell alumni functions in Ithaca and San Francisco (Cornell Silicon Valley Alumni Association)
- Panel on the Social Responsibility of Scientists, Physics Graduate Society, Cornell University (2007)

Honors and Awards

Jackson School Outstanding Research Award, 2021
 Simpson Research Award in Tropical Meteorology, American Meteorology Society, 2020
 American Meteorology Society, Fellow, 2008
 Board of Trustees, University Corporation for Atmospheric Research, 2008-2014, elected by University Member Representatives to UCAR
 Executive Committee, Board on Oceans and Atmosphere, National Association of State Universities and Land-Grant Colleges (2007 - 2018)
 Jackson School of Geosciences Award for Graduate Teaching, 2013
 Merrill Presidential Scholar Award, Outstanding Educator, 2007
 Carl Becker House, Faculty Fellow, Cornell, 2007-2008
 University Faculty Executive Committee, 1997-2003 (university-wide election)
 Merrill Presidential Scholar Award, Outstanding Educator, 2003
 DOE Global Change Fellow, 1981-1984

Graduate Degrees Supervised

As major professor:
 Siyu Zhao (PhD student)
 Patrick Andrews (PhD student)
 Harsankhar Manoj (PhD student)
 Weiran Liu (PhD 2019)
 Gang Zhang (PhD 2015)
 Caroline Binkley (MS 2015)
 Naresh Neupane (PhD 2014)

Meredith Brown (MS 2012)
James Favors (PhD student, 2010/2011)
Bing Pu (PhD 2010) Current position, Postdoctoral Research Associate,
The University of Texas
Christina Patricola (M.S. 2007; PhD 2010) Current position, Research
Associate, Texas A&M
Samson Hagos (M.S. 2004, PhD 2007). Current position, Research Scientist,
Pacific Northwest National Laboratory
Jen-shan Hsieh (Ph.D. May 2005). Current position: Research Associate at Texas
A&M
Torsten Duffy, M.S. May 2000. Current position: Weather prediction modeling
manager at Naval Research Lab.
Edward K. Vizy, M.S. 1999, Ph.D. 2003. (NASA Graduate Student Fellowship)
Current position: Research Associate at UT Austin.
Corinne M. Carter, M.S. 1999 (NSF Graduate Fellowship). Current position:
Computer programmer at Raytheon
Lesley L. Greene, M.S. 1997. (NASA Graduate Student Fellowship) Current
position: Actor.
John C.-H. Chiang, M.S. Physics 1996. Current position: Associate Professor at
University of California, Berkeley.
John D. Lenters, M.S. 1994, PhD 1996. Current position: Associate Professor,
University of Nebraska, Department of Geosciences
Todd D. Ringler, PhD 1996. Current position: Research scientist, Los Alamos
National Laboratory, Theoretical Division, Fluid Dynamics Group

Other Supervisory (Current and recent)

Dr. Edward K Vizy, Research Associate, 2003-present
Mr. Yang Liu, Visiting PhD student, Peking University (2017-present)
Dr. Rory Fitzpatrick, Visiting Scholar, University of Leeds; Postdoctoral Research
Associate, 2018-present
Dr. Fan Han, Postdoctoral Research Associate, 2018
Dr. Jaya Khana, Postdoctoral Research Associate, 2016-2017
Dr. Xiaoming Sun, Postdoctoral Research Associate, 2015-2017
Dr. Julien Cretat, Postdoctoral Research Associate, 2012-2014
Undergraduate researchers: Hunter Wilkes (2019), Emily Verdoia (2019/2020),
Venus Santos, Nathan Wolf, Jenna Hartin (Undergraduate Honors Thesis)
Skylar Turner – advisor for Polymath Scholar thesis, 2018/2019, The Potential of
Quantum Computing for Improving Climate Change Prediction
Pravan Nair – advisor for Plan II Physics thesis, Economic and Environmental
Impacts of Public Transit Geometry: A Mathematical Model for a Sustainable
City

External Support (Current* and Recent)

*National Science Foundation, Multi-scale Analysis of Congo Basin
Precipitation: Understanding the Regional Rainfall Climatology and the

- Potential for Change. Award number 1939880. P.I Kerry H. Cook; Co-P.I. Edward K. Vizy; July 2020 – Jun 2023. \$822,693.
- *National Science Foundation, Understanding High-Impact Rainfall Events over the West African Sahel: Resolving the Role of Environmental Conditions on Storm Processes. Award number 1929074. Dec 2019 – Nov 2022. P.I Edward K. Vizy; Co-P.I. Kerry H. Cook. \$657,103.
- *National Science Foundation, Seasonality of East African Rainfall. Award Number 1701520. P.I Kerry H. Cook; Co-P.I. Edward K. Vizy. Award number 1701520. Aug 2017 – Jul 2021. \$683,578.00
- National Science Foundation, Role of Mesoscale Convective Systems in Determining the Diurnal Cycle of Precipitation over Sub-Saharan Northern Africa. March 2015 – February 2020. P.I Edward K. Vizy; Co-P.I. Kerry H. Cook \$497,000.
- National Science Foundation, Regional Climate Resilience and Sensitivity in the Tropics and Subtropics. April 2014 – March 2017. P.I Kerry H. Cook; Co-P.I. Edward K. Vizy. \$880,000
- NASA Oceanography Program, Influence of the Equatorial Atlantic Cold Tongue and Angola Current on Atlantic Basin Climate Variability. June 2013 – May 2017. P.I Edward K. Vizy; Co-P.I. Kerry H. Cook \$489,000.
- National Science Foundation, African Monsoon Systems: Basic Dynamics, Basic Dynamics and Applications to Interannual and Decadal Prediction (2011-2016). P.I Kerry H. Cook; Co-P.I. Edward K. Vizy. \$457,000.
- National Science Foundation, Collaborative Research: Climate Forecasting, Adaptation Backcasting: Coupling human response to climate change in Malawi P.I Kerry H. Cook (2011)
- USAID Coupling human response to climate change in Malawi (2012 - 2014). P.I Kerry H. Cook; Co-P.I. Brent McCusker.
- DOE, Changes in Intense Precipitation Events in West Africa and the central U.S. under Global Warming (2011-2014)
- DOD, subcontract through LBJ School, Modeling Climate Change and Population Vulnerability in Africa (2010-2011)
- DOE, Program on Abrupt Climate Change, Influence of Atlantic SST thresholds on continental climates: Development and application of a coupled atmosphere/ocean/vegetation regional climate model (2008-2012)
- NSF DRICOMP Program, Hydrodynamics of the Caribbean low-level jet and its relationship to drought (2007-2008)
- NSF, Climate Dynamics and Large-scale Dynamic Meteorology: Understanding the seasonal cycle of rainfall over northern Africa (2005-2009).
- NASA Oceans and Ice Program, The Influence of the Amazon and Orinoco River Plumes on Tropical Atlantic Climate, in collaboration with Duke University Geoscience Dept and University of South Florida Oceanography Dept. (2006-2009)
- NSF. Evaluation of the Great Plains Low-level Jet and its Relationship to Mid-West Precipitation in Coupled GCM Simulations of the 20th and 21st Centuries (2007-2008)
- International Center for Theoretical Physics, Trieste, Italy. Workshop on African Drought (2007 -2008)

NASA NAMMA Program: Using AMMA and satellite observations to improve simulation of tropical Atlantic cyclogenesis. (2007 – 2009)
NASA Graduate Student Research Program: Understanding the evolution of the boreal summer rainy season over East Africa. (Emily Riddle, 2006-2009)
National Science Foundation, Small Grants for Exploratory Research,, Sensitivity of the West African monsoon to Gulf of Guinea SSTs (2004- 2005).
National Science Foundation, Paleoclimate Section of the Atmospheric Science Division: "Mesoscale Modeling of Tropical Paleoclimate". (2002 – 2005)

Publications

*indicates paper written with graduate student

+indicates paper written with postdoctoral advisee

In preparation for 2021

Second edition: Cook, K.H., 2013. *Climate Dynamics*, Princeton University Press.
Conversion to full color graphics with 50% expansion of material.

Submitted

*Cook, K.H., Vizy E.K., Liu Y., Liu W., 2020. Greenhouse-Gas Induced Warming Amplification over the Arabian Peninsula with Implications for Ethiopian Rainfall. Submitted to *Climate Dynamics*, December 2020.

Published

- *†Cook, K.H., Fitzpatrick, R.G.J., Liu, W., Vizy, E.K., 2020. Seasonal asymmetry of equatorial East African rainfall projections: Understanding differences between the response of the long rains and the short rains to increased greenhouse gases. *Climate Dynamics* <https://doi.org/10.1007/s00382-020-05350-y>
- *Liu, Y., K.H. Cook, and E.K. Vizy, 2020: Delayed retreat of the summer monsoon over the Indochina peninsula linked to surface warming trends. *Int. J. Climatol.*, <https://doi.org/10.1002/joc.6938>
- *Zhao, S., and K.H. Cook, 2020: Influence of Walker circulations on East African rainfall. Accepted for *Climate Dynamics*.
- Vizy, E.K., and K.H. Cook, 2020: Interannual variability of East African rainfall: Role of seasonal transitions of the low-level cross-equatorial flow. *Clim. Dyn.* <https://doi.org/10.1007/s00382-020-05244-z>
- Wang, B., M. Biasutti, M.P. Byren, C.Castro, C.P. Change, K.H. Cook, R. Fu, A. Grimm, K.J. Ha. H. Henson, A. Kitoh, R. Krishnan, J.Y. Lee, J. Li, J. Liu, A. Moise, S. Pascale, M.K. Roxy, A. Seth, C.H. Sui, A. Turner, S. Yang, K.S. Yun, L. Zhang, and T. Zhou, 2020. Monsoon Climate Change Assessment. *Bulletin of the Amer. Meteorol. Soc.* <https://doi.org/10.1175/BAMS-D-19-0335.1>
- †Fitzpatrick, R.G.J, D.J. Parker; J.H. Marsham; D.P. Rowell; F.M. Guichard; C.M. Taylor; K.H. Cook; E.K. Vizy; L.S. Jackson; D.L. Finney; J.A. Crook; R. Stratton; S. Tucker, 2020: What drives the intensification of mesoscale convective systems over the West African Sahel under climate change? *J. Climate*, DOI: [10.1175/JCLI-D-19-0380.1](https://doi.org/10.1175/JCLI-D-19-0380.1)

- Staten P.W., K. M. Grise, S. M. Davis, K. B. Karnauskas, D. W. Waugh, A. Maycock, Q. Fu, K. H. Cook, O. Adam, I. R. Simpson, R. J. Allen, K. Rosenlof, G. Chen, C. C. Ummenhofer, X-W. Quan, J. P. Kossin, N. A. Davis, S-W. Son, 2020: Tropical widening: From global variations to regional impacts. *Bulletin of the Amer. Meteorol. Soc.* DOI: [10.1175/BAMS-D-19-0047.1](https://doi.org/10.1175/BAMS-D-19-0047.1)
- †Khanna J, K.H. Cook, and E.K. Vizy, 2020: Opposite spatial variability of climate change-induced surface temperature trends due to soil and atmospheric moisture in tropical/subtropical dry and wet land regions. *Int. J. Climatol.*, <https://doi.org/10.1002/joc.6554>
- *Liu, W., K.H. Cook, and E.K. Vizy, 2020: Influence of Indian Ocean SST regionality on the East African short rains. *Climate Dynamics*. DOI:10.1007/s00382-020-05265-8
- *Cook, K.H., Y. Liu, and E.K. Vizy, 2020: Congo Basin drying associated with poleward shifts of African thermal lows. *Climate Dynamics*, **54**, 863-883. <https://doi.org/10.1007/s00382-019-05033-3>
- Cook, K. H., and E. K. Vizy, 2019: Contemporary climate change of the African monsoon systems. *Current Climate Change Reports*, **5**, 145-159. <https://doi.org/10.1007/s40641-019-00130-1>
- Vizy, E.K., and K.H. Cook, 2019: Observed relationship between the Turkana low-level jet and boreal summer convection. *Clim. Dyn.*, **53**, 4037-4058 <https://doi.org/10.1007/s00382-019-04769-2>
- †Han, F., K.H. Cook, and E.K. Vizy, 2019: Changes in intense rainfall events and drought across Africa in the 21st century. *Clim. Dyn.*, **53**, 2757-2777 DOI: 10.1007/s00382-019-04653-z
- *Liu, W., K.H. Cook, and E.K. Vizy, 2019: Role of the West African westerly jet in the seasonal and diurnal cycles of precipitation over West Africa. *Climate Dynamics*, **54**, 843-861. <https://link.springer.com/article/10.1007/s00382-019-05035-1>
- Cook, K.H., and E.K. Vizy, 2019: Examining multidecadal trends in the surface heat balance over the tropical and subtropical oceans in atmospheric reanalyses. *Int. J. Climatol.* **40**, 2253-2269. <https://rmets.onlinelibrary.wiley.com/doi/abs/10.1002/joc.6330>
- *Liu, W., K.H. Cook, and E.K. Vizy, 2019: The role of mesoscale convective systems in the diurnal cycle of rainfall and its seasonality over sub-Saharan Northern Africa. *Clim. Dyn.* **52**, 729-745. <https://doi.org/10.1007/s00382-018-4162-y>
- †Sun, X., E.K. Vizy, and K.H. Cook, 2019: Land-atmosphere interactions in the southeastern Atlantic: Interannual variability. *Climate Dynamics*, **52**, 539-561. <https://doi.org/10.1007/s00382-018-4155-x>
- Vizy, E.K., and K.H. Cook, 2019: Understanding the summertime diurnal cycle of precipitation over sub-Saharan West Africa: Regions with daytime rainfall peaks in the absence of significant topographic features. *Clim. Dyn.* **52**, 2903-2922. <https://doi.org/10.1007/s00382-018-4315-z>
- Cook, K. H., and E. K. Vizy, 2018: Expanding width of the tropics: Impacts on the ocean. *Climate Variations*, **16**, 27-32. doi:10.5065/D69Z93QF.

- +Vizy, E.K., K.H. Cook, and X. Sun, 2018: Decadal changes of the South Atlantic Ocean Angola-Benguela front. *Climate Dynamics*, 51, 3251-3273. <https://doi.org/10.1007/s00382-018-4077-7>
- Cook K.H., 2018: Climate Change Scenarios and African Climate Change, Oxford Research Encyclopedia. <http://climatescience.oxfordre.com/> H. von Storch, Editor.
- Thiaw, W. M., S. Janicot, E. Bekele, K.H. Cook, B. Fontaine, A. Mekonnen, O. Ndiaye, P.- H. K. Tamo, and E. K. Vizy, 2017: AMMA forecaster's handbook: Chapter 7: Subseasonal forecasting. Wiley.
- +Cook, K.H., E. K. Vizy, and X. Sun, 2017: Multidecadal-scale adjustment of the ocean mixed layer heat budget in the tropics: Examining ocean reanalyses. *Climate Dynamics*, doi:10.1007/s00382-017-3703-0
- Vizy, E.K., and K.H. Cook, 2017: Mesoscale convective systems and nocturnal rainfall over the West African Sahel: Role of the Inter-tropical front. *Climate Dynamics*, doi:10.1007/s00382-017-3628-7.
- +Sun, X.M., Cook, K. H., and E. K. Vizy, 2017: The South Atlantic subtropical high: Climatology and interannual variability. *Climate Dynamics*, doi:10.1175/JCLI-D-16-0705.1
- Vizy, E.K., and K. H. Cook, 2017: Seasonality of the observed amplified Sahara warming trend and implications for Sahel rainfall. *J. Climate*, 30, 3073-3094, doi:10.1175/JCLI-D-16-0687.1
- *Zhang, G., K.H. Cook, and E.K. Vizy, 2016a: The diurnal cycle of warm season rainfall over West Africa. Part I: Observational analysis. *J. Climate*, 29, 8423-8437. doi:10.1175/JCLI-d-15-0874.1.
- *Zhang, G., K.H. Cook, and E.K. Vizy, 2016b: The diurnal cycle of warm season rainfall over West Africa. Part II: Convection-permitting simulations. *J. Climate*, 29, 8439-8454. doi:10.1175/JCLI-d-15-0875.1
- Cook, K. H., and E. K. Vizy, 2016: Future Climate Projections over Africa. In "Climate, Conflict, and Governance in Africa". Program on Climate Change and African Political Stability, The Robert S. Strauss Center, The University of Texas at Austin.
- Justino, F., S. Frode, E.K. Vizy, K.H. Cook, and M. Pereira. 2016: Greenhouse gas induced changes in the seasonal cycle of the Amazon Basin in a coupled climate-vegetation regional model. *Climate*, 4, doi:10.3390/cli4010003.
- Cook, K. H., and E. K. Vizy, 2016: The Congo Basin Walker Circulation: Dynamics and connections to precipitation, *Climate Dynamics*, 47, 1-21. DOI 10.1007/s00382-015-2864-y.
- Vizy, E.K., and K.H. Cook, 2016: Understanding long-term (1982-2013) multi-decadal change in the equatorial and subtropical South Atlantic climate. *Clim. Dyn.* 46, 2087-2113. doi:10.1007/s00382-015-2691-1.
- Cook, K. H., and E. K. Vizy, 2015: The Congo Basin Walker Circulation: Dynamics and Connections to Precipitation, *Climate Dynamics*, in press.
- Cook, K.H., 2014: Role of inertial instability in the West African Monsoon Jump. *JGR - Atmospheres*, 120, 3085-3102
- Vizy, E.K., K.H. Cook, James Chimphamba, and B. McCusker, 2015: Projected changes in Malawi's growing season. *Climate Dynamics*, <http://link.springer.com/article/10.1007%2Fs00382-014-2424-x>

- Cook, K. H., and E. K. Vizy, 2015: Detection and analysis of an amplified warming of the Sahara Desert. *J. Climate*, **28**, 6560-6580. [Highlighted in Discovery News, American Meteorological Society News, and Nature Climate Change]
- +Crétat, J., E. K. Vizy, and K. H. Cook, 2015: The relationship between African easterly waves and daily rainfall over West Africa: observations and regional climate simulations. *Clim. Dyn.* **44**, 385-404.
- Vizy, E.K. and K.H. Cook, 2015. Understanding long-term (1982–2013) multi-decadal change in the equatorial and subtropical South Atlantic climate. *Climate Dynamics*, DOI [10.1007/s00382-015-2691-1](https://doi.org/10.1007/s00382-015-2691-1) [Highlighted in Nature, 530, 20-22, 2016]
- Rodrigues-Fonseca, B., E. Mohino, C.R. Mechoso, C. Caminade, M. Biasutti, M. Gaetani, J. García-Serrano, E. K. Vizy, K. Cook, Y. Xue, I. Polo, T. Losada, L. Druyan, B. Fontaine, J. Bader, Francisco J. Doblas-Reyes, L. Goddard, S. Janicot, A. Arribas, W. Lau, A. Colman, M. Vellinga, D. P. Rowell, F. Kucharski, and A. Voldoire, 2015: Variability and Predictability of West African Droughts. A review in the role of Sea Surface Temperature Anomalies. *J. Climate*, **28**, 4034-4060. doi:10.1175/JCLI-D-14-00130.1
- Busby, J.W., K.H. Cook, E.K. Vizy, T.G.Smith, and M. Bekalo, 2014: Identifying hot spots of security vulnerability associated with climate change in Africa. *Climatic Change*, **124**, 717-731.
- +Crétat, J., E. K. Vizy, and K. H. Cook, 2014: How well are daily intense rainfall events captured by current climate models over Africa? *Clim. Dyn.*, **42**, 2691-2711.
- Vizy, E.K. and K.H. Cook, 2014. Capturing the Atlantic cold tongue and coastal upwelling in a coupled atmosphere/mixed layer ocean regional model. *Climate Dynamics*, **42**, 345-366.
- *Zhang, G., and K.H. Cook, 2014: West African monsoon demise: Climatology, interannual variations, and relationship to seasonal rainfall. *J. Geophys. Research – Atmospheres*. **119**, DOI: 10.1002/2014JD022043.
- Vizy, E.K. and K.H. Cook, 2014. Impact of cold air surges on rainfall variability in the Sahel and wet African tropics: a multi-scale analysis. *Clim. Dyn.*, **43**, 1057-1081.
- Cook, K.H., 2013. *Climate Dynamics*, Princeton University Press. ISBN 9780691125305, 216 pp
- +Vizy, E. K., K. H. Cook, J. Crétat, and N. Neupane, 2013: Projections of a wetter Sahel in the 21st century from global and regional models. *J. Climate*, **26**, 4664-4687.
- Cook, K. H., and E. K. Vizy, 2013: Projected changes in East African rainy seasons. *J. Climate*, **26**, 5931-5948.
- *Neupane, N., and K.H. Cook, 2013: A nonlinear response of Sahel rainfall to Atlantic warming. *J. Climate*, **26**, 7080-7096.
- *Patricola, C. M., and K. H. Cook, 2013a: Mid-twenty first century climate change in the central United States. Part I: Regional and global model predictions. *Climate Dyn.*, **40**, 551-568.

- *Patricola, C. M., and K. H. Cook, 2013b: Mid-twenty first century climate change in the central United States. Part II: Climate change processes. *Climate Dyn.*, **40**, 569-583.
- Collins M., R. Knutti et al., 2013: Chapter 12 Long-term climate change: Projections, commitments and irreversibility. IPCC Fifth Assessment Report, Cambridge University Press.
- Cook, K.H., G.A. Meehl, and J.M. Arblaster, 2012: Monsoon regimes and processes in CCSM4, Part 2: African and American monsoon systems. *Journal of Climate*, **25**, 2609-2621.
- Cook, K.H., and E.K. Vizy, 2012: Impact of climate change on mid-21st century growing seasons in Africa. *Climate Dynamics*, **39**, 2937-2955.
- *Pu, B., E.K. Vizy, and K.H. Cook, 2012: Warm season response over North America to a shutdown of the Atlantic meridional overturning circulation and CO₂ increases. *J. Climate*, **25**, 6701-6720.
- *Pu, B., and K.H. Cook, 2012: Role of the West African westerly jet in Sahel rainfall variations. *J. Climate*, **25**, 2880-2896.
- Vizy, E.K. and K.H. Cook, 2012. Mid-21st century changes in extreme events over Northern and Tropical Africa, *J. Climate*, **25**, 5748-5767.
- *Patricola, C. M., and K. H. Cook, 2011: Sub-Saharan Northern African climate at the end of the 21st century: Forcing factors and climate change processes. *Climate Dynamics*, **37**, 1165-1188.
- Cook, K. H., and E. K. Vizy, 2010: Hydrodynamics of the Caribbean low-level jet and its relationship to precipitation. *J. Climate*, **23**, 1477-1494.
- Vizy, E. K., and K. H. Cook, 2010: Influence of the Amazon/Orinoco plume on the summertime Atlantic climate. *J. Geophys. Res. – Atmospheres*, **23**, Art. No. D21112 .
- *Pu, B., and K.H. Cook, 2010: Dynamics of the West African westerly jet. *J. Climate*, **23**, 6263-6276.
- Druyan, L., J. Feng, K. H. Cook, Y. Xue, M. Fulakeza, S. M. Hagos, A. Konare, W. Moufouma-Okia, D. P. Rowell, and E. K. Vizy, 2010: The WAMME regional model intercomparison study. *Climate Dynamics*, DOI 10.1007/s00382-009-0676-7.
- *Patricola, C. M., and K. H. Cook, 2010: Northern African climate at the end of the 21st century: Integrated application of regional and global climate models. *Climate Dyn.*, **35**, 193-212.
- Vizy, E. K., and K. H. Cook, 2009: Tropical storm development from African easterly waves in the eastern Atlantic: A comparison of two successive waves using a regional model as part of NASA AMMA 2006. *J. Atmos. Sci.*, **66**, 3313-3334.
- Cook, K. H., 2009: South American climate variability and change: Remote and regional forcing processes. In *Past Climate Variability in South America and Surrounding Regions: From the last Glacial Maximum to the Holocene*. F. Vimeux, F. Sylvestre, and M. Khodri, Eds., Springer.
- Vizy, E. K., and K. H. Cook, 2009: A mechanism for African monsoon breaks: Mediterranean cold air surges. *J. Geophys. Res.*, **114**, D01104, doi:10.1029/2008JD010654.

- Cook, K.H., and E.K. Vizy 2009: The Caribbean low-level jet: Regional dynamics and its relationship to precipitation. U.S. CLIVAR Variations, Vol. 6, No. 3, 9-11.
- *Hagos, S. M., and K. H. Cook, 2009: Development of a coupled regional model and its application to the study of interactions between the West African monsoon and the eastern tropical Atlantic Ocean. *J. Climate*, **22**, 2591-2604.
- Forward for text: *Global Warming* by Natalie Goldstein. Facts on File, Global Issues Series.
- Cook, K. H., 2009: South American climate variability and change: Remote and regional forcing processes. In *Past Climate Variability in South America and Surrounding Regions: From the last Glacial Maximum to the Holocene*. F. Vimeux, F. Sylvestre, and M. Khodri, Eds., Springer.
- Cook, K.H., 2009: Abrupt climate change: Atmospheric tipping points, in *Climate Change: Global Risks, Challenges and Decisions*. K. Richardson, D. Liverman, Eds. DOI: 10.1088/1755-1307/6/6/062003
- Cook, K. H., 2008: Mysteries of Sahel droughts. *Nature Geoscience*, **1**, 647-648.
- Cook, K. H., E. K. Vizy, Z. S. Launer, and C. M. Patricola, 2008: Springtime intensification of the Great Plains low-level jet and Midwest precipitation in GCM simulations of the 21st century. *J. Climate*, **21**, 6321-6340.
- *Patricola, C.M., and K.H. Cook, 2008: Atmosphere/vegetation feedbacks: A mechanism for abrupt climate change over Northern Africa. *Journal of Geophysical Research – Atmospheres*. **113**, D18102.
- *Hagos, S. M., and K. H. Cook, 2008: Ocean warming and late 20th century Sahel drought and recovery. *J. Climate*, **21**, 3797-3814.
- *Hsieh, J.-S. and K.H. Cook, 2008: On the instability of the African easterly jet and the generation of African Waves: Reversals of the potential vorticity gradient. *J. Atmospheric Sci.*, **65**, 2130-2151.
- *Riddle, E.E., and K.H. Cook, 2008: Abrupt rainfall transitions over the Greater Horn of Africa: Observations and regional model simulations. *Journal of Geophysical Research – Atmospheres*. **113**, D15109.
- Cook, K.H., and E.K. Vizy 2008: Effects of 21st c. climate change on the Amazon rain forest. *J. Climate*, **21**, 542-560.
- *Hagos, S.M., and K.H. Cook, 2007: Dynamics of the West African monsoon jump. *J. Climate*, **20**, 5264-5284.
- Vizy, E.K., and K.H., Cook, 2007: Relationship between Amazon and high Andes rainfall. *Journal of Geophysical Research – Atmospheres*, **112** (D7): Art. No. D07107.
- *Patricola, C.M., and K.H. Cook, 2007: Dynamics of the West African Monsoon under mid-Holocene precessional forcing: Regional climate model simulations. *J. Climate*, **20**, 694-716.
- *Hsieh, J.-S. and K.H. Cook, 2007: A study of the energetics of African easterly waves using a regional climate model. *J. Atmospheric Sci.*, **64**, 421-440.
- Cook, K.H., and E. K. Vizy, 2006: Coupled model simulations of the West African monsoon system: 20th century simulations and 21st century predictions. *Journal of Climate*, **19**, 3681-3703.

- Cook, K.H., and E. K. Vizy, 2006: South American climate during the Last Glacial Maximum: Delayed onset of the South American monsoon. *J. Geophys. Res. – Atmospheres*, **111**, D02110, doi:10.1029/2005JD005980.
- *Hagos, S.M. and K.H. Cook, 2005. Influence of surface processes over Africa on the Atlantic marine ITCZ and South American precipitation. *J. Climate*, **18**, pages 4993-5010.
- Vizy, E. K., and K. H. Cook, 2005: Evaluation of Last Glacial Maximum sea surface temperature reconstructions through their influence on South American climate, *J. Geophys. Res.*, **110**, D11105, doi:10.1029/2004JD005415.
- Ward, M.N., K.H. Cook, A. Diedhiou, A. Giannini, A. Kamba, P.J. Lamb, A.B. Mohamed, A. Nassor, C. Thorncroft, 2005: Seasonal-to-decadal predictability and prediction of West African climate. *CLIVAR Exchanges*, **9**, No. 3 14-17.
- *Hsieh, J.-S. and K.H. Cook, 2005: Generation of African easterly wave disturbances: Relationship to the African easterly jet. *Mon. Wea. Rev.*, **133**, 1311-1327.
- Cook, K.H., 2005. Hadley Circulation Dynamics: Seasonality and the Role of Continents. *The Hadley Circulation: Past, Present, and Future*. In *Advances in Global Change Research*, Vol. 21, Kluwer Academic Press. H.F. Diaz and R.S. Bradley, eds., 511 p.
- *Cook, K.H., J.-S.Hsieh, and S.M. Hagos, 2004: The Africa/South America intercontinental teleconnection. *J. Climate*, **17**, 2851-2865.
- *Cook, K.H., N. Neary, and E.K. Vizy, 2003: Mesoscale modeling of the African Humid Period. *CLIVAR Exchanges*, **8**, 27-28.
- Vizy, E. K., and K. H. Cook, 2003: Connections between the summer East African and Indian rainfall regimes, *J. Geophys. Res.*, **108** (D16), 4510, doi:10.1029/2003JD003452.
- Cook, K.H., 2003: Role of continents in driving the Hadley cells. *J. Atmospheric Sciences*, **60**, 957-976.
- *Cook, K.H., X. Yang, C.M. Carter, and B.N. Belcher, 2003: A modeling system for studying climate controls on mountain glaciers with application to the Patagonian Icefields. *Climatic Change*, **56**, 339-367.
- Cook, K.H., 2003: "Reply to Comments on 'The south Indian convergence zone and interannual rainfall variability over southern Africa' and the question of ENSO's influence on southern Africa.", *J. Climate*, **16**, 563-565.
- Nogues-Paegle, J., C.R. Mechoso, R. Fu, E.H. Berbery, W.C. Chao, T.C. Chen, K.H. Cook, A.F. Diaz, D. Enfield, R. Ferreira, A.M. Grimm, V. Kousky, B. Liebmann, J. Marengo, K. Mo, J.D. Neelin, J. Paegle, A.W. Robertson, A. Seth, C.S. Vera, J. Zhou, 2003: Progress in Pan American CLIVAR research: Understanding the South American monsoon. *Meteorologica*, **27**, 3-32.
- *Cook, K.H., and J.-S Hsieh, 2002: Teleconnection between Africa and South America. *Bull. Amer. Meteorological Soc.*, **83** (3), 359-360
- Vizy, E. K., and K. H. Cook, 2002: Development and application of a mesoscale climate model for the tropics: Influence of sea surface temperature anomalies on the West African monsoon, *J. Geophys. Res.- Atmos.*, **107**(D3), 10.1029/2001JD000686, 2002.

- Vizy, E. K., and K. H. Cook, 2001: Mechanisms by which Gulf of Guinea and eastern North Atlantic sea surface temperature anomalies can influence African rainfall. *J. Climate*, **14**, 795-821.
- Cook, K.H., 2001: A Southern Hemisphere wave response to ENSO with implications for southern Africa precipitation. *J. of Atmospheric Science*, **15**, 2146-2162.
- Cook, K.H., 2000: The South Indian Convergence Zone and interannual rainfall variability over southern Africa. *J. Climate*, **13**, 3789-3804.
- Cook, K.H., 1999: Generation of the African Easterly jet and its role in determining West African precipitation. *J. Climate*, **12**, 1165-1184.
- *Ringler, T.D., and K.H.Cook, 1999: Understanding the seasonality of orographically forced stationary waves: Interaction between mechanical and thermal forcing. *J. Atmospheric Science*, **56**, 1154-1174.
- *Lenters, J.D., and K.H.Cook, 1999: Summertime Precipitation Variability in South America: Role of the Large-scale Circulation. *Mon. Wea. Rev.*, **127**, 409-431.
- Cook, K.H., 1997: Large-scale atmospheric dynamics and Sahelian precipitation. *J of Climate.*, **10**, 1137-1152.
- *Ringler, T.D., and K.H.Cook, 1997: Factors controlling nonlinearity in mechanically-forced stationary waves over orography. *J. Atmos. Sci.*, **54**, 2612-2629.
- *Nayvelt, L., K.H.Cook, and P.J.Gierasch, 1997: Modeling and observations of Martian stationary waves. *J. Atmospheric Science*, **8**, 986-1013.
- *Lenters, J.D., and K.H.Cook, 1997: On the origin of the Bolivian high and related circulation features of the South American climate. *J. Atmospheric Science*, **54**, 656-677.
- *Lenters, J.D., and K.H.Cook, 1995: Simulation and diagnosis of the regional South American precipitation climatology. *J. Climate*, **8**, 2988-3005.
- *Ringler, T.D., and K.H.Cook, 1995: Orographically-induced stationary waves: Dependence on latitude. *J. Atmos. Sci.*, **52**, 2548-2560.
- *Lenters, J.D., K.H.Cook and T.D.Ringler, 1995: Comments on "On the influence of the Andes on the general circulation of the Southern Hemisphere". *J. Climate.*, **8**, 2113-2115.
- Cook, K.H., 1995. Understanding perturbations of the intertropical convergence zone over tropical continents. In Global Precipitation and Climate Change, M. Desbois and F.Desalmond, eds. NATO ASI Series I: Global Environmental Change, Vol. 26.
- Cook, K.H., 1994. Mechanisms by which surface drying perturbs tropical precipitation fields. *J. of Climate*, **7**, 400-413.
- Cook, K.H., 1993: Predicting Climate Change: The State of the Art, in Technology, Development and the Global Environment. W.J.Makofske, ed. HarperCollins Press.
- Cook, K. H. and I. M. Held, 1992: The time-mean response of the atmosphere to large-scale orography. *J. Atmos. Sci.*, **49**, 525-539.
- Cook, K.H., 1991: The Challenge of Global Climate Change. In Environmental Issues: The Master Lecture Series. Institute for Environmental Studies, Ramapo College of New Jersey. W. Makofske, H. Horowitz, E. Karlin and P. McConnell, eds.

- *Cook, K. H. and A. Gnanadesikan, 1991: Effects of saturated and dry land surfaces on the tropical circulation and precipitation in a general circulation model. *J. Climate*, 4, 873-889.
- Cook, K. H., 1990: The atmosphere's response to the ice sheets of the last glacial maximum. *Annals of Glaciology*, 14, 32-38.
- Cook, K. H. and I.M. Held, 1988: Stationary waves of the ice age climate. *J. Climate*, 1, 807-819.
- Neelin, J. D., I. M. Held, and K. H. Cook, 1987: Evaporation-wind feedback and low-frequency variability in the tropical atmosphere. *J. Atmos. Sci.*, 44, 2342-2348.
- W.C. Clark, K.H. Cook, G. Marland, A.M. Weinberg, R.M. Rotty, et al., 1982: The carbon dioxide question: Perspectives for 1982. In Carbon Dioxide Review: 1982, W.C. Clark, ed., Oxford University Press, New York.
- W. L. Gates, K. H. Cook, and M. E. Schlesinger, 1981: Preliminary analysis of experiments on the climate effects of increased CO₂ with an atmospheric general circulation model and a climatological ocean, 1981. *J. Geophys. Res.*, 86, 6385-6393.