

NAN ROSENBLROOM, Ph.D

Education

PhD : Department of Geological Sciences, University of Colorado at Boulder. 1997.

MS : Earth Sciences, University of California, Santa Cruz. 1992.

BA : Gustavus Adolphus College, St. Peter, MN. 1983. Summa cum Laude

Professional Experience

Project Manager

- CATALYST - January 2020- present

Associate Scientist. CGD/NCAR

- Climate Change Research. 2007-2019
 - Paleoclimate Working Group Liaison. 2007-2015.
 - Terrestrial Sciences. 2002-2007.
 - Earth Dynamics and Atmospheric Systems. 1993-2001.
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Professional Interests

High resolution climate modeling, tropical cyclones, Paleoclimate, landscape evolution, carbon cycling, ecosystem dynamics, land surface/hydrologic processes. Managing multimember large ensembles; coordinating resources and optimizing model allocation and usage on NWSC and external HPC platforms.

Recent Publications

Projected Future Changes in Tropical Cyclones using the CMIP6 2 HighResMIP Multi-model Ensemble
Roberts, M.J., Camp, J., Seddon, J., Vidale, P.L., Hodges, K., Vanniere, B., Mecking, J., Haarsma, R., Bellucci, A., Scoccimarro, E., Caron, L-P., Chauvin, F., Terray, L., Valcke, S., Moine, M-P., Putrasahan, D., Roberts, C.D., Senan, R., Zarzycki, C., Ullrich, P., Yamada, Y., Mizuta, R., Kodama, C., Fu, D., Zhang, Q., Danabasoglu, G., **Rosenbloom**, N., H. Wang, L. Wu. GRL (Submitted Dec 2019)

Reed, K. A., Bacmeister, J. T., Huff, J. J. A., Wu, X., Bates, S. C., & **Rosenbloom**, N. A. (2019). Exploring the impact of dust on North Atlantic hurricanes in a high-resolution climate model. *Geophysical Research Letters*.

DiNezio, P. N., J. E. Tierney, B. L. Otto-Bliesner, A. Timmermann, T. Bhattacharya, N. **Rosenbloom**, and E. C. Brady, 2018: Glacial changes in tropical climate amplified by the Indian Ocean. *Science Advances*, **4**, /advances/4/12/eaat9658.atom, doi:10.1126/sciadv.aat9658.

Yeager, S. G., and Coauthors, 2018: Predicting near-term changes in the Earth system: A large ensemble of initialized decadal prediction simulations using the Community Earth System Model. *Bulletin of the American Meteorological Society*, **99**, 1867-1886, doi:10.1175/BAMS-D-17-0098.1.

Lin, L., Gettelman, A., Xu, Y., Wu, C., Wang, Z., Dong, W., Bates, S. C., and N. A. **Rosenbloom**: CAM6 simulation of mean and extreme precipitation over Asia: Sensitivity to upgraded physical parameterizations and higher horizontal resolution, *Geosci. Model Dev. Discuss.*, <https://doi.org/10.5194/gmd-2019-1>, in review, 2019.

Meehl, G. A., D. Yang, J. M. Arblaster, S. C. Bates, N. A. **Rosenbloom**, R. Neale, C. A. Shields, J. Small, and G. Danabasoglu, 2019: Effects of model resolution and physics on Southern Hemisphere storm tracks in CESM1.3, (in prep).

Hu, Z., A. Hu, Y. Hu and N. **Rosenbloom**, 2019: Budgets for Decadal Variability in Pacific Ocean Heat

Content. In prep.

- Aerenson, T., C. Tebaldi, J-F Lamarque, D. Lawrence, B. Lipscomb, M. Long, N. **Rosenbloom**, G. Strand, 2019: Abrupt Reversing of climate change. in prep
- Bacmeister, J. T., K. A. Reed, C. Hannay, P. Lawrence, S. Bates, J. E. Truesdale, N. **Rosenbloom**, and M. Levy, 2018: Projected changes in tropical cyclone activity under future warming scenarios using a high-resolution climate model. *Climatic Change*, **146**, 547-560, doi:10.1007/s10584-016-1750-x.
- DiNezio, P. N., C. Deser, A. Karspeck, S. Yeager, Y. Okumura, G. Danabasoglu, N. **Rosenbloom**, J. Caron, J. Meehl. 2017. A 2 year forecast for a 60-80% chance of La Niña in 2017-2018. *Geophysical Research Letters*, v. 44 (22). <https://doi.org/10.1002/2017GL074904>.
- Tabor, C. R., and Coauthors, 2016: The cause of Late Cretaceous cooling: A multimodel-proxy comparison. *Geology*, **44**, 963-966, doi:10.1130/G38363.1.
- J.T. Bacmeister, C. Hannay, S. Bates, P. Lawrence, J. Truesdale, N. **Rosenbloom**, K. A. Reed, and M. F. Wehner, 2015: Tropical cyclone activity under RCP4.5 and RCP8.5 compared to the present. Submitted to Special Issue on Benefits of Reduced Anthropogenic Climate changeE (BRACE), Guest Editors: Brian O'Neill, Andrew Gettelman, NCAR, Climatic Change. Submitted.
- Fergus W. Howell, Alan M. Haywood, Bette L. Otto-Bliesner, Fran Bragg, Wing-Le Chan, Mark A. Chandler, Camille Contoux, Youichi Kamae, Ayako Abe-Ouchi, Nan A. **Rosenbloom** Christian Stepanek, and Zhongshi Zhang. Arctic sea ice simulation in the PlioMIP ensemble. *Clim. Past*, 12, 749-767, doi:10.5194/cp-12-749-2016, 2016.
- Zarzycki, C. M., Reed, K. A., Bacmeister, J. T., Craig, A. P., Bates, S. C., and **Rosenbloom**, N. A.: Impact of surface coupling grids on tropical cyclone extremes in high-resolution atmospheric simulations, *Geosci. Model Dev.*, 9, 779-788, doi:10.5194/gmd-9-779-2016, 2016.
- A. M. Dolan, S. J. Hunter, D. J. Hill, A. M. Haywood, S. J. Koenig, B. L. Otto-Bliesner, A. Abe-Ouchi, F. Bragg, W.-L. Chan, M. A. Chandler, C. Contoux, A. Jost, Y. Kamae, G. Lohmann, D. J. Lunt, G. Ramstein, N. A. **Rosenbloom** L. Sohl, C. Stepanek, H. Ueda, Q. Yan, and Z. Zhang. Using results from the PlioMIP ensemble to investigate the Greenland Ice Sheet during the mid-Pliocene Warm Period. *Clim. Past*, 11, 403-424, doi:10.5194/cp-11-403-2015, 2015.
- Hu, A., G. A. Meehl, W. Han, B. Otto-Bliesner, A. Abe-Ouchi, N. **Rosenbloom**, 2015: Effects of the Bering Strait closure on AMOC and global climate under different background climates. *Progress in Oceanography*, 132, 174-196, doi:10.1016/j.pocean.2014.04.004.
- Bette L. Otto-Bliesner, Esther C. Brady, John Fasullo, Alexandra Jahn, Laura Landrum, Samantha Stevenson, Nan **Rosenbloom**, Andrew Mai, and Gary Strand. (2015) Climate Variability and Change since 850 C.E.: An Ensemble Approach with the Community Earth System Model (CESM) Bulletin of the American Meteorological Society. DOI: <http://dx.doi.org/10.1175/BAMS-D-14-00233.1>
- Reed, K. A., J. T. Bacmeister, N. A. **Rosenbloom**, M. F. Wehner, S. C. Bates, P. H. Lauritzen, J. E. Truesdale, and C. Hannay (2015), Impact of the dynamical core on the direct simulation of tropical cyclones in a high-resolution global model. *Geophys. Res. Lett.*, 42, 3603-3608. doi:10.1002/2015GL063974.

Synergistic Activities

Nan Rosenbloom

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- UCAR Ombuds - 2019 - ongoing
- NCL Advisory Panel (Co-chair with Tanya Peavy, NOAA) - August 2018 - ongoing
- SRAP-NWSC - Science Requirements Advisory Panel (SRAP) for the NCAR/CISL NWSC-3 Procurement.