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## Stephen G. Yeager

[www.cgd.ucar.edu/oce/yeager/yeager.html](http://www.cgd.ucar.edu/oce/yeager/yeager.html)

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### EDUCATION

2013 Ph.D., University of Colorado (Atmospheric and Oceanic Science)  
1998 M.Sc., Brown University (Physics)  
1993 B.A., Dartmouth College (Physics)

### APPOINTMENTS

2018- Project Scientist III, CGD, NCAR  
2013-18 Project Scientist II, CGD, NCAR  
2009-13 Project Scientist I, CGD, NCAR  
2004-09 Associate Scientist III, CGD, NCAR  
1998-04 Associate Scientist II, CGD, NCAR

### HONORS AND AWARDS

2016 *Eos* Research Spotlight, "Atlantic Sea Ice Could Grow in the Next Decade", American Geophysical Union, 4 February 2016 (for Yeager et al., *GRL*, doi:10.1002/2015GL065364, 2015).  
2014 Outstanding Publication Award, University Corporation for Atmospheric Research (UCAR), December 2014 (for Yeager et al., *J. Climate*, doi:10.1175/JCLI-D-11-00595.1, 2012).  
2014 Special Recognition Award, CGD  
2010 Special Recognition Award, Computational & Information Systems Lab (CISL)  
1997 University Fellowship, Brown University  
1993 *Summa cum laude* with high honors  
1993 Haseltine Physics prize, Dartmouth College  
1992 Phi Beta Kappa, Dartmouth College  
1990/2/3 Rufus Choate Scholar (top 5% of class), Dartmouth College  
1991 Second Honor Group (top 15% of class), Dartmouth College

### SERVICE AND LEADERSHIP

2020- **Co-chair:** CESM Earth System Prediction Working Group  
2020 **Convener/Organizer:** Seasonal to Decadal Climate Prediction Session, American Meteorological Society (AMS) Centennial Meeting, January 2020, Boston  
2019 **Co-Convener:** WCRP Townhall on subseasonal to decadal prediction, American Geophysical Union (AGU) Fall Meeting, December 2019, San Francisco  
2019 **Expert Panel Member:** 2019 UCAR Journalism Summit  
2019 **Mentor:** Daniela Faggiani Dias (NCAR Advanced Study Program Graduate Student Visitor; 06/2019-09/2019)  
2019- **Co-lead:** Earth System Prediction Project, CGD  
2019- **Steering Committee Member:** iHESP (International Laboratory for High-Resolution Earth System Prediction)  
2019- **Co-chair:** Decadal Climate Prediction Project (DCPP) Panel, World Climate Research Programme (WCRP)  
2018-19 **Supervisor:** Elizabeth Maroon  
2018-19 **Coordinator:** 2018-2019 CGD Seminar Series

- 2018 **Review Panel Member:** DOE Regional and Global Model Analysis (RGMA) Panel Review (Washington D.C.)
- 2018 **Organizing Committee:** Seasonal to Decadal science program, International Conference on Subseasonal to Decadal Prediction (September 2018, Boulder, CO)
- 2018- **Panel Member:** Ocean Model Development Panel (OMDP), International CLIVAR
- 2017 **Review Panel Member:** NOAA-OOMD Transport Mooring Review Expert Panel (Miami, FL)
- 2014- **Supervisor:** Who Kim
- 2015-16 **Supervisor:** Fred Castruccio
- 2015-16 **Chair:** Task Team 3, U.S. AMOC Executive Committee
- 2015 **External Reviewer:** German MiKlip Decadal Prediction Project renewal
- 2015 **Organizing Committee:** UK RAPID/US AMOC International Science Meeting (Bristol, UK)
- 2015 **Mentor:** Hrishikesh Chandanpurkar (NCAR Advanced Study Program Graduate Student Visitor; 08/2015-01/2016)
- 2015 **Participant:** UCAR Manager Mojo leadership program
- 2014-15 **Committee Member:** Organizing Committee of the Community Earth System Model (CESM) Tutorial Workshop (Boulder, CO)
- 2014 **Committee Member:** Organizing Committee of the U.S. AMOC Science Team Meeting (Seattle, WA)
- 2013-15 **Vice-Chair:** Task Team 3, U.S. AMOC Executive Committee
- 2004-09 **Science Liaison:** Community Climate System Model Ocean Model Working Group
- 1993-95 **Volunteer:** Peace Corps (Fiji) secondary school math/science teacher

**Member:** American Meteorological Society, American Geophysical Union, Sigma Xi, and Phi Beta Kappa

**Reviewer:** *Journal of Advances in Modeling Earth Systems, Nature, Nature Geoscience, Dynamics of Atmospheres and Oceans, Journal of Climate, Journal of Physical Oceanography, Ocean Modelling, Ocean Science, Geophysical Research Letters, Journal of Geophysical Research, Bulletin of the American Meteorological Society, Climate Dynamics, Quarterly Journal of the Royal Meteorological Society, Scientific Reports, WIREs Climate Change, the National Science Foundation (NSF), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the UK Natural Environment Research Council (NERC).*

#### COMPUTING AWARDS

- 05/2020 CISL NSC (NCAR Strategic Capability) award for *Multiyear Earth System Prediction using CESM2*; Project Lead: Yeager, Award: 18M core-hours on Cheyenne.
- 02/2017 NCAR Computational & Information Systems Laboratory Accelerated Scientific Discovery. *Predicting Near-Term Changes in the Likelihood of Climate Extremes: Initialized Decadal Climate Prediction Using Large Ensemble*; Project Lead: Yeager; Award: 35.4M core-hours on Cheyenne.

#### ACTIVE FUNDING AWARDS

- 09/01/2020-08/31/2023 **NOAA CVP:** S. Yeager (NCAR, lead PI), Cheng, W. (UW), P. Chang (TAMU), and G. Danabasoglu (NCAR). *Understanding the relative roles of Atlantic vs. Pacific coupled dynamics in initialized decadal prediction*, \$881K.
- 03/01/2019-02/28/2024 **iHESP:** P. Chang (TAMU), Director. *International Laboratory for High-resolution Earth System Prediction*, \$2M/year, (co-lead and funded participant).

- 10/01/2017-09/30/2020 **NSF**: Kwon, Y.-O. (WHOI), C. Frankignoul (WHOI), G. Danabasoglu (NCAR), and S. Yeager (NCAR). *Collaborative Research: The influence of Arctic-lower-latitude interactions on weather and climate variability: mechanisms, predictability, and prediction*, \$676K. (co-I and funded participant).
- 07/01/2016-06/30/2019 **NOAA CVP/DOE RGCM**: Cheng, W. (UW), D. Zhang (UW), W. Weijer (LANL), G. Danabasoglu (NCAR), S. Yeager (NCAR), and J. Chiang (Berkeley). *Understanding the freshwater budget of the Atlantic Ocean: Controls, Responses, and the role of the AMOC*, \$1.2M. (co-PI and funded participant).

#### COMPLETED FUNDING AWARDS

- 11/01/2012-02/28/2019 **NSF**: Danabasoglu G. (NCAR), J. Anderson (NCAR), G. Brantstator (NCAR), K. Lindsay (NCAR), J. Tribbia (NCAR), C. Frankignoul (WHOI), Y.-O. Kwon (WHOI), M. Zhang (SUNY), S. Yeager (NCAR), A. Karspeck (NCAR), M. Long (NCAR), L. Jiang (NCAR), and H. Teng (NCAR). *Collaborative Research EaSM2: Mechanisms, Predictability, Prediction, and Regional and Societal Impacts of Decadal Climate Variability*, \$2.8M. (co-I and funded participant).
- 08/01/2013-07/31/2016 **NOAA CVP**: Danabasoglu, G. (NCAR), T. Delworth (GFDL), Y.-O. Kwon (WHOI), A. Karspeck (NCAR), S. Yeager (NCAR), J. Tribbia (NCAR), R. Msadek (GFDL), A. Rosati (GFDL), and C. Frankignoul (WHOI). *A Collaborative Multi-model Study: Understanding AMOC Variability Mechanisms and Their Impacts on Decadal Prediction*, \$1.8M. (co-PI and funded participant).
- 08/01/2013-07/31/2016 **NOAA CVP**: Chang, P. (TAMU), G. Danabasoglu (NCAR), and S. Yeager (NCAR). *Collaborative Research: Understanding Changes in the Atlantic Meridional Overturning Circulation (AMOC) during the 20<sup>th</sup> Century using IPCC AR5 Model Ensembles*, \$860K. (co-PI and funded participant).
- 08/01/2009-07/31/2013 **NOAA CVP**: Danabasoglu G. (NCAR), J. Tribbia (NCAR), T. Delworth (GFDL), A. Rosati (GFDL), and J. Marshall (MIT). *A Collaborative Investigation of the Mechanisms, Predictability, and Climate Impacts of Decadal Scale AMOC Variability Simulated in a Hierarchy of Models*, \$2.5M. (funded participant).

#### TEACHING & UNIVERSITY VISITORSHIPS

- 12/2017 Texas A&M University, College Station, TX. *Half-week visit to give two guest lectures and collaborate with Dr. Ping Chang's group.*
- 09/2017 National Centre for Atmospheric Science (NCAS) Visiting Scientist Programme, University of Reading, Reading, UK. *Two-week visit to attend ACSIS meeting and collaborate with NCAS scientists.*

#### INVITED/KEYNOTE TALKS & SEMINARS

- 12/2019 "The abyssal origins of North Atlantic decadal predictability", AGU Fall Meeting, San Francisco, CA.
- 06/2019 "Interannual-to-decadal Earth System Prediction at NCAR", National Earth System Prediction Capability Workshop, College Park, MD.
- 03/2019 "The role of barotropic dynamics in Atlantic decadal predictability", Joint US-Japan Workshop on Climate Change & Variability, Honolulu, HI.
- 11/2018 "What explains skillful decadal prediction of North Atlantic SST?", Blue-Action Annual Meeting, Almada, Portugal.
- 09/2018 "Near-term Hydroclimate Outlooks based on the Community Earth System Model (CESM) Decadal Prediction Large Ensemble (DPLE)", 2<sup>nd</sup> International Conference on Subseasonal to Decadal Prediction, Boulder, CO.
- 12/2017 "Decadal Climate Prediction in the Large Ensemble Limit", fall AGU meeting, New Orleans, LA.

- 09/2017 “Decadal Climate Prediction in the Large Ensemble Limit”, Department of Meteorology Seminar, University of Reading, Reading, UK.
- 03/2017 “Decadal Climate Prediction using CESM”, International Forum on High-resolution Global Earth System Prediction Studies, Qingdao National Laboratory for Marine Science, Qingdao, China.
- 06/2016 “Decadal prediction with the CESM model”, Workshop on Climate Prediction in the Arctic-Atlantic sector, University of Bergen, Bergen, Norway.
- 06/2016 “What caused the Atlantic cold blob of 2015?”, US CLIVAR *Variations* Webinar Series. [<https://usclivar.org/archived-webinars>]
- 05/2016 “Mechanisms associated with predictable North Atlantic variability”, US CLIVAR Paleo AMOC Workshop, Boulder, CO.
- 01/2016 “Evaluation of CESM ocean-ice hindcast experiments forced by JRA55 data”, CLIVAR Ocean Model Development Panel extended meeting on forcing ocean-ice models, Yokohama, Japan.
- 06/2015 “Predicted Growth of Atlantic Sea-ice in the Coming Decade”, Aspen Global Change Institute workshop on decadal prediction, Aspen, CO.
- 03/2014 “On the dynamics of large-scale Atlantic circulation variability”, Texas A&M University, College Station, TX; Department of Atmospheric Sciences Seminar.
- 10/2013 “On the dynamics of historical AMOC variability”, NCAR, Boulder, CO; Climate and Global Dynamics Seminar.
- 09/2013 “The past, present, and future of the meridional overturning circulation in the Atlantic”, University of Colorado, Boulder, CO; Department of Atmospheric and Oceanic Science, Oceanography Seminar.
- 07/2013 “On the dynamics of historical AMOC variability”, U.S. AMOC/U.K. RAPID International Science Meeting, Baltimore, MD.
- 06/2011 “A CCSM4 decadal prediction case study: Abrupt North Atlantic ocean heat content change in the 1990s”, Aspen Global Change Institute workshop on decadal prediction, Aspen, CO.
- 11/2008 “Addressing the Gulf Stream problem in the 1<sub>o</sub> POP model”, University of Colorado, Boulder, CO; Department of Atmospheric and Oceanic Science, Oceanography Seminar.
- 10/2005 “Equatorial thermocline variability related to subtropical Atlantic spine formation zones”, U.S. CLIVAR Tropical Atlantic Variability workshop, Venice, Italy.

#### PEER-REVIEWED PUBLICATIONS

- Richter, J. H., K. Pegion, L. Sun, H. Kim, J. M. Caron, A. Glanville, S. **Yeager**, W. Kim, and A. Tawfik, 2020: Subseasonal prediction with CESM1 and the role of stratospheric variability on subseasonal skill, *Weather and Forecasting*, submitted.
- Ortega, P., J. Robson, M. Menary, R. Sutton, A. Blaker, A. Germe, J. Hirschi, B. Sinha, L. Hermanson, and S. **Yeager**, 2020: Labrador Sea density as a precursor of multi-decadal variability in the North Atlantic: a multi-model context, *Clim. Dyn.*, submitted.
- Kim, W., S. **Yeager**, and G. Danabasoglu, 2020: Was the Great Salinity Anomaly of the 1970s induced by an extreme Fram Strait Sea-Ice Export? *J. Climate*, submitted.
- Yeager**, S. G., 2020: The abyssal origins of North Atlantic decadal predictability, *Clim. Dyn.*, in review.
- Roberts, M., et al., 2020: Sensitivity of the Atlantic Meridional Overturning Circulation to Model Resolution in CMIP6 HighResMIP Simulations and Implications for Future Changes, *JAMES*, in revision.
- Chassignet, E., S. **Yeager**, B. Fox-Kemper, et al., 2020: Impact of horizontal resolution on global ocean-sea-ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2 (OMIP-2), *Geosci. Mod. Dev.*, in revision.
- Tsujino, H., et al., 2020: Evaluation of global ocean–sea-ice model simulations based on the experimental protocols of the Ocean Model Intercomparison Project phase 2

- (OMIP-2), *Geosci. Mod. Dev.*, in revision.
- Zhang, S., et al., 2020: Optimizing High-Resolution Community Earth System Model on a Heterogeneous Many-Core Supercomputing Platform (CESM-HR\_sw1.0), *Geosci. Mod. Dev.*, in revision.
- Christensen, H. M., J. Berner, and S. G. **Yeager**, 2020: The value of initialisation on decadal timescales: state dependent predictability in the CESM Decadal Prediction Large Ensemble, *J. Climate*, in revision.
- Dunstone, N., D. Smith, S. **Yeager**, G. Danabasoglu, P.-A. Monerie, L. Hermanson, R. Eade, S. Ineson, J. Robson, A. Scaife, H.-L. Ren , 2020: Skilful interannual climate prediction from two large initialized model ensembles, *Env. Res. Lett.*, in review.
- Lu, L., S. Zhang, S.G. **Yeager**, G. Danabasoglu, P. Chang, L. Wu, X. Lin, A. Rosati, and F. Lu, 2020: Impact of Coherent Ocean Stratification on AMOC Reconstruction by Coupled Data Assimilation with a Biased Model, *J. Climate*, in press, doi:10.1175/JCLI-D-19-0735.1.
- Smith, D. M., et al., 2020: North Atlantic climate far more predictable than models imply, *Nature*, in press.
- Krumhardt, K. M., N. S. Lovenduski, M. C. Long, J. Y. Luo, K. Lindsay, S. **Yeager**, and C. Harrison, 2020: Potential predictability of net primary production in the ocean, *Glob. Biogeochem. Cyc.*, 34, e2020GB006531, doi:10.1029/2020GB006531.
- Liang, Y.-C., M.-H. Lo, C.-W. Lan, H. Seo, C. Ummenhofer, S. **Yeager**, R.-J. Wu, and J. Steffen, 2020: Amplified Seasonal Cycle in Hydroclimate over the Amazon River Basin and its Plume Region, *Nat. Comm.*, in press.
- Hermanson, L., R. Bilbao, N. Dunstone, M. Menegoz, P. Ortega, H. Pohlmann, J. Robson, D. Smith, G. Strand, C. Timmreck, S. **Yeager**, and G. Danabasoglu, 2020: Robust Multiyear Climate Impacts of Volcanic Eruptions in Decadal Prediction Systems, *J. Geophys. Res. Atmos.*, 125, e2019JD031739., doi:10.1029/2019JD031739.
- Stewart, K. D., W. Kim, S. Urakawa, A. Hogg, S. **Yeager**, H. Tsujino, H. Nakano, A. Kiss, and G. Danabasoglu, 2020: JRA55-do-based repeat year forcing datasets for driving ocean–sea-ice models, *Ocean Modelling*, 147, 101557, doi:10.1016/j.ocemod.2019.101557.
- Brady, R. X., N. S. Lovenduski, S. G. **Yeager**, and M. Long, 2020: Skillful multiyear predictions of ocean acidification in the California Current System, *Nat. Commun.*, 11, 2166, doi:10.1038/s41467-020-15722-x.
- Athanasiadis, P., S. G. **Yeager**, Y.-O. Kwon, A. Bellucci, and S. Tibaldi, 2020: Decadal predictability of North Atlantic blocking and the NAO, *npj Climate and Atmospheric Science*, 3:20, doi:10.1038/s41612-020-0120-6.
- Liang, Y.-C., Y.-O. Kwon, C. Frankignoul, G. Danabasoglu, S. **Yeager**, A. Cherchi, Y. Gao, G. Gastineau, R. Ghosh, D. Matei, J. V. Mecking, D. Peano, L. Suo, and T. Tian, 2020: Quantification of the Arctic Sea Ice-Driven Atmospheric Circulation Variability in Coordinated Large Ensemble Simulations, *Geophys. Res. Lett.*, 47, e2019GL085397, doi:10.1029/2019GL085397.
- Merryfield, W. J., et al., 2020: Current and emerging developments in subseasonal to decadal prediction, *Bull. Amer. Meteorol. Soc.*, in press, doi:10.1175/BAMS-D-19-0037.1.
- Kim, W., S. **Yeager**, and G. Danabasoglu, 2020: Atlantic Multidecadal Variability and Associated Climate Impacts Initiated by Ocean Thermohaline Dynamics, *J. Climate*, 33, 1317-1334, doi:10.1175/JCLI-D-19-0530.1.
- Lovenduski, N. S., G. Bonan, S. **Yeager**, K. Lindsay, and D. Lombardozzi, 2019: High predictability of terrestrial carbon fluxes from an initialized decadal prediction system *Env. Res. Lett.*, 14, 124074, doi:10.1088/1748-9326/ab5c55.
- Danabasoglu, G., L. Landrum, S. **Yeager**, and P. Gent, 2019: Robust and non-robust Aspects of Atlantic Meridional Overturning Circulation Variability and Mechanisms in the Community Earth System Model, *J. Climate*, 32, 7349-7368, doi:10.1175/JCLI-D-19-0026.1..

- Moffa-Sánchez, P., E. Moreno-Chamarro, D. J. Reynolds, P. Ortega, L. Cunningham, D. Swingedouw, D. E. Amrhein, J. Halfar, L. Jonkers, J. H. Jungclauss, K. Perner, A. Wanamaker, and S. **Yeager**, 2019: Variability in the northern North Atlantic and Arctic oceans across the last two millenia: a review, *Paleoceanography and Paleoclimatology*, 34, 1399-1436, doi:10.1029/2018PA003508.
- Simpson, I. R., S. G. **Yeager**, K. A. McKinnon, and C. Deser, 2019: Decadal predictability of late winter precipitation in western Europe through an ocean-jet stream connection, *Nat. Geosci.*, 12, 613-619, doi: 10.1038/s41561-019-0391-x.
- Smith, D. M., R. Eade, A. A. Scaife, L.-P. Caron, T. M. DelSole, G. Danabasoglu, T. Delworth, F. J. Doblas-Reyes, N. J. Dunstone, L. Hermanson, V. Kharin, M. Kimoto, W. J. Merryfield, T. Mochizuki, W. A. Müller, H. Pohlmann, S. **Yeager**, and X. Yang, 2019: Robust skill of decadal climate predictions, *npj Clim. Atm. Sci.*, 2:13, doi: 10.1038/s41612-019-0071-y.
- Li, F., S. Lozier, G. Danabasoglu, N. P. Holliday, Y.-O. Kwon, A. Romanou, S. G. **Yeager**, and R. Zhang, 2019: Local and downstream relationships between Labrador Sea Water volume and North Atlantic meridional overturning circulation variability, *J. Clim.*, 32, 3883-3898, doi:10.1175/JCLI-D-18-0735.1.
- Zhang, R., R. Sutton, G. Danabasoglu, Y.-O. Kwon, R. Marsh, S. G. **Yeager**, D. E. Amrhein, and C. M. Little, 2019: A Review of the Role of the Atlantic Meridional Overturning Circulation in Atlantic Multidecadal Variability and Associated Climate Impacts, *Rev. Geophys.*, 57, 316-375, doi:10.1029/2019RG000644.
- Fox-Kemper, B., A. Adcroft, C. W. Böning, E. P. Chassignet, E. Curchitser, G. Danabasoglu, C. Eden, M. H. England, R. Gerdes, R. J. Greatbatch, S. M. Griffies, R. W. Hallberg, E. Hanert, P. Heimbach, H. T. Hewitt, C. N. Hill, Y. Komuro, S. Legg, J. Le Sommer, S. Masina, S. J. Marsland, S. G. Penny, F. Qiao, T. D. Ringler, A. M. Treguier, H. Tsujino, P. Uotila, and S. G. **Yeager**, 2019: Challenges and Prospects in Ocean Circulation Models, *Front. Mar. Sci.*, 6:65, doi:10.3389/fmars.2019.00065.
- Lovenduski, N. S., S. G. **Yeager**, K. Lindsay, and M. C. Long, 2019: Predicting near-term variability in ocean carbon uptake, *Earth Sys. Dyn.*, 10, 45-57, doi:10.5194/esd-10-45-2019.
- Castruccio, F. S., Y. Ruprich-Robert, S. G. **Yeager**, G. Danabasoglu, R. Msadek, and T. L. Delworth, 2019: Modulation of Arctic Sea Ice Loss by Atmospheric Teleconnections from Atlantic Multidecadal Variability, *J. Climate*, 32, 1419-1441, doi:10.1175/JCLI-D-18-0307.1.
- Lee, S.-K., R. Lumpkin, M. O. Baringer, C. S. Meinen, M. Goes, S. Dong, H. Lopez, and S. G. **Yeager**, 2018: Global meridional overturning circulation inferred from a data-constrained ocean and sea-ice model, *Geophys. Res. Lett.*, 46, doi:10.1029/2018GL080940.
- Kim, W., S. G. **Yeager**, and G. Danabasoglu, 2018: Key Role of Internal Ocean Dynamics in Atlantic Multidecadal Variability During the Last Half Century, *Geophys. Res. Lett.*, 45, 13,449-13,457, doi:10.1029/2018GL080474..
- Smith, D. M., A. A. Scaife, E. Hawkins, R. Bilbao, G. J. Boer, M. Caian, L.-P. Caron, G. Danabasoglu, T. Delworth, F. J. Doblas-Reyes, R. Doescher, N. J. Dunstone, R. Eade, L. Hermanson, M. Ishii, V. Kharin, M. Kimoto, T. Koenigk, Y. Kushnir, D. Matei, G. A. Meehl, M. Menegoz, W. J. Merryfield, T. Mochizuki, W. A. Müller, H. Pohlmann, S. Power, M. Rixen, M. Tuma, K. Wyser, X. Yang, and S. G. **Yeager**, 2018: Predicted chance that global warming will temporarily exceed 1.5°C, *Geophys. Res. Lett.*, 45, 11,895-11,903, doi:10.1029/2018GL079362.
- Wang, H., J. McClean, L. Talley, and S. G. **Yeager**, 2018: Seasonal cycle and annual reversal of the Somali Current in an eddy-resolving global ocean model, *J. Geophys. Res. - Oceans*, 123 (9), 6562-6580, doi:10.1029/2018JC013975.
- Tsujino, H., S. Urakawa, H. Nakano, R. J. Small, W. M. Kim, S. G. **Yeager**, G. Danabasoglu, T. Suzuki, J. L. Bamber, M. Bentsen, C. Böning, A. Bozec, E. Chassignet, E. Curchitser, F. B. Dias, P. J. Durack, S. M. Griffies, Y. Harada, M.

- Ilicak, S. A. Josey, C. Kobayashi, S. Kobayashi, Y. Komuro, W. G. Large, J. Le Sommer, S. J. Marsland, S. Masina, M. Scheinert, H. Tomita, M. Valdivieso, and D. Yamazaki, 2018: JRA-55 based surface dataset for driving ocean—sea-ice models (JRA55-do), *Ocean Modelling*, 130, 79-139, doi:10.1016/j.ocemod.2018.07.002.
- Cheng, W., W. Weijer, W. M. Kim, G. Danabasoglu, S. G. **Yeager**, P. R. Gent, D. Zhang, J. C. H. Chiang, and J. Zhang, 2018: Can the salt-advection feedback be detected in internal variability of the Atlantic Meridional Overturning Circulation?, *J. Climate*, 31, 6649-6667, doi:10.1175/JCLI-D-17-0825.1.
- Yeager**, S. G., G. Danabasoglu, N. Rosenbloom, W. Strand, S. Bates, G. Meehl, A. Karspeck, K. Lindsay, M. C. Long, H. Teng, and N. S. Lovenduski, 2018: Predicting near-term changes in the Earth System: A large ensemble of initialized decadal prediction simulations using the Community Earth System Model, *Bull. Amer. Met. Soc.*, 99, 1867-1886, doi:10.1175/BAMS-D-17-0098.1.
- Ruprich-Robert, Y., T. Delworth, R. Msadek, F. Castruccio, S. **Yeager**, and G. Danabasoglu, 2018: Impacts of the Atlantic Multidecadal Variability on North American summer climate and heat waves, *J. Climate*, 31, 3679-3700, doi:10.1175/JCLI-D-17-0270.1.
- Kim, W., S. G. **Yeager**, P. Chang, and G. Danabasoglu, 2018: Low-frequency North Atlantic Climate Variability in the Community Earth System Model Large Ensemble, *J. Climate*, 31, 787-813, doi:10.1175/JCLI-D-17-0193.1.
- DiNezio, P., C. Deser, A. Karspeck, S. **Yeager**, Y. Okumura, G. Danabasoglu, N. Rosenbloom, J. Caron, and J. Meehl, 2017: A two-year forecast for a 60-80% chance of La Niña in 2017-18, *Geophys. Res. Lett.*, 44, 11,624-11,635, doi: 10.1002/2017GL074904.
- Yeager**, S. G., and J. I. Robson, 2017: Recent progress in understanding and predicting Atlantic decadal climate variability, *Curr. Clim. Change Rep.*, 3, 112-127, doi: 10.1007/s40641-017-0064-z.
- Tseng, Y., H. Lin, H. Chen, K. Thompson, M. Bentsen, et al., and S. **Yeager**, 2016: North and equatorial Pacific Ocean circulation in the CORE-II hindcast simulations, *Ocean Modelling*, 104, 143-170, doi:10.1016/j.ocemod.2016.06.003.
- Ruprich-Robert, Y., R. Msadek, F. Castruccio, S. **Yeager**, T. Delworth, and G. Danabasoglu, 2017: Assessing the climate impacts of the observed Atlantic Multidecadal Variability using the GFDL CM2.1 and NCAR CESM1 global coupled models, *J. Climate*, 30, 2785-2810, doi:10.1175/JCLI-D-16-0127.1.
- Zhang, R., R. Sutton, G. Danabasoglu, T. L. Delworth, W. M. Kim, J. Robson, and S. G. **Yeager**, 2016: Comment on “The Atlantic Multidecadal Oscillation without a role for ocean circulation”, *Science*, 352, 6293, pp. 1527, doi: 10.1126/science.aaf1660.
- Griffies, S. M., G. Danabasoglu, P. J. Durack, et al., and S. **Yeager**, 2016: Experimental and diagnostic protocol for the physical component of the CMIP6 Ocean Model Intercomparison Project (OMIP), *Geosci. Model Dev.*, 9, 3231-3296, doi:10.5194/gmd-2016-77.
- Kim, W., S. **Yeager**, P. Chang, and G. Danabasoglu, 2016: Atmospheric conditions associated with Labrador Sea deep convection: New insights from a case study of the 2006-2007 and 2007-2008 winters, *J. Climate*, 29, 5281-5297, doi:10.1175/JCLI-D-15-0527.1.
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- Wang, Q., M. Ilicak, R. Gerdes, H. Drange, et al., and S. G. **Yeager**, 2016: An assessment of the Arctic Ocean in a suite of interannual CORE-II simulations. Part II: Liquid freshwater, *Ocean Modelling*, 99, 86-109, doi:10.1016/j.ocemod.2015.12.009.



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#### NON-REFEREED PUBLICATIONS

- Danabasoglu, G., M. F. de Jong, A. Karspeck, M. Lankhorst, M. Patterson, R. Perez, A. Schmittner, W. Weijer, S. **Yeager**, and R. Zhang, 2016: 2016 US AMOC Science Team Report on Progress and Priorities. Report 2016-4, US CLIVAR Project Office, 178 pp., doi:10.5065/D66QIVN8.
- Yeager**, S., W. Kim, and J. Robson, 2016: What caused the Atlantic cold blob of 2015? *US CLIVAR Variations*, Project Office, 14, No 2, 24-29.
- Danabasoglu, G., R. Curry, A. Karspeck, C. Meinen, R. Msadek, M. Patterson, R. Perez, A. Schmittner, L. Thompson, and S. **Yeager**, 2015: 2014 US AMOC Science Team Annual Report on Progress and Priorities. Report 2015-1, US CLIVAR Project Office, 165 pp.
- Danabasoglu, G., R. Curry, P. Heimbach, Y. Kushnir, C. Meinen, R. Msadek, M. Patterson, L. Thompson, S. **Yeager**, and R. Zhang, 2014: 2013 US AMOC Science Team Annual Report on Progress and Priorities. Report 2014-4, US CLIVAR Project Office, 162 pp.
- Yeager**, S., 2013: Understanding and predicting changes in North Atlantic Sea Surface Temperature, Ph.D. dissertation, University of Colorado, Boulder, advisor: Baylor Fox-Kemper.
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- W. G. Large and S. G. **Yeager**, 2004: Diurnal to decadal global forcing for ocean and sea-ice models: The data sets and flux climatologies. Technical Report TN-460+STR, NCAR, 105pp.
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- Yeager**, S., 1993: A dipole model of Smith Purcell radiation, Senior honors thesis, Department of Physics, Dartmouth College, Hanover, NH.

#### TALKS

- 04/2020 "The abyssal origins of North Atlantic decadal predictability", CESM Ocean Model Working Group Meeting, Boulder, CO.
- 02/2020 "Historical AMOC in an eddy-resolving CESM2 simulation", Ocean Sciences Meeting, San Diego, CA.

- 02/2020 "Progress towards CESM-HR Decadal Prediction Experiments", iHESP Steering Committee and Advisory Committee Meeting, Boulder, CO.
- 01/2020 "Interannual to Decadal Earth System Prediction using CESM", CESM Advisory Board Meeting, Boulder, CO.
- 12/2019 "Spin-up and interannual variability in a CESM-HR OMIP-2 simulation", iHESP Annual Meeting, College Station, TX.
- 10/2019 "Initialization sensitivity tests using CESM-DPLE", Blue-Action Annual Meeting, Edinburgh, Scotland.
- 05/2019 "Modeling 101: Decadal Climate Prediction", UCAR Journalism Summit, Boulder, CO.
- 04/2019 "A new high-resolution-CESM ocean+sea-ice simulation using JRA55-do forcing", iHESP Opening Ceremony, College Station, TX.
- 03/2019 "JRA55-do simulations at NCAR", CLIVAR Ocean Model Development Panel 5<sup>th</sup> Session, Tallahassee, FL.
- 02/2019 "Decadal Predictability of North Atlantic Blocking", CESM Climate Variability and Change Working Group, winter meeting, Boulder, CO.
- 08/2018 "The CESM Decadal Prediction Large Ensemble & Multi-year Forecasts of Arctic Sea Ice", 2018 CESM Polar Modeling Workshop, Boulder, CO.
- 07/2018 "What explains skillful decadal prediction of North Atlantic SST?", 2018 International AMOC Science Meeting, Coconut Grove, FL.
- 03/2018 "Decadal Climate Prediction in the Large Ensemble Limit", DOE RGMA Webinar Series.
- 02/2018 "Skillful Multiyear Predictions of Precipitation over Land", Ocean Sciences Meeting, Portland, OR.
- 01/2018 "Decadal Climate Prediction in the Large Ensemble Limit", Blue-Action Project Annual Meeting, Bologna, Italy.
- 01/2018 "Decadal Climate Prediction in the Large Ensemble Limit", Ocean Model Working Group Meeting, Boulder, CO.
- 10/2017 "Skillful Decadal Prediction of Upper Ocean Heat Content", CLIVAR CONCEPT-HEAT Workshop, Boulder, CO.
- 10/2017 "Decadal Climate Prediction in the Large Ensemble Limit", OUC-TAMU-NCAR Project Meeting, Boulder, CO.
- 09/2017 "Low-frequency North Atlantic Climate Variability in the CESM Large Ensemble", NCAS Climate and Ocean Dynamics (COD) Seminar, Reading, UK.
- 09/2017 "Skillful Multiyear Predictions of Precipitation over Land using CESM", ACSIS-OSNAP-RAPID Joint Science Meeting, Oxford, UK.
- 08/2017 "Decadal Climate Prediction at NCAR", NSF-GEO visit, Boulder, CO.
- 07/2017 "Predicting Near-term Shifts in the Likelihood of Climate Extremes", STATMOS/SAMSI Workshop on Climate Statistics, Boulder, CO.
- 06/2017 "Skillful Decadal Climate Prediction in the Atlantic Sector using CESM", Ocean Model Working Group, 22<sup>nd</sup> Annual CESM Workshop, Boulder, CO.
- 06/2017 "Initialized Decadal Climate Prediction using Large Ensembles", CWG Session on Earth System Prediction, 22<sup>nd</sup> Annual CESM Workshop, Boulder, CO.
- 03/2017 "AMOC-related climate prediction using CESM", US AMOC Science Team Webinar Series. [<https://usclivar.org/archived-webinars>]
- 03/2017 "CISL Accelerated Scientific Discovery. Predicting Near-term changes in the likelihood of climate extremes: initialized decadal climate prediction using large ensembles", Plenary Session, CESM Winter Working Group meeting, Boulder, CO.
- 11/2016 "Decadal climate prediction using CESM", NOAA Climate Variability Program webinar series. [<http://cpo.noaa.gov/ClimateDivisions/EarthSystemScienceandModeling/ClimateVariabilityandPredictability/AMOCMechanisms.aspx>]
- 10/2016 "Decadal climate prediction using CESM", CGD research report, Boulder, CO.

- 06/2016 “What caused the Atlantic cold blob of 2015?”, US CLIVAR *Variations* webinar series. [<https://usclivar.org/archived-webinars>]
- 05/2016 “Mechanisms associated with predictable North Atlantic decadal variability”, US CLIVAR Paleo-Modern AMOC Workshop, Boulder, CO.
- 04/2016 “Mechanisms underpinning skillful decadal prediction in the North Atlantic”, NCAR Day of Networking and Discovery, Boulder, CO.
- 02/2016 “Mechanisms underpinning skillful decadal prediction in the North Atlantic”, Ocean Sciences Meeting, New Orleans, LA.
- 02/2016 “Evaluation of CESM ocean-ice hindcast experiments forced by JRA55 data”, CESM Ocean Model Working Group meeting, Boulder, CO.
- 01/2016 “Towards a new Normal Year Forcing (NYF)”, 2<sup>nd</sup> session of the CLIVAR Ocean Model Development Panel – Extended meeting on forcing ocean-ice climate models, Yokohama, Japan.
- 01/2016 “Evaluation of CESM ocean-ice hindcast experiments forced by JRA55 data”, 2<sup>nd</sup> session of the CLIVAR Ocean Model Development Panel – Extended meeting on forcing ocean-ice climate models, Yokohama, Japan.
- 09/2015 “Mechanisms, predictability, and regional and societal impacts of decadal climate variability”, 2015 EaSM PI Meeting, Bethesda, MD.
- 07/2015 “Predicted growth of Atlantic sea ice in the coming decade”, RAPID/US AMOC International Science Meeting, Bristol, UK.
- 06/2015 “Reconstructing ocean/sea-ice variability over the 1871-2010 period using NOAA 20<sup>th</sup> Century reanalysis”, CESM Workshop, Breckenridge, CO.
- 02/2015 “Should we expect a rebound of Arctic sea ice extent in coming years? Initialized predictions of AMOC and sea ice extent using CCSM4”, CESM Climate Variability and Change Working Group Meeting, Boulder, CO.
- 01/2015 “Exploration of new POP grids for CESM2”, CESM Ocean Model Working Group Meeting, Boulder, CO.
- 08/2014 “Ocean Modeling II: parameterized physics”, CESM Tutorial Workshop, Boulder, CO.
- 08/2014 “Ocean Modeling I: ocean modeling basics and the CESM ocean model”, CESM Tutorial Workshop, Boulder, CO.
- 03/2014 “Topographic control of the Atlantic Meridional Overturning Circulation”, CGD research report, Boulder, CO.
- 02/2014 “Topographic control of the Atlantic Meridional Overturning Circulation”, Ocean Sciences Meeting, Honolulu, HI.
- 08/2013 “Ocean Modeling I: ocean modeling basics and the CESM ocean model”, CESM Tutorial Workshop, Boulder, CO.
- 05/2013 “The origins of large-scale North Atlantic ocean circulation changes in the late 20<sup>th</sup> century: implications for decadal prediction”, World Climate Research Program (WCRP) International Workshop on Seasonal to Decadal Prediction, Toulouse, France.
- 04/2013 “Understanding and predicting changes in North Atlantic sea surface temperature”, doctoral dissertation defense, University of Colorado, Department of Atmospheric and Oceanic Science, Boulder, CO.
- 08/2012 “On the origins and mechanisms of North Atlantic decadal variability between 1948-2007”, U.S. AMOC Annual PI Meeting, Boulder, CO.
- 06/2012 “Exploring the origins and mechanisms of recent decadal variations in the North Atlantic using CCSM4”, CESM Workshop, Breckenridge, CO.
- 02/2012 “A decadal prediction case study: late 20<sup>th</sup> century North Atlantic ocean heat content”, Ocean Sciences Meeting, Salt Lake City, UT.
- 12/2011 “A decadal prediction case study: late 20<sup>th</sup> century North Atlantic ocean heat content”, CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 06/2011 “A CCSM4 decadal prediction case study: Abrupt North Atlantic ocean heat content change in the 1990s”, CCSM Workshop, Breckenridge, CO.

- 01/2011 "Initialized decadal prediction experiments using CCSM4", 91<sup>st</sup> Annual Meeting of the American Meteorological Society, Seattle, WA.
- 10/2010 "Community Climate System Model (CCSM4) decadal prediction experiments initialized from best-estimates of the historical ocean state between 1970 and 2000", CGD research report, Boulder, CO.
- 06/2010 "Decadal prediction with CCSM4: Update on ocean data assimilation efforts and the latest coupled results", CCSM Workshop, Breckenridge, CO.
- 04/2010 "Decadal prediction with CCSM4", IMAGE Theme of the Year Workshop, Boulder, CO.
- 02/2010 "Estimating the strength and variability of the Atlantic Meridional Overturning Circulation in recent decades using CCSM4", Ocean Sciences Meeting, Portland, OR.
- 12/2009 "Towards decadal prediction with CCSM4", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 11/2009 "Estimating the strength and variability of the Atlantic Meridional Overturning Circulation in recent decades", CGD research report, Boulder, CO.
- 06/2009 "Low resolution POP", CCSM Workshop, Breckenridge, CO.
- 12/2008 "The nonlinear connection between Labrador Sea buoyancy loss, Deep Western Boundary Current strength, and Gulf Stream path in 1 $\sigma$  POP", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 11/2008 "Mixed boundary conditions, thermohaline circulation, and the Gulf Stream", CGD research report, Boulder, CO.
- 06/2008 "Amelioration of North Atlantic circulation biases in non-eddy resolving POP", CCSM Workshop, Breckenridge, CO.
- 03/2008 "Observed diapycnal injection of salinity anomalies", Ocean Sciences Meeting, Orlando, FL.
- 12/2007 "POP vertical grids for CCSM4", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 06/2007 "Optimizing the POP vertical grid", CCSM Workshop, Breckenridge, CO.
- 02/2007 "CCSM3.5 sensitivity to ocean vertical grid resolution", CGD research report, Boulder, CO.
- 12/2006 "CCSM4 POP grid formulation", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 06/2006 "Exploration of increased vertical grid resolution for POP", CCSM Workshop, Breckenridge, CO.
- 12/2005 "CORE I and II in CCSM3", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 05/2005 "NCOM Hindcast (1958-1997)", CGD research report, Boulder, CO.
- 07/2004 "Origins of isopycnic interannual variability", CCSM Workshop, Breckenridge, CO.
- 01/2004 "Diurnal to decadal forcing for ocean models", CCSM Ocean Model Working Group Meeting, Boulder, CO.
- 06/2003 "Tools for implementing new displaced pole ocean grids in CCSM2", CCSM Workshop, Breckenridge, CO.
- 03/2003 "Tools for displaced-pole ocean grid generation for CCSM2", CCSM Ocean Model Working Group Meeting, Boulder, CO.

#### SELECTED POSTERS

- 05/2019 "Atmospheric Responses to Arctic Sea Ice Loss in a High-top Atmospheric General Circulation Model" by Yu-Chiao Liang, Y.-O. Kwon, C. Frankignoul, G. Danabasoglu, and S. Yeager. AMS 15<sup>th</sup> Conference on Polar Meteorology and Oceanography, Boulder, CO.

- 05/2017 “Skillful Decadal Climate Prediction in the Atlantic Sector” by S. **Yeager**, N. Rosenbloom, G. Strand, K. Lindsay, G. Danabasoglu, A. Karspeck, S. Bates, and J. Meehl. US AMOC Science Team Meeting, Santa Fe, New Mexico.
- 05/2017 “JRA-55 based surface data set for driving ocean-sea ice models (JRA55-do). Part II: Assessment on the results of global ocean-sea ice models forced by the data set” by H. Tsujino, S. Urakawa, H. Nakano, J. Small, S. **Yeager**, W. Kim, G. Danabasoglu, W. Large, S. Josey, T. Suzuki, Y. Komuro, D. Yamazaki, S. Griffies, H. Tomita, and M. Valdivieso. Joint JpGU/AGU meeting, Tokyo, Japan.
- 09/2016 “Atmospheric conditions associated with Labrador Sea deep convection” by W. Kim, S. **Yeager**, P. Chang, and G. Danabasoglu. CLIVAR Open Science Conference, Qingdao, China.
- 02/2016 “Atlantic multidecadal variability climate impacts: idealized experiments with NCAR and GFDL coupled climate models” by F. Castruccio, Y. Ruprich-Robert, R. Msadek, S. **Yeager**, G. Danabasoglu, and T. Delworth. Ocean Sciences Meeting, New Orleans, LA.
- 02/2016 “Understanding multidecadal SST changes in the tropical North Atlantic” by W. M. Kim, S. **Yeager**, P. Chang, and G. Danabasoglu. Ocean Sciences Meeting, New Orleans, LA.
- 12/2015 “Sensitivity of ocean processes to changes and uncertainties in global river discharge” by H. Chandanpurkar, S. **Yeager**, J. Reager, and J. Famiglietti. AGU Meeting, San Francisco, CA.
- 09/2015 “Predictive skill of the CESM in forecasting the 2014-2015 cold winter in the eastern United States” by J. Xie, M. Zhang, S. **Yeager**, and G. Danabasoglu. EaSM PI Meeting, Bethesda, MD.
- 09/2015 “Predicted growth of Atlantic sea ice in the coming decade” by S. **Yeager**, H. Teng, and G. Danabasoglu. EaSM PI Meeting, Bethesda, MD.
- 09/2014 “Simulated Atlantic multidecadal variability (AMV) during the 20th century in CESM large ensemble and forced ocean simulations” by W. Kim, S. **Yeager**, P. Chang, and G. Danabasoglu. US AMOC Science Team Meeting, Seattle, WA.
- 09/2014 “Community Earth System Model (CESM) projections of AMOC in the coming decade: mechanisms and impacts” by S. **Yeager**, H. Teng, G. Danabasoglu, and A. Karspeck. US AMOC Science Team Meeting, Seattle, WA.
- 06/2014 “Atlantic hindcast sensitivity to historical Greenland freshwater forcing” by L. Landrum, S. **Yeager**, J. Box, J. Fyke, and S. Mernild. CESM Workshop, Breckenridge, CO.
- 10/2011 “A decadal prediction case study: late 20<sup>th</sup> century North Atlantic ocean heat content” by S. **Yeager**, A. Karspeck, G. Danabasoglu, J. Tribbia, and H. Teng. World Climate Research Program (WCRP) Open Science Conference, Denver, CO.
- 09/2010 “Community Climate System Model (CCSM4) decadal prediction experiments initialized from best-estimates of the historical ocean state between 1970 and 2000” by S. **Yeager**, G. Danabasoglu, J. Tribbia, J. Anderson, T. Hoar, N. Collins, K. Raeder, H. Teng, and J. Hurrell. CLIVAR WGOMD-GSOP Workshop on decadal variability, predictability, and prediction: understanding the role of the ocean, Boulder, CO.
- 01/2010 “Initialization of Community Climate System Model (CCSM4) decadal prediction experiments: hindcast estimates of the Atlantic Meridional Overturning Circulation in recent decades” by S. **Yeager**, G. Danabasoglu, J. Tribbia, J. Anderson, T. Hoar, and N. Collins. U.S. CLIVAR Workshop on predicting climate of the coming decades, Miami, FL.
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