Stephen M. Griffies

(a) Professional Preparation

- Louisiana State University: BS, Chemical Engineering, 1986
- Northwestern University: MS, Applied Mathematics, 1987
- University of Pennsylvania: PhD, Physics, 1993
- NOAA GFDL: Visiting Scientist & UCAR Climate Change Postdoctoral Fellow, 1993-1996

(b) Professional Experience:

- 2011-present: Physical Scientist GS-15/ZP-V, NOAA Geophysical Fluid Dynamics Laboratory
- 2012 (Jun-Aug): Visiting scientist National Center for Atmospheric Research, Boulder USA
- 2011 (Jan-Jun): CSIRO Distinguished Visiting Scientist Fellow, Hobart, Australia
- 2009 (Mar): Visiting Professor, Universite catholique de Louvain, Belgium
- 2005 (Jan-Nov): Visiting Scientist, CSIRO Marine and Atmospheric Research, Hobart, Australia
- 2005-present: co-Leader, Ocean Model Development Team, Geophysical Fluid Dynamics Lab.
- 2001-2005: Group Leader, Oceans and Climate Group, Geophysical Fluid Dynamics Laboratory
- 2001-2002: co-Leader, Ocean Model Development Team, Geophysical Fluid Dynamics Lab.
- 2000-2001: Leader, Climate Model Development Team, Geophysical Fluid Dynamics Laboratory
- 2000-2011: Physical Scientist GS-14, NOAA Geophysical Fluid Dynamics Laboratory
- 1997-2000: Physical Scientist GS-13, NOAA Geophysical Fluid Dynamics Laboratory
- 1996-1997: Physical Scientist GS-12, NOAA Geophysical Fluid Dynamics Laboratory

Five publications most closely related to current proposal

Griffies, S.M. and R.J. Greatbatch, 2012: Physical processes that impact global mean sea level in ocean climate models. *Ocean Modelling*, **51**, 37-72.

Griffies, S.M., M. Winton, L.J. Donner, L.W., L.W. Horowitz, S.M. Downes, R. Farneti, A. Gnanadesikan, W.J. Hurlin, H.-C. Lee, Z. Liang, J.B. Palter, B.L. Samuels, A.T. Wittenberg, B.L. Wyman, J. Yin, and N.T. Zadeh, 2011: GFDL's CM3 coupled climate model: characteristics of the ocean and sea ice simulations. *Journal of Climate*, **24**, 3520-3544.

Farneti, R., T.D. Delworth, A.J. Rosati, S.M. Griffies, and F. Zeng, 2010: The role of mesoscale eddies in the rectification of the Southern Ocean response to climate change. *Journal of Physical Oceanography*, **40**, 1539-1557.

Griffies, S. M., A. Biastoch, C. Böning, 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. Sen Gupta, C. A. Severijns, H. L. Simmons, A. M. Treguier, M. Winton, S. Yeager, and J. Yin, 2009: Coordinated ocean-ice reference experiments (CORE**s**). *Ocean Modelling*, **26(1-2)**, 1-46, doi:10.1016/j.ocemod.2008.08.007, 2009.

Griffies, S.M., A. Gnanadesikan, K.W. Dixon, J.P. Dunne, R. Gerdes, M.J. Harrison, A. Rosati, J. Russell, B.L. Samuels, M.J. Spelman, M. Winton, R. Zhang, Formulation of an ocean model for global climate simulations, *Ocean Science*, 1:45-79, 2005

Five other publications

Ferrari, R., S.M. Griffies, A.J.G. Nurser, and G.K. Vallis, 2010: Boundary value problem for the parameterized mesoscale eddy transport, *Ocean Modelling*, **32**, 143-156.

Griffies, S.M., Fundamentals of Ocean Climate Models. *Princeton University Press, 2004*.

Griffies, S.M., C. Boening, F.O. Bryan, E.P. Chassignet, R. Gerdes, H. Hasumi, A. Hirst, A.-M. Treguier, and D. Webb, Developments in Ocean Climate Models, *Ocean Modelling*, 2:123-192, 2000

Griffies, S.M., The Gent-McWilliams skew-flux. *Journal of Physical Oceanography*, 28: 831-841, 1998.

Griffies. S.M. and K. Bryan, Predictability of North Atlantic multidecadal climate variability. *Science*, 275: 181-184, 1997.

Synergistic activities

- Co-developer of the Modular Ocean Model versions 2,3,4 and 5. Technical reports documenting these codes include Pacanowski, R.C. and S.M. Griffies, The MOM3 Manual, 1999; Griffies,

S.M., M.J. Harrison, R.C. Pacanowski, and A. Rosati, A Technical Guide to MOM4; S.M. Griffies, Elements of MOM4p1, 2009; and S.M. Griffies, Elements of MOM, 2012.

- Member, CLIVAR/CLiC/SCAR Southern Ocean Region Implementation Panel
- Co-Chair of the Clivar Working Group for Ocean Model Development (2004-2009)
- Associate Editor, *Ocean Modelling*, 2007-present
- Associate Editor, *Ocean Science*, 2004-2007

(e) Collaborators and Other Affiliations

A.Adcroft(Princeton), H.Aiki(JAMSTEC), M.Alexander(NOAA), W.Anderson(GFDL), P. Bouruet-Aubertot (LOCEAN), J.Austin(UCAR), H.Banks(UKMO), V.Balaji(Princeton), R.Benson(GFDL), M.Benton(Bergen), D.Bi(CSIRO), D.Bianchi(McGill), R.Biastoch(IFM-GEOMAR), N.Bindoff(UTAS), N.Bond(UW), C.Böning(IFM-GEOMAR), K.Brander(DTU-Aqua), B.Briegleb (NCAR), F.Bryan (NCAR), Y.Chang(Broward), E.Chassignet(FSU), J.Church(CSIRO), W.Collier(C&A Tech.), W.Cooke (HPTi), E.Curchitser(Rutgers), G.Danabasoglu(NCAR), S.Danilov (AWI), E.Deleersnijder(Louvain), T.Delworth(GFDL), S.Denvil(LOCEAN), M.Dix(CSIRO), K.Dixon (GFDL), L.Donner(GFDL), S. Downes(ANU), J.Dunne(GFDL), H.Drange(Bergen), S.Elipot(NOC), M. England(UNSW), T.Ezer(Old Dominion), R.Farneti(ICTP), R. Ferrari(MIT), C. Franklin(CSIRO), B.Fox-Kemper (CU-Boulder), S. Freidenreich(GFDL), T.Froelicher(Princeton), E. Galbraith(McGill), R.Gerdes(AWI), S.Gille(Scripps), I.Ginis (URI), P.Ginoux(GFDL), A.Gnanadesikan (JHU), J.Golaz(GFDL), M. Golebiewski(CSIRO), A. Gordon(Columbia), R.Greatbatch(IFM-GEOMAR), J.Gregory(Reading), H. Haak(MPI-M), M.Haltuch (NWFSC), E.Hanert(Louvain), R.Hallberg(GFDL), N. Hanna(CSIRO), J. Hare (NEFSC), C.Hay (Toronto), M.Harrison(GFDL), W.Hazeleger(KNMI), I.Held (GFDL), R.Hemler (GFDL), M.Herzfeld (CSIRO), A.Hirst(CSIRO), A.Hollowed(NMFS), M.Holland (NCAR), L.Horowitz(GFDL), A.He (NCAR), W.Hurlin(GFDL), M.Ilicak (Bergen), L.Jackson(Hadley Center), J.John(GFDL), J.Jungclaus (MPI-M), S.Klien (LLNL), A.Klocker(UTAS), R.Kopp (Princeton), E. Kowalczyk(CSIRO), J.Krasting (GFDL), E.Kunze(Victoria), E.Y.Kwon(UCLA), A.Langenhorst (GFDL), W.G.Large(NCAR), H.C.Lee (HPTi), P.Lehodey(MEMMS), S.Legg(Princeton), S.Levin (Princeton), H. Levy (GFDL), Z.Liang(HPTi), S.J.Lin(GFDL), J.S.Link(NMFS), C.Little(Princeton), K.Lorbacher (CSIRO), J.MacKinnon(Scripps), G.Madec(CNRS), M.Maltrud(LANL), S.Malyshev (Princeton), S. Marsland(CAWCR), T.Martin (UW), T.McDougall(CSIRO), P.C.Milly(USGS), Y.Ming (GFDL), J.Mitrovica(Harvard), A.Naveira Garabato (NOC), A.J.G.Nurser(SOC), S.O'Farrell(CSIRO), J.Overpeck (Arizona), T.Ozgokmen(Miami), R. Pacanowski(GFDL), J.Palter(McGill), S.Peacock(Chicago), W.Perrie (Canada), H. Peters(ESR), P. Phillips(GFDL), A.Pirani(CLIVAR), H.Phillips(UTAS), R. Pincus (ESRL) J.Ploshay(GFDL), J.Price (WHOI), V.Ramaswamy(GFDL), H.Rashid(CSIRO), U.Riemenschneider (WHOI), K.Rodgers (Princeton), A.Rosati(GFDL), K.Rose(LSU), M.Rugenstein (Utrecht), J. Russell (Arizona), R. Rykaczewski(SC), T.Sanford(UW), J.Sarmiento(Princeton), M.Scheinert (IFM-GEOMAR), G.Schmidt (NASA), B.Samuels(GFDL), J.Schroter(AWI), D.Schwarzkoph(GFDL), F.Schwing(SWFSC), C.Seman (GFDL), L.Sentman(GFDL), A.Sen Gupta(UNSW), C.A.Severijns(KNMI), E.Shevliakova (Princeton), J.Simeon(LSCE), M.Schmidt(IOW), R.Slater(Princeton), M. Spelman(GFDL), D. Stammer (Hamburg), W.Stern(GFDL), D.Stevens(E.Anglia), C.Stock (GFDL), R.Stouffer (GFDL), L.St.Laurent (FSU), K. Sullivan (AOML), Z.Sun(CAWCR), A.M.Treguier (IFREMER), H.Tsujino(MRI), J.R.Toggweiler (GFDL), P.Uhe(CSIRO), P.Uotila(CAWCR), G.Vallis (Princeton), G.Vecchi(GFDL), A.Venaille (CNRS), P.Vohralik(CSIRO), I.Watterson(CSIRO), F.Werner (SWFSC), R.J.Wilson(GFDL), M.Winton (GFDL), A.Wittenberg(GFDL), W.Wu(NCAR), B.Wyman (GFDL), X.Xu (USM), H.Yan (WHOI), J. Yang(WHOI), S.Yeager(NCAR), J.Yin (FSU), N.Zadeh(HPTi), F.Zeng(GFDL), R.Zhang (GFDL), M. Zhao (GFDL), X.Zhou(Duke), H.Zhou(CAWCR)

Graduate and Postdoctoral Advisors: M. Cvetic (UPenn), K. Bryan (NOAA/GFDL retired, Princeton)
Postdoctoral Advisees: S.Smith co-advisor (NYU); H. Simmons (Alaska) Yalin Fan (Princeton)
Graduate Advisor: J. Kurian: External thesis examiner (UCLA); A. Klocker: co-advisor (ANU Canberra); M. Bates: co-advisor (MIT); M. Bueti: co-advisor, University of Rhode Island, PhD student, 2011-present.