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Professional Preparation

- Postdoctoral research Atmospheric Sciences and Institute of Geophysics and Planetary Physics, University of California, Los Angeles, 1995-1996
- Ph. D. Atmospheric Sciences, University of Arizona, January 1995
- M. S. Astrophysics, University of Arizona, May 1991
- B. S. Physics, University of Science and Technology of China, July 1987

Appointments

- Associate Professor, University of Maryland, College Park. 2005-present
- Assistant Professor, University of Maryland, College Park. 2001-2005
- Alexander Von Humboldt fellow, Max-Planck Institute for Meteorology, Germany. 2000
- Scientist (IPA), NASA Goddard Space Flight Center. 1999
- Assistant Research Scientist, University of California, Los Angeles. 1997-2000
- Visiting postdoctoral scientist, Massachusetts Institute of Technology. 1995

Five publications most closely related to the proposed research

1. **Zeng, N.**, J. Yoon, A. Vinzileos, G. J. Collatz, E. Kalnay, A. Mariotti, A. Kumar, A. Busalacchi, S. Lord, 2008: Dynamical Prediction of Terrestrial Ecosystems and the Global Carbon Cycle: a 25-year Hindcast Experiment. *Global Biogeochem. Cycles*, 22, GB4015, doi:10.1029/2008GB003183.
2. Friedlingstein, P., and coauthors including **N. Zeng**, 2006: Climate-carbon cycle feedback analysis, results from the C4MIP model intercomparison. *J. Climate*, 19, 3337-3353.
3. **Zeng, N.**, H. Qian, C. Roedenbeck, and M. Heimann, 2005: Impact of 1998-2002 midlatitude drought and warming on terrestrial ecosystem and the global carbon cycle. *Geophys. Res. Lett.*, L20203. 10-1029/2005GL024607.
4. **Zeng, N.**, A. Mariotti, and P. Wetzel, 2005: Mechanisms of interannual CO₂ variability. *Global Biogeochemical Cycles*, 19, GB1016, doi: 10-1029/2004GB002273.
5. Qian, H.-F., R. Joseph, **N. Zeng**, 2008: Response of the terrestrial carbon cycle to the El Niño-Southern Oscillation. *Tellus*, doi:10.1111/j.1600-0889.2008.00360.x

Five other related publications

6. **Zeng, N.**, H. Qian, E. Munoz, and R. Iacono, 2004: How strong is carbon-climate feedback under global warming?. *Geophys. Res. Lett.*, L20203. 10-1029/2004GL020904.
7. Qian, H.-F., R. Joseph, **N. Zeng**, 2009: Enhanced terrestrial carbon uptake in the northern high latitudes in the 21st century from the C4MIP model projections. *Global Change Biology*, in press.
8. **Zeng, N.**, 2008: Carbon sequestration via wood burial. *Carbon Balance and Management*, 3:1; doi:10.1186/1750-0680-3-1.
9. **Zeng, N.**, J. Yoon, J. Marengo, A. Subramaniam, C. Nobre, A. Mariotti, J. D. Neelin, 2008: Causes and Impacts of the 2005 Amazon drought. *Environ. Res. Lett.*, 3, 014002, doi:10.1088/1748-9326/3/1/014002.
10. **Zeng, N.**, J. D. Neelin, W. K.-M. Lau, and C. J. Tucker, 1999: Enhancement of interdecadal climate variability in the Sahel by vegetation interaction. *Science*, 286, 1537-1540.

Synergistic Activities

- Reviewed papers for *JAS*, *BAMS*, *J. Climate*, *J. Appl. Meteo*, *J. Geophys. Res.*, *Geophys. Res. Lett.*, *Science*, *PNAS*, *Climate Dyn.*, *Adv. Atmo. Sci.*, *J. Hydrology*, *J. Hydrometeor.*, *Ecol. Model.*, *Global Change Biol.*, *Biogeosciences*, *Phys. Rev. Lett.*, etc., several books. Panel and proposal review for NSF, NOAA, NASA, ESF, CAS, Swiss Sci. Foundation.
- Member of the American Geophysical Union, the American Meteorological Society; the American Association for the Advancement of Sciences.
- Lead or co-Convener for AGU Meetings 2000, 2002, 2008 and WPGM meeting 2006, EGU 2008, 2009.
- Development and distribution of the Quasi-equilibrium Tropical Circulation Model and the Simple-Land model, and the dynamic vegetation/carbon cycle model VEGAS for the use of a wider community.
- Interviews with *Science News*, *Technological Review*, *Environmental News Network*, *ABC*, *New Scientists*, *Xinhua*, *Discovery Channel News*, etc.; disseminating research results on desertification, climate change and carbon sequestration through public lectures etc.
- Lead writer, land section, CLIVAR Atlantic ITCZ research plan.
- Contributing author, the Third Assessment Report of the IPCC.
- Editor of 'Atmospheric and Oceanic Science Letters'; editorial board of 'Sustainability', co-chief editor 'Earth System Dynamics' (EGU, to be launched),
- Member, US-CLIVAR Panel on Predictability, Prediction and Application Interface (PPAI).
- Member, US-CLIVAR drought working group.
- Member, US CCSP Carbon Cycle Science Working Group (CCS WG).

List of collaborators within last 48 months

E. Kalnay, R. Murtugudde, J. Carton, A. Busalacchi, R. DeFries (U Maryland)

M. Heimann, C. Roedenbeck, P. Wetzel (Max-Planck-Institute for Biogeochemistry, Germany)

R. Iacono and A. Mariotti (ENEA climate section, Italy)

J. D. Neelin (Inst. of Geophysics and Planetary Physics, UCLA)

G. J. Collatz (NASA/Goddard Space Flight Center)

J. Christian (Canadian Climate Centre)

R. Feely (PMEL)

S. Smith (Joint Global Change Research Institute, Pacific Northwest National Lab)

J. Marengo and C. Nobre (CPTEC, Brazil)

A. Subramaniam (Columbia University)

Y. Ding, Y. Luo (National Climate Center, China)

H. Wang, Z. Lin (Institute of Atmospheric Physics, Chinese Academy of Sciences)

J. Pan (Centre for Sustainable Development, Chinese Academy of Social Sciences)

A. Vintzileos, A. Kumar, S. Lord (National Centers for Environmental Prediction, NOAA)

Collaboration in a broad sense with the C4MIP paper coauthors (Friedlingstein et al. 2006), and with the C20C project participants (Scaife et al., 2008)

Ph.D. thesis advisor

R. E. Dickinson (U Texas)

Postdoctoral advisor

J. D. Neelin (UCLA)

Graduate students advised

K. Hales, J. Lin, H. Qian, D. Barry, S. Chan, E. Munoz, B. Wauer, B. Cook, J. Gregg, J.-S. Kang

Postdocs advised: J. Yoon, R. Joseph