

JASON E. SMERDON

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EDUCATION

2004	Ph.D.	<i>Applied Physics</i>	University of Michigan, Ann Arbor, MI
2000	M.S.	<i>Physics</i>	University of Michigan, Ann Arbor, MI
1998	B.A.	<i>Physics Major</i>	Gustavus Adolphus Coll., St. Peter, MN

PROFESSIONAL APPOINTMENTS

2017-	Lamont Research Professor	Lamont-Doherty Earth Observatory, Columbia University, New York, NY
2014-	Earth Institute Faculty, Associated Member	Earth Institute, Columbia University, New York, NY
2011-	Co-Director, Undergraduate Program in Sustainable Development	Earth Institute, Columbia University, New York, NY
2014-17	Lamont Associate Research Professor (Senior Staff)	Lamont-Doherty Earth Observatory, Columbia University, New York, NY
2008-15	Adjunct Assistant Professor	School of International and Public Affairs, Columbia University, New York, NY
2012-14	Lamont Associate Research Professor (Junior Staff)	Lamont-Doherty Earth Observatory, Columbia University, New York, NY
2012-14	Earth Institute Faculty, Junior Member	Earth Institute, Columbia University, New York, NY
2008-12	Storke-Doherty Lecturer	LDEO and Dept. of Earth and Env. Sci., Columbia University, New York, NY
2010-12	Lamont Assistant Research Professor	Lamont-Doherty Earth Observatory, Columbia University, New York, NY
2008-10	Doherty Associate Research Scientist	Lamont-Doherty Earth Observatory, Columbia University, New York, NY
2007-08	Barnard Environmental Science/Mellon Postdoctoral Fellow	Department of Environmental Science, Barnard College, New York, NY
2005-07	Lamont-Doherty Postdoctoral Fellow	Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY

HONORS AND AWARDS

2016,17	Nominated for <i>Excellence in Mentoring Award</i>	Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
2013	<i>Editors' Citation for Excellence in Refereeing</i> , Geophysical Research Letters	
2009	<i>Distinguished Visiting Researcher at the UCM-Grupo Santander</i>	Universidad Complutense de Madrid, Madrid, Spain
2008	<i>James Chair Visiting Professor</i>	St. Francis Xavier University, Antigonish, Canada
2008	<i>First Decade Award for Early Professional Achievement</i>	Gustavus Adolphus College, St. Peter, MN

- 2007 *Storke-Doherty Lectureship Award*
LDEO and Dept. of Earth and Env. Sci., Columbia University, New York, NY
- 2007 *Barnard Environmental Science/Mellon Postdoctoral Fellowship*
Department of Environmental Science, Barnard College, New York, NY
- 2005 *Lamont-Doherty Postdoctoral Fellowship*
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2005 *John Dorr Graduate Academic Achievement Award*
Department of Geological Sciences, University of Michigan, Ann Arbor, MI
- '98-2001 *GAANN Fellowship*
Applied Physics Program, University of Michigan, Ann Arbor, MI
- 1997 *Julian A. Crawford Memorial Prize in Physics*
Department of Physics, Gustavus Adolphus College, St. Peter, MN

PROFESSIONAL ACTIVITIES

Intergovernmental Panel on Climate Change

- 2011-13 Contributing Author, Working Group I, Assessment Report 5, *Chapter 5: Information from Paleoclimate Archives*.

Conference and Workshop Convening

- 2017 Co-Covener (with E. Cook), *Large-scale hydroclimate variability and change of the Common Era: Patterns, Impacts, and Processes*, PAGES Open Science Meeting, Zaragoza, Spain
- 2016 Chair, PAGES 2k-PMIP3 Workshop: *Comparing data and model estimates of hydroclimate variability and change over the Common Era*, Lamont-Doherty Earth Observatory, NY
- 2010-17 Co-Convener (with K.J. Anchukaitis, E.R. Cook, J. Emile-Geay and K. Cobb): *The Climate of the Common Era*, AGU Fall Meeting, San Francisco, CA
- 2013 Co-Chair, *Third International Workshop on Climate Informatics*, National Center for Atmospheric Research, Boulder, CO
- 2012 Program Committee Chair, *Second International Workshop on Climate Informatics*, National Center for Atmospheric Research, Boulder, CO
- 2012 Organizer, *Decadal-to-Centennial Tropical Pacific Climate Variability: Perspectives from Proxies and Multi-Century Model Simulations*, Lamont-Doherty Earth Observatory, New York, NY
- 2008 Co-Convener (with C. Ammann, N. Graham, and M. Evans): *Advancing Process Understanding in Proxy Climate Records*, AGU Fall Mtg., San Francisco, CA

Workshop Participation

- 2016 *Sixth International Workshop on Climate Informatics* (Keynote Speaker), National Center for Atmospheric Research, Boulder, CO
- 2014 *PAGES 2k Climate Field Reconstruction Workshop* (Speaker), Woods Hole Oceanographic Institution, Woods Hole, MA
- 2013 *PAGES2k/PMIP3 Workshop on Integrated Analysis of Reconstructions and Multi-Model Simulations for the Past Two Millennia* (Speaker), Madrid, Spain
- 2013 *CICAR Symposium, Climate Change: Recent Discoveries and Future Challenges* (Participant), Lamont-Doherty Earth Observatory, Palisades, NY
- 2013 *PAGES EuroMed2k Hydroclimate Workshop* (Speaker), Univ. of Reading, UK
- 2012 *PAGES EuroMed2k Workshop* (Speaker), Max Plank Institute for Meteorology, Hamburg, Germany

- 2012 *Workshop on using paleo-climate model/data comparisons to constrain future projections* (Participant), The Bishop Museum, Honolulu, Hawaii
- 2011 *First International Workshop on Climate Informatics* (Breakout Session Leader)
New York Academy of Sciences, New York, NY
- 2011 *Bayesian Hierarchical Models for High-Resolution Climate Reconstructions*
(Invited Speaker) National Center for Atmospheric Research, Boulder, CO
- 2011 *Bayesian Hierarchical Models (BHM)s for Climate Field Reconstruction (CFR) and Comparison to Existing CFR Methods* (Participant), Lamont-Doherty Earth Observatory, Palisades, NY
- 2010 *Climate Sensitivity Extremes: Assessing the Risk* (Participant), Goddard Institute for Space Studies, New York, NY
- 2010 *Climate of the Last Millennium: Natural and Forced Climate Variability from the Medieval Period to the Greenhouse Future* (Invited talk), Goddard Institute for Space Studies, New York, NY
- 2009 *Abrupt Climate Change in a Warming World* (Invited talk), Lamont-Doherty Earth Observatory, Palisades, NY

Editorial Positions and Reviewer Service

- 2004- Reviewer: *Science, Nature, Nature Geosciences, Nature Climate Change, Journal of Climate, Geophysical Research Letters, Climate Dynamics, Journal of Geophysical Research (Atmospheres and Earth Surface), Earth and Planetary Science Letters, Climate of the Past, International Journal of Climatology, Climatic Change, Environmental Modeling and Software, Hydrology and Earth System Science, Columbia University Press, National Science Foundation, Department of Energy, National Oceanographic and Atmospheric Administration*
- 2006-08 Guest Editor (with V. Rath): *Climate of the Past*, Interpreting subsurface Temperature signals of climate change – Special Issue

Invited Lectures and Panels (Last 5 Years)

- 2017 Invited Lecturer, Columbia Univ. Seminar on Sustainable Finance, New York, NY
- 2017 Keynote Lecture, Kingsborough Community College Eco-Festival, New York, NY
- 2016 Keynote Lecture, 6th International Workshop on Climate Informatics, Boulder, CO
- 2015 Earth Institute Distinguished Lecture Series, New York, NY
- 2015 Keynote Lecture, 2015 Environmental Business International Fall Strategy Summit, Washington DC
- 2015 Colloquium, Department of Geography, Johannes Gutenberg-Universitat Mainz, Mainz, Germany
- 2014 Building Bridges Preview Lecture, Gustavus Adolphus College, St. Peter, MN
- 2014 New York State Common Retirement Fund, New York, NY
- 2013 Plenary Talk, International Meeting on Statistical Climatology, Jeju, Korea
- 2013 Keynote Speaker, Andrew Davidson and Co. 21st Annual Conference Managing Financial Climate Change, New York, NY
- 2013 Earth Institute Sustainable Development Seminar Series, Columbia University, NY
- 2013 Program in Public Sector Leadership and Governance, Earth Institute, Columbia University, New York, NY
- 2013 Department Seminar, Universidad Complutense de Madrid, Madrid, Spain
- 2013 Department of Geography, Johannes Gutenberg-Universitat Mainz, Mainz, Germany
- 2012 World Economic Forum, Earth Institute, Columbia University, New York, NY
- 2012 Climatology, Climate Dynamics and Climate Change Seminar, Department of Geography, University of Giessen, Giessen, Germany

- 2012 Joint Colloquium Series, Department of Atmospheric and Environmental Sciences,
University of Albany, NY
- 2012 Expeditions Project Meeting, Dept. of Computer Science and Engineering, University
of Minnesota, Minneapolis, MN
- 2012 Global Insights Program, Gustavus Adolphus College, St. Peter, MN

UNIVERSITY SERVICE

Committees, Coordinating and Administration

- 2016- Member: *Senior Sustainability Advisory Committee*
Columbia University Sustainability Planning Team, New York, NY
- 2016- Member: *GHG/Energy Focus Team Member*
Columbia University Sustainability Planning Team, New York, NY
- 2016- Member: *Promotions and Careers Committee*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2011- Co-Director, Undergraduate Program in Sustainable Development
Earth Institute, Columbia University, New York, NY
- 2016-17 Chair: *LARP Search Committee* (Atmospheric Science – Successful)
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2016-17 Chair: *Lecturer in Discipline for the Undergraduate Prog. in Sust. Dev.* (Successful)
Earth Institute, Columbia University, New York, NY
- 2014-15 Chair: *LARP Search Committee* (Climate/Paleoclimate – Successful)
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2011-14, Member: *Education Committee*
Earth Institute, Columbia University, New York, NY
- 2011-12 Member: *Faculty Search Committee* (Physical Oceanography – Successful)
Dept. of Earth and Env. Sciences, Columbia University, New York, NY
- 2010-15 Executive Advisor: *NSERC CREATE Training Program in Climate Science*
St. Francis Xavier University, Antigonish, Nova Scotia, Canada
- 2010-12 Chair: *Website Advisory Committee*
Dept. of Earth and Env. Sciences, Columbia University, New York, NY
- 2009-12 Member: *Advisory Committee to the Office of Academic Affairs and Diversity*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2008-11 Chair: *Campus Life Committee*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2010 Member: *Search Committee for Junior Science Writer*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2008-10 Member: *Website Advisory Committee*
Dept. of Earth and Env. Sciences, Columbia University, New York, NY
- 2008 Member: *Search Committee for Junior Science Writer*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2007-08 Coordinator: *The Earth Science Colloquium at the LDEO*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2006-08 Member: *Campus Life Committee*
Lamont-Doherty Earth Observatory, Columbia University, Palisades, NY
- 2007 Co-Coordinator (with H.-P. Huang): *Summer reading seminar on the IPCC AR4*
Lamont-Doherty Earth Observatory, Columbia University

MEDIA EXPERIENCE AND OUTREACH (LAST 5 YEARS)

I am regularly interviewed for print and broadcast media. The most up-to-date list of my media appearances and examples of my outreach efforts can be found at the following URLs:

<https://smerdon.ldeo.columbia.edu/recent-news>

<https://smerdon.ldeo.columbia.edu/content/teaching-and-outreach>

- 2017 Brain Trust Panel Member, Care as Culture, Commemoration of Mierle Laderman Ukeles and her exhibition Maintenance Art, Queens Museum
- 2016 Teacher Renewal for Urban Science Teaching (TRUST), Summer Institute: Earth and Space Science, AMNH, New York, NY
- 2016 Talk-Back Guest, The Rap Guide to Climate Chaos by Baba Brinkman, Soho Playhouse
- 2015 Panel Moderator, FACES Event at Climate Week NYC, Hosted by Tzi Chu USA
- 2015 Internet Action Force, Comedic Interview on Climate Change
- 2015 Green TV, Interview on Climate Extremes and Attribution
- 2015 Raw Science, Podcast Interview on Western Megadroughts
- 2015 Speaker for 5th Grade Assembly, Cottage Lane Elementary School
- 2015 Radio Guest (1 hour), Your Call, KALW, Local (San Francisco) Public Radio
- 2015 Radio Guest, 938LIVE Radio, Singapore
- 2015 Radio Guest, Science Friday, National Public Radio
- 2014 Teacher Renewal for Urban Science Teaching (TRUST), Summer Institute: Earth and Space Science, AMNH, New York, NY
- 2014 Climate Models Calendar, Subject of March Photograph and Research Feature
- 2014 Students for a Greener Hofstra, Hofstra University, Hempstead, NY
- 2013 Earth Day Lecture, New York Power Authority, White Plains, NY
- 2013 Radio Guest (1 hour), Kathleen Dunn Show, Wisconsin Public Radio
- 2013 Sustainability Day, Ramaz Upper School, New York, NY

TEACHING AND MENTORING

Teaching and Course Development

- 2011-17 Instructor: *Introduction to Sustainable Development (SDEV1900)*
Earth Institute, Columbia University, New York, NY
- 2008-15 Instructor: *Climatology (U6115; MPA students in Environmental Science and Policy)*
School of International and Public Affairs, Columbia University, New York, NY
- 2010 Instructor (with J. McManus): *Earth's Environmental Systems: Climate (EES2100)*
Dept. of Earth and Env. Science, Columbia University, New York, NY
- 2008 Guest Instructor: *Earth's Environmental Systems: Climate* (multiple lectures on climate change adaptation/mitigation), Barnard College, New York, NY
- 2007-08 Lab Developer and Instructor: *Earth's Environmental Systems: Climate* (worked to revise existing climate labs and include more hands-on exercises in the lab course, including two climate model labs), Barnard College, New York, NY
- 2007 Guest Instructor: *Data Analysis* (taught multiple 2-hour undergraduate lectures on introductory statistics), Barnard College, New York, NY

Undergraduate Students

- 2017 George-Costin Dobrin (CC' 20), Columbia College Science Fellow
Columbia College, New York, NY

- 2017 Sofia Gouin, (CC' 19), EI Research Intern
Earth Institute, New York, NY
- 2015 Grant Gutierrez (CC '15), EI Research Intern
Earth Institute, New York, NY
- 2014-15 Timothy Kirby Jr. (GS '16), EI Research Intern
Earth Institute, New York, NY
- 2014 Ryan Creedon (PSU '16), Meredith Fish (PSU '15), Stephanie Goldstein (BC '15),
Lamont Summer Interns (Advising by Committee), LDEO, Palisades, NY
- 2013-14 Seung Hun Baek (CC '14), EI Research Intern and Senior Thesis
Department of Earth and Environmental Science, New York, NY
- 2008 E.B. Tupper (BC '08), Summer Research Assistant
Department of Environmental Science, Barnard College, New York, NY
- 2007 Alison Powell (BC '09), Summer Research Assistant
Department of Environmental Science, Barnard College, New York, NY
- 2007-08 Diana Chang (BC '08), Hughes Fellow, Summer Intern and Senior Thesis
Department of Environmental Science, Barnard College, New York, NY
- 2006, 08 Amanda Rook (BC '08), Summer Research Assistant
Department of Environmental Science, Barnard College, New York, NY
- 2006 A.J. Carver (UW-Madison, '07), NOAA Hollings Fellow, Summer Intern
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY

Research Assistants

- 2011 Hannah Aizenman (CUNY Graduate Student), Summer Code Developer
Google Summer of Code Internship, Hosted at LDEO, Palisades, NY
- 2009-10 Dan Amrhein (CC '09), Full-Time Research Assistant (now a postdoc at U of Wash.)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY

Graduate Students

- 2016-17 Yuxin Zhou, (Ph.D., Expected Graduation: 2021, Advisory Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2015- Seung Hun Baek, (Ph.D., Expected Graduation: 2020, Primary Advisor)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2015-16 Xiaomeng Jin, (Ph.D., Expected Graduation: 2019, Advisory Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2014- Colin Raymond, (Ph.D., Expected Graduation: 2019, Thesis Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2014- Bor-Ting Jong, (Ph.D., Expected Graduation: 2019, Thesis Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2013-17 Lea Schneider, (Ph.D. 2017, Second Reader of Doctoral Thesis)
Johannes Gutenberg University, Mainz, Germany
- 2012-14 Nandini Ramesh, (Ph.D., Expected Graduation: 2017, Advisory Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY
- 2010-15 Sloan Coats, (Ph.D., 2015, Primary Advisor; Starting as an Assistant Sci. at WHOI in 2018)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY 2008
- 2008 Miriam Jones, (Ph.D. 2008, Outside Reader for Thesis Committee)
Lamont-Doherty Earth Observatory of Columbia University, Palisades, NY

Postdoctoral Scientists

- 2018 Gijs de Cort, Belgian American Educational Foundation (BAEF) Postdoctoral Fellow
- 2015-18 Justin Mankin, EI Postdoctoral Fellow (starting as an Assist. Prof. at Dartmouth in 2018)
- 2015-18 Nathan Steiger, NOAA Climate and Global Change Postdoctoral Fellow

GRANTS: ACQUIRED AND COMPLETED

Total Funding Raised from Federal Grants (since 2007): \$13,276,086

Total Funding Raised as Lead PI or sole LDEO PI (since 2007): \$1,400,760

- 2017- NSF, \$1,899,667 (LDEO Portion), 5 years, *PIRE: Climate Research Education in the Americas using Tree-Ring Speleothem Examples (PIRE-CREATE)*, PIs: R. D'Arrigo, Laia Andreu-Hayles, A.P. Williams, J. Smerdon, with lead PI: M. Vuille, SUNY Albany
- 2016- NSF, \$157,085 (LDEO Portion), 3 years, *Collaborative Research: Derivation of Ensemble and Joint-Variable Climate Field Reconstructions of the Common Era Using New Random Field Methods*, PIs: B. Li and J. Smerdon
- 2016- NSF, \$626,108, 3 years, *Reconstruction and Dynamics of Interhemispheric Hydroclimate Variability between the Americas*, PIs: J. Smerdon (lead), E. Cook, R. Seager, P. Williams
- 2015 PAGES, \$12,000, PMIP3/PAGES 2k Workshop: *Comparing data and model estimates of hydroclimate variability and change over the Common Era*, PI: J. Smerdon
- 2015 Lamont Climate Center, \$10,000, PMIP3/PAGES 2k Workshop: *Comparing data and model estimates of hydroclimate variability and change over the Common Era*, PI: J. Smerdon
- 2014-18 NSF, \$776,807, 3 years (1-yr NCE), *Continental scale droughts in North America: Their frequency, character and causes over the past millennium and near term future*, PIs: R. Seager, N. Henderson, D. Lee, and J. Smerdon
- 2014 Lamont Climate Center, \$5,730, Climate Center Visitor: J. Fidel Gonzalez-Rouco
- 2013- NSF, \$3,500,000 (LDEO Portion), 5 years, *Collaborative Research, EaSM2: Linking near-term future changes in weather and hydroclimate in western North America to adaptation for ecosystem and water management*, PIs: R. Seager, M. Ting, Y. Kushnir, M. Biasutti, J. Smerdon, B. Cook and A. Greene
- 2011-14 NOAA, \$30,463 (LDEO Portion), 3 years, *Fossil Coral Estimates of Central Tropical Pacific SST and Hydrological Variability During the Last Millennium*, PIs: K. Cobb and J. Smerdon
- 2010-14 NOAA, \$2,383,473, 3 years (1-yr NCE), *Global Decadal Hydroclimate Variability, Predictability and Change: A Data-Enriched Modeling Study*, R. Seager, M. Cane, M. Ting, Y. Kushnir, J. Smerdon, A. Kaplan, M. Evans, L. Polvani
- 2009-13 NSF, \$274,418 (LDEO Portion), 3 years (1-yr NCE), *Collaborative Research: Locally constrained climate field reconstructions of the last millennium: Methods and application*, PIs: J. Smerdon (lead), A. Kaplan, M. Evans
- 2008-11 NOAA, \$3,315,379, 2 years (1-yr NCE), *Abrupt Climate Change in a Warming World: Lessons from Holocene Paleo and Modern Instrumental Records and Model Simulations*, PIs: R. Seager, M. Cane, Y. Kushnir, A. Kaplan, M. Ting, N. Naik, X. Yuan, D. Martinson, and J. Smerdon
- 2007-11 NOAA, \$312,686, 3 years (1-yr NCE), *Spectral characteristics of climate proxies and their expression in climate field reconstructions*, PIs: J. Smerdon (lead), A. Kaplan, E. Cook, and M. Evans
- 2007 Barnard Mini Mellon Grant, \$4,800, 1 year, *Campus Energy Assessment and Education for Sustainable Development*, PIs: J. Smerdon and S. Pfirman
- 2007 Black Rock Forest Consortium/Stiefel Foundation, \$3,350, 1 year, *Land-*

- Atmosphere Coupling at Black Rock Forest: The role of snow, vegetation, and soil thermodynamics*, PIs: G. Gong, J. Smerdon and J. Cherry
- 2006 Black Rock Forest Consortium/Stiefel Foundation, \$4,989, 1 year, *Long-term data management for Black Rock Forest meteorological and snow-related research*, PIs: G. Gong, J. Smerdon and J. Cherry
- 2006 Climate Center, Lamont-Doherty Earth Observatory, \$5,200, 1 year, *Monitoring Snow Characteristics and the Evolution of Ground Temperatures at Black Rock Forest: Adding Capacity to the Snow Research Station*, Co-PIs: J. Cherry and J. Smerdon

PEER-REVIEWED PUBLICATIONS

Publications can be accessed online at: <https://smerdon.ldeo.columbia.edu/publications>

Symbols denote *student or **postdoctoral authors

ISI Data (11/1/17): 75 Publications, 1836 Citations, h-index = 24, ResearcherID: F-9952-2011

Google Scholar (11/1/17): 3119 Citations, h-index = 29

84. **Mankin, J.S., R. Seager, **J.E. Smerdon**, B.I. Cook, A.P. Williams, and R.M. Horton, *Blue water tradeoffs with ecosystems in a CO₂-enriched climate*, ***Geophysical Research Letters***, in review.
83. *García-García, A., *F.J. Cuesta-Valero, H. Beltrami, and **J.E. Smerdon**, *Characterization of air and ground temperature relationships within the CMIP5 historical and future climate simulations*, ***Journal of Geophysical Research - Atmospheres***, in revision.
82. *Fernández-Donado, L., J. F. González-Rouco, E. García-Bustamante, **J.E. Smerdon**, S.J. Phipps, J. Luterbacher, and C.C. Raible, *Northern Hemisphere temperature reconstructions of the Common Era: Ensemble uncertainties and their influence on model-data comparisons*, ***Geophysical Research Letters***, in revision.
81. Williams, A.P., B.I. Cook, **J.E. Smerdon**, *D.A. Bishop, R. Seager and †J.S. Mankin, *The 2016 southeastern US drought: an extreme departure from centennial wetting and cooling*, ***Journal of Geophysical Research - Atmospheres***, in press.
80. **Steiger, N.J and **J.E. Smerdon**, *A pseudoproxy assessment of data assimilation for reconstructing the atmosphere-ocean dynamics of hydroclimate extremes*, ***Climate of the Past***, doi:10.5194/cp-2017-69, in press.
79. Cook, B.I., A.P. Williams, **J.S. Mankin, R. Seager, **J.E. Smerdon** and **D. Singh, *Revisiting the leading drivers of Pacific coastal drought variability in the Contiguous United States*, ***Journal of Climate***, in press.
78. Ault, T.R., S. St. George, **J.E. Smerdon**, **S. Coats, **J.S. Mankin, C.M. Carrillo, B.I. Cook, and S. Stevenson, *A robust null hypothesis for the potential causes of megadrought in western North America*, ***Journal of Climate***, in press.
77. *Hydro2k Consortium*: **Smerdon, J.E.**, J. Luterbacher, S. Phipps, K.J. Anchukaitis, T.R. Ault, **S. Coats, K.M. Cobb, B.I. Cook, C. Colose, T. Felis, A. Gallant, J.H. Jungclaus, B. Konecky, A. LeGrande, S. Lewis, *A.S. Lopatka, W. Man, **J.S. Mankin, J.T. Maxwell, B.L. Otto-Bliesner, J.W. Partin, D. Singh, **N.J. Steiger, S. Stevenson, J.E. Tierney, D. Zanchettin, H. Zhang, **A. Atwood, L. Andreu-Hayles, *S.H. Baek, B. Buckley, E.R. Cook, R. D'Arrigo, **S.G. Dee, M. Griffiths, C. Kulkarni, Y. Kushnir, F. Lehner, *C. Leland, H.W. Linderholm, A. Okazaki, J. Palmer, E. Piovano, C.C. Raible, *M.P. Rao, **J. Scheff, G.A. Schmidt, R. Seager, M. Widmann, A.P. Williams, E. Xoplaki, *Comparing proxy and model estimates of hydroclimate variability and change over the Common Era*, ***Climate of the Past***, in press.

76. Jungclauss, J.H., E. Bard, M. Baroni, P. Braconnot, J. Cao, L.P. Chini, T. Egorova, M. Evans, J.F. González-Rouco, H. Goosse, G.C. Hurtt, F. Joos, J.O. Kaplan, M. Khodri, K. Klein Goldewijk, N. Krivova, A.N. LeGrande, S.J. Lorenz, J. Luterbacher, W. Man, M. Meinshausen, A. Moberg, C. Nehrbass-Ahles, B.I. Otto-Bliesner, S.J. Phipps, J. Pongratz, E. Rozanov, G.A. Schmidt, H. Schmidt, W. Schmutz, A. Schurer, A.I. Shapiro, M. Sigl, **J.E. Smerdon**, S.K. Solanki, C. Timmreck, M. Toohey, I.G. Usoskin, S. Wagner, C.-J. Wu, K.L. Yeo, D. Zanchettin, Q. Zhang, and E. Zorita, *The PMIP4 contribution to CMIP6 - Part 3: the Last Millennium, Scientific Objective and Experimental Design for the PMIP4 past1000 simulations*, ***Geoscientific Model Development***, doi:10.5194/gmd-2016-278, in press.
75. **Hartl-Meier, C.T.M., U. Büntgen, **J. E. Smerdon**, E. Zorita, P. J. Krusic, F. C. Ljungqvist, *L. Schneider, and J. Esper (2017), *Temperature covariance in tree ring reconstructions and model simulations over the past millennium*, ***Geophysical Research Letters***, 44, 9458-9469, <https://doi.org/10.1002/2017GL073239>
74. **Mankin, J.S., **J.E. Smerdon**, B.I. Cook, A.P. Williams, and R. Seager (2017), *The curious case of projected 21st-century drying but greening in the American West*, ***Journal of Climate***, 30, 8689-8710, <https://doi.org/10.1175/JCLI-D-17-0213.1>.
73. Lehner, F., **S. Coats, T.F. Stocker, A.G. Pendergrass, B.M. Sanderson, C.C. Raible, and **J.E. Smerdon** (2017), *Projected drought risk in 1.5°C and 2°C warmer climates*, ***Geophysical Research Letters***, 44, 7419-7428, doi:10.1002/2017GL074117.
72. *Schneider, L., **J.E. Smerdon**, F. Pretis, **C. Hartl-Meier, and J. Esper, *A new archive of large volcanic events over the past millennium derived from reconstructed summer temperatures*, ***Environmental Research Letters***, 12, 094005, <https://doi.org/10.1088/1748-9326/aa7a1b>.
71. *Baek, S.H., **J.E. Smerdon**, **S. Coats, A.P. Williams, B.I. Cook, E.R. Cook, R. Seager (2017), *Precipitation, temperature, and teleconnection signals across the combined North American, Monsoon Asia, and Old World Drought Atlases*, ***Journal of Climate***, 30, 7141-7155, <https://doi.org/10.1175/JCLI-D-16-0766.1>.
70. **Mankin, J.S., D. Viviroli, M.M. Mekonnen, A.Y. Hoekstra, R.M. Horton, **J.E. Smerdon**, and N.S. Diffenbaugh (2017), *Influence of internal variability on population exposure to hydroclimatic changes*, ***Environmental Research Letters***, 12, 044007, <http://iopscience.iop.org/1748-9326/12/4/044007>.
69. Beltrami, H., G.S. Matharoo, **J.E. Smerdon**, L. Illanes, and L. Tarasov (2016), *Impacts of the Last Glacial Cycle on Temperature Reconstructions over the Last Millennium*, ***Geophysical Research Letters***, 43, doi:10.1002/2016gl071317.
68. Ault, T.R., **J.S. Mankin, B.I. Cook and **J.E. Smerdon** (2016), *Relative impacts of mitigation, temperature, and precipitation on 21st-Century megadrought risk in the American Southwest*, ***Science Advances***, 2(10), e1600873, doi:10.1126/sciadv.1600873.
67. **Coats, S., **J.E. Smerdon**, B.I. Cook, R. Seager, E.R. Cook, and K.J. Anchukaitis (2016), *Internal ocean-atmosphere variability drives megadroughts in Western North America*, ***Geophysical Research Letters***, 43, 9886-9894, doi:10.1002/2016GL070105.
66. **Coats, S., **J.E. Smerdon**, K.B. Karnauskas, and R. Seager (2016), *The improbable but unexceptional occurrence of megadrought clustering in the American West during the Medieval Climate Anomaly*, ***Environmental Research Letters***, 11(7), doi:<http://dx.doi.org/10.1088/1748-9326/11/7/074025>.
65. **Smerdon, J.E.**, and H.N. Pollack (2016), *Reconstructing Earth's surface temperature over the past 2000 years: the science behind the headlines*, ***WIREs Climate Change***, 7: 746-771. doi:10.1002/wcc.418.

64. Li, B., X. Zhang and **J.E. Smerdon** (2016), *Comparison between Spatio-Temporal Random Processes and Application to Climate Model Data*, **Environmetrics**, 27(5), 267-279, doi:10.1002/env.2395.
63. *Cuesta-Valero, F.J., *A. García-García, H. Beltrami, and **J.E. Smerdon** (2016), *First assessment of continental energy storage in CMIP5 simulations*, **Geophysical Research Letters**, 43, doi:10.1002/2016GL068496.
62. *García-García, A., *F.J. Cuesta-Valero, H. Beltrami, and **J.E. Smerdon** (2016), *Simulation of air and ground temperatures in PMIP3/CMIP5 last millennium simulations: implications for climate reconstructions from borehole temperature profiles*, **Environmental Research Letters**, 11, 044022, doi:10.1088/1748-9326/11/4/044022.
61. *Pretis, F., *L. Schneider, **J.E. Smerdon** and D. Hendry (2016), *Detection of Designed Break Functions with an Application to Volcanic Impacts on Hemispheric Surface Temperatures*, **Journal of Economic Surveys**, 30(3), 403-429, doi:10.1111/joes.12148.
60. Cook, B.I., E.R. Cook, **J.E. Smerdon**, R. Seager, A.P. Williams, **S. Coats, D.W. Stahle, and J. Villanueva Díaz (2016), *North American Megadroughts in the Common Era: Reconstructions and Simulations*, **WIREs Climate Change**, doi:10.1002/wcc.394.
59. Euro-Med2k Consortium: Luterbacher, J., J.P. Werner, **J.E. Smerdon**, *L. Fernández-Donado, J. Gonzalez-Rouco, D. Barriopedro, F. Ljungqvist, U. Büntgen, E. Zorita, S. Wagner, J. Esper, D. McCarroll, A. Toreti, D. Frank, J. Jungclaus, M. Barriendos, C. Bertolin, O. Bothe, R. Brázdil, C. Dario, P. Dobrovolný, M. Gagen, E. García-Bustamante, Q. Ge, J. Gómez-Navarro, J. Guiot, Z. Hao, G. Hegerl, K. Holmgren, V. Klimenko, J. Martín-Chivelet, C. Pfister, N. Roberts, A. Schindler, A. Schurer, O. Solomina, L. von Gunten, E. Wahl, H. Wanner, O. Wetter, E. Xoplaki, N. Yuan, D. Zanchetti, H. Zhang, C. Zerefos (2016), *European summer temperatures since Roman times*, **Environmental Research Letters**, 11, 024001, doi:10.1088/1748-9326/11/2/024001.
58. **Smerdon, J.E.**, *S. Coats, and T.R. Ault (2016), *Model-Dependent Spatial Skill in Pseudoproxy Experiments Testing Climate Field Reconstruction Methods for the Common Era*, **Climate Dynamics**, 46(5), 1921-1942, DOI: 10.1007/s00382-015-2684-0.
57. PAGES2k-PMIP3 group: Böthe, O., M. Evans, *L. Fernández-Donado, E. García-Bustamante, J. Gergis, J.F. González-Rouco, H. Goosse, G. Hegerl, A. Hind, J. Jungclaus, D. Kaufman, F. Lehner, N. McKay, A. Moberg, C.C. Raible, A. Schurer, F. Shi, **J.E. Smerdon**, L. von Gunten, S. Wagner, E. Warren, M. Widmann, P. Yiou, E. Zorita (2015), *Continental-scale temperature variability in PMIP3 simulations and PAGES 2k regional temperature reconstructions over the past millennium*, **Climate of the Past**, 11, 1673-1699, doi:10.5194/cp-11-1673-2015.
56. Williams, A.P., R. Seager, J.T. Abatzoglou, B.I. Cook, **J.E. Smerdon**, E.R. Cook (2015), *Contribution of anthropogenic warming to the 2012-2014 California drought*, **Geophysical Research Letters**, 42, 6819-6828, doi:10.1002/2015GL064924.
55. *Coats, S., **J.E. Smerdon**, R. Seager, D. Griffin, and B.I. Cook (2015), *Winter-to-Summer Precipitation Phasing in Southwestern North America: A Multi-century perspective from Paleoclimatic Model-Data Comparisons*, **Journal of Geophysical Research-Atmospheres**, 120, 8052-8064, doi:10.1002/2015JD023085.
54. Esper, J., *L. Schneider, **J.E. Smerdon**, B. Schöne, and U. Büntgen (2015), *Signals and memory in tree-ring width and density data*, **Dendrochronologia**, 35, 62-70.
53. *Schneider, L., **J.E. Smerdon**, U. Büntgen, R.J.S. Wilson, V.S. Myglan, A.V. Kirilyanov, and J. Esper (2015), *Revising midlatitude summer temperatures back to AD 600 based on a wood density network*, **Geophysical Research Letters**, 42, 4556-4562, doi:10.1002/2015GL063956.

52. Beltrami, H., G. Matharoo and **J.E. Smerdon** (2015), *Impact of borehole depths on reconstructed estimates of ground surface temperature histories and energy storage*, **Journal of Geophysical Research-Earth Surface**, 120, 763-778, doi: 10.1002/2014JF003382.
51. Cook, B.I., T.R. Ault, and **J.E. Smerdon** (2015), *Unprecedented 21st-Century Drought Risk in the American Southwest and Central Plains*, **Science Advances**, 1, e1400082.
50. **Smerdon, J.E.**, B.I. Cook, E.R. Cook, and R. Seager (2015), *Bridging Past and Future Climate Across Paleoclimatic Reconstructions, Observations, and Models: A Hydroclimate Case Study*, **Journal of Climate**, 28(8), 3212-3231.
49. Beltrami, H., G. Matharoo and **J.E. Smerdon** (2015), *Ground surface temperature and continental heat gain in a warming climate: Uncertainties from underground*, **Environmental Research Letters**, 10, 014009, doi:10.1088/1748-9326/10/1/014009.
48. *Coats, S., B.I. Cook, **J.E. Smerdon**, and R. Seager (2015), *North American Pan-Continental Droughts in Model Simulations of the Last Millennium*, **Journal of Climate**, 28, 2025-2043.
47. *Coats, S., **J.E. Smerdon**, B.I. Cook and R. Seager (2015), *Are Simulated Megadroughts in the North American Southwest Forced?*, **Journal of Climate**, 28, 124-142.
doi:http://dx.doi.org/10.1175/JCLI-D-14-00071.1
46. Evans, M.N., **J.E. Smerdon**, A. Kaplan, S.E. Tolwinski-Ward, and J.F. Gonzalez-Rouco (2014), *Climate field reconstruction uncertainty arising from multivariate and nonlinear properties of predictors*, **Geophysical Research Letters**, 41, doi:10.1002/2014GL062063.
45. Cook, B.I., R. Seager, and **J.E. Smerdon** (2014), *The Worst North American Drought Year of the Last Millennium: 1934*, **Geophysical Research Letters**, 41, doi:10.1002/2014GL061661.
44. PAGES 2k Consortium (Primary Authors: K. Anchukaitis, U. Büentgen, J. Emile-Geay, M. N. Evans, H. Goosse, D. Kaufman, J. Luterbacher, **J. Smerdon**, M. Tingley, L. von Gunten) (2014), *A Community-Driven Framework for Climate Reconstructions*, **Eos Trans. AGU**, 95(40), 361.
43. Beltrami, H., G.S. Matharoo, L. Tarasov, V. Rath and **J.E. Smerdon** (2014), *Numerical Studies on the Impact of the Last Glacial Cycle on recent borehole temperature profiles: implications for terrestrial energy balance*, **Climate of the Past**, 10, 1693-1706, doi:10.5194/cp-10-1693-2014.
42. Wahl, E.R., H.F. Diaz, **J.E. Smerdon** and C.M. Ammann (2014), *Late Winter Temperature Response to Large Tropical Volcanic Eruptions in Temperate Western North America: Relationship to ENSO Phases*, **Global and Planetary Change**, 122, 238-250, doi: 10.1016/j.gloplacha.2014.08.005
41. *Ballard, T., R. Seager, **J.E. Smerdon**, B.I. Cook, A.J. Ray, B. Rajagopalan, Y. Kushnir, J. Nakamura, N. Henderson (2014), *Hydroclimate Variability and Change in the Prairie Pothole Region, the "Duck Factory" of North America*, **Earth Interactions**, 18, 1-28, doi: http://dx.doi.org/10.1175/EI-D-14-0004.1.
40. Cook, B.I., **J.E. Smerdon**, R. Seager, and *S. Coats (2014), *Global warming and 21st century drying*, **Climate Dynamics**, 43:2607-2627, DOI 10.1007/s00382-014-2075-y.
39. Cook, B.I., **J.E. Smerdon**, R. Seager and E.R. Cook (2014), *Pan-continental droughts in North America over the last millennium*, **Journal of Climate**, 27, 383-397.
38. Wang, J., J. Emile-Geay, D. Guillot, **J.E. Smerdon**, and B. Rajaratnam (2014), *Evaluating climate field reconstruction techniques using improved emulations of real-world conditions*, **Climate of the Past**, 10, 1-19, doi:10.5194/cp-10-1-2014.
37. *Coats, S., **J.E. Smerdon**, B.I. Cook and R. Seager (2013), *Stationarity of the Tropical Pacific Teleconnection to North America in CMIP5/PMIP3 Model Simulations*, **Geophysical Research Letters**, 40, doi:10.1002/grl.50938.

36. *Coats, S., J.E. Smerdon, R. Seager, B.I. Cook and J.F. González-Rouco (2013), *Megadroughts in Southwest North America in Millennium-Length ECHO-G Simulations and their Comparison to Proxy Drought Reconstructions*, **Journal of Climate**, 26, 7635-7649, doi:http://dx.doi.org/10.1175/JCLI-D-12-00603.1. 35.
37. **Smerdon, J.E.**, A. Kaplan, and *D. E. Amrhein, *Reply to comment by Rutherford et al. on "Erroneous Model Field Representations in Multiple Pseudoproxy Studies: Corrections and Implications,"* **Journal of Climate**, Journal of Climate, 26, 3485-3486.
34. PAGES 2k Consortium (72 authors), (2013), *Temperature variability at the continental scale over two millennia*, **Nature Geoscience**, doi:10.1038/NCEO1797.
33. Tierney, J.E., **J.E. Smerdon**, K.J. Anchukaitis, and R. Seager (2013), *Decadal-to-centennial variability in East African hydroclimate controlled by the Indian Ocean*, **Nature**, 493, 389-392.
32. Werner, J., J. Luterbacher, and **J.E. Smerdon** (2013), *A Pseudoproxy Evaluation of Bayesian Hierarchical Modeling and Canonical Correlation Analysis for Climate Field Reconstructions over Europe*, **Journal of Climate**, 26(3), 851-867.
31. Karnauskas, K.B., **J.E. Smerdon**, R. Seager, and J.F. González-Rouco (2012), *A Pacific centennial oscillation predicted by coupled GCMs*, **Journal of Climate**, 25, 5943-5961.
30. Li, B. and **J.E. Smerdon** (2012), *Defining spatial assessment metrics for paleoclimate field reconstructions of the Common Era*, **Environmetrics**, 23(5), 394-406. doi:10.1002/env.2142.
29. Wahl, E.R., and **J.E. Smerdon**, *Comparative performance of paleoclimatic field and index reconstructions derived from climate proxies and noise-only predictors*, **Geophysical Research Letters**, 39, L06703, doi:10.1029/2012GL051086.
28. **Smerdon, J.E.** (2012), *Climate models as a test bed for climate reconstruction methods: pseudoproxy experiments*, **WIREs Climate Change**, 3:63-77, doi:10.1002/wcc.149.
27. Beltrami, H., **J.E. Smerdon**, G. Matharoo, and *N. Nickerson (2011), *Impact of maximum borehole depths on inverted temperature histories in borehole paleoclimatology*, **Climate of the Past**, 7, 745-756
26. **Smerdon, J.E.**, A. Kaplan, E. Zorita, J.F. Gonzalez-Rouco, and M.N. Evans (2011), *Spatial performance of four climate field reconstruction methods targeting the Common Era*, **Geophysical Research Letters**, 38, L11705, doi:10.1029/2011GL046696
25. **Smerdon, J.E.** (2011), *Discussion of: A Statistical Analysis of Multiple Temperature Proxies: Are Reconstructions of Surface Temperatures Over the Last 1000 Years Reliable?*, **Annals of Applied Statistics**, 5(1), 76-79.
24. D'Arrigo, R., R. Seager, **J.E. Smerdon**, A.N. LaGrande, and E.R. Cook (2011), *The Anomalous winter of 1783-1784: Was the Laki eruption or an analog of the 2009-2010 winter to blame?*, **Geophysical Research Letters**, 38, L05706, doi:10.1029/2011GL046696.
23. *Lesperance, M., **J. E. Smerdon**, and H. Beltrami (2010), *Propagation of linear surface air temperature trends into the terrestrial subsurface*, **Journal of Geophysical Research-Atmospheres**, 115, D2115, doi:10.1029/2010JD014377.
22. **Smerdon, J. E.**, A. Kaplan, *D. Chang, and M. N. Evans (2010), *A pseudoproxy evaluation of the CCA and RegEM methods for reconstructing climate fields of the last millennium*, **Journal of Climate**, 23, 4856-4880, doi:10.1175/2010JCLI3328.1.
21. **Smerdon, J. E.**, A. Kaplan, and *D. E. Amrhein (2010), *Erroneous Model Field Representations in Multiple Pseudoproxy Studies: Corrections and Implications*, **Journal of Climate**, 23, 5548-5554, doi:10.1175/2010JCLI3742.1.
20. **Smerdon, J. E.**, H. Beltrami, *C. Creelman, and *M.B. Stevens (2009), *Characterization of land-surface processes: A quantitative analysis using air-ground thermal orbits*, **Journal of Geophysical Research-Atmospheres**, 114, D15102, doi:10.1029/2009JD011768.

19. **Smerdon, J. E.**, A. Kaplan, and *D. Chang (2008), *On the origin of the standardization sensitivity in RegEM climate field reconstructions*, ***Journal of Climate***, 28, 14, 1889-1901.
18. D'Arrigo, R.D., R. Allan, R.J.S. Wilson, J. Palmer, J. Sakulich, **J.E. Smerdon**, S. Bijaksana, and L.O. Ngkoimani (2008), *Pacific and Indian Ocean climate signals in a tree-ring record of Java monsoon drought*, ***International Journal of Climatology***, 28: 1889-1901, doi:10.1002/joc.1679.
17. **Smerdon, J. E.**, J.F. González-Rouco and E. Zorita (2008), *Comment on "Robustness of proxy-based climate field reconstruction methods,"* by Mann et al., ***Journal of Geophysical Research- Atmospheres***, 113, D18106, doi:10.1029/2007JD009542.
16. D'Arrigo, R.D. and **J. E. Smerdon** (2008), *Tropical climate influences on drought variability over Java, Indonesia*, ***Geophysical Research Letters***, 35, L05707, doi:10.1029/2007GL032589.
15. **Smerdon, J. E.**, and A. Kaplan (2007), *Comments on "Testing the fidelity of methods used in proxy-based reconstructions of past climate": The role of the standardization interval*, by Mann et al., ***Journal of Climate***, 20, 5666-5670.
14. Hegerl, G. C., T. J. Crowley, M. R. Allen, W. T. Hyde, H. N. Pollack, **J. Smerdon**, and E. Zorita (2007), *Detection of human influence on a new, validated 1500-year temperature reconstruction*, ***Journal of Climate***, 20, 650-666.
13. *Stevens, M. B., **J. E. Smerdon**, J.F. González-Rouco, M. Stieglitz, and H. Beltrami (2007), *Effects of bottom boundary placement on subsurface heat storage: Implications for climate model simulations*, ***Geophysical Research Letters***, 34, L02702, doi:10.1029/2006GL028546.
12. Stieglitz, M., and **J. E. Smerdon** (2007), *Characterizing land-atmosphere coupling and the implications for subsurface thermodynamics*, ***Journal of Climate***, 20, 21-37.
11. **Smerdon, J. E.** and M. Stieglitz (2006), *Simulating heat transport of harmonic temperature signals in the Earth's shallow subsurface: Lower-boundary sensitivities*, ***Geophysical Research Letters***, 33, L14402, doi:10.1029/ 2006GL026816.
10. **Smerdon, J. E.**, H. N. Pollack, V. Cermak, J. W. Enz, M. Kresl, J. Safanda, and J. F. Wehmler (2006), *Daily, seasonal and annual relationships between air and subsurface temperatures*, ***Journal of Geophysical Research-Atmospheres***, 111, D07101, doi:10.1029/2004JD005578.
9. Pollack, H. N., S. Huang and **J. E. Smerdon** (2006), *Five centuries of climate change in Australia: The view from underground*, ***Journal of Quaternary Science***, 21(7), 701-706.
8. Pollack, H. N., **J. E. Smerdon**, and P. E. van Keken (2005), *Variable seasonal coupling between air and ground temperatures: a simple representation in terms of subsurface thermal diffusivity*, ***Geophysical Research Letters***, 32, L15405, doi:10.1029/ 2005GL023869.
7. **Smerdon, J. E.**, H. N. Pollack, V. Cermak, J. W. Enz, M. Kresl, J. Safanda, and J. F. Wehmler (2004), *Air-ground temperature coupling and subsurface propagation of annual temperature signals*, ***Journal of Geophysical Research-Atmospheres***, 109, D21107, doi:10.1029/2004JD005056.
6. Pollack, H. N., and **J. E. Smerdon** (2004), *Borehole climate reconstructions: Spatial structure and hemispheric averages*, ***Journal of Geophysical Research-Atmospheres***, 109, D11106, doi:10.1029/2003JD004163.
5. **Smerdon, J. E.**, H. N. Pollack, J. W. Enz, and M. J. Lewis (2003), *Conduction-dominated heat transport of the annual temperature signal in soil*, ***Journal of Geophysical Research-Solid Earth***, 108(B9), 2431, doi:10.1029/2002JB002351.
4. Lin, X., **J.E. Smerdon**, A.W. England, and H.N. Pollack (2003), *A model study of the effects of climatic precipitation changes on ground temperatures*, ***Journal of Geophysical Research- Atmospheres***, 108(D7), doi:10.1029/2002JD002872.

3. Pollack, H. N., D. Y. Demezhko, A. D. Duchkov, I. V. Golovanova, S. Huang, V. A. Shchapov, and **J.E. Smerdon** (2003), *Surface temperature trends in Russia over the past five centuries reconstructed from borehole temperatures*, ***Journal of Geophysical Research-Solid Earth***, 108(B4), 2180, doi:10.1029/2002JB002154.
2. England, A. W., X. Lin, **J. E. Smerdon**, and H. N. Pollack (2003), *The influence of soil moisture upon the geothermal climate signal*, IGARSS Proceedings, ***IEEE International***, 1, 419-421, doi:10.1109/IGARSS.2003.1293795.
1. Beltrami, H., **J. E. Smerdon**, H. N. Pollack, and S. Huang (2002), *Continental heat gain in the global climate system*, ***Geophysical Research Letters***, 29(8), doi:10.1029/2001GL014310 (chosen as a paper for the 'Editor's Highlights').

BOOKS, CHAPTERS AND REPORTS

- 2018 Mathez, E.A. and **J.E. Smerdon**, *Climate Change: The Science of Global Warming and Our Energy Future*, 2nd Ed., Columbia Univ. Press, New York, NY, in press.
- 2017 Sustainability Planning Team (2017), *Columbia University Sustainability Plan 2017-2020, Sustainable Columbia*, Columbia University, New York.
- 2013 Contributing Author to: Masson-Delmotte, V., et al., Information from Paleoclimate Archives. In: *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- 2012 Monteleoni, C., G. A. Schmidt, F. Alexander, A. Niculescu-Mizil, K. Steinhäuser, M. Tippet, A. Banerjee, M. B. Blumenthal, A. R. Ganguly, **J.E. Smerdon**, M. Tedesco, "Climate Informatics," In *Computational Intelligent Data Analysis for Sustainable Development; Data Mining and Knowledge Discovery Series*. Yu, T., Chawla, N., and Simoff, S. (Eds.), CRC Press, Boca Raton, FL, 2013.
- 2009 **Smerdon, J.E.**, Student Companion to *Climate Change: The Science of Global Warming and Our Energy Future* by E. A. Mathez, Columbia University Press, New York, NY, 2009.

ADDITIONAL PUBLICATIONS

*Symbols denote *student or **postdoctoral authors*

- 2017 ****Coats, S** and **J.E. Smerdon**, The Atlantic's internal drum beat, *Nature Geoscience News & Views*, 10, 470-471, doi:10.1038/ngeo2970.
- 2017 **Smerdon, J.E.**, What was Earth's climate like before we were measuring it?, *Significance*, 14: 24-29. doi:10.1111/j.1740-9713.2017.00999.x
- 2016 **Smerdon, J.E.**, J. Luterbacher, S.J. Phipps, Hydro2k: Integrating proxy data and models for insights into past and future hydroclimate, *PAGES Magazine*, 24(1), 45.
- 2015 **Smerdon, J.E.**, What historic megadroughts in the western US tell us about our climate future, *The Conversation*, 2/16/2015
- 2007 Rath, V. and **J.E. Smerdon** (Eds.), Interpreting subsurface temperature signals of climate change, *Climate of the Past – Special Issue*, http://www.clim-past.net/special_issue8.html

- 2007 *Rook, A., *A. Powel, and **J.E. Smerdon**, Initial Sustainability Report on Barnard College, Barnard College, NY, NY,
http://www.ldeo.columbia.edu/~jsmerdon/papers/ISR_9_08.pdf
- 2004 **Smerdon, J.E.**, Spatial and Temporal Analyses of Geothermal Climate Signals: Implications for Borehole Paleoclimatology, Doctoral Thesis, University of Michigan, Ann Arbor, MI.

PUBLISHED ABSTRACTS AND PRESENTATIONS (LAST 5 YEARS)

*Symbols denote *student or **postdoctoral authors*

†Denotes an oral presentation and the associated presenter

- 2017 †Cook, B.I., A.P. Williams, **J.S. Mankin, R. Seager, **J.E. Smerdon** and **D. Singh, Revisiting the leading drivers of Pacific coastal drought variability in the Contiguous United States, *Eos Trans. AGU*, Fall Meet. Suppl., H12F-01
- 2017 **Smerdon, J.E.**, *†S.H. Baek, R. Seager and B.I. Cook, Parsing the contributions of ocean forcings and atmospheric variability to spatially widespread droughts in the contiguous United States, *Eos Trans. AGU*, Fall Meet. Suppl., H12F-02
- 2017 *García-García, A., *F.J. Cuesta-Valero, H. Beltrami, and **J.E. Smerdon**, Characterization of Air and Ground Temperature Relationships within the CMIP5 Historical and Future Climate Simulations, *Eos Trans. AGU*, Fall Meet. Suppl., H33B-1678
- 2017 **†Steiger, N.J., and **J.E. Smerdon**, Indices and Dynamics of Global Hydroclimate Over the Past Millennium from Data Assimilation, *Eos Trans. AGU*, Fall Meet. Suppl., PP22A-08
- 2017 *Baek, S.H., **J.E. Smerdon**, **S. Coats, A.P. Williams, B.I. Cook, E.R. Cook, and R. Seager, Precipitation, temperature, and teleconnection signals across the combined North American, Monsoon Asia, and Old World Drought Atlases, *Eos Trans. AGU*, Fall Meet. Suppl., PP31A-1269
- 2017 †Seager, R., **J.S. Mankin, B.I. Cook, **J. Scheff, **J.E. Smerdon**, **S. Coats, A.P. Williams, Ecohydrological change and variability over western North America from the Last Glacial Maximum to the near term future: The known, the unknown and the known unknown, *Eos Trans. AGU*, Fall Meet. Suppl., PP33D-03
- 2017 **†Coats, S., **J.E. Smerdon**, S. Stevenson, J. Fasullo, and B.L. Otto-Bliesner, A new space-time characterization of Northern Hemisphere drought in model simulations of the past and future as compared to the paleoclimate record, *Eos Trans. AGU*, Fall Meet. Suppl., PP43D-04
- 2017 †Ault, T., S. St. George, **J.E. Smerdon**, S. Coats, J.S. Mankin, C. Carrillo Cruz, B.I. Cook, and S. Stevenson, A robust null hypothesis for the potential causes of megadrought in western North America, *Eos Trans. AGU*, Fall Meet. Suppl., PP43D-06
- 2017 **†Mankin, J.S., **J.E. Smerdon**, B.I. Cook, A.P. Williams, and R. Seager, Blue water tradeoffs with ecosystems in a CO₂-enriched climate, *Eos Trans. AGU*, Fall Meet. Suppl., GC34B-03
- 2017 †Lehner, F., **S. Coats, T.F. Stocker, A.G. Pendergrass, B.M. Sanderson, C. Raible, and **J.E. Smerdon**, Projected drought risk in 1.5°C and 2°C warmer climates, *Eos Trans. AGU*, Fall Meet. Suppl., GC24E-02
- 2017 †Williams, A.P., B.I. Cook, J.E. Smerdon, *D.A. Bishop, R. Seager, and **J.S. Mankin, The 2016 southeastern US drought: an extreme departure from centennial wetting and cooling, *Eos Trans. AGU*, Fall Meet. Suppl., GC52B-01
- 2017 *†Bishop, D.A., A.P. Williams, R. Seager, A.M. Fiore, B.I. Cook, **J.S. Mankin, **D.

- Singh, **J.E. Smerdon**, and *M.P. Rao, Assessing the causes of 20th century wetting in the eastern United States, *Eos Trans. AGU*, Fall Meet. Suppl., GC34A-03 -
- 2017 *Baek, S.H., **J.E. Smerdon**, **S. Coats, A.P. Williams, B.I. Cook, E.R. Cook, and R. Seager, Precipitation, temperature, and teleconnection signals across the combined North American, Monsoon Asia, and Old World Drought Atlases, *2017 PAGES Open Science Meeting*, Zaragoza, Spain.
- 2017 **Steiger, N.J., and **J.E. Smerdon**, Reconstructing the global atmosphere-ocean dynamics of hydroclimate extremes with data assimilation, *2017 PAGES Open Science Meeting*, Zaragoza, Spain.
- 2017 †St. George, S., T. Ault, C. Carrillo, **S. Coats, **J.S. Mankin, and **J.E. Smerdon**, What to expect when you're expecting decadal variability in hydroclimatic proxies, *2017 PAGES Open Science Meeting*, Zaragoza, Spain.
- 2016 †Ault, T.R., **J.S. Mankin, B.I. Cook, **J.E. Smerdon** (invited), Relative impacts of mitigation, temperature, and precipitation on 21st-Century megadrought risk in the American Southwest, *Eos Trans. AGU*, Fall Meet. Suppl., GC14B-05.
- 2016 **†Mankin, J.S., **J.E. Smerdon**, B.I. Cook, A.P. Williams, R. Seager, Transpiration-driven aridification of the American West in 21st-Century model projections, *Eos Trans. AGU*, Fall Meet. Suppl., GC14B-06, 2016.
- 2016 **Steiger, N.S., **J.E. Smerdon**, Global hydroclimate reconstructions over the last millennium using data assimilation, *Eos Trans. AGU*, Fall Meet. Suppl., PP33B-2352.
- 2016 †Beltrami, H., *A. García-García, *F.J. José Cuesta-Valero, **J.E. Smerdon**, Simulation of Air and Ground Temperatures in PMIP3/CMIP5 Last Millennium Simulations: Implications for Climate Reconstructions from Borehole Temperature Profiles, *EGU General Assembly*, Vienna, Austria, EGU2016-4988.
- 2016 *Fernández-Donado, L., J.F. González-Rouco, E. Garcia-Bustamante, **J.E. Smerdon**, J. Luterbacher, C.C. Raible, Forced and internal variability in temperature simulations and reconstructions of the Common Era, *EGU General Assembly*, Vienna, Austria, EGU2016-17529.
- 2016 *Cuesta-Valero, F.J., *A. García-García, H. Beltrami, **J.E. Smerdon**, Estimating Continental Energy Storage from CMIP5 Simulations, *EGU General Assembly*, Vienna, Austria, EGU2016-4975.
- 2016 *García-García, A., *F.J. Cuesta-Valero, H. Beltrami, **J.E. Smerdon**, Thermal Coupling between Air and Ground Temperatures in the CMIP5 Historical and Future Simulations, *EGU General Assembly*, Vienna, Austria, EGU2016-4962.
- 2015 Cook, B.I., T.R. Ault, **J.E. Smerdon**, Unprecedented 21st century drought risk in the American Southwest and Central Plains, *Eos Trans. AGU*, Fall Meet. Suppl., H131-1714.
- 2015 †Williams, A.P., R. Seager, J. Abatzoglou, B.I. Cook, **J.E. Smerdon**, E.R. Cook, Contribution of anthropogenic warming to California drought during 2012-2015, *Eos Trans. AGU*, Fall Meet. Suppl., H11P-03.
- 2015 *Coats, S., **J.E. Smerdon**, B.I. Cook, R. Seager, E.R. Cook, K.J. Anchukaitis, The Dynamic State of the Ocean and Atmosphere during Megadroughts in the American West, *Eos Trans. AGU*, Fall Meet. Suppl., PP44B-08.
- 2015 †**Smerdon, J.E.**, S. Coats, and T. Ault, Model-Dependent Spatial Skill in Pseudoproxy Experiments Testing Climate Field Reconstruction Methods for the Common Era, *EGU General Assembly*, Vienna, Austria, EGU2015-4228.
- 2015 *†Coats, S. B.I. Cook, **J.E. Smerdon**, and R. Seager, North American Pan-

- Continental Droughts in Model Simulations of the Last Millennium, *EGU General Assembly*, Vienna, Austria, EGU2015-7679.
- 2015 *L. Fernández-Donado, J.F. González-Rouco, E. García-Bustamante, **J.E. Smerdon**, C.C. Raible, and J. Luterbacher, Last millennium simulations and reconstructions: comparison and uncertainties, *EGU General Assembly*, Vienna, Austria, EGU2015-12693.
- 2015 *Coats, S., **J.E. Smerdon**, R. Seager, and B.I. Cook, Are Simulated Megadroughts in the North American Southwest Forced?, *EGU General Assembly*, Vienna, Austria, EGU2015-7700.
- 2015 Beltrami, H., Matharoo, G.S., and **J.E. Smerdon**, Ground surface temperature and continental heat gain: Uncertainties from underground, *EGU General Assembly*, Vienna, Austria, EGU2015-3987.
- 2014 Matharoo, G., H. Beltrami, **J.E. Smerdon**, Ground warming and continental energy storage in the Northern Hemisphere during the Common Era: Impact of borehole depth, *Eos Trans. AGU*, Fall Meet. Suppl., PP21E-08.
- 2014 *†Coats, S., **J.E. Smerdon**, R. Seager, B.I. Cook, Model-Data Comparisons of Pan-Continental Drought over North America during the Common Era, *Eos Trans. AGU*, Fall Meet. Suppl., PP21E-07.
- 2014 *Fish, M., B.I. Cook, **J.E. Smerdon**, R. Seager, A.P. Williams, Characterizing Climate Controls on Vegetation Seasonality in the North American Southwest, *Eos Trans. AGU*, Fall Meet. Suppl., B41K-0212.
- 2014 †**Smerdon, J.E.**, B.I. Cook, E.R. Cook, R. Seager, Merging Paleoclimatic Reconstructions, Observations, and Models to Refine Drought Risk Assessments, *Eos Trans. AGU*, Fall Meet. Suppl., H33N-03.
- 2014 Beltrami, H., G. Matharoo, L. Tarasov, V. Rath, **J.E. Smerdon**, Impact of the Last Glacial Cycle on Common-Era temperature and energy reconstructions from terrestrial borehole temperatures in North America, *Eos Trans. AGU*, Fall Meet. Suppl., GC11A-0956.
- 2013 †Cook, B.I., **J.E. Smerdon**, R. Seager, E.R. Cook, Pan-continental droughts in North America over the last millennium, *Eos Trans. AGU*, Fall Meet. Suppl., GC11A-0956.
- 2013 *Coats, S., **J.E. Smerdon**, R. Seager, B.I. Cook, North American Megadroughts in PMIP3 Last-Millennium Model Simulations, *Eos Trans. AGU*, Fall Meet. Suppl., GC11A-0972.
- 2013 Wahl, E.R., H.F. Diaz, **J.E. Smerdon**, Winter Temperature Response to Large Tropical Volcanic Eruptions in Temperate Western North America: Relationship to ENSO Phases, *Eos Trans. AGU*, Fall Meet. Suppl., PP51A-1909.
- 2013 Beltrami, H., G.S. Matharoo, and **J.E. Smerdon**, Impact of maximum borehole depths on ground warming patterns: A spatial analysis over the Northern Hemisphere, *EGU General Assembly*, Vienna, Austria, EGU2013-6383.
- 2013 Matharoo, G.S., H. Beltrami, L. Tarasov, V. Rath, and **J.E. Smerdon**, Impact of long-term climate histories on estimated ground warming patterns: A spatial analysis over North America, *EGU General Assembly*, Vienna, Austria, EGU2013-6360.
- 2013 Tierney, J.E., **J.E. Smerdon**, K.J. Anchukaitis, and R. Seager, Multidecadal variability in East African hydroclimate controlled by the Indian Ocean, *EGU General Assembly*, Vienna, Austria, EGU2013-5931.
- 2013 **Smerdon, J.E.**, J. Werner, L. Fernandez-Donado, U. Buntgen, F.C. Ljungqvist, J.

Esper, J.F. Gonzalez-Rouco, J. Luterbacher, D. McCarroll, S. Wagner, E.R. Wahl, H. Wanner, and E. Zorita, A Data-Model Comparison over Europe using a new 2000-yr Summer Temperature Reconstruction from the PAGES 2k Regional Network and Last-Millennium GCM Simulations, *EGU General Assembly*, Vienna, Austria, EGU2013-11174

- 2013 *Coats, S., †**J.E. Smerdon**, R. Seager, B.I. Cook, and J.F. Gonzalez-Rouco, Megadroughts in Southwestern North America: A data-model comparison using last-millennium GCM simulations and the proxy-derived North American Drought Atlas, *EGU General Assembly*, Vienna, Austria, EGU2013-5963.
- 2013 †Werner, J.P., U. Buntgen, F.C. Ljungqvist, J. Esper, L. Fernandez-Donado, J.F. Gonzalez-Rouco, J. Luterbacher, D. McCarroll, **J.E. Smerdon**, S. Wagner, E.R. Wahl, H. Wanner, and E. Zorita, The Medieval Climate (A)nomaly over Europe, *EGU General Assembly*, Vienna, Austria, EGU2013-9209.
- 2013 †**Smerdon, J.E.**, U. Buntgen, F.C. Ljungqvist, J. Esper, L. Fernandez-Donado, F.J. Gonzalez-Rouco, J. Luterbacher, D. McCarroll, S. Wagner, E.R. Wahl, H. Wanner, Werner, J., and E. Zorita, A 2000-year European Mean Summer Temperature Reconstruction from the PAGES 2k Regional Network and Comparison to Millennium-Length Forced Model Simulations, *PAGES Open Science Meeting*, Goa, India
- 2013 *Coats, S., **J.E. Smerdon**, R. Seager, B.I. Cook, F.J. Gonzalez-Rouco, Megadroughts in Millennium-Length Forced and Control Simulations and their Comparison to the Proxy-derived North American Drought Atlas, *PAGES Open Science Meeting*, Goa, India