

JAMIE SCOTT

NOAA/CIRES/EARTH SYSTEM RESEARCH LABORATORY/PHYSICAL SCIENCES DIV
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EDUCATION

MS, Atmospheric Sciences, *Colorado State University*, 1994. GPA 3.9/4.0. Advisor: Steven A. Rutledge

Thesis title: Doppler Radar Observations of an Asymmetric MCS and Associated Vortex Couplet.

BS, Meteorology, *University of Wisconsin-Madison*, 1991. GPA 3.6/4.0. Graduated with distinction.

EXPERIENCE

- Senior Associate Scientist, *CIRES, NOAA/ESRL Physical Sciences Division* (6/11 to present)
- Associate Scientist III, *CIRES, NOAA/ESRL Physical Sciences Division* (3/99 - 6/11)
- Associate Scientist II, *CIRES, NOAA/ESRL Physical Sciences Division* (10/94 - 3/99)
- Research Assistant, *Colorado State University* (8/92-10/94)
- Forecaster, *Weather Central, Inc.* (8/91-8/92)
- Upper Air Operator: Lake Michigan Ozone Study, *Sonoma Technology, Inc.* (6/91-8/91)

CURRENT RESPONSIBILITIES

- Independently creates/acquires and manages observed and model datasets for climate analysis
- Responsible for developing and maintaining code for production, quality control, and analysis of climate data
- Proficient in managing, modifying, and executing complex codes such and Atmospheric General Circulation Models
- Comfortable working on multiple computer platforms/operating systems
- Uses a diverse and current tool set for data production, management and analysis
- Demonstrates expertise in programming languages such as FORTRAN, NCAR command language, Python, Perl, bourne shell and c-shell and data formats such as netCDF and grib
- Shows ability to learn new software with minimal training
- Supports production of peer-reviewed publications with minimal supervision from data production/acquisition/analysis to desktop publishing
- Designs, produces and maintains websites for broad distribution of climate information using HTML, Python, NCL, and CSS
- Handles data requests from CIRES, NOAA and external scientists

RESEARCH INTERESTS

- Ocean-Atmosphere Interaction
- Inter-annual Climate Variability
- Climate Extremes
- Numerical Modeling
- Ensemble Forecasting
- Short-term Atmospheric Variability
- Remote Sensing

PROGRAMMING SKILLS

- Fortran 77/90 IMSL/NAG/LaPack
- Python/Perl/tcsh/sh
- GrADS/NCL
- UNIX/Solaris/MacOSX/Windows

GRAPHICS/VISUALIZATION

- GrADS/NCL
- Imagemagic/Ghostscript
- MS Word/Powerpoint/Excel
- Adobe Illustrator/Photoshop/Acrobat
- html/cgi/css/javascript

DATA FORMATS

- Grib
- netCDF/HDF
- binary (big Endian, little Endian, sequential or direct access)

REFEREED PUBLICATIONS

- Alexander M.A., J.D. Scott, D. Swales, M. Hughes, K. Mahoney, C.A. Smith (2014), Moisture Pathways into the US Intermountain West Associated with Heavy Winter Precipitation Events. *Journal of Hydrometeorology*, doi: doi:10.1175/JHM-D-14-0139.1
- Lynch, P.D., J.A. Nye, J.A. Hare, C.A. Stock, M.A. Alexander, J.D. Scott, K.L. Curti, and K. Drew (2014), Projected ocean warming creates a conservation challenge for river herring populations. *ICES Journal of Marine Science*, doi: doi:10.1093/icesjms/fsu134
- Alexander, Michael A., James D. Scott, Kelly Mahoney, Joseph Barsugli, 2013: Greenhouse Gas-Induced Changes in Summer Precipitation over Colorado in NARCCAP Regional Climate Models. *J. Climate*, **26**, 8690-8697. doi: <http://dx.doi.org/10.1175/JCLI-D-13-00088.1>
- Mahoney, Kelly, Michael Alexander, James D. Scott, Joseph Barsugli, 2013: High-Resolution Downscaled Simulations of Warm-Season Extreme Precipitation Events in the Colorado Front Range under Past and Future Climates. *J. Climate*, **26**, 8671-8689. doi: <http://dx.doi.org/10.1175/JCLI-D-12-00744.1>
- Alexander, M. A., H. Seo, S.-P. Xie, and J. D. Scott, 2012: ENSO's Impact on the Gap Wind Regions of the Eastern Tropical Pacific Ocean *J. Climate*, **25**, 3549-3565.
- Capotondi, A., M. Alexander, N. Bond, E. Churchitser, and J. Scott, 2012: Enhanced Upper-Ocean Stratification with Climate Change in the CMIP3 Models. *J. Geophys. Res. - Oceans*, **117**, C04031, doi:10.1029/2011JC007409.
- Mahoney, K., M. A. Alexander, G. Thompson, J. J. Barsugli, J. D. Scott, 2012: Changes in hail and flood risk in high-resolution simulations over the Colorado Mountains. *Nature Climate Change*, **2**, doi:10.1038/nclimate1344.
- Deser, C., A. S. Phillips, R. A. Tomas, Y. Okumura, M. A. Alexander, A. Capotondi, J. D. Scott, Y. -O. Kwon, and M. Ohba, 2012: ENSO and Pacific Decadal Variability in Community Climate System Model Version 4. *J. Climate*, **25**, 2622-2651, 10.1175/JCLI-D-11-00301.1
- Alexander, M. A., 2010: Extratropical Air-Sea Interaction, SST Variability and the Pacific Decadal Oscillation (PDO). *Climate Dynamics: Why does Climate Vary*, Editors D. Sun and F. Bryan, AGU Monograph, pp. 123-148.
- Alexander, M. A., D. J. Vimont, P. Chang, and J. D. Scott, 2010: The Impact of Extratropical Atmospheric Variability on ENSO: Testing the Seasonal Footprinting Mechanism using Coupled Model Experiments. *J. Climate*, **23**, 2885-2901.
- Hare, J., M. Alexander, M. Fogarty, E. Williams, J. D. Scott, 2010: Forecasting the dynamics of a coastal fishery species using a coupled climate population model. *Ecological Applications*, **20(2)**, 452-464.
- Newman, M., M. A. Alexander and J. D. Scott, 2011: An empirical model of tropical ocean dynamics. *Climate Dyn.*, doi: 10.1007/s00382-011-1034-0.
- Alexander, M. A. and J. D. Scott, 2008: The role of Ekman ocean heat transport in the Northern Hemisphere Response to ENSO. *J. Climate*, **21**, 5688-5707.
- Bladé, I., M. Newman, M. A. Alexander, J. D. Scott, 2008: The late fall extratropical response to ENSO: sensitivity to coupling and convection in the tropical west Pacific. *J. Climate*, **21**, 6101-6118.
- Bhatt, U. S., M. A. Alexander, C. Deser, J. E. Walsh, J.S. Miller, M. Timlin, J. D. Scott, and R. Tomas, 2008: The Atmospheric Response to Realistic Reduced Summer Arctic Sea Ice Anomalies. In *Arctic Sea Ice Decline: Observations, Projections, Mechanisms, and Implications*, Geophys. Monogr. Ser., vol. 180, eds. E. Deweaver and C. Bitz., and L.-B. Tremblay, pp. 91-110, AGU, Washington, D. C.
- Alexander, M. A., L. Matrosova, C. Penland, J. D. Scott, and P. Chang, 2008: Forecasting Pacific SSTs: Linear Inverse Model Predictions of the PDO. *J. Climate*, **21**, 385-402.

- Alexander, M., J. Yin, G. Branstator, A. Capotondi, C. Cassou, R. Cullather, Y.-O. Kwon, J. Norris, J. Scott, I. Wainer, 2006. Extratropical Atmosphere-Ocean Variability in CCSM3. *J. Climate*, **19**, 2496-2525. Special Issue (June 1, #11) on the CCSM3.
- Alexander, M. A., N.-C. Lau, and J. D. Scott, 2004: Broadening the atmospheric bridge paradigm: ENSO teleconnections to the North Pacific in summer and to the tropical west Pacific-Indian Oceans over the seasonal cycle. *Earth Climate: The Ocean-Atmosphere Interaction*, eds. C. Wang, S.-P. Xie and J. Carton. AGU Monograph. pp. 85-104.
- Alexander, M. A., U. S. Bhatt, J. E. Walsh, M. S. Timlin, J. S. Miller and J. D. Scott, 2004: The atmospheric response to realistic Arctic sea ice anomalies in an AGCM during Winter. *J. Climate*, **17**, 890-905.
- Alexander, M. A. and J. D. Scott, 2002: The influence of ENSO on air-sea interaction in the Atlantic. *Geophys. Res. Lett.*, **29** (14), 10.1029/2001GL014347.
- Alexander, M. A., I. Blade, M. Newman, J. R. Lanzante, N.-C. Lau, and J. D. Scott, 2002: The Atmospheric Bridge: the Influence of ENSO Teleconnections on Air-Sea Interaction Over the Global Oceans. *J. Climate*, **15**, 2205-2231.
- Alexander, M. A., M. S. Timlin, and J. D. Scott, 2001: Winter-to-Winter recurrence of sea surface temperature, salinity and mixed layer depth anomalies. *Progress in Oceanography*, **49**, 41-61.
- Alexander, M. A., J. D. Scott, and C. Deser, 2000: Processes that influence sea surface temperature and ocean mixed layer depth variability in a coupled model. *J. Geophys. Res. - Oceans*, **105**, 16, 823-842.
- Newman, M., M. A. Alexander, C. R. Winkler, J. D. Scott, and J. J. Barsugli, 2000: A linear diagnosis of the coupled extratropical Ocean-Atmosphere system in the GFDL GCM. *Atmospheric Sciences Letters*, **1**.
- Scott, J. D. and M. A. Alexander, 1999: Net shortwave fluxes over the ocean. *J. Phys. Oceanogr.*, **29**, 3167-3174.
- Alexander, M. A., and J. D. Scott, 1997: Surface Flux Variability over the North Pacific and North Atlantic Oceans. *J. Climate*, **10**, 2963-2978.
- Scott, J. D., M. A. Alexander, J. A. Collins, and C. A. Smith, 1997. Interactive Visualization of Climate Data on the WWW. *Bull. Amer. Meteor. Soc.*, **78**, 1985-1989.
- Scott, J. D., and S.A. Rutledge, 1995: Doppler Radar Observations of an Asymmetric Mesoscale Convective System and Associated Vortex Couplet. *Mon. Wea. Rev.*, **123**, 3437-3457.

OTHER PUBLICATIONS

- Alexander, M. A. and J. D. Scott, 1995: Atlas of Climatology and Variability in the GFDL R30S14 GCM. U.S. Government Printing Office: 1996-774-842.