

Julia Pongratz

Curriculum Vitae

January 06, 2012

- PRESENT POSITION** ◇ **Post-doctoral Research Scientist**
Department of Global Ecology, Carnegie Institution
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pongatz@carnegie.stanford.edu
- EDUCATION** ◇ **Ph.D.** in Geosciences (with distinction), Max Planck Institute for Meteorology/University of Hamburg, Germany (2006–2009)
Thesis: *A model estimate on the effect of anthropogenic land cover change on the climate of the last millennium*
- ◇ **Diploma (M.Sc.)** in Physical Geography (minors Physics and Remote Sensing), Ludwig-Maximilians-University Munich, Germany (2000–2005)
Thesis: *Estimating the impact of land cover change on energy and water balance in Mato Grosso, Brazil*
- ◇ **Study-abroad year** at University of Maryland, College Park, MD, USA (2003–2004)
- SCHOLARSHIPS AND AWARDS** ◇ **Editor’s Citation for Excellence in Refereeing** for Reviews of Geophysics (2011)
- ◇ **Wladimir Peter Köppen Award** of the KlimaCampus, University of Hamburg (2010)
- ◇ **Otto Hahn Medal** of the Max Planck Society (2009)
- ◇ **Young Scientists’ Outstanding Poster Paper (YSOPP) Award** of the EGU (2008)
- ◇ **Scholarship of the German National Academic Foundation** (2001–2005)
- ◇ **Grant from the German-American Fulbright Program** (2003–2004)
- WORK EXPERIENCE** ◇ **Carnegie Institution, Department of Global Ecology**, Stanford, USA (2009–present)
Postdoctoral research: Climate modeling (MPI-ESM, CAM3.5, HadCM3L) with focus on land surface processes, geoengineering, and food security; application of crop models; evaluation of mitigation potential of reforestation.
- ◇ **Max Planck Institute for Meteorology**, Hamburg, Germany (2006–2009)
Research work towards Ph.D.: Reconstruction of historical land cover including uncertainty estimate; design and implementation of simulations with comprehensive climate models, model development (ECHAM5/JSBACH), and data analysis.
- ◇ **German Aerospace Center**, Oberpfaffenhofen, Germany (2005–2006)
Scientific Assistant in the Institute for Atmospheric Physics: Design and implementation of cloud detection algorithms for MSG data; radiative transfer simulations.
- ◇ **University of Maryland**, College Park, MD, USA in collaboration with **NASA Goddard Space Flight Center**, Greenbelt, MD, USA (2003–2004)
Supervised research and student employment in the LBA-Project: Design, implementation, and evaluation of model simulations (SiB2); derivation of vegetation parameters from remote sensing data.
- ◇ **Ludwig-Maximilians-University Munich**, Munich, Germany (2001–2003)
Student Assistant in the GLOWA project: Assembly and maintenance of eddy covariance measurement stations; field measurements; processing and analysis of remote sensing data.
- PROFESSIONAL ACTIVITIES** ◇ **Assistant Editor** for Climatic Change (Springer Science+Business Media) (since 2010)
- ◇ **Reviewer for journals** Ambio, Biogeosciences, Climate Dynamics, Climate of the Past, Environmental Research Letters, Environmental Science and Technology, Geophysical Research Letters, Global Biogeochemical Cycles, Journal of Geophysical Research, Nature, Nature Climate Change, Nature Geoscience, Quaternary Science Reviews, Remote Sensing of Environment, Reviews of Geophysics.

- ◇ **Conference convener** Session chair at the iLEAPS conference, Garmisch, 09/2011, side event at the Planet under Pressure conference, London, 03/2012 (planned).
- ◇ **Invited speaker** to 9 conferences and external research institutes.

SKILLS

- ◇ programming in FORTRAN, shell scripting; ArcGIS; Linux, Windows, Mac
- ◇ German (mother tongue), English (fluent), Spanish (fair), French (fair)

PEER-

REVIEWED

PUBLICATIONS

- ◇ **J. Pongratz**, D.B. Lobell, L. Cao, and K. Caldeira (in press). *Crop yields in a geoengineered climate*. *Nature Climate Change*.
- ◇ **J. Pongratz** and K. Caldeira (in review). *Attribution of climate change to regions affected by preindustrial land cover change*.
- ◇ R.A. Houghton, G.R. van der Werf, R.S. DeFries, M.C. Hansen, J.I. House, **J. Pongratz**, and N. Ramankutty (submitted). *Regional Carbon Cycle Assessment and Processes (RECCAP) Synthesis Chapter G2: Carbon emissions from land use and land-cover change*.
- ◇ G.A. Schmidt, J.H. Jungclaus, C.M. Ammann, E. Bard, P. Braconnot, T.J. Crowley, G. Delaygue, F. Joos, N.A. Krivova, R. Muscheler, B.L. Otto-Bliesner, **J. Pongratz**, D.T. Shindell, S.K. Solanki, F. Steinhilber, and L.E.A. Vieira (2011). *Climate forcing reconstructions for use in PMIP simulations of the last millennium (v1.1)*. *Geosci. Model Dev. Discuss.*, 4, pp. 2451-2467, doi:10.5194/gmdd-4-2451-2011.
- ◇ **J. Pongratz**, C.H. Reick, T. Raddatz, K. Caldeira, and M. Claussen (2011). *Past land use decisions have increased mitigation potential of reforestation*. *Geophys. Res. Lett.* 38, L15701, doi:10.1029/2011GL047848.
- ◇ **J. Pongratz**, K. Caldeira, C.H. Reick, and M. Claussen (2011). *Coupled climate-carbon simulations indicate minor global effects of wars and epidemics on atmospheric CO₂ between AD 800 and 1850*. *The Holocene*, doi: 10.1177/0959683610386981.
- ◇ G.A. Schmidt, J.H. Jungclaus, C.M. Ammann, E. Bard, P. Braconnot, T.J. Crowley, G. Delaygue, F. Joos, N.A. Krivova, R. Muscheler, B.L. Otto-Bliesner, **J. Pongratz**, D.T. Shindell, S.K. Solanki, F. Steinhilber, and L.E.A. Vieira (2011). *Climate forcing reconstructions for use in PMIP simulations of the last millennium (v1.0)*. *Geosci. Model Dev.*, 4, pp. 33-45, doi:10.5194/gmd-4-33-2011.
- ◇ G.A. Ban-Weiss, G. Bala, L. Cao, **J. Pongratz**, and K. Caldeira (2011). *Climate forcing and response to idealized changes in surface latent and sensible heat*. *Environ. Res. Lett.*, 6, 034032, doi:10.1088/1748-9326/6/3/034032.
- ◇ **J. Pongratz**, C.H. Reick, T. Raddatz, and M. Claussen (2010). *Biogeophysical versus biogeochemical climate response to historical anthropogenic land cover change*. *Geophys. Res. Lett.*, 37, L08702, doi:10.1029/2010GL043010.
- ◇ K. Hibbard, A. Janetos, D. van Vuuren, **J. Pongratz**, S. Rose, R. Betts, M. Herold, and J. Feddema (2010). *Research priorities in land use and land-cover change for the Earth system and integrated assessment modelling*. *International Journal of Climatology*, doi:10.1002/joc.2150.
- ◇ J.H. Jungclaus, S.J. Lorenz, C. Timmreck, C.H. Reick, V. Brovkin, K. Six, J. Segsneider, M.A. Giorgetta, T.J. Crowley, **J. Pongratz**, N.A. Krivova, L.E. Vieira, S.K. Solanki, D. Klocke, M. Botzet, M. Esch, V. Gayler, H. Haak, T.J. Raddatz, E. Roeckner, R. Schnur, H. Widmann, M. Claussen, B. Stevens, and J. Marotzke (2010). *Climate and carbon-cycle variability over the last millennium*. *Clim. Past*, 6, pp. 723-737, doi:10.5194/cp-6-723-2010.
- ◇ C. Reick, T. Raddatz, **J. Pongratz**, and M. Claussen (2010). *Contribution of anthropogenic land cover change emissions to pre-industrial atmospheric CO₂*. *Tellus*, doi:10.1111/j.1600-0889.2010.00479.x.
- ◇ E. Röckner, M. Giorgetta, T. Crüger, M. Esch, and **J. Pongratz** (2010). *Historical and future anthropogenic emission pathways derived from coupled climate-carbon cycle simulations*. *Climatic Change*, doi:10.1007/s10584-010-9886-6.

- ◇ **J. Pongratz**, C.H. Reick, T. Raddatz, and M. Claussen (2009). *Effects of anthropogenic land cover change on the carbon cycle of the last millennium*. Global Biogeochem. Cycles, 23, GB4001, doi:10.1029/2009GB003488.
 - ◇ **J. Pongratz**, T. Raddatz, C.H. Reick, M. Esch, and M. Claussen (2009). *Radiative forcing from anthropogenic land cover change since A.D. 800*. Geophys. Res. Lett., 36, L02709, doi:10.1029/2008GL036394.
 - ◇ **J. Pongratz**, C. Reick, T. Raddatz, and M. Claussen (2008). *A reconstruction of global agricultural areas and land cover for the last millennium*. Global Biogeochem. Cycles, 22, GB3018, doi:10.1029/2007GB003153.
 - ◇ **J. Pongratz**, L. Bounoua, R. DeFries, D.C. Morton, L.O. Anderson, W. Mauser, and C. Klink (2006). *The impact of land cover change on surface energy and water balance in Mato Grosso, Brazil*. Earth Interactions, 10 (19), pp. 1–17.
- OTHER PUBLICATIONS
- ◇ **J. Pongratz** (2010). *Global warming or cooling from historical land-cover change?* iLEAPS Newsletter, 10.
 - ◇ **J. Pongratz** and C.H. Reick (2009). *Vorindustrielle Landwirtschaft: Klimawandel ohne Öl und Kohle*. Jahrbuch der Max-Planck-Gesellschaft 2009.
 - ◇ **J. Pongratz** and C.H. Reick (2009). *Landwirtschaft pflügt das Klima um*. MaxPlanck-Forschung 4.2009.
 - ◇ **J. Pongratz** (2009). *A model estimate on the effect of anthropogenic land cover change on the climate of the last millennium*. Ph.D. Thesis, Reports on Earth System Science, 68, ISSN 1614-1199, 148 pages.
 - ◇ **J. Pongratz**, C. Reick, T. Raddatz, and M. Claussen (2008). *A Global Land Cover Reconstruction AD 800 to 1992 - Technical Description*. Reports on Earth System Science, 51, ISSN 1614-1199, 83 pages.
- FIRST-AUTHORED CONFERENCE PAPERS
- ◇ **J. Pongratz**, D.B. Lobell, L. Cao, and K. Caldeira (2011). *Effects of geoengineering on crop yields*. AGU Fall Meeting, Abstract GC13A-0937.
 - ◇ **J. Pongratz** (2011). *Global land cover change in the last millennium – effects on past and present climate*. 3rd iLEAPS Science Conference.
 - ◇ **J. Pongratz** (2011). *The long history of land use change and climate*. iLEAPS Land Use and Land Cover Change Kick-off Meeting.
 - ◇ **J. Pongratz**, C. Reick, T. Raddatz, M. Claussen, and K. Caldeira (2011). *An overview of the effects of historical land cover change on climate and the carbon cycle*. 45th Congress of the Canadian Meteorological and Oceanographic Society.
 - ◇ **J. Pongratz** and K. Caldeira (2011). *Relevance of preindustrial land cover change for attribution of excess atmospheric carbon dioxide*. Geophysical Research Abstracts, 13, EGU2011-13623.
 - ◇ **J. Pongratz** and K. Caldeira (2010). *Relevance of preindustrial land cover change and emissions for attribution of excess atmospheric carbon dioxide*. AGU Fall Meeting, Abstract A24A-07.
 - ◇ **J. Pongratz**, C. Reick, T. Raddatz, M. Claussen, and K. Caldeira (2010). *Biophysical versus carbon cycle effects of anthropogenic land cover change*. Global Land Project Open Science Meeting.
 - ◇ **J. Pongratz**, C. Reick, K. Caldeira, T. Raddatz, and M. Claussen (2010). *Biophysical versus carbon cycle effects of anthropogenic land cover change*. AIMES Open Science Conference.
 - ◇ **J. Pongratz**, C. Reick, T. Raddatz, K. Caldeira, and M. Claussen (2009). *Regional contributions to global climate change in present and future from anthropogenic land cover change*. Eos 90(52), Fall Meet. Suppl., Abstract B21B-0345.
 - ◇ **J. Pongratz**, C.H. Reick, T. Raddatz, and M. Claussen (2009). *Anthropogenic land cover change and the carbon cycle - a GCM study on the beginning of the Anthropocene*. International Carbon Dioxide Conference.

- ◇ **J. Pongratz**, C.H. Reick, T. Raddatz, and M. Claussen (2009). *Preindustrial agriculture and the carbon cycle - a GCM study on the beginning of the Anthropocene*. 8th Geophysical Research Abstracts, 11, EGU2009-5697.
- ◇ **J. Pongratz**, T. Raddatz, C.H. Reick, and M. Claussen (2008). *Effects of pre-industrial agricultural expansion and epidemics on the climate and the carbon cycle*. Eos Trans. AGU, 89(53), Fall Meet. Suppl., Abstract U31A-0007.
- ◇ **J. Pongratz**, C. Reick, T. Raddatz, and M. Claussen (2008). *Biogeophysical effects of anthropogenic land cover change during the last millennium*. Geophysical Research Abstracts, 10, EGU2008-A-03996.
- ◇ **J. Pongratz**, C. Reick, T. Raddatz, and M. Claussen (2007). *A millennium of anthropogenic land cover change and its effects on climate*. Eos Trans. AGU, 88(52), Fall Meet. Suppl., Abstract GC54C-01.
- ◇ **J. Pongratz**, C. Reick, T. Raddatz, and M. Claussen (2007). *Anthropogenic land cover change in the last millenium — assessing its extent and consequences for climate*. Geophysical Research Abstracts, 9, 01878.
- ◇ **J. Pongratz**, R. DeFries, L. Bounoua, D.C. Morton, L.O. Anderson, and Y.E. Shimabukuro (2004). *Estimating climatic implications of soy and pasture expansion in Mato Grosso*. III Conferência Científica do LBA, Brasília, Brazil.

SELECTED
PRESS
COVERAGE

- ◇ **Research Spotlight in EOS**. “Farmers’ past choices enhance mitigation potential of reforestation” (10/25 2011)
- ◇ **Journal Highlight of the AGU**. “Reforestation northern farmland can have a cooling effect” (08/31 2011)
- ◇ **Editor’s highlight of Geophysical Research Letters**. “Farmers’ past choices enhance mitigation potential of reforestation” (08/02 2011)
- ◇ **BBC World Service**. Interview in “Europe Today” (01/27 2011)
- ◇ **Handelsblatt**. “Was hat Dschingis Khan mit dem Klimawandel zu tun?” (01/26 2011)
- ◇ **Deutsche Welle**. “Historic wars and plagues had little effect on climate, study finds” (01/25 2011)
- ◇ **El País**. “La conquista de América no influyó en el clima” (01/21 2011)
- ◇ **Nature**. “Research Highlights: Biogeochemistry: Preindustrial carbon” (Nature 461, 850, doi:10.1038/461850e. 10/14 2010)
- ◇ **Deutschlandradio**. “Studie: Menschengemachte CO₂-Emissionen schon vor der Industrialisierung” (01/26 2010)