

CURRICULUM VITA

GOKHAN DANABASOGLU

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Educational Information

- 1982-1986 B. S. in Mechanical Engineering (with Honors), Bogazici University, Istanbul, Turkey.
- 1987-1988 M. S. in Aerospace Engineering Sciences, University of Colorado, Boulder, CO, USA.
- 1989-1992 Ph. D. in Aerospace Engineering Sciences, University of Colorado, Boulder, CO, USA. Advisor: Prof. Sedat H. Biringen.
Thesis title: *Spatial simulation of transition in wall-bounded shear flows: Active control and effects of surface roughness.*

Work History

- 1984 Assistant technician, Turkish National Locomotive Plant, Eskisehir, Turkey (summer training).
- 1985 Assistant technician, Arcelik Refrigerator Plant, Eskisehir, Turkey (summer training).
- 1985-1986 Teaching assistant, Department of Physics, Bogazici University, Istanbul, Turkey.
- 1987-1991 Teaching assistant, Department of Aerospace Engineering Sciences, University of Colorado, Boulder, CO.
- 1987-1992 Research assistant, Computational Fluid Dynamics Group, Department of Aerospace Engineering Sciences, University of Colorado, Boulder, CO.
- 1992-1997 Visiting scientist, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, CO.
- 1997-1998 Associate scientist II, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, CO.
- 1998-2002 Associate scientist III, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, CO.
- 2002-2003 Project scientist I, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, CO.
- 2003-2004 Project scientist II, Oceanography Section, Climate and Global Dynamics Division, National Center for Atmospheric Research, Boulder, CO.
- 2004-2008 Scientist II, Oceanography Section, Climate and Global Dynamics Division, ESSL, National Center for Atmospheric Research, Boulder, CO.

2008-present Scientist III, Oceanography Section, Climate and Global Dynamics Division,
NESL, National Center for Atmospheric Research, Boulder, CO.

Professional Schools Attended

1. The NASA Langley - ICASE Workshop on *Instability and Transition*, Hampton, VA, May 15-June 9, 1989.
2. The NASA Langley - ICASE Workshop on *Transition and Turbulence*, Hampton, VA, July 8-August 2, 1991.
3. The NATO Advanced Study Institute winter school on *Ocean Modeling and Parameterization*, in Centre de Physique des Houches, Les Houches, France, January 20-30, 1998.

Scientific / Technical Accomplishments

- Developed and implemented numerous parameterizations and diagnostic packages in the ocean component of the NCAR Community Climate System Model (CCSM).
- Designed and developed many diagnostic tools for the analysis of the ocean model data for community use.
- Created the first version of the web-based ocean analysis package that has been used extensively at NCAR. This tool makes model results available on the web to university collaborators, thus expediting dissemination of new solutions.
- Published over 50 refereed journal articles that are cited over 1600 times.
- Continuous analysis and evaluation of the CCSM simulations.
- Recently, focusing on mechanisms of multi-decadal variability in the simulated Atlantic meridional overturning circulation and on decadal prediction with CCSM. The latter includes work on hindcast and DART assimilation initialization approaches for decadal prediction experiments.

Honors and Awards

Appointed to *the CLIVAR Working Group on Ocean Model Development (WGOMD)* as a member and co-chair, September 2007-present.

CCSM Distinguished Achievement Award, 2009.

Professional Memberships

American Geophysical Union
American Meteorological Society

Research Grants Awarded

1. NSF Ocean Sciences, U.S. CLIVAR Climate Process Team, Collaborative Research: Gravity Current Entrainment Climate Process Team. October 2003 - September 2006, \$163,911 (NCAR portion), Co-Principal Investigator.

2. NSF Ocean Sciences, U.S. CLIVAR Climate Process Team, Collaborative Research: Interaction of Eddies with Mixed Layers. October 2003 - September 2006, \$163,911 (NCAR portion), Co-Principal Investigator.
3. NSF Ocean Sciences, U.S. CLIVAR Climate Process Team, Collaborative Research: Gravity Current Entrainment Climate Process Team (Renewal). September 2006 - August 2008, \$134,501 (NCAR portion), Co-Principal Investigator.
4. NSF Ocean Sciences, U.S. CLIVAR Climate Process Team, Collaborative Research: Interaction of Eddies with Mixed Layers (Renewal). September 2006 - August 2008, \$134,501 (NCAR portion), Co-Principal Investigator.
5. NOAA Climate Program Office, Investigation of the Mechanisms, Predictability, and Climate Impacts of Decadal Scale AMOC Variability Simulated in CCSM3 and GFDL Coupled Models. October 2008 – September 2010, \$234,146 (NCAR portion), Principal Investigator.
6. NOAA Climate Program Office, Diagnosing Decadal-Scale Climate Variability in Current Generation Coupled Models for Informing Near-Term Climate Change Impacts. August 2009 – July 2012, \$349,481 (\$0 NCAR portion, travel support), Co-Principal Investigator.
7. NOAA Climate Program Office, A Collaborative Investigation of the Mechanisms, Predictability, and Climate Impacts of Decadal-Scale AMOC Variability Simulated in a Hierarchy of Models. August 2009 – July 2012, \$609,009 (NCAR portion), Principal Investigator.
8. NOAA Climate Program Office, Decadal Variability of the Atlantic Meridional Overturning Circulation and its Impact on the Climate: Two Regimes and Rapid Transition. May 2010 – April 2012, \$357,692, (\$0 NCAR portion, travel support), Co-Principal Investigator.
9. NOAA through cooperative agreement, Ocean Initialization with DART. June 2010 – May 2012, \$285,014, Principal Investigator.
10. NSF Ocean Sciences, Collaborative Research: Representing Internal-Wave Driven Mixing in Global Ocean Models. May 2010 – April 2013, \$307,431 (NCAR portion), Co-Principal Investigator.
11. NSF Polar Programs, Collaborative Research: Ocean Mixing Processes Associated with High Spatial Heterogeneity in Sea Ice and Implications for Climate Models. June 2010 – May 2013, \$316,377 (NCAR portion), Co-Principal Investigator.
12. DOE, Regional Projections of Climate at Decadal Time Scales: High Resolution Global Predictions and Regionally Resolved Source-response Studies. October 2010 – September 2013, \$753,381, Co-Principal Investigator.
13. NSF, Type I Collaborative Research: Topographic Control of the Gulf Stream. January 2011 – December 2013, \$239,633, Principal Investigator.
14. DOE, Climate Science for a Sustainable Energy Future (CSSEF). \$4,469,677 (NCAR portion), funded at \$285,000 level for FY11, Co-Principal Investigator.

15. DOE, SciDAC proposal, Collaborative Project: Closing the Oceanic Branch of the Hydrological and carbon Cycles and Sea Level Budget in CESM. July 2011 – June 2014, \$871,293, Principal Investigator, pending.

Community Service

All of the new ocean parameterizations and model improvements that I have developed and implemented in the Community Climate System Model ocean component are available to and, indeed, used by the general university and research communities both nationally and internationally. I also provide model data to these communities. I regularly help many university researchers in answering their parameterization and model questions and provide guidance on how to design their experiments for their particular research questions.

Committee and Panel Service

Member, *the FY2006 NOAA CLIVAR Proposal Review Panel*, the NOAA Climate Program Office, Silver Spring, Maryland, November 16-18, 2005.

Member, *the FY2007 NOAA CLIVAR Proposal Review Panel*, the NOAA Climate Program Office, Silver Spring, Maryland, December 19-20, 2006.

Member, *the CLIVAR Working Group on Ocean Model Development (WGOMD)*, September 2007 – July 2009.

Co-Chair, *the CLIVAR Working Group on Ocean Model Development (WGOMD)*, July 2009 – present.

Co-Chair, *the Community Climate System Model (CCSM) Ocean Model Working Group (OMWG)*, July 2008 – present.

Ex-officio Member, *the JSC / CLIVAR Working Group on Coupled Modelling*, July 2009 – present.

Member, *The U.S. AMOC Program Executive Committee*, October 2010 – present.

Lead, *Task Team on AMOC Mechanisms and Predictability*, The U.S. AMOC Program Executive Committee, October 2010 – present.

Member, *The CISL High Performance Computing Advisory Panel (CHAP)*, October 2010 – present.

Member, Organizing Committee for the CLIVAR WGOMD Workshop on Ocean Mesoscale Eddies: Representations, parameterizations, and observations. U.K. Met Office Hadley Centre, Exeter, U.K., April 27-29, 2009.

Rapporteur, Working Group 6, NCAR Workforce Management Plan, Subcommittee IV: Scientific and Engineering Appointments Retreat, April 13, 2009.

Lead Co-chair, Organizing Committee for the CLIVAR WGOMD-GSOP Workshop on Decadal Variability, Predictability, and Prediction: Understanding the Role of the Ocean. National Center for Atmospheric Research, Boulder, CO, September 20-23, 2010.

Reviewer, NCAR Advanced Study Program Postdoctoral Applications (ongoing).

Professional Meetings

Session Chair, *the 16th Conference on Atmospheric and Oceanic Fluid Dynamics*, Santa Fe, NM, June 25-29, 2007.

Invited Organizer, Coupled Ocean Modeling Session, *GFDL Ocean Climate Model Development Meeting*, Princeton, NJ, October 28-30, 2009.

Session Chair, Dynamics and Impacts of the Meridional Overturning Circulation II session (PO13A), *Ocean Sciences Meeting*, Portland, OR, February 22-26, 2010.

Invited Discussion Leader, Mechanisms and Predictability of AMOC Session, *The 2nd U.S. Atlantic Meridional Overturning Circulation (AMOC) Annual Meeting*, Miami, FL, June 7-9, 2010.

Professional Reviews

For Journals: Atmosphere-Ocean, Climate Dynamics, Geophysical Research Letters, Journal of Atmospheric and Oceanic Technology, Journal of Climate, Journal of Computational Physics, Journal of Geophysical Research - Oceans, Journal of Marine Research, Journal of Physical Oceanography, Ocean Modelling, Ocean Science, Physics of Fluids A, Quarterly Journal of the Royal Meteorological Society.

For Agencies: National Science Foundation Atmospheric Sciences and Physical Oceanography, National Oceanographic and Atmospheric Administration.

Educational and Outreach Activities

Key Lecturer, *the First Latin American School in Ocean and Climate Modeling*, Dichato (Concepcion), Chile, October 16-27, 2000.

Consultant, the United Nations Transfer of Knowledge Through Expatriate Nationals (TOKTEN) / United Nations International Short-term Advisory Resources (UNISTAR) programs. Middle East Technical University, Institute of Marine Sciences, Erdemli, Icel, Turkey (April 28 - May 2, 2003) and Istanbul Technical University, Eurasia Institute of Earth Sciences, Istanbul, Turkey (May 5-8, 2003).

Primary and Topic Organizer, *the Third Annual UCAR/NCAR Junior Faculty Forum*, Boulder, CO, July 27-29, 2005.

Project Mentor, *the Art of Climate Modeling Workshop*, NCAR, Boulder, CO, June 5-16, 2006.

Guest Investigator, Woods Hole Oceanographic Institution, 2007-present.

Senior Advisor, *Early Career Scientists Assembly Junior Faculty Forum*, Boulder, CO, July 8-10, 2008.

Science Fair Judge, Boulder Valley School District, 1996.

Supervisor

Wanli Wu, Associate Scientist II (2004-2006)

Bruce Briegleb, Associate Scientist IV (2006-present)

Steve Yeager, Project Scientist I (2009-present)

Susan Bates, Project Scientist I (2009-present)

Alicia Karspeck, Project Scientist I (2010-present)

Invited Presentations

1. Danabasoglu, G., 1995: Tracer distributions and fluxes in the global ocean. *The Middle East Technical University, Institute of Marine Sciences*, Erdemli, Icel, Turkey, May 23.
2. Danabasoglu, G., 2003: NCAR Community Climate System Model and Exploration of the causes and effects of some coupled model biases. Middle East Technical University, Institute of Marine Sciences, Erdemli, Icel, Turkey, April 28.
3. Danabasoglu, G., 2003: Introduction to subgrid scale parameterizations in ocean general circulation models. Middle East Technical University, Institute of Marine Sciences, Erdemli, Icel, Turkey, April 29.
4. Danabasoglu, G., 2003: Vertical mixing parameterizations in ocean general circulation models. Middle East Technical University, Institute of Marine Sciences, Erdemli, Icel, Turkey, April 30.
5. Danabasoglu, G., 2003: NCAR Community Climate System Model and Exploration of the causes and effects of some coupled model biases. Istanbul Technical University, Eurasia Institute of Earth Sciences, Istanbul, Turkey, May 5.
6. Danabasoglu, G., 2003: Introduction to subgrid scale parameterizations in ocean general circulation models. Istanbul Technical University, Eurasia Institute of Earth Sciences, Istanbul, Turkey, May 6.
7. Danabasoglu, G. and W. G. Large, 2005: Remote impacts of large, positive SST biases along the eastern boundaries of subtropical gyres. *The CLIVAR / OOPC / Argo / GOOS / CPPS Workshop on the South Pacific*, Concepcion, Chile, October 11-14.
8. Danabasoglu, G., 2007: Oceanic thermohaline circulation. *Ball Aerospace and Technologies Corp. Seminar Series*, Boulder, CO, August 3.
9. Danabasoglu, G., 2007: Are there remaining issues precluding the use of terrain-following coordinates in global climate models? *The Workshop on Numerical Methods in Ocean Models*, Bergen, Norway, August 24-25.

10. Danabasoglu, G., 2008: Multi-decadal variability of the Atlantic Meridional Overturning Circulation (AMOC) in CCSM3. *The Aspen Global Change Institute Workshop on Climate Prediction to 2030: Is it possible, what are the scientific issues, and how would those predictions be used?* Aspen, CO, June 22-28.
11. Danabasoglu, G., 2008: Atlantic Meridional Overturning Circulation (AMOC): Variability and potential predictability. *Early Career Scientists Assembly Junior Faculty Forum*, Boulder, CO, July 8-10.
12. Danabasoglu, G., 2009: Reducing coupled model biases through (ocean) model improvements and increased atmospheric model resolution in CCSM4. The CCSM Distinguished Achievement Award Seminar, *the 14th Annual CCSM Workshop*, Breckenridge, CO, June 15-18.
13. Danabasoglu, G., 2009: Introduction and discussion of coupled ocean modeling. *Ocean Climate Model Development Meeting*, GFDL, Princeton, NJ, October 28-30.
14. Danabasoglu, G., 2010: Effects of vertical variations of thickness diffusivity in the CCSM ocean component. *Beyond GM – A symposium on oceanic eddy fluxes*, NCAR, Boulder, CO, March 4.
15. Danabasoglu, G. and S. Yeager, 2010: AMOC multi-decadal variability: Mechanisms, their robustness, and impacts of model configurations. *The 2nd U.S. Atlantic Meridional Overturning Circulation (AMOC) Annual Meeting*, Miami, FL, June 7-9.
16. Danabasoglu, G., 2010: Decadal prediction experiments with CCSM4. *The Center for Australian Weather and Climate Research Decadal Climate Variability and Decadal Climate Prediction Workshop*, Werribee, Australia, June 23-24 (via teleconnection).
17. Danabasoglu, G., 2011: Decadal variability and prediction studies with the Community Climate System Model version 4 (CCSM4). *The 3rd International Workshop on Global Change Projection: Modeling, Intercomparison, and Impact Assessment jointly with the 4th International Workshop on KAKUSHIN Program*, Tsukuba, Japan, March 9-11.
18. Danabasoglu, G., 2011: Atlantic meridional overturning circulation variability and decadal prediction initialization approaches in CESM. *The Aspen Global Change Institute Workshop on Making Sense of the Multi-Model Decadal Prediction Experiments from CMIP5*, Aspen, CO, June 26-July 1.

Publications

A. Thesis

1. Danabasoglu, G., 1992: Spatial simulation of transition in wall-bounded shear flows: Active control and effects of surface roughness. Ph. D. Dissertation, Department of Aerospace Engineering Sciences, University of Colorado, Boulder, CO, 260 pp.

B. Refereed Journal Articles (* From Thesis Work)

1. Biringen, S., and G. Danabasoglu, 1989: Oscillatory flow with heat transfer in a square cavity. *Phys. Fluids A*, **1**, 1796-1812.
2. Biringen, S., and G. Danabasoglu, 1990: Computation of convective flow with gravity modulation in rectangular cavities. *J. Thermophys. Heat Trans.*, **4**, 357-365.
3. Danabasoglu, G., and S. Biringen, 1990: A Chebyshev matrix method for the spatial modes of the Orr-Sommerfeld equation. *Int. J. Num. Meth. in Fluids.*, **11**, 1033-1037.
4. *Danabasoglu, G., A. Saati, and S. Biringen, 1991: Three-Dimensional simulations of incompressible and compressible flow stability. *Computer Phys. Comm.*, **65**, 76-83.
5. *Danabasoglu, G., S. Biringen, and C. L. Streett, 1991: Spatial simulation of instability control by periodic suction blowing. *Phys. Fluids A*, **3**, 2138-2147.
6. *Saiki, E. M., S. Biringen, G. Danabasoglu, and C. L. Streett, 1993: Spatial simulation of secondary instability in plane channel flow: comparison of K- and H-type disturbances. *J. Fluid Mech.*, **253**, 485-507.
7. Danabasoglu, G., J. C. McWilliams, and P. R. Gent, 1994: The role of mesoscale tracer transports in the global ocean circulation. *Science*, **264**, 1123-1126.
8. *Danabasoglu, G., S. Biringen, and C. L. Streett, 1994: Application of the spectral multi-domain method to the Navier-Stokes equations. *J. Comp. Phys.*, **113**, 155-164.
9. Boning, C. W., F. O. Bryan, W. R. Holland, G. Danabasoglu, and J. C. McWilliams, 1995: An overlooked problem in model simulations of the thermohaline circulation and heat transport in the Atlantic Ocean. *J. Climate*, **8**, 515-523.
10. Danabasoglu, G., and J. C. McWilliams, 1995: Sensitivity of the global ocean circulation to parameterizations of mesoscale tracer transports. *J. Climate*, **8**, 2967-2987.
11. McWilliams, J. C., G. Danabasoglu, and P. R. Gent, 1996: Tracer budgets in the warm water sphere. *Tellus*, **48A**, 179-192.
12. Danabasoglu, G., J. C. McWilliams, and W. G. Large, 1996: Approach to equilibrium in accelerated global oceanic models. *J. Climate*, **9**, 1092-1110.
13. Large, W. G., G. Danabasoglu, S. C. Doney, and J. C. McWilliams, 1997: Sensitivity to surface forcing and boundary layer mixing in the NCAR CSM ocean model: Annual-mean climatology. *J. Phys. Oceanogr.*, **27**, 2418-2447.
14. Gent, P. R., F. O. Bryan, G. Danabasoglu, S. C. Doney, W. R. Holland, W. G. Large, and J. C. McWilliams, 1998: The NCAR climate system model global ocean component. *J. Climate*, **11**, 1287-1306.
15. Danabasoglu, G., 1998: On the wind driven circulation of the uncoupled and coupled NCAR climate system ocean model. *J. Climate*, **11**, 1442-1454.

16. Milliff, R. F., W. G. Large, J. Morzel, G. Danabasoglu, and T. M. Chin, 1999: Ocean general circulation model sensitivity to forcing from scatterometer winds. *J. Geophys. Res.*, **104**, 11337-11358.
17. Saravanan, R., G. Danabasoglu, S. C. Doney, and J. C. McWilliams, 2000: Decadal variability and predictability in the midlatitude ocean-atmosphere system. *J. Climate*, **13**, 1073-1097.
18. Danabasoglu, G., and J. C. McWilliams, 2000: An upper-ocean model for short-term climate variability. *J. Climate*, **13**, 3380-3411.
19. Large, W. G., G. Danabasoglu, J. C. McWilliams, P. R. Gent, and F. O. Bryan, 2001: Equatorial circulation of a global ocean climate model with anisotropic horizontal viscosity. *J. Phys. Oceanogr.*, **31**, 518-536.
20. McWilliams, J. C., and G. Danabasoglu, 2002: Eulerian and eddy-induced meridional overturning circulations in the tropics. *J. Phys. Oceanogr.*, **32**, 2054-2071.
21. Danabasoglu, G., 2004: A comparison of global ocean general circulation model solutions obtained with synchronous and accelerated integration methods. *Ocean Modelling*, **7**, 323-341.
22. Gent, P. R., and G. Danabasoglu, 2004: Heat uptake and the thermohaline circulation in the Community Climate System Model, version 2. *J. Climate*, **17**, 4058-4069.
23. Hack, J. J., J. M. Caron, G. Danabasoglu, K. W. Oleson, C. Bitz, and J. E. Truesdale, 2006: CCSM CAM3 climate simulation sensitivity to changes in horizontal resolution. *J. Climate*, **19**, 2267-2289.
24. Large, W. G., and G. Danabasoglu, 2006: Attribution and impacts of upper ocean biases in CCSM3. *J. Climate*, **19**, 2325-2346.
25. Danabasoglu, G., W. G. Large, J. J. Tribbia, P. R. Gent, B. P. Briegleb, and J. C. McWilliams, 2006: Diurnal coupling in the tropical oceans of CCSM3. *J. Climate*, **19**, 2347-2365.
26. Gent, P. R., F. O. Bryan, G. Danabasoglu, K. Lindsay, D. Tsumune, M. W. Hecht, and S. C. Doney, 2006: Ocean chlorofluorocarbon and heat uptake during the 20th century in the CCSM3. *J. Climate*, **19**, 2366-2381.
27. Bryan, F. O., G. Danabasoglu, N. Nakashiki, Y. Yoshida, D.-H. Kim, J. Tsutsui, and S. C. Doney, 2006: Response of the North Atlantic thermohaline circulation and ventilation to increasing carbon dioxide in CCSM3. *J. Climate*, **19**, 2382-2397.
28. Bryan, F. O., G. Danabasoglu, P. R. Gent, and K. Lindsay, 2006: Changes in ocean ventilation during the 21st century in the CCSM3. *Ocean Modelling*, **15**, 141-156.
29. Danabasoglu, G., and J. Marshall, 2007: Effects of vertical variations of thickness diffusivity in an ocean general circulation model. *Ocean Modelling*, **18**, 122-141, doi:10.1016/j.ocemod.2007.03.006.

30. Doney, S. C., S. Yeager, G. Danabasoglu, W. G. Large, and J. C. McWilliams, 2007: Mechanisms governing interannual variability of upper ocean temperature in a global ocean hindcast simulation. *J. Phys. Oceanogr.*, **37**, 1918-1938.
31. Wu, W., G. Danabasoglu, and W. G. Large, 2007: On the effects of parameterized Mediterranean overflow on North Atlantic ocean circulation and climate. *Ocean Modelling*, **19**, 31-52, doi:10.1016/j.ocemod.2007.06.003.
32. Kleypas, J. A., G. Danabasoglu, and J. M. Lough, 2008: Potential role of the ocean thermostat in determining regional differences in coral reef bleaching events. *Geophys. Res. Lett.*, **35**, L03613, doi:10.1029/2007GL032257.
33. Danabasoglu, G., R. Ferrari, and J. C. McWilliams, 2008: Sensitivity of an ocean general circulation model to a parameterization of near-surface eddy fluxes. *J. Climate*, **21**, 1192-1208.
34. Jochum, M., G. Danabasoglu, M. Holland, Y.-O. Kwon, and W. G. Large, 2008: Ocean viscosity and climate. *J. Geophys. Res.*, **113**, C06017, doi:10.1029/2007JC004515.
35. Danabasoglu, G., 2008: On multi-decadal variability of the Atlantic meridional overturning circulation in the Community Climate System Model version 3 (CCSM3). *J. Climate*, **21**, 5524-5544, doi:10.1175/2008JCLI2019.1.
36. Griffies, S. M., A. Biastoch, C. Boning, F. Bryan, G. Danabasoglu, E. P. Chassignet, M. H. England, R. Gerdes, H. Haak, R. W. Hallberg, W. Hazeleger, J. Jungclaus, W. G. Large, G. Madec, A. Pirani, B. L. Samuels, M. Scheinert, A. S. Gupta, C. A. Severijns, H. L. Simmons, A. M. Treguier, M. Winton, S. Yeager, and J. Yin, 2009: Coordinated Ocean-ice Reference Experiments (COREs). *Ocean Modelling*, **26**, 1-46, doi:10.1016/j.ocemod.2008.08.007.
37. Eden, C., M. Jochum, and G. Danabasoglu, 2009: Effects of different closures for thickness diffusivity. *Ocean Modelling*, **26**, 47-59, doi:10.1016/j.ocemod.2008.08.004.
38. Danabasoglu, G., S. Peacock, K. Lindsay, and D. Tsumune, 2009: Sensitivity of CFC-11 uptake to physical initial conditions and interannually varying surface forcing in a global ocean model. *Ocean Modelling*, **29**, 58-65, doi:10.1016/j.ocemod.2009.02.011.
39. Danabasoglu, G., and P. R. Gent, 2009: Equilibrium climate sensitivity: Is it accurate to use a slab ocean model? *J. Climate*, **22**, 2494-2499, doi:10.1175/2008JCLI2596.1.
40. Legg, S., B. Briegleb, Y. Chang, E. P. Chassignet, G. Danabasoglu, T. Ezer, A. L. Gordon, S. Griffies, R. Hallberg, L. Jackson, W. Large, T. M. Ozgokmen, H. Peters, J. Price, U. Riemenschneider, W. Wu, X. Xu, and J. Yang, 2009: Improving oceanic overflow representation in climate models: The Gravity Current Entrainment Climate Process Team. *BAMS*, **90**, 657-670.
41. Meehl, G.A., L. Goddard, J. Murphy, R. J. Stouffer, G. Boer, G. Danabasoglu, K. Dixon, M. A. Giorgetta, A. Greene, E. Hawkins, G. Hegerl, D. Karoly, N. Keenlyside, M. Kimoto, B. Kirtman, A. Navarra, R. Pulwarty, D. Smith, D. Stammer, and T. Stockdale, 2009: Decadal prediction: Can it be skillful? *BAMS*, **90**, 1467-1485.

42. Danabasoglu, G., W. G. Large, and B. P. Briegleb, 2010: Climate impacts of parameterized Nordic Sea overflows. *J. Geophys. Res.*, 115, C11005, doi:10.1029/2010JC006243.
43. Fox-Kemper, B., G. Danabasoglu, R. Ferrari, S. M. Griffies, R. W. Hallberg, M. M. Holland, M. E. Maltrud, S. Peacock, and B. L. Samuels, 2011: Parameterization of mixed layer eddies. III: Implementation and impact in global ocean climate simulations. *Ocean Modelling*, **39**, 61-78, doi:10.1016/j.ocemod.2010.09.002.
44. Tsumune, D., M. Aoyama, K. Hirose, F. O. Bryan, K. Lindsay, and G. Danabasoglu, 2011: Transport of ¹³⁷Cs to the Southern Hemisphere in an ocean general circulation model. *Prog. Oceanogr.*, **89**, 38-48, doi:10.1016/j.pocean.2010.12.006.
45. Gent, P. R., G. Danabasoglu, L. J. Donner, M. M. Holland, E. C. Hunke, S. R. Jayne, D. M. Lawrence, R. B. Neale, P. J. Rasch, M. Vertenstein, P. H. Worley, Z.-L. Yang, and M. Zhang, 2011: The Community Climate System Model version 4. *J. Climate*, **24**, 4973-4991, doi: 10.1175/2011JCLI4083.1.
46. Gent, P. R., and G. Danabasoglu, 2011: Response to increasing Southern Hemisphere winds in CCSM4. *J. Climate*, **24**, 4992-4998, doi:10.1175/JCLI-D-10.05011.1.
47. Danabasoglu, G., S. Bates, B. P. Briegleb, S. R. Jayne, M. Jochum, W. G. Large, S. Peacock, and S. G. Yeager, 2012: The CCSM4 ocean component. *J. Climate* (in press).
48. Yeager, S. G., and G. Danabasoglu, 2012: Sensitivity of Atlantic meridional overturning circulation variability to parameterized Nordic Sea overflows in CCSM4. *J. Climate* (in press).
49. Bitz, C. M., K. M. Shell, P. R. Gent, D. Bailey, G. Danabasoglu, K. C. Armour, M. M. Holland, and J. T. Kiehl, 2012: Climate sensitivity in the Community Climate System Model version 4. *J. Climate* (in press).
50. Yeager, S., A. Karspeck, G. Danabasoglu, J. Tribbia, and H. Teng, 2012: A decadal prediction case study: Late 20th century North Atlantic Ocean heat content. *J. Climate* (in press).
51. Danabasoglu, G., S. G. Yeager, Y.-O. Kwon, J. J. Tribbia, A. S. Phillips, and J. W. Hurrell, 2012: Variability of the Atlantic meridional overturning circulation in CCSM4. *J. Climate* (in press).

C. Other External Refereed Publications

1. Biringen, S., G. Danabasoglu, and T. K. Eastman, 1990: A finite difference method with direct solvers for thermally-driven cavity problems. *Numerical Simulation of Oscillatory Convection in Low-Pr Fluids*, B. Roux, Ed., NNFM **27**, 35-42, Vieweg, Braunschweig.
2. Danabasoglu, G., S. Biringen, and C. L. Streett, 1990: Numerical simulation of spatially-evolving instability. *Instability and Transition*, M. Y. Hussaini and R. Voigt, Eds., 394-404, Springer-Verlag, New York.

3. Danabasoglu, G., S. Biringen, and C. L. Streett, 1992: A spectral multi-domain code for the Navier-Stokes equations. *Instability, Transition and Turbulence*, M. Y. Hussaini, A. Kumar, and C. L. Streett, Eds., 283-293, Springer-Verlag, New York.
4. Danabasoglu, G., S. Biringen, and C. L. Streett, 1993: Simulation of instabilities in a boundary layer with a roughness element. *13th Int. Conf. Num. Meth. in Fluid Dyn., Proceedings*, M. Napolitano and F. Sabetta, Eds., 205-209, Springer-Verlag, Berlin.
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