

Department of Atmospheric Sciences
University of California, Los Angeles
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Birthdate: October 31, 1959

Positions

Professor, Dept. of Atmospheric 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 (Houghton Lectureship), Dept. of Earth, Atmospheric and Planetary
Sciences,
Massachusetts Institute of Technology. Jan. 1994–May 1995
Assistant Professor, Dept. of Atmospheric Sciences, UC Los Angeles Sept. 1988–June 1992
Postdoctoral Associate, Dept. of Earth, Atmospheric and Planetary Sciences,
Massachusetts Institute of Technology. Sept. 1987–Aug. 1988

Education

Ph.D., Geophysical Fluid Dynamics Program, Princeton University, 1987
M.Sc., Physics, University of Toronto, 1983; B.Sc., Physics, University of Toronto, 1981

Awards and Affiliations (selected)

National Science Foundation 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, 1994-1995
Presidential Young Investigator Award 1991-1996
Fellow, American Meteorological Society, Royal Meteorological Society
Member, American Geophysical Society, American Meteorological Society
Member, Canadian Meteorological and Oceanographic Society

Service (selected)

Associate Editor, *Journal of Climate*, 1996-present
Reviewer, *Third Assessment Report of the Intergovernmental Panel on Climate Change*, 1999-2000
Global Ocean-Atmosphere-Land System (GOALS) Panel, National Research Council, 1994–98

Research Interests

Ocean-atmosphere interaction, tropical and more recently midlatitude. El Niño/Southern oscillation;
interannual climate variations. 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 mod-
els; theory of atmospheric and climate phenomena; use of asymptotic methods to simplify more
complex models.

Selected Principle Publications**I. Prior to 2000 (Selected)**

3. 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**, 2341-2348.
9. Neelin, J. D., 1990: A hybrid coupled general circulation model for El Niño studies. *J. Atmos. Sci.*, **47**, 674-693.
12. Neelin, J. D., M. Latif, M. A. F. Allaart, M. A. Cane, U. Cubasch, W. L. Gates, P. R. Gent, M. Ghil, C. Gordon, N. C. Lau, C. R. Mechoso, G. A. Meehl, J. M. Oberhuber, S. G. H. Philander, P. S. Schopf, K. R. Sperber, A. Sterl, T. Tokioka, J. Tribbia and S. E. Zebiak, 1992: Tropical air-sea interaction in general circulation models. *Climate Dynamics*, **7**, 73-104.

II. Principle Publications since 2000

52. Dijkstra, H. A. and J. D. Neelin, 2000: Imperfections of the thermohaline circulation: Latitudinal asymmetry and preferred northern sinking. *J. Climate*, **13**, 366-382.
53. Neelin, J. D., and N. Zeng, 2000: A quasi-equilibrium tropical circulation model—formulation. *J. Atmos. Sci.*, **57**, 1741-1766.
54. Zeng, N., J. D. Neelin, and C. Chou, 2000: A quasi-equilibrium tropical circulation model—implementation and simulation. *J. Atmos. Sci.*, **57**, 1767-1796.
55. Lin, J. W., J. D. Neelin, and N. Zeng, 2000: Maintenance of tropical intraseasonal variability: impact of evaporation-wind feedback and midlatitude storms. *J. Atmos. Sci.*, **57**, 2793-2823.
56. Neelin, J. D., F.-F. Jin, and H.-H. Syu, 2000: Variations in ENSO phase-locking. *J. Climate*, **13**, 2570-2590.
57. Syu, H.-H., and J. D. Neelin, 2000: ENSO in a hybrid coupled model. Part I: sensitivity to physical parameterizations. *Climate Dynamics*, **16**, 19-34.
58. Syu, H.-H., and J. D. Neelin, 2000: ENSO in a hybrid coupled model: Part II: prediction with piggyback data assimilation. *Climate Dynamics*, **16**, 35-48.
59. Zeng, N., J. D. Neelin, C. Chou, J. W.-B. Lin and H. Su, 2000: Climate and variability in a quasi-equilibrium tropical circulation model. In *General circulation Modeling: Past, Present, and Future*. D. A. Randall, ed., Academic Press, pp. 457-488.
60. Zeng, N. and J. D. Neelin, 2000: The role of vegetation-climate interaction and interannual variability in shaping the African Savanna. *J. Climate*, **13**, 2665-2670.
61. Roulston, M. S., and J. D. Neelin, 2000: The response of an ENSO model to climate noise, weather noise and intraseasonal forcing. *Geophys. Res. Lett.*, **27**, 3723-3726.
62. Lin, J. W.-B., and J. D. Neelin, 2000: Influence of a stochastic moist convective parameterization on tropical climate variability. *Geophys. Res. Lett.*, **27**, 3691-3694.
63. Perigaud, C. M., C. Cassou, B. DeWitte, L.-L. Fu and J. D. Neelin, 2000: Using data and intermediate coupled models for seasonal-to-interannual forecasts. *Mon. Wea. Rev.* **128**, 3025-3049.
64. Chou, C., and J. D. Neelin, 2001: Mechanisms limiting the southward extent of the South American summer monsoon. *Geophys. Res. Lett.*, **28**, 2433-2436.
65. Su, H., J. D. Neelin, and C. Chou, 2001: Tropical teleconnection and local response to SST anomalies during the 1997-1998 El Niño. *J. Geophys. Res.*, **106**, D17, 20,025-20,043.
66. Chou, C., J. D. Neelin, and H. Su, 2001: Ocean-atmosphere-land feedbacks in an idealized monsoon, *Quart. J. Roy. Meteor. Soc.*, **127**, 1869-1891.
67. Sun, C., Z. Hao, M. Ghil and J. D. Neelin, 2002: Data assimilation for a coupled ocean-atmosphere model. Part I: Sequential state estimation. *Mon. Wea. Rev.*, **130**, 1073-1099.
68. Lin, J. W.-B., and J. D. Neelin, 2002: Considerations for stochastic convective parameterization. *J. Atmos. Sci.*, **59**, 959-975.

69. Stevens, B., J. Duan, J. C. McWilliams, M. Münnich and J. D. Neelin, 2002, Entrainment, Rayleigh friction and boundary layer winds over the tropical Pacific. *J. Climate*, **15**, 30-44.
70. Su, H., and J. D. Neelin, 2002: Teleconnection mechanisms for tropical Pacific descent anomalies during El Niño. *J. Atmos. Sci.*, **59**, 2694-2712.
71. Nogues-Paegle, J., C. R. Mechoso, R. Fu, E. H. Berbery, W. C. Chao, T.-C. Chen, K. 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, 2002: Progress in Pan American CLIVAR Research: Understanding the South American Monsoon. *Meteorologica*, **27** 3-32.
72. Mechoso, C. R., J. D. Neelin and J.-Y. Yu, 2003: Testing simple models of ENSO. *J. Atmos. Sci.*, **60**, 305-318.
73. Chou, C. and J. D. Neelin, 2003: Mechanisms limiting the northward extent of the northern summer monsoons over North America, Asia and Africa. *J. Climate*, **16**, 406-425.
74. Zeng, N., K. Hales, and J. D. Neelin, 2002: Nonlinear dynamics in a coupled vegetation-climate system and implications for desert-forest gradient. *J. Climate*, **15**, 3474-3487.
75. Su, H., J. D. Neelin and J. E. Meyerson, 2003: Sensitivity of tropical tropospheric temperature to sea surface temperature forcing. *J. Climate*, **16**, 1283-1301.
76. Lin, J. W.-B., and J. D. Neelin, 2003: Toward stochastic moist convective parameterization in general circulation models. *Geophys. Res. Lett.*, **30**(4), 1162, doi:10.1029/2002GL016203.
77. Dijkstra, H. A., W. Weijer and J. D. Neelin, 2003: Imperfections of the three-dimensional thermohaline ocean circulation: Hysteresis and unique-state regimes. *J. Phys. Oceanog.*, **33**, 2796-2814.
79. Su, H. and J. D. Neelin, 2003: The scatter in tropical average precipitation anomalies. *J. Climate*, **16**, 3966-3977.
80. Neelin, J. D., C. Chou, and H. Su, 2003: Tropical drought regions in global warming and El Niño teleconnections. *Geophys. Res. Lett.*, **30**(24), 2275, doi:10.1029/2003GL018625.
81. Münnich, M., and J. D. Neelin, 2004: Where is ENSO stress balanced? *Atmospheric Science Letters*, **5**, 35-41.
82. K. Hales, J. D. Neelin and N. Zeng, 2004: Sensitivity of tropical land climate to leaf area index: Role of surface conductance versus albedo. *J. Climate*, **17**, 1459-1473.