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Noah Diffenbaugh

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Kara J Foundation Professor of Earth System Science and Kimmelman Family Senior Fellow at the Woods Institute for the Environment

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- Climate and Earth System Dynamics Group

Bio | **Research & Scholarship** | **Teaching** | **Publications**

- Professor, Earth System Science
- Senior Fellow, Stanford Woods Institute for the Environment
- Affiliate, Precourt Institute for Energy

Dr. Noah Diffenbaugh is the Kara J Foundation Professor and Kimmelman Family Senior Fellow at Stanford University. He studies the climate system, including the processes by which climate change could impact agriculture, water resources, and human health. Dr. Diffenbaugh is currently Editor-in-Chief of the peer-review journal Geophysical Research Letters. He has served as a Lead Author for Working Group II of the Intergovernmental Panel on Climate Change (IPCC), and has provided testimony and scientific expertise to the White House, the Governor of California, and U.S. Congressional offices. Dr. Diffenbaugh is a recipient of the James R. Holton Award from the American Geophysical Union, a CAREER award from the National Science Foundation, and a Terman Fellowship from Stanford University. He has also been recognized as a Kavli Fellow by the U.S. National Academy of Sciences, and as a Google Science Communication Fellow.

Administrative Appointments

- Kara J Foundation Professor, School of Earth, Energy and Environmental Sciences, Stanford University (2017 - Present)
- Kimmelman Family Senior Fellow, Woods Institute for the Environment, Stanford University (2017 - Present)
- Professor of Earth System Science, Stanford University (2016 - Present)
- Senior Fellow, Woods Institute for the Environment, Stanford University (2013 - Present)
- Associate Professor of Environmental Earth System Science, Stanford University (2013 - 2016)
- Assistant Professor of Environmental Earth System Science, Stanford University (2009 - 2013)
- Center Fellow, Woods Institute for the Environment, Stanford University (2009 - 2013)
- Associate Professor of Earth and Atmospheric Sciences, Purdue University (2008 - 2009)
- Assistant Professor of Earth and Atmospheric Sciences, Purdue University (2004 - 2008)
- Postgraduate Research Earth Scientist, University of California, Santa Cruz (2003 - 2004)

Honors and Awards

- Timothy J. O'Leary, S. J., Distinguished Scientist, Gonzaga University (2018)
- Panelist, 154th National Academy of Sciences Annual Meeting, National Academy of Sciences (2017)
- Geosciences Distinguished Lecture, National Science Foundation (2016)
- Introductory Speaker, US Kavli Frontiers of Science, National Academy of Sciences (2016)
- Faculty Scholar, Stanford University (2015 – 2016)
- ISI "Hot Paper" and "Highly Cited Paper", Diffenbaugh et al., PNAS, 2015, Thompson Reuters (2015)
- "2015 Highlights", Mankin et al., Environmental Research Letters (2015)
- "California Game Changers at COP21", NexGen Climate America (2015)
- ISI "Highly Cited Paper", Swain et al., Bulletin of the American Meteorological Society, Thompson Reuters (2014)

- ISI “Highly Cited Paper”, Horton et al., Nature Climate Change, 2014, Thompson Reuters (2014)
- ISI “Highly Cited Paper”, Singh et al., Nature Climate Change, 2014, Thomson Reuters (2014)
- School of Earth Sciences Undergraduate Teaching Recognition, Stanford University (2014)
- Stanford Fellow, Stanford University (2013 - 2015)
- ISI "Highly Cited Paper", Diffenbaugh and Field, Science, 2013, Thompson Reuters (2013)
- ISI “Highly Cited Paper”, Diffenbaugh et al., Nature Climate Change, 2013, Thomson Reuters (2013)
- Fifth Anniversary Collection, Diffenbaugh et al., Environmental Research Letters, (2011)
- Google Science Communication Fellow, Google (2011)
- “2011 Highlights”, Diffenbaugh et al., Environmental Research Letters (2011)
- NSF CAREER Award, National Science Foundation (2010 - 2015)
- AGU Research Spotlight, Diffenbaugh and Ashfaq, GRL, American Geophysical Union (2010)
- Kavli Fellow, U.S. National Academy of Sciences (2010)
- Terman Fellowship, Stanford University (2009 - 2012)
- University Faculty Scholar, Purdue University (2009)
- “2009 Highlights,” Ahmed et al., Environmental Research Letters (ERL) (2009)
- Fifth Anniversary Collection, Jackson et al., Environmental Research Letters, (2008)
- NSF Highlight of significant achievement toward strategic outcome goals, Trapp et al., 2007, Proceedings of the National Academy of Sciences (2008)
- “Best of 2008,” Diffenbaugh et al., Environmental Research Letters (ERL) (2008)
- “Best of 2008,” Jackson et al, Environmental Research Letters (2008)
- Purdue President's Nominee - Packard Fellowship for Science and Engineering, Purdue University (2007)
- James R. Holton Award, Atmospheric Sciences Section, American Geophysical Union (2006)
- Scholar, ARCS Foundation (2002 - 2003)
- Regents Fellowship, University of California (2000 - 2001)

University Service and Professional Activities

- Member, Science Advisory Board, Climate Research Program, Lawrence Livermore National Lab (2016 - Present)
- AB 2800 Climate Safe Infrastructure Working Group, State of California (2017 - Present)
- Earth Council, School of Earth, Energy and Environmental Sciences (2016 - Present)
- Editor-in-Chief, Geophysical Research Letters (2015 - Present)
- Undergraduate Advisory Council, Vice Provost for Undergraduate Education, Stanford University (2014 - Present)
- Earth Sciences Council, School of Earth Sciences, Stanford University (2014 - 2015)
- Undergraduate Teaching Recognition, School of Earth Sciences, Stanford University (2014 - 2014)
- Faculty Advisory Board, Introductory Seminar Program, Stanford University (2013 - Present)
- Dean’s Teaching Task Force, School of Earth Sciences, Stanford University (2013 - 2014)
- Search Committee (co-Chair), Coastal Human-Environment Systems, Stanford University (2013 - 2014)
- Faculty Committee, Sustainable Urban Systems initiative, Stanford University (2013 - 2013)
- Director, Goldman Honors Program in Environmental Science, Technology and Policy, Stanford University (2012 - 2015)
- Member, Science Advisory Board, Climate Change Science Institute, Oak Ridge National Laboratory (2012 - 2015)
- Academic Guidance Committee, Emmett Interdisciplinary Program in Environment and Resources (E-IPER), Stanford University (2012 - 2013)
- Faculty Mentor, MUIR Woods Undergraduate Research Program, Stanford University (2012 - 2012)
- Faculty Mentor, Stanford Leland Scholars Program, Stanford University (2012 - 2012)
- Committee on the Effects of Provisions in the Internal Revenue Code on Greenhouse Gas Emissions, National Academy of Sciences (2011 - 2013)
- Member, Sustainability 2.0 faculty committee, Stanford University (2011 - 2012)
- Climate Science Day on Capitol Hill, February 16-17, 2011, American Geophysical Union (2011 - 2011)
- Organizing Committee, Simulating the Spatial-Temporal Patterns of Anthropogenic Climate Change, Los Alamos Institute for Advanced Studies Workshop (2011 - 2011)
- Co-Term Advisor, Earth Systems Program, Stanford University (2010 - Present)
- Pre-Major Advisor, Stanford University (2010 - Present)
- Scientific Research Computing Facility Faculty Committee, Stanford University (2010 - Present)
- Stanford University Member Representative, University Corporation for Atmospheric Research (2010 - Present)
- Lead Author, Working Group II, Intergovernmental Panel on Climate Change (2010 - 2014)
- Graduate Admissions Committee, E-IPER, Stanford University (2010 - 2013)
- Undergraduate Education Committee, School of Earth Sciences, Stanford University (2010 - 2013)
- Faculty Mentor, School of Earth Sciences High School Intern Program, Stanford University (2010 - 2012)
- Environmental Forum Organizing Committee, Woods Institute for the Environment, Stanford University (2010 - 2011)
- Co-Director, Fifth ICTP Workshop on the Theory and Use of Regional Climate Models, May, 2010, Trieste, Italy, International Centre for Theoretical Physics (2010 - 2010)
- Organizing Committee, Climate Change Modeling and Scaling Workshop, U.S. National Climate Assessment (2010 - 2010)
- Adjunct Associate Professor of Earth and Atmospheric Sciences, Purdue University (2009 - Present)

- Affiliated Faculty, Emmett Interdisciplinary Program in Environment and Resources (E-IPER), Stanford University (2009 - Present)
- Committee of the Whole, Earth Systems Program, Stanford University (2009 - Present)
- Editor, Geophysical Research Letters (2009 - 2014)
- Graduate Admissions Committee, Department of Environmental Earth System Science, Stanford University (2009 - 2013)
- Co-Chair, Paleoceanography and Paleoclimatology General Contributions, 2009 Joint Assembly, May 24-29, Toronto, Canada, American Geophysical Union (2009 - 2009)
- DOE Climate Change Science: Focus Group, July 27-28, Washington, D.C., Department of Energy (2009 - 2009)
- Executive Committee, Atmospheric Sciences Section, American Geophysical Union (2008 - Present)
- Atmospheric Science Section Representative, Eos Advisory Board, American Geophysical Union (2008 - 2009)
- Interim Director, Purdue Climate Change Research Center, Purdue University (2008 - 2009)
- Co-Chair, Regional-Scale Forcing of Climate, AGU Fall Meeting, San Francisco, CA, December 15-19, American Geophysical Union (2008 - 2008)
- Co-Chair, Transitioning Out of the Mid-Holocene Climate: An Evaluation of Land-Ocean Proxy Records and Model Simulations, AGU Fall Meeting, San Francisco, CA, December 15-19, American Geophysical Union (2008 - 2008)
- Coordinating Lead Author, Climate Change in Indiana: Initial Analyses of Impacts and Opportunities, an analysis of S.2191, U.S. Senator Richard Lugar's office (2008 - 2008)
- Proposal Panelist – DOE (National Lab Climate Change Scientific Focus Areas; Regional Models for Climate Change Integrated Assessment); NASA (Modeling, Analysis, and Prediction); NOAA (Climate Prediction Program for the Americas); NSF (CDI-II); U.S. CLIVAR (Drought in Coupled Models Project), DOE, NASA, NOAA, NSF, U.S. CLIVAR (2007 - Present)
- Member, Terrestrial Ecosystems and Climate Policy Working Group, National Center for Ecological Analysis and Synthesis (2007 - 2010)
- Contributing Author, CCSP Synthesis and Assessment Product 3.4, Abrupt Climate Change, Hydrologic Variability and Change, Chapter 3, U.S. Geological Survey (2007 - 2008)
- Book Chapter Referee – Climate Impact Hotspots: Key Vulnerable Regions and Climate Change, Publishing (2007 - 2007)
- Report Referee, California Energy Commission, State of Washington (2007 - 2007)
- Short Term Visitor, Abdus Salam International Centre for Theoretical Physics (2006 - Present)
- Co-Guest Editor, Glacial-Interglacial Climate of the Past 160,000 Years: New Insights from Data and Models, Special Issue, Palaeogeography, Palaeoclimatology, Palaeoecology (2006 - 2006)
- Contributor, Agency Technical Working Group, Potential Effects of Climate Change on New Mexico, State of New Mexico (2006 - 2006)
- Journal Manuscript Referee, Journal of Geophysical Research – Atmospheres, Journal of Hydrometeorology, Limnology and Oceanography, Meteorological Applications, Nature, Paleoceanography (2003 - Present)
- Journal Manuscript Referee, International Journal of Climatology, International Journal of Environmental Research and Public Health, Journal of Applied Meteorology and Climatology, Journal of Climate (2003 - Present)
- Journal Manuscript Referee, Agricultural and Forest Meteorology, Atmospheric Research, Climate Dynamics, Climate Research, Climatic Change, Earth Interactions, Eos, Geology, Geophysical Research Letters, Global and Planetary Change (2003 - Present)
- Journal Manuscript Referee, Proceedings of the National Academy of Sciences, Quaternary International, Quaternary Research, Quaternary Science Reviews, Theoretical and Applied Climatology, Water Resources Management (2003 - Present)
- Co-Chair, Climate of the Last Glacial-Interglacial Cycle: New Insights From Models and Data, AGU Fall Meeting, San Francisco, CA, December 8-12, American Geophysical Union (2003 - 2003)

Education

- Ph.D., University of California, Santa Cruz, Earth Sciences (2003)
- M.S., Stanford University, Earth Systems (1997)
- B.S., Stanford University, Earth Systems (1997)