

PAUL HIGGINS, PH.D.

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EXPERIENCE:

- 09/06-Present **American Meteorological Society**, Washington, DC **Senior Policy Fellow**
Conduct research and analysis of climate science and policy. Lead societal efforts to develop and advance climate policy. Educate decision makers, the media, and the general public about climate change. Write articles, reports, policy statements, and commentary. Organize and lead workshops and Congressional briefings. Train scientists on the federal policy process. Oversee the AMS Congressional Fellowship. Serve as acting director of policy program when the director is away.
- 09/05-08/06 **US Senate, Office of Senator DeWine** **AAAS Congressional Fellow**
Developed and analyzed climate and energy policy. Sought options to protect climate, promote energy security, and benefit the economy. Created incentives to promote international cooperation in reducing greenhouse gas emissions.
- 11/03-08/05 **University of California**, Berkeley, CA **Visiting Research Fellow**
National Science Foundation, Berkeley, CA **Principle Investigator**
Designed and implemented experiments to reveal the causes and consequences of global climate change. Wrote articles, grants, letters, and OP-ED contributions for scientific and lay audiences. Presented research findings at national and international meetings.
- 09/99-10/03 **Global Change Education Program**, Stanford, CA **Graduate Research Fellow**
Designed and implemented experiments on the causes and consequences of abrupt climate change. Wrote research articles and grants. Initiated a project to promote the use of scientific knowledge in policy making. Educated the public about climate change through radio and print interviews. Concurrent with Ph.D. and funded by the Department of Energy.
- 04/98-09/99 **University of Michigan**, Ann Arbor, MI **Research Associate/CO₂ Site Director**
Conducted research on Earth system responses to increases in atmospheric CO₂. Supervised all field research and operations at a Department of Energy funded project site including a nine-member research team. Led research tours and educated the public about global change.
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- EDUCATION:** 9/99-10/03 **Ph.D.** Stanford University, Stanford, CA
9/94-6/96 **M.S.** Stanford University, Stanford, CA
9/89-5/93 **B.S.** The University of Michigan, Ann Arbor, MI

- HONORS:** National Science Foundation Postdoctoral Fellowship, 2003-2005; Department of Energy Graduate Fellowship, 1999-2003; NOAA Postdoctoral Program in Climate and Global Change (alternate), 2003; Midwest Regional Water Polo Champion, The University of Michigan, 1989.

- CAREER:** Chair of writing committee for AMS policy statement on geoengineering. Authored numerous peer-reviewed articles, grants, commentaries, book chapters, and reviews. Delivered keynote and invited presentations to domestic and international audiences, including to EPA, NOAA, and DoE. Initiated and lead a group commentary (www.ClimatePolicy.org).

- SERVICE:** Member, Distinguished Science Journalism Award Committee for AMS. Reviewer for peer-reviewed journals (including *Climatic Change* and *Nature*), grants, fellowship programs (including AAAS, and DoE), and legislation (US House Committee on Science and Technology). Served on the board of trustees committee on land and buildings at Stanford University (2001-2002) and as a representative to the faculty senate of Stanford University (2001-2002).

SELECTED PEER REVIEWED PUBLICATIONS (FIVE OF FOURTEEN)

- Higgins, P.A.T. 2007. A year to solve the climate problem. *Bulletin of the American Meteorological Society*. 88(8):1181-1185.
- Higgins, P.A.T., and Harte, J. 2006. Biophysical and biogeochemical responses to climate change depend on dispersal and migration. *BioScience*. 56(5):407-417.
- Higgins, P.A.T. 2004. Biogeochemical and biophysical responses of the land surface to a sustained thermohaline circulation weakening. *Journal of Climate*. 17(21):4135-4142.
- Higgins, P.A.T., Masterandrea, M.D., Schneider, S.H. 2002. Dynamics of climate and ecosystem coupling: abrupt changes and multiple equilibria. *Philosophical Transactions of the Royal Society of London series B-Biological Sciences*. 357(1421):647-655.
- Higgins, P.A.T., Jackson, R.B., desRosier, J.M., Field, C.B. 2002. Root production and demography in a California annual grassland under elevated atmospheric carbon dioxide. *Global Change Biology*. 8(9):841-850.

SUBMITTED PUBLICATIONS UNDER REVIEW

- Higgins, P.A.T. Design principles and remaining needs for U.S. federal climate policy: emission fees. *In review*.
- Higgins, P.A.T. A mitigation framework for maximum climate protection. *In review*.

FIVE OTHER PUBLICATIONS

- Higgins, P.A.T. Climate Change Research and Development in the FY2010 Budget. *In: AAAS Report XXXIV, Research and Development FY 2010. The American Association for the Advancement of Science (AAAS). Washington, DC. In Press.*
- Higgins, P.A.T. Disturbance. *In: Encyclopedia of Climate and Weather, 2nd Edition. Oxford University Press. In Press.*
- Higgins, P.A.T. 2009. Carbon cycle amplification: how optimistic assumptions cause persistent underestimates of potential climate damages and mitigation needs. *Climatic Change*. 95:363-368.
- Higgins, P.A.T., Chan, K.M.A., and Porder, S. 2006. Bridge over a philosophical divide. *Evidence & Policy*. 2(2):251-257.
- Higgins, P.A.T. 2005. Exercise based transportation reduces oil dependence, carbon emissions and obesity. *Environmental Conservation*. 32(3):197-202.

SELECTED INVITED TALKS

- Higgins, P.A.T. Climate science, societal risk, & the search for a safe emissions trajectory. July 7, 2008. The Aspen Institute, Energy and Environment Program, Aspen, CO
- Higgins, P.A.T. Responses and feedbacks of the land surface to changes in climate: policy implications. March 15, 2007. National Ocean and Atmosphere Administration, Silver Spring, MD
- Higgins, P.A.T. Plant migration affects the strength and sign of climate feedbacks. March 7, 2007. Department of Earth System Science, University of California. Irvine, CA