

J. David Neelin

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Born: October 31, 1959, Ottawa, Canada
Citizenship: Canada/U.S. (dual)

Positions

Vice-Chair, Dept. of Atmospheric and Oceanic Sciences, UCLA 1/2004-1/2008, 1/2009-present
Professor, Dept. of Atmospheric and Oceanic Sciences and Institute of Geophysics and Planetary Physics, UC Los Angeles July 1995–present

Associate Professor, Dept. of Atmospheric Sciences, UC Los Angeles July 1992–July 1995

Visiting Associate Professor, Dept. of Earth, Atmospheric and Planetary Sciences,
Massachusetts Institute of Technology, January 1994–May 1995 (Houghton Lectureship)

Assistant Professor, Dept. of Atmospheric Sciences, University of California, Los Angeles.
Sept. 1988–June 1992

Postdoctoral Associate, Dept. of Earth, Atmospheric and Planetary Sciences,
Massachusetts Institute of Technology. Sept. 1987–Aug. 1988

Education

Doctorate: October, 1987, Princeton University, Geophysical Fluid Dynamics Program

Master of Science: August, 1983, University of Toronto, Department of Physics

Bachelor of Science, Hon.: June, 1981, University of Toronto, Department of Physics

Selected Awards

Fellow of the John Simon Guggenheim Memorial Foundation, 2007-2008

Professeur Invité, Ecole Normale Supérieure, Paris May-June 2008

Fellow, American Meteorological Society, 2003

Fellow, Royal Meteorological Society, 2003

NSF Special Creativity Award 1999-2000

C. L. Meisinger Award of the American Meteorological Society, 1996

Houghton Lectureship, Dept. of Earth, Atmospheric and Planetary Sciences, MIT, 1994–95

Presidential Young Investigator Award 1991-1996

Research Interests

Ocean-atmosphere interaction. El Niño/Southern oscillation; climate variations on interannual and longer time scales. Sea-ice–ocean interaction. Land-surface–climate interaction.

Tropical atmospheric dynamics. Interaction between moist convection and large-scale motions; evaporation-wind feedback; intraseasonal oscillations.

Building atmospheric and ocean-atmosphere models of intermediate complexity; hybrid coupled models; theoretical models of atmospheric and climate phenomena; use of asymptotic methods to simplify more complex models.

Service (selected)

International Climate Variability and Predictability Study (CLIVAR) Pacific Panel, 2005-2009
Nature Advisory Panel, 2008-2009
 Joint Policy Board for Mathematics, Committee for Math Awareness Month 2009
 Associate Editor, *Journal of Climate*, 1996-2006
 Reviewer, *Third and Fourth Assessment Report of the Intergovernmental Panel on Climate Change*
 Global Ocean-Atmosphere-Land System (GOALS) Panel, Board on Atmospheric Sciences and
 Climate, National Research Council, 1994–98
 Contributor, *Climate Change 1995, The Science of Climate Change*, Contribution of Working Group I
 to the Second Assessment report of the Intergovernmental Panel on Climate Change.
 American Meteorological Soc. Committee on Hurricanes & Tropical Meteorology & Climate, 1995-98
 University Corporation for Atmospheric Research UCLA representative, 1988-94
 American Meteorological Society Committee on the Interaction of the Sea and Atmosphere, 1992-95
 Tropical-oceans-Global-Atmosphere Program on Seasonal to Interannual Climate Prediction
 working group, 1992–95

Affiliations

American Meteorological Society (Fellow)
 American Geophysical Union (Member)
 American Association for the Advancement of Science (Member)
 Canadian Meteorological and Oceanographic Society (Member)
 Royal Meteorological Society (Fellow)

Selected Recent Publications

62. Lin, J. W.-B. & Neelin, J. D. Influence of a stochastic moist convective parameterization on tropical climate variability. *Geophys. Res. Lett.*, **27**, 3691–3694 (2000).
74. Chou, C. & Neelin, J. D. Mechanisms limiting the northward extent of the northern summer monsoons over North America, Asia and Africa. *J. Climate*, **16**, 406-425 (2003).
91. Neelin, J. D., Munnich, M., Su, H., Meyerson, J. E. & Holloway, C. Tropical drying trends in global warming models and observations. *Proc. Nat. Acad. Sci.*, **103**, 6110–6115 (2006).
92. Peters, O. & Neelin, J. D. Critical phenomena in atmospheric precipitation. *Nature Physics*, **2**, 393–396 (2006).
98. Holloway, C. E. & Neelin, J. D. The convective cold top and quasi-equilibrium. *J. Atmos. Sci.*, **64**, 1467–1487 (2007).
101. Neggers, R. A. J., Neelin, J. D. & Stevens, B. Impact mechanisms of shallow cumulus convection on tropical climate dynamics. *J. Climate*, **20**, 2623-2642 (2007).
104. Neelin, J. D., Peters, O., Lin, J. W.-B., Hales, K. & Holloway, C. Rethinking convective quasi-equilibrium: observational constraints for stochastic convective schemes in climate models. *Phil. Trans. Royal Soc. A*, **366**, 2581-2604 (2008).
103. Lintner, B. R. & Neelin, J.D. Eastern margin variability of the South Pacific Convergence Zone. *Geophys. Res. Lett.*, **35**, L16701 (2008).
109. Neelin, J. D., Peters, O. & Hales, K. The transition to strong convection. *J. Atmos. Sci.*, **66**, 2367-2384 (2009).
110. Holloway, C. E. & Neelin, J. D. Moisture vertical structure, column water vapor, and tropical deep convection. *J. Atmos. Sci.*, **66**, 1665–1683 (2009).