

Curriculum Vitae

Arne Max Erich Winguth, Ph.D.

Department of Earth and Environmental Sciences
University of Texas at Arlington
500 Yates St.
Arlington, TX 76019, USA
Phone: 817-272-2977
Email: awinguth@uta.edu
<http://www.uta.edu/faculty/awinguth>

Professional Preparation

1997-1999 **Postdoctoral Research**
University of Chicago
1997 **Ph.D. in Oceanography**
University of Hamburg and Max Planck Institute for Meteorology, Germany
1992 **Diplom in Oceanography**
University of Hamburg, Germany

Academic Appointments

2007 – present **Assistant Professor**
Department of Earth and Environmental Sciences, University of Texas at Arlington
2000 - 2007 **Assistant Professor**
Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison
Fall 1999 **Visiting Assistant Professor**
Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison
1997-1999 **Research Associate**
University of Chicago, Department of Geophysical Sciences
1992-1997 **Graduate Research Assistant**
Max Planck Institute for Meteorology, Hamburg, Germany

Selected Awards, Honors and Fellowships

- [1] Maverick Speakers Series, Introduction of Professor Robert Ballard, March 6, 2012.
- [2] University of Texas at Arlington Research Enhancement Program (REP) 2010/2011, “Urban Climate and Climate Change – A new Initiative at UTA”, 2010.
- [3] Food for Thought Recognition, Freshman Leaders on Campus, April 12, 2010.
- [4] Research Excellence Award, University of Texas at Arlington, Earth and Environmental Science Department, 2009.
- [5] University of Wisconsin-Madison Graduate School Fall Competition 2006, salary for one 50% graduate research assistant position, 2006.
- [6] NCAR ASP Faculty Fellowship Program, “CCSM-MUDS: Coupling of a sediment model to CCSM to study sedimentary changes at the Permian-Triassic Boundary”, 06/01/2005-06/31/2005; 06/01/2006-07/31/2006.
- [7] University of Wisconsin-Madison Graduate School Fall Competition 2005, salary for one 50% graduate research assistant position, 2005.
- [8] Visiting Scientist, Max Planck Institute for Meteorology, Germany, “Development of marine carbon cycle in an earth system model”, two months summer salary, 2005.
- [9] Visiting Scientist, Max Planck Institute for Meteorology, Germany, “Development of marine carbon cycle in an earth system model”, two months summer salary, 2004.
- [10] University of Wisconsin-Madison Graduate School Fall Competition 2003, one month faculty summer salary, 2003.
- [11] Visiting Scientist, Max Planck Institute for Meteorology, Germany, “Development of marine carbon cycle in an earth system model”, two months summer salary, 2003.
- [12] University of Wisconsin-Madison Graduate School Fall Competition 2002, salary for one 50% graduate research assistant position and one undergraduate student hourly, 2002.
- [13] Visiting Scientist, Max Planck Institute for Meteorology, Germany, “Development of marine carbon cycle in an earth system model”, two months summer salary, 2002.
- [14] University of Wisconsin-Madison Graduate School Fall Competition 2001, two months faculty summer salary, 2001.
- [15] German Weather Service (DWD) SAF (stipend), “The adjoint ocean primitive equation model C-HOPE”, three months summer salary, 2001.
- [16] German Weather Service (DWD) SAF (stipend), “Assimilation of climate data into an ocean general circulation model: First steps towards operational climate monitoring”, three months summer salary, 2000.

Publications and Conference Abstracts

Publications in peer-reviewed journals and books

- [1] **Winguth, A.**, and C. Winguth, 2012. Precession-driven monsoon variability at the Permian-Triassic Boundary – Implications for anoxia and mass extinctions. *Global and Planetary Change*, doi:10.1016/j.gloplacha.2012.06.006 (published online Jun. 26, 2012; 11 pp.).
- [2] **Winguth, A.M.E.**, E. Thomas, and C. Winguth, 2012. Global decline in ocean ventilation, oxygenation and productivity during the Paleocene-Eocene Thermal Maximum – Implications for the benthic extinction. *Geology*, 40, 263-266, doi:10.1130/G32529.1.
- [3] Winguth, C., and **A.M.E. Winguth**, 2012. Simulating Permian-Triassic oceanic anoxia distribution: Implications for species extinction and recovery. *Geology*, 40, 127–130, doi:10.1130/G32453.1.

- [4] Osen, A. *, **A. Winguth**, C. Winguth, and C. Scotese, 2012. Sensitivity of Late Permian climate to topographic changes and implications for mass extinctions. *Global and Planetary Change*, doi:10.1016/j.gloplacha.2012.01.011 (published online Feb. 26, 2012; 9 pp.).
- [5] Cope, J.T. *, and **A. Winguth**, 2011. On the sensitivity of the Eocene ocean circulation to Arctic freshwater pulses. *Palaeogeogr., Palaeoclimatol., Palaeoecol.*, 306, 82–94. (Corresponding author: **A. Winguth**)
- [6] **Winguth, A.M.E.**, 2011. The Paleocene-Eocene Thermal Maximum: Feedbacks between climate change and biogeochemical cycles, in: *Climate Change Book 1*, edited by J. Blanco and H. Kheradmand, InTech, p. 43-64.
- [7] **Winguth, A.M.E.**, C. Shields, C. Shellito, and C. Winguth, 2010. Climate response at the Paleocene-Eocene Thermal Maximum to greenhouse gas forcing – A model study with CCSM3. *Journal of Climate*, 23, 2562-2584.
- [8] Friedrichs, M.A.M., M.-E. Carr, R.T. Barber, M. Scardi, D. Antoine, R.A. Armstrong, I. Asanuma, M.J. Behrenfeld, E.T. Buitenhuis, F. Chai, J.R. Christian, A.M. Ciotti, S.C. Doney, M. Dowell, J. Dunne, B. Gentili, W. Gregg, N. Hoepffner, J. Ishizaka, T. Kameda, I. Lima, J. Marra, F. Mélin, J.K. Moore, A. Morel, R.T. O'Malley, J. O'Reilly, V.S. Saba, M. Schmeltz, T.J. Smyth, J. Tjiputra, K. Waters, T.K. Westberry, and **A. Winguth**, 2009. Assessing the uncertainties of model estimates of primary productivity in the tropical Pacific Ocean. *Journal of Marine Systems*, doi:10.1016/j.marsys.2008.05.010.
- [9] Schurgers, G. *, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, M. Vizcaino, and **A. Winguth**, 2008. Long-term effects of biogeophysical and biogeochemical interactions between terrestrial biosphere and climate under anthropogenic climate change. *Global and Planetary Change*, doi:10.1016/j.gloplacha.2008.01.009.
- [10] Tjiputra, J. *, and **A. Winguth**, 2008. Sensitivity of sea-to-air CO₂ flux to ecosystem parameters from an adjoint model. *Biogeosciences*, 5, 615–630.
- [11] Vizcaíno, M. *, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, G. Schurgers, and **A.M.E. Winguth**, 2008. Long-term ice sheet–climate interactions under anthropogenic greenhouse forcing simulated with a complex Earth System Model. *Climate Dynamics*, 31, 665–690, doi:10.1007/s00382-008-0369-7.
- [12] Gröger, M., E. Maier-Reimer, U. Mikolajewicz, G. Schurgers, M. Vizcaino, and **A. Winguth**, 2007. Vegetation-climate feedbacks in transient simulations over the last interglacial (128-113 kyBP), in: *The Climate of Past Interglacials*, edited by F. Sirocko, M. Sanchez-Goni, T. Litt, and M. Claussen, p. 563-572.
- [13] Gröger, M., E. Maier-Reimer, U. Mikolajewicz, G. Schurgers, M. Vizcaino, and **A. Winguth**, 2007. Changes in the hydrological cycle, ocean circulation and carbon/nutrient cycling during the Last Interglacial. *Paleoceanography*, 22, PA4205, doi:10.1029/2006PA001375.
- [14] Mikolajewicz, U., M. Gröger, E. Maier-Reimer, G. Schurgers, M. Vizcaíno, and **A. Winguth**, 2007. Long-term effects of anthropogenic CO₂ emissions simulated with a complex earth system model. *Climate Dynamics*, 28, 599-633, doi:10.1007/s00382-006-0204-y.
- [15] Santek, D.A., and **A. Winguth**, 2007. A satellite view of internal waves induced by the Indian Ocean tsunami. *Int. J. of Remote Sensing*, 28, 2927-2936, doi:10.1080/01431160601094534.
- [16] Schurgers, G. *, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, M. Vizcaino, and **A. Winguth**, 2007. The effect of land surface changes on the Eemian climate. *Climate Dynamics*, 29, 357-373, doi:10.1007/s00382-007-0237-x.
- [17] Tjiputra, J. *, **A. Winguth**, and D. Polzin, 2007. Assimilation of seasonal chlorophyll and nutrient data into an adjoint three-dimensional ocean carbon cycle model: Sensitivity analysis and ecosystem parameter optimization. *Global Biogeochemical Cycles*, 21, GB1001, doi:10.1029/2006GB002745.
- [18] **Winguth, A.M.E.**, 2006. *Biogeochemical Cycles*, McGraw-Hill 2006 Yearbook of Science and Technology, McGraw Hill, Boston, p. 143–146.
- [19] Howard, M.T. *, C. Klaas, E. Maier-Reimer, and **A.M.E. Winguth**, 2006. Sensitivity of ocean carbon tracer distribution to particulate organic flux parameterizations. *Global Biogeochemical Cycles*, 20, GB3011, doi:10.1029/2005GB002499.

* student paper

- [20] Schurgers, G. *, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, M. Vizcaíno, and **A. Winguth**, 2006. Dynamics of the terrestrial biosphere, climate and atmospheric CO₂ concentration during interglacials: a comparison between Eemian and Holocene. *Climate of the Past*, 2, 205-220.
- [21] **Winguth, A.M.E.**, and E. Maier-Reimer, 2005. Causes of the marine productivity and oxygen changes associated with the Permian–Triassic boundary: A reevaluation with ocean general circulation models. *Marine Geology*, 217, 283-304.
- [22] Wetzel, P. *, **A.M.E. Winguth**, and E. Maier-Reimer, 2005. Sea-to-air CO₂ flux from 1948 to 2003 - a model study. *Global Biogeochemical Cycles*, 19, GB2005, doi:10.1029/2004GB002339.
- [23] **Winguth, A.M.E.**, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, G. Schurgers, and M. Vizcaíno, 2005. Centennial-scale interactions between the carbon cycle and anthropogenic climate change using a dynamic earth system model. *Geophys. Res. Letts.*, 32, L23714, doi:10.1029/2005GL023681.
- [24] **Winguth, A.M.E.**, P. Wetzel, and E. Maier–Reimer, 2004. Simulated sea-to-air CO₂ flux from 1948 to 2003 using NCEP reanalysis surface fluxes, Annual Climate Diagnostics & Prediction Workshop, October 18-22, Madison, 10 pp.
- [25] **Winguth, A.M.E.**, C. Heinze, J. Kutzbach, E. Maier-Reimer, U. Mikolajewicz, D. Rowley, A. Rees, and A.M. Ziegler, 2002. Simulated ocean circulation of the middle Permian. *Paleoceanography*, 17(5), 1057, doi: 10.1029/2001PA000646.
- [26] Archer, D., G. Eshel, **A. Winguth**, W. Broecker, R. Pierrehumbert, M. Tobis, and R. Jacob, 2000. Atmospheric pCO₂ sensitivity to the biological pump in the ocean. *Global Biogeochemical Cycles*, 14, 1219-1230.
- [27] Archer, D., **A. Winguth**, D. Lea, and N. Mahowald, 2000. What caused the glacial / interglacial pCO₂ cycles?. *Rev. Geophys.*, 38, 159-189.
- [28] **Winguth, A.M.E.**, D. Archer, E. Maier-Reimer, and U. Mikolajewicz, 2000. Paleonutrient data analysis of the glacial Atlantic using an adjoint ocean general circulation model, in: Inverse Methods in Global Biogeochemical Cycles, AGU Geophysical Monograph Series, edited by P. Kasibhatla, M. Heimann, D. Harley, N. Mahowald, R. Prinn, and P. Rainer, p. 171-183.
- [29] **Winguth, A.M.E.**, D. Archer, E. Maier-Reimer, U. Mikolajewicz, and J.-C. Duplessy, 1999. Sensitivity of paleonutrient tracer distribution and deep sea circulation to glacial boundary conditions. *Paleoceanography*, 14, 304-323.
- [30] Henderson, G.M., C. Heinze, R.F. Anderson, and **A. Winguth**, 1999. Global distribution of the ²³⁰Th flux to ocean sediments constrained by GCM modelling. *Deep-Sea Research Part I*, 46, 1861-1893.
- [31] Heinze, C., D. Archer, E. Maier-Reimer, and **A. Winguth**, 1999. A global oceanic sediment model for longterm climate studies. *Global Biogeochem. Cycles*, 13, 221-250.
- [32] Maier-Reimer, E., U. Mikolajewicz, and **A. Winguth**, 1996. Future ocean uptake of CO₂: Interaction between ocean circulation and biology. *Climate Dynamics*, 12, 711-721.
- [33] **Winguth, A.M.E.**, M. Heimann, K.D. Kurz, E. Maier-Reimer, U. Mikolajewicz, and J. Segsneider, 1994. El-Niño-Southern Oscillation related fluctuations of the marine carbon cycle. *Global Biogeochem. Cycles*, 8, 39-63.

Publications submitted to peer-reviewed journals

- [34] Lunt, D.J., T. Dunkley Jones, M. Heinemann, M. Huber, A. LeGrande, **A. Winguth**, C. Loftson, J. Marotzke, J. Tindall, P. Valdes, and C. Winguth. A model-data comparison for a multi-model ensemble of early Eocene atmosphere-ocean simulations: EoMIP, submitted to *Climate of the Past*, in revision.
- [35] **Winguth, A.M.E.**, and B. Clark. The Urban Heat Island of the North-Central Texas Region and its Relation to the 2011 Severe Texas Drought, submitted to the *J. of Applied Meteorology and Climatology*, in revision.
- [36] **Winguth, A.M.E.**, C. Shields, and C. Winguth. Interactions between the climate and carbon cycle at the Permian-Triassic boundary, to be submitted to *Earth Science Reviews* by December 31, 2012.

Diplom and Ph.D. Theses

Winguth, A.M.E., Windinduzierte Variabilität in der Warmwassersphäre von 1981-1987. Teil II: Fluktuationen im Kohlenstoffkreislauf, Examensarbeit Nr.14 (Diplomarbeit), Max-Planck-Institut fuer Meteorologie, Hamburg, 1992.

Winguth, A.M.E., Assimilation von $\delta^{13}\text{C}$ -Daten aus marinen Sedimentbohrkernen in das LSG zur Rekonstruktion der Ozeanzirkulation während des letzten glazialen Maximums, *Examensarbeit Nr.47* (Ph.D. Thesis), Max-Planck-Institut für Meteorologie, Hamburg, 1997.

Other publications

- [1] Mikolajewicz, U., M. Gröger, E. Maier-Reiner, G. Schurgers, M. Vizcaino, and **A. Winguth**, 2004. CLIMCYC: Modeling of the last glacial cycle: Response of climate and vegetation to insolation forcing between 132-112 ka BP. *PAGES News* v.12, no.2, 24-25.
- [2] **Winguth, A.**, U. Cubasch, K.P. Koltermann, P. Loewe, and H. Haak, 2001. The adjoint ocean primitive equation model C-HOPE, CM-SAF Scientific Report, Deutscher Wetterdienst, 25 pp.
- [3] **Winguth, A.**, U. Cubasch, K. Guenther, K.P. Koltermann, P. Loewe, D. Mueller, and P. Tungalagsaikhan, 2000. Assimilation of climate data into an ocean general circulation model: First steps towards operational climate monitoring. CM-SAF Scientific Report, Deutscher Wetterdienst, 20 pp.
- [4] **Winguth, A.M.E.**, E. Maier-Reimer, U. Mikolajewicz, and J.-C. Duplessy, 1996. On the sensitivity of an ocean general circulation model to glacial boundary conditions, Report No. 203, Max-Planck-Institut fuer Meteorologie, Hamburg, Germany.

Invited conference abstracts

- [1] **Winguth, A.**, A. Osen, C. Scotese, and C. Winguth. Paleogeography of the late Permian – Implications for climate, geochemical cycles, and mass extinction, Paper 21-10, 2010 GSA Denver Annual Meeting, October 31-November 3, 2010 (keynote speaker).
- [2] **Winguth, A.**, A. Osen, C. Scotese, and C. Winguth. Changes of Late Permian Ocean Circulation and Deep-Sea Anoxia in Response to Tectonic Changes - A Model Study with CCSM3, P. #90104 AAPG Annual Convention, New Orleans, LA, April 11-14, 2010 (invited).
- [3] Cope, J.T. IV*, **A. Winguth**, and V.N. Asher. On the Sensitivity of the Eocene Ocean Circulation to Arctic Freshwater Pulses, GSA, Portland, OR, October 18-21, 2009 (invited).
- [4] **Winguth, A.**, J. Cope, C. Shields, and C. Winguth. Modelling of Changes in Marine Carbon Uptake During Warm Climates (solicited), Vienna, Austria, April 13-18, 2008.
- [5] **Winguth, A.M.E.**, J. Kiehl, E. Maier-Reimer, and C. Shields. Paleoceanographic Changes at the Permian-Triassic Boundary: Implications from climate model simulations, The Geological Society of America, 2006 Philadelphia Annual Meeting, October 22–25, 2006.
- [6] **Winguth, A.**, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, G. Schurgers, and M. Vizcaíno. CO₂ uptake of the biosphere: Feedback between the carbon cycle and climate using a dynamic earth system model, Extended Abstract, 7th International Conference on Carbon Dioxide, Broomfield, CO, September 26-30, 2005 (invited).
- [7] **Winguth, A.** Simulated present and future changes of the PIC:POC ratio. AGU Chapman Conference, The Role of Marine Organic Carbon and Calcite Fluxes in Driving Global Climate Change, Past and Future, Woods Hole Oceanographic Institute, Woods Hole, MA, July 24-27, 2005 (invited).
- [8] **Winguth, A.M.E.**, C. Heinze, J. Kutzbach, E. Maier-Reimer, U. Mikolajewicz, D. Rowley, and A.M. Ziegler. Simulated Ocean Circulation of the Middle Permian, Earth System Processes, Edinburgh, Scotland, June 24-28, 2001 (invited).

Other conference abstracts and papers

- [1] **Winguth, A.**, C. Shellito, C. Shields, and E. Thomas. Climate Response at the Paleocene-Eocene Thermal Maximum to Greenhouse Gas Forcing – An Analog for Future Climate Change, Third Santa Fe Conference on Global and Regional Climate Change, October 30 - November 4, 2011.
- [2] Osen, A., C. Scotese, **A.M.E. Winguth**, and C. Winguth. Sensitivity of Late Permian climate to topographic changes and implications for mass extinctions, Paper 209-9, 2011 GSA Annual Meeting in Minneapolis, October 9-12, 2011.

- [3] **Winguth, A.M.E.**, J. Kiehl and C. Shields. Influence of cloud feedbacks on the end-Permian mass extinction, Paper 209-8, 2011 GSA Annual Meeting in Minneapolis, October 9-12, 2011.
- [4] Osen, A.^{*}, C. Scotese, **A.M.E., Winguth**, and C. Winguth. Sensitivity of Late Permian climate to topographic changes and implications for mass extinctions, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP11B-1432, AGU Fall Meeting, San Francisco, CA, December 13-17, 2010.
- [5] **Winguth, A.M.E.**, and C. Winguth. Ocean Stagnation and Anoxia at the Paleocene-Eocene Boundary - Implications for the Benthic Extinction, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP23B-1748, AGU Fall Meeting, San Francisco, CA, December 13-17, 2010.
- [6] Osen, A.^{*}, C. Scotese, C. Winguth and **A.M.E. Winguth**. Influence of a Mid-Ocean Ridge on the Permian Ocean Circulation, 15th Annual CESM Workshop in Breckenridge, Colorado, June 28-July 1, 2010.
- [7] **Winguth, A.M.E.**, and C. Winguth. Geochemical Changes in Response to Greenhouse Gas Forcing at the PETM Using CCSM3, 15th Annual CESM Workshop in Breckenridge, Colorado, June 28-July 1, 2010.
- [8] Cope, J.T.^{*}, and A.M.E. Winguth. On the Sensitivity of Ocean Circulation to Arctic Freshwater Input during the Paleocene/Eocene Thermal Maximum, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP41A-1482, AGU Fall Meeting, San Francisco, CA, December 14-18, 2009.
- [9] Winguth, C., and **A.M.E. Winguth**. Ocean Circulation at the Permian-Triassic Boundary: Modeling Anoxia and Upwelling Patterns with CCSM3, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP34A-08, AGU Fall Meeting, San Francisco, CA, December 14-18, 2009.
- [10] **Winguth, A.M.E.**, C. Winguth, and K.T. Lindsay. Geochemical Changes in Response to Greenhouse Gas Forcing at the PETM using CCSM3, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP44A-07, AGU Fall Meeting, San Francisco, CA, December 14-18, 2009.
- [11] **Winguth, A.M.E.**, C. Winguth, and K.T. Lindsay. Geochemical Changes in Response to Greenhouse Gas Forcing at the PETM using CCSM3, Eocene Hyperthermals & Carbon Workshop, Univ. California, Santa Cruz, CA, December 12-13, 2009.
- [12] **Winguth, A.**, and C. Winguth. Response of Eocene Climate to Greenhouse Gas Forcing – A model study with CCSM3, MOCA 2009, Montreal, Canada, July 19-29, 2009.
- [13] **Winguth, A.**, Response of Early Eocene Climate to Greenhouse Gas Forcing – A Model Study with CCSM3, 13th Annual CCSM Workshop, Breckenridge, CO, June 15 - 18, 2009.
- [14] Cope, J.T. IV^{*}, **A. Winguth**, and V.N. Asher. On the Sensitivity of the Eocene Ocean Circulation to Arctic Freshwater Pulses, GSA South-Central Section - 43rd Annual Meeting, March 16-17, 2009, Dallas, Texas (Student paper award).
- [15] Franklin, M.M.^{*}, and **A.M.E. Winguth**. Parameterizing the Marine Silicon Cycle: Effects on Modern Ocean Biogeochemistry, EOS Transactions, AGU Fall Meet. Suppl., Abstract OS11B-1123, AGU Fall Meeting, San Francisco, CA, December 15-19, 2008.
- [16] **Winguth, A.M.**, J. Cope, C. Winguth, and C. Shields. On the Sensitivity of the Marine Carbon Cycle to Changes in the Ocean Circulation During the Paleocene-Eocene Thermal Maximum, EOS Transactions, AGU Fall Meet. Suppl., Abstract PP41D-1488, AGU Fall Meeting, San Francisco, CA, December 15-19, 2008.
- [17] Tjiputra, J.T.^{*}, and **A.M.E. Winguth**. Adjoint sensitivity of the air-sea CO₂ flux to ecosystem parameterization in a three-dimensional global ocean carbon cycle model, EGS Spring Meeting, Vienna, Austria, April 13-18, 2008.
- [18] **Winguth, A.**, V. Asher, C. Shields, and C. Winguth. Simulated Ocean Circulation and Marine Carbon Cycle during the Paleocene-Eocene Thermal Maximum, GSA Annual Meeting, Houston, TX, October 5-9, 2008.
- [19] **Winguth, A.**, M. Franklin, T. Sykes, and V. Asher. Carbon Cycle Changes During the Paleocene-Eocene Thermal Maximum: A CCSM Sensitivity Study (presented by T. Sykes^{*}), 13th Annual CCSM Workshop in Breckenridge, Colorado, June 17-19, 2008.
- [20] **Winguth, A.**, U. Mikolajewicz, E. Maier-Reimer, G. Schurgers, and M. Vizcaino. On the Sensitivity of the Oceanic pCO₂ to Recent and Future Climate Induced Changes in Marine Carbon Tracers, EOS Trans.

AGU, 88(52), Fall Meet. Suppl., Abstract U43A-0859. AGU Fall Meeting, San Francisco, CA, December 10-14, 2007.

- [21] **Winguth, A.**, M. Franklin, D. Polzin, C. Shellito, and C. Winguth. Dynamics of Carbon Release and Sequestration During two Early Eocene Hyperthermals, 12th Annual CCSM Workshop, Breckenridge, CO, June 19 - 21, 2007.
- [22] **Winguth, A.**, J. Cope, C. Winguth, C. Shellito, and C. Shields. PETM climate dynamics and data-model comparison, NCAR PETM Data-model integration Workshop, Santa Fe, New Mexico, May 31, 2007.
- [23] **Winguth, A.**, U. Mikolajewicz, E. Maier-Reimer, G. Schurgers, and M. Vizcaino. Future longterm changes in marine CO₂ uptake and oxygen - an ESM study, EGU General Assembly, Vienna, Austria, April 15-20, 2007.
- [24] **Winguth, A.** Permian carbon cycle simulations, NCAR CCSM Paleoclimate Working Group Meeting, Madison, WI, February 16-17, 2006.
- [25] **Winguth, A.** Permian anoxia and tracer modeling, NCAR CCSM Ocean Working Group Meeting, Boulder, CO, December 12-13, 2005.
- [26] **Winguth, A.**, D. Polzin, J. Tjiputra, and M. Howard. Assimilation of remote sensing chlorophyll data into a marine ecosystem model, NASA Ocean Color Research Team Meeting, Portland, OR, April 12-14, 2005.
- [27] Howard, M.T. *, C. Klaas, and **A. Winguth**. A modeling study using the mineral ballasting technique for POC flux prediction in the ocean with a focus on comparison with sediment trap data and interactions with the sediments, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 13-17, 2004.
- [28] Schurgers, G. *, U. Mikolajewicz, M. Gröger, E. Maier-Reimer, M. Vizcaino, and **A. Winguth**. Modelling climate-vegetation interactions with a paleoclimate Earth System Model, EOS Transactions, AGU Fall Meeting, San Francisco, December 13-17, 2004.
- [29] Tjiputra, J. *, **A.M.E. Winguth**, and D. Polzin. Analysis of seasonal chlorophyll-a using an adjoint three-dimensional ocean carbon cycle, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 13-17, 2004.
- [30] **Winguth, A.M.E.**, and E. Maier-Reimer. Causes of the marine productivity and oxygen changes associated with the Permian - Triassic boundary: A reevaluation with general ocean circulation models, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 13-17, 2004.
- [31] **Winguth, A.**, and J. Tjiputra. Ocean Color Research Team parameter estimates of a three-dimensional adjoint ecosystem model using SeaWIFS chlorophyll data, International Summer School of Oceanography "An integrated view of oceanography: ocean weather forecasting in the 21st century", Lalonde les Maures, France, September 20-October 1, 2004.
- [32] **Winguth, A.**, and M.T. Howard. Variability of sinking organic matter and its implication for the carbon rain ratio using the carbon cycle model HAMOCC5, NASA Ocean Color Research Team Meeting, Washington, April 14-16, 2004.
- [33] **Winguth, A.** Marine productivity changes associated with the Permian-Triassic boundary, ASLO conference, Honolulu, HI, February 16-20, 2004.
- [34] **Winguth, A.** Warm polar currents in the late Permian, NCAR CCSM Paleoclimate Working Group Meeting, Boulder, CO, February 2-4, 2004.
- [35] Howard, M.T. *, and **A.M.E. Winguth**. A better particulate organic carbon (POC) distribution below 1000 meters in the ocean: mineral ballasting in the HAMOCC5 ocean general circulation model, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 8-12, 2003.
- [36] **Winguth, A.M.E.**, M. Dobbel, E. Maier-Reimer, and P. Wetzel. Interannual fluctuations of sea-air CO₂ fluxes and carbon transport between 1950 and 2000: Biological and temperature effects deduced from OBCMs, AGU/EGS Spring Meeting, Nice, France, April 6-11, 2003.
- [37] **Winguth, A.M.E.**, M. Dobbel, and E. Maier-Reimer. Interannual Fluctuations of the Marine Ecosystem to Changes in the Ocean Circulation, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 6-10, 2002.

- [38] **Winguth, A.** Analysis of marine productivity and chlorophyll a with inverse techniques. International Workshop on “Global Ocean Productivity and the Fluxes of Carbon and Nutrients: Combining Observations and Models”, JRC-ISPRA, Italy, June 24-27, 2002.
- [39] **Winguth, A.,** U. Cubasch, E. Maier-Reimer, V. Gouretski, H.-J. Koltermann, P. Loewe, K. Guenther, and P. Tungalagsaikhan. Analysis of satellite observations and in situ tracer distributions by using an inverse ocean general circulation model, EOS Transactions, AGU Fall Meeting, San Francisco, CA, December 15-19, 2000.
- [40] **Winguth, A.,** M. Gibbs, C. Heinze, E. Maier-Reimer, U. Mikolajewicz, D. Rowley, and A.M. Ziegler. Modeling the Late Permian Ocean Circulation, 4th International Conference on Modelling of Global Climate Change and Variability, 13-17 September, 1999.
- [41] **Winguth, A.,** D. Archer, E. Maier-Reimer, and U. Mikolajewicz. Estimation of deep water production rates by using an adjoint OGCM, AGU Fall Meeting, San Francisco, USA, 8-12 December, 1998.
- [42] **Winguth, A.,** D. Archer, E. Maier-Reimer, and U. Mikolajewicz. Assimilation of carbon isotopes and paleonutrient tracers into the Hamburg LSG to interpret the circulation of the glacial Atlantic, Workshop on Inverse Methods in Global Biogeochemical Cycles, Heraklion, Greece, 16-20 March, 1998.
- [43] **Winguth, A.,** D. Archer, E. Maier-Reimer, and U. Mikolajewicz. Assimilation of carbon isotopes and paleonutrient tracers into the Hamburg LSG to interpret the circulation of the glacial Atlantic, AGU Fall Meeting, San Francisco, USA, 8-12 December, 1997.
- [44] **Winguth, A.,** J.-C. Duplessy, E. Maier-Reimer, and U. Mikolajewicz. Assimilation of $\delta^{13}\text{C}$ paleodata into the Hamburg LSG, 5th International Carbon Dioxide Conference, Cairns, Australia, 8-12 September, 1997.
- [45] **Winguth, A.,** E. Maier-Reimer, and U. Mikolajewicz. Modelling the glacial ocean circulation with the Hamburg LSG, EGS, XXI General Assembly, The Hague, The Netherlands, 6-10 May, 1996.
- [46] **Winguth, A.,** R. Giering, and E. Maier-Reimer. Assimilation of paleodata into the Hamburg LSG, Second International Symposium on Assimilation of Observations in Meteorology and Oceanography, WMO/TD, Tokyo, Japan, 13-17 March, 1995.
- [47] **Winguth, A.,** M. Heimann, E. Maier-Reimer, U. Mikolajewicz, and J. Segschneider. ENSO related fluctuations of the carbon cycle, 4th International Carbon Dioxide Conference, WMO, Carqueiranne, France, 13-17 September, 1993.

List of invited seminars and oral research presentations since 2000

- [1] “Hothouse climate during the Early Eocene- Implications for future climate change”, Dept. of Oceanography, Texas A&M University, College Station, TX, 2012.
- [2] “Orbital pacing and rapid climate change at the Permian-Triassic Boundary – Implications for anoxia and mass extinctions”, presentation at the GSA in topical session T63, Minneapolis, MN, 2011.
- [3] “Hothouse climate during the Early Eocene- Implications for future climate change”, invited talk at the University of Texas at Arlington, Biology Department, University of Texas at Arlington, Arlington, TX, 2011.
- [4] “Climate Response at the Paleocene-Eocene Thermal Maximum to Greenhouse Gas Forcing - A Model Study with CCSM3”, Horizons in Earth System World University Network Series (<http://www.wun.ac.uk/events/series/horizons-earth-systems>), international video lecture, broadcast from the University of Texas at Arlington, Arlington, TX, 2011.
- [5] “Paleogeography of the Late Permian - Implications for Climate, Geochemical Cycles, and Mass Extinction”, keynote speaker at the GSA in topical session T120, Denver, CO, 2010.
- [6] Panelist on Climate Change: TCC Tree Panelist, October 2010.
- [7] “Changes of the Late Permian ocean circulation and deep-sea anoxia in response to tectonic changes -A Model Study with CCSM3”, Invited talk at the AAPG meeting, New Orleans, LA, 2010.
- [8] “The Paleocene-Eocene Thermal Maximum: Mysteries of a Hothouse World”, Invited talk at the University of Cincinnati, Cincinnati, OH, 2010.
- [9] “Global Climate Change and North Texas”, keynote speaker, North-Central Texas Campus Climate Summit, University of Texas at Arlington, Arlington, TX, 2009.

- [10] “Global Climate Change and its Impact for North Texas”, Invited talk for the University of Texas at Arlington OneBook Presentation, UTA Library, Arlington, TX, 2009.
- [11] “Response of Early Eocene Climate to Greenhouse Gas Forcing – A Model Study with CCSM3”, Invited Talk, 14th Annual CCSM workshop, Breckenridge, CO, 2009.
- [12] “Paleoclimate Modeling with LSG and HAMOCC”, invited talk for the special colloquium in honor of Dr. Ernst Maier-Reimer’s 65th birthday, Max Planck Institute for Meteorology, Hamburg, Germany, 2009.
- [13] “Future Climate Change And Its Impact on Human Health”, UNT Health Science Center, Forth Worth, TX, 2008.
- [14] “Simulated Ocean Circulation and Marine Carbon Cycle during the Paleocene-Eocene Thermal Maximum”, Southern Methodist University (SMU), Dallas, TX, 2008.
- [15] “Millenia-Scale Interactions Between Marine Carbon Cycle and Climate”, Dept. of Oceanography, Texas A&M University, College Station, TX, 2008.
- [16] “Marine Productivity Changes at the PETM - A Model Study”, NSF PETM workshop Santa Cruz, CA, 2007.
- [17] “The sensitivity of the marine carbon cycle to long-term climatic changes”, Massachusetts Institute of Technology (MIT), Boston, MA, 2007.
- [18] “On the sensitivity of the marine carbon cycle to long-term climatic changes”, Department of Earth and Environmental Sciences, University of Texas at Arlington, Arlington, TX, 2007.
- [19] “Changes in the marine carbon cycle at the PETM: A model study”, PETM Data Model Integration Workshop, Santa Fe, NM, 2007.
- [20] “Ocean circulation during the late Permian”, Department of Earth and Environmental Sciences, University of Texas at Arlington, Arlington, TX, 2007.
- [21] “Improvement of the Prediction of CO₂-Uptake in the Ocean by Data Assimilation”, IFM-GEOMAR, Kiel, Germany, 2007.
- [22] “Internal waves induced by the Indian Ocean Tsunami off the Coast of Sri Lanka”, Department of Civil and Environmental Engineering, University of Wisconsin-Madison, Madison, WI, 2007.
- [23] “Paleoceanographic Changes at the Permian-Triassic Boundary: Implications from Climate Model Simulations”, Geological Society of America, Philadelphia, PA, 2006.
- [24] “CO₂ Uptake of the Marine and Land Biosphere in Response to Future Climate Change Using an Earth System Model”, University of Illinois Urbana-Champaign, Champaign, IL, 2006.
- [25] “Permian Climate Modeling with CCSM”, Annual CCSM Paleoclimate Working Group Meeting, Breckenridge, CO, 2006.
- [26] “CO₂ Uptake of the Marine and Land Biosphere in Response to Future Climate Change Using an Earth System Model”, David Houghton Celebration Symposium, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, WI, 2006.
- [27] “CCSM-MUDS: Coupling of a sediment model to CCSM to study sedimentary changes at the Permian-Triassic Boundary”, NCAR CCSM Paleoclimate Working Group Meeting, Madison, WI, 2006.
- [28] “Feedbacks between the carbon cycle and climate using a dynamic earth system model”, AOS907 Seminar, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, WI, 2006.
- [29] “CO₂ Uptake of the biosphere: Feedbacks between the carbon cycle and climate using a dynamic earth system model”, 7th International Carbon Dioxide Conference, Boulder, CO, 2005.
- [30] “CO₂ Uptake of the biosphere: Feedbacks between the carbon cycle and climate using a dynamic earth system model”, SAGE Seminar, SAGE, University of Wisconsin-Madison, WI, 2005.
- [31] “A satellite view of internal waves induced by the Indian Ocean Tsunami”, AOS907 Seminar, University of Wisconsin-Madison, Madison, WI, 2005.
- [32] “Simulated present and future changes of the PIC:POC ratio”, AGU Chapman Conference on the Role of Marine Organic Carbon and Calcite Fluxes in Driving Global Climate Change, Past and Future, Woods Hole, MA, 2005.

- [33] “Anoxia in the deep sea? - A model study”, Max Planck Institute for Meteorology, Hamburg, Germany, 2005.
- [34] “Climate-Vegetation Interactions in a Paleoclimate Earth System Model”, CPEP Seminar, UW-Madison, Madison, WI, 2005.
- [35] “Permian carbon cycle simulations”, NCAR (Paleoclimate Workshop), NCAR, Boulder, CO, 2005.
- [36] “Has the ocean circulation been stagnant at the Permian/Triassic Boundary? - A model study”, University of Cincinnati, Department of Geology, Cincinnati, OH, 2005.
- [37] “Climate Feedbacks in a Paleoclimate Earth System Model”, Quarternary Seminar Series, University of Wisconsin, Department of Geography, University of Wisconsin-Madison, Madison, WI, 2005.
- [38] “Causes of marine productivity and oxygen changes associated with the Permian - Triassic boundary: A reevaluation with ocean general circulation models”, AOS907 Seminar, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, WI, 2004.
- [39] “Marine productivity and oxygen changes associated with the Permian-Triassic boundary”, Max-Planck-Institut für Meteorologie, Hamburg, Germany, 2004.
- [40] “A New Formulation for Particulate Organic Carbon Distribution in the HAMOCC5 Marine Carbon Cycle Model”, Institut für Meereskunde, University of Kiel, Germany, 2004.
- [41] “Marine productivity changes associated with the Permian-Triassic boundary”, Joint CCSM climate variability and paleoclimate working group meeting, NCAR, Boulder, CO, 2004.
- [42] “Simulated carbon fluxes with the three-dimensional carbon cycle HAMOCC5.1: Forward and inverse approach”, Alfred Wegener Institute, Bremerhaven, Germany, 2004.
- [43] “Variability of the marine carbon cycle”, AOS907 Seminar Series, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, WI, 2003.
- [44] “Parameter estimates of the three-dimensional carbon cycle model LSG/HAMOCC5: Forward and adjoint approach”, Max-Planck-Institut für Meteorologie, Hamburg, Germany, 2003.
- [45] “Particle fluctuations into the deep sea”, Alfred Wegener Institute, Bremerhaven, Germany, 2003.
- [46] “Analysis of interannual fluctuations of the marine carbon cycle”, University of Berlin, Berlin, Germany, 2003.
- [47] “Marine biogeochemical cycles”, AOS405 Senior Capstone Seminar, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, WI, 2002.
- [48] “Simulated Warm Polar Currents during the Middle Permian”, Max Planck Institute for Meteorology, Hamburg, Germany, 2002.
- [49] “Assimilation of marine productivity and chlorophyll a data into an adjoint carbon cycle model”, Alfred Wegener Institute, Bremerhaven, Germany, 2002.
- [50] “Analysis of marine productivity and chlorophyll a with inverse techniques”, International Workshop on Global Ocean Productivity and the Fluxes of Carbon and Nutrients: Combining Observations and Models, JRC-ISPRA, Ispra, Italy, 2002.
- [51] “Simulated Warm Polar Currents during the Middle Permian”, AOS/SSEC Colloquium Series, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, Madison, WI, 2001.
- [52] “Marine Biogeochemical Changes and Climate Changes”, AOS405 Senior Capstone Seminar, Department of Atmospheric and Oceanic Sciences, University of Wisconsin-Madison, WI, 2001.
- [53] “Assimilation von aktiven und passiven Tracern in ein allgemeines Ozeanzirkulationsmodell zur Rekonstruktion der Stroemungsfelder in der Gegenwart und in der Vergangenheit”, Bundesanstalt für Schifffahrt und Hydrographie (BSH), Hamburg, Germany, 2001.
- [54] “Warm Polar Currents during the Permian”, Alfred Wegener Institute, Bremerhaven, Germany, 2001.
- [55] “Simulated warm polar currents during the Late Permian period”, Earth System Processes, GSA-GSL, Edinburgh, Scotland, 2001.
- [56] “Simulated Warm Polar Currents during the Middle Permian”, Department of Geosciences, University of Chicago, Chicago, IL, 2001.

- [57] “Analysis of satellite observations and in situ tracer distributions by using an inverse ocean general circulation model”, AGU 2000 Fall Meeting, San Francisco, CA, 2000.
- [58] “Changes in thermohaline circulation, past and future”, Department of Civil and Environmental Engineering, UW-Madison, 2000.
- [59] “Reconstruction of the glacial ocean circulation with carbon isotopes”, Department of Geology, University of Wisconsin-Madison, Madison, WI, 2000.
- [60] “On the thermohaline circulation”, Department of Physics, University of Wisconsin-Madison, Madison, WI, 2000.
- [61] “Assimilation of $\delta^{13}\text{C}$ carbon isotopes into an OGCM to reconstruct the glacial ocean circulation”, Alfred Wegener Institute, Bremerhaven, Germany, 2000.
- [62] “Rekonstruktion der Ozeanzirkulation des glazialen Atlantiks”, Geo-Forschungs-Zentrum, Potsdam, Germany, 2000.

Grants

Current grants

- [1] National Science Foundation (NSF) EAR-0745817, “Collaborative Research: Chemostratigraphic Analysis of Panthalassic and Tethyan Permian-Triassic Boundary Sections: Assessment of Global Paleooceanographic Dynamics”, 04/01/09 - 03/31/13, PI for UTA with Co-PIs Drs. H. Rowe and C. Winguth, other institutions’ PIs: Tom Algeo (University of Cincinnati), K.H. Freeman (Penn State), T.W. Lyons (University of California-Riverside), B.B. Ellwood (LSU), \$144,871.00 (Winguth portion \$64,298.00).
- [2] National Science Foundation (NSF) EAR-0903071 “Collaborative Research: Global Change and the Terrestrial Paleoclimate Record from Eastern North America: 600,000 years BP to Present”, 09/01/09 – 08/31/13, Co-PI, with Drs. H. Rowe (PI; overall project lead) and M. Hu (Co-PI), other institutions’ PIs: R.L. Edwards (University of Minnesota-Twin Cities), Y. Gao (East Tennessee State University), \$319,518.00.

Pending grants

- [1] Institute of Education Sciences, “Virtuous cycles of learning: Building evidence-based, diagnostic, formative, and standardized assessments for concepts in earth science”, Co-PI for UTA with M. Schwartz (PI), J. Tommerdahl, A. Cavallo, C. Winguth, \$637,531.00.

Previous grants

- [1] University of Texas at Arlington Research Enhancement Program (REP) 2010/2011, “Urban Climate and Climate Change – A new initiative at UTA”, \$6,500.
- [2] National Science Foundation (NSF) EAR-0803979 (transfer of EAR-0628336 from UW-Madison), “Collaborative Research: Dynamics of carbon release and sequestration: Case studies of two early Eocene hyperthermals”, 10/28/2007-9/31/2010, PI for UTA, other institutions’ PIs: Zachos (UCSC), T. Browler, L. Kump (Penn State), R. Zeebe (Hawaii), G. Bowen (Purdue), H. Stoll (Williams College), M. Pagani (Yale), Farley (CALTECH), \$194,301.00.
- [3] National Science Foundation (NSF) EAR-0628336, “Collaborative Research: Dynamics of carbon release and sequestration: Case studies of two early Eocene hyperthermals”, 10/01/2006-9/31/2009, PI for UW-Wisconsin, other institutions’ PIs: Zachos (UCSC), T. Browler, L. Kump (Penn State), R. Zeebe (Hawaii), G. Bowen (Purdue), H. Stoll (Williams College), M. Pagani (Yale), Farley (CALTECH), \$383,254.00.
- [4] NASA Carbon Cycle Science NAG5-11245, “Interannual to decadal air-sea carbon fluxes: Analysis of marine productivity and nutrient data with an inverse carbon cycle model”, 09/01/2001-01/31/2006, PI, Co-PI Henry Niebauer, \$346,891.
- [5] German Research Foundation (DFG) “Evolution des Systems Erde während des jüngeren Palaeozoikums im Spiegel der Sedimentgeochemie, 09/01/2000-08/31/2002, Co-PI, with Drs. E. Maier-Reimer PI and C. Heinze (Co-PI), Max Planck Institute for Meteorology, Germany. Overall lead PI: W. Buggisch, University of Tübingen, Germany), Max Planck Institute was awarded 2 years 2 BAT-IIA (2 PostDoc

Positions).

- [6] European Union (EU 1582774), “Northern Ocean Carbon Flux Exchange Study”, 04/01/2002-03/31/2005, consulting partner, overall lead PI: Dr. Jim Orr, Max Planck Institute for Meteorology was awarded 50% BAT-IIA (50% Graduate Research Assistant) for Patrick Wetzel. (http://www.clamer.eu/index.php?option=com_clamerprojects&ProjectId=28)
- [7] World University Network (WUN) Development Grant 2005, 03/01/2005-12/31/2005, \$11,000.

NSF/NCAR supercomputer allocation resources awarded

(estimated operating cost of 1 GAU is ~1 \$ for NCAR’s IBM supercomputer “bluefire”)

- [1] NCAR CISL Project Number: 37261007, 10/18/11-3/31/12 (extended to 3/31/2014), Lead User: Arne Winguth, Institution: University of Texas at Arlington, Project Title: Collaborative Research: Chemostratigraphic Analysis of Panthalassic and Tethyan Permian-Triassic Boundary Sections: Assessment of Global Paleooceanographic Dynamics, NSF Award Number: EAR-0745817, NSF award PI: Arne Winguth, GAUs allocated: 339,800.
- [2] NCAR CISL Project Number: 37261010, 05/27/2010-8/31/2012 (extended to 2013), Lead User: Arne Winguth, Institution: University of Texas, Arlington, Project Title: Carbon Cycle Response to Rapid Climate Change at the Younger Dryas, NSF award number: EAR 0903071, NSF award PI: Arne Winguth, GAUs allocated: 79,500.
- [3] NCAR CISL Project Number: 37261007, 3/31/2009-3/31/2010, Lead User: Arne Winguth, Institution: University of Texas at Arlington, Project Title: Collaborative Research: Chemostratigraphic Analysis of Panthalassic and Tethyan Permian-Triassic Boundary Sections: Assessment of Global Paleooceanographic Dynamics. NSF award number: EAR 0745817, NSF award PI: Arne Winguth, GAUs allocated: 250,000.
- [4] NCAR CISL Project Number: 37261006, 12/01/2007-8/31/2009 (extended until 8/31/2010), Lead User: Arne Winguth, Institution: University of Texas at Arlington, Project Title: Collaborative Research: Dynamics of carbon release and sequestration: Case studies of two early Eocene hyperthermals, NSF award number: EAR 0803979, NSF award PI: Arne Winguth, GAUs allocated: 152,100 (+76,600 extension).

Teaching Experience

University of Wisconsin-Madison (2000-2007):

- (1) Survey of Oceanography (AOS 105),
- (2) Ocean and Climate (AOS265),
- (3) Marine Biogeochemical Cycles and Climate Change (AOS601),
- (4) Introduction to Physical Oceanography (AOS660),
- (5) Ph.D. seminar (AOS907),
- (6) World University Network Series (WUN) (AOS965).

University of Texas at Arlington (2007-present):

- (1) Earth Systems (GEOL1425),
- (2) Global Warming (GEOL1430),
- (3) Introduction to Oceanography (GEOL1450),
- (4) Oceanography (GEOL3301),
- (5) Paleoclimate and Climate Change (GEOL4325),
- (6) Physical Oceanography (GEOL4365/5410),
- (7) Meteorology and Climatology (GEO4405/5405),
- (8) Technical Session (GEOL5199),
- (9) World University Network Series (www.wun.ac.uk).

Advisors and Advisees

Graduate advisors

Dr. Ernst Maier-Reimer, Max-Planck-Institut fuer Meteorologie, Hamburg, Germany.

Dr. Hartmut Grassl, Max-Planck-Institut fuer Meteorologie, Hamburg, Germany.

Postdoctoral sponsor

Dr. David Archer, University of Chicago, Chicago, IL.

M.S. students supervised

[1] Rebekah Ball (M.S. candidate)

[2] Theophilus Ojerinola (M.S., non-thesis, candidate)

[3] Donna Marshall-Knowles (M.S. candidate and AISD high-school teacher)

[4] Anand Soni (M.S. candidate, M.S. thesis proposal defense passed in 2012, graduation anticipated for Fall 2012)

[5] Mandi Beck (M.S. candidate, co-advised with Dr. Scotese, graduation anticipated for Fall 2012)

[6] Jesse Cope (M.S. 2009; Geologist for Exxon)

[7] Chandrika Nagaraj (M.S., non-thesis, 2010; Computer Science, UTA research web team)

[8] Vinit Asher (M.S., non-thesis, 2009; Computer Science, Computer specialist for Oracle company)

[9] Morgan Franklin (M.S. 2008; Data manager at the USGS)

[10] Jerry Tjiputra (M.S. 2004; continued as Ph.D.)

[11] Matt Howard (M.S. 2005; Consultant for the National Weather Service)

Ph.D. students supervised

[1] Matthew Ray (B.S. to Ph.D. candidate)

[2] Taylor Hughlett (B.S. to Ph.D. candidate, Diagnostic Exam passed in Spring 2012)

[3] Angela Osen (Ph.D. candidate, Diagnostic Exam passed in Fall 2010)

[4] Teresa Sykes (Ph.D. candidate, Ph.D. thesis proposal defense passed in Spring 2011)

[5] J. Tjiputra (Ph.D. 2007; Scientist at the University of Bergen)

[6] M. Vizcaino (Ph.D. 2006, primary supervisor Dr. U. Mikolajewicz; Postdoctoral scientist at Berkley)

[7] G. Schurgers (Ph.D. 2006, primary supervisor Dr. U. Mikolajewicz; Scientist at Lund University)

[8] Patrick Wetzel (Ph.D. 2004, primary supervisor Dr. E. Maier-Reimer; Environmental consultant for wind farms)

Other graduate students advised

[1] Najla Khan, 2009 (current status unknown)

[2] Heather Peto, 2003 (resident, Department of Internal Medicine, University of Texas Medical School at Houston)

[3] Eli Hebert 2002-2003 (current status unknown)

[4] Tanja Casal, 2000-2001 (Ph.D. 2008, postdoctoral associate, University of Miami, Rosenstiel School of Marine and Atmospheric Science)

Undergraduate students advised

[1] Brandy Clark (2010-present, prospective B.S. to Ph.D. candidate)

[2] Todd Kremmin (visiting undergraduate student from Gustavus Adolphus College, 2012)

[3] Andrew Smart (2009-2010)

Advising Activities

Thesis/dissertation committee member since 2007

- [1] Cathina L. Gunn De Rosas (Ph.D. candidate)
- [2] Mark Hull (Ph.D. candidate)
- [3] Neal Alexandrowicz (Ph.D. candidate)
- [4] Jessica Buckles (Ph.D. candidate)
- [5] Jerry Ford (M.S. candidate)
- [6] Andrew LaFavers (Ph.D. candidate)
- [7] Juan Levesque (Ph.D. candidate)
- [8] Clinton Crowley (Ph.D., graduated in 2012)
- [9] Rowan Shishakly (M.S., non-thesis, graduated in 2012)
- [10] Amiratu Yamusah (M.S., graduated in 2011)
- [11] Arghya Goswami (Ph.D., graduated in 2011)
- [12] Whitney Ewerz (M.S., non-thesis, graduated in 2008)

Professional Services

Academic memberships

- [1] Member of the American Geophysical Union
- [2] Member of the Geological Society of America
- [3] Member of the CCSM Paleoclimate and Ocean Working Groups (National Center for Atmospheric Research)
- [4] Member of the Ocean Color Research Team (NASA)

Conference session chairman

- [1] Topical Session 140 (I+II), The Geological Society of America GSA, Annual Meeting in Charlotte, NC, 2012.
- [2] Topical Session 63 (I+II), The Geological Society of America GSA, Annual Meeting in Denver, CO, 2011.
- [3] Session J07, The Joint Meteorological, Oceanic and Cryospheric Assembly (MOCA), Montreal, Canada, 2009.
- [4] Session CL36, European Geophysical Union, Vienna, Austria, 2008.

Editorial boards

Guest Editor: Global and Planetary Change, Elsevier.

Governing and advisory boards and panels

- [1] National Center for Atmospheric Research Computer Information System Laboratory (CISL) High-Performance Computing Advisory Panel (CHAP), 2009-present.
- [2] University Corporation for Atmospheric Research scientific advisory committee for the NSF/NCAR Wyoming Supercomputing Project (NWSC), 2011.
- [3] Vision North Texas (<http://www.visionnorthtexas.org/main.html>), 2009-present.
- [4] University of Texas at Arlington representative for the University Corporation for Atmospheric Research, 2008-present (affiliate member).
- [5] NASA Carbon Cycle Panel, 2002.

Invited research proposal reviewer

- [1] National Science Foundation
- [2] National Aeronautic and Space Administration

- [3] National Oceanic and Atmospheric Administration
- [4] Netherlands Organization for Scientific Research, Netherlands
- [5] German Research Foundation, Germany
- [6] National Environmental Research Council, U.K.

Invited manuscript reviewer for journals

- [1] Nature
- [2] Geology
- [3] Global Biogeochemical Cycles
- [4] Paleoceanography
- [5] Climate Dynamics
- [6] Journal of Climate
- [7] Geophysical Research Letters
- [8] Global and Planetary Change
- [9] Palaeogeography, Palaeoclimatology, Palaeoecology
- [10] Biogeosciences
- [11] Climate of the Past

Academic consultant

- [1] Vision North Texas (<http://www.visionnorthtexas.org/main.html>), 2009-present.
- [2] European Union (EU 1582774), “Northern Ocean Carbon Flux Exchange Study”, 04/01/2002-03/31/2005, consulting partner, overall lead PI: Dr. Jim Orr.
- [3] Environmental Panel for Tarrant Community College, 2009.

Department of Earth and Environmental Sciences committees

- [1] Department of Earth and Environmental Sciences webpage (since 2009, chair)
- [2] Research committee (chair)
- [3] Sustainability committee (chair)
- [4] Departmental colloquium speaker series (chair until 2009)
- [5] Departmental recruitment committee for the department chair and six faculty members
- [6] Curriculum committee
- [7] Environmental and Earth Sciences program graduate studies committee
- [8] Environmental and Earth Sciences program advisory council

University and college committees

- [1] College of Science research committee (member, representative of the Department of Earth and Environmental Sciences)
- [2] College of Science computing committee (member, representative of the Department of Earth and Environmental Sciences)
- [3] College of Science graduate recruitment committee (member, representative of the Department of Earth and Environmental Sciences)
- [4] UTA representative for the University Corporation for Atmospheric Research

Media and other services

- [1] Interviews for (1) Shorthorn, (2) Arlington Citizen Journal, (3) Deutschland-Funk (German Public Radio).
- [2] Research interview for the UTA President’s Office, 2011.
- [3] Hosting student presentation from the Institute of Broadening Participation (<http://www.ibparticipation.org/>) in the Oceanography class (GEOL 1450), 2011.
- [4] Presentation of climate research at a summer program of the Texas Wesleyan University for 8th -11th grade students interested and underrepresented in math and science (TexPREP), 2010.

[5] Hosting indigenous researchers in the Global Warming class (GEOL 1430) as part of the “International Summit on Indigenous Environmental Philosophy”, Anadarko, Oklahoma, 2009.