

Tanya L. Spero (formerly Tanya L. Otte), Research Physical Scientist, in EPA's National Exposure Research Laboratory

Systems Exposure Division

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Area of Expertise: Tanya Spero develops and applies regional-scale meteorological models for operations and research. Her current research focuses on improving regional climate modeling techniques to examine the impacts of climate change on air quality, human health, and ecosystems.

Select Publications:

Spero, T.L., C.G. Nolte, J.H. Bowden, M.S. Mallard, and J.A. Herwehe, 2016: The impact of incongruous lake temperatures on regional climate extremes downscaled from the CMIP5 archive using the WRF model. *J. Climate*, 29, 839–853.

Bowden, J.H., K.D. Talgo, T.L. Spero, and C.G. Nolte, 2016: Assessing the added value of dynamical downscaling using the Standardized Precipitation Index. *Adv. in Meteorol.*, doi:10.1155/2016/8432064.

Fann, N., C.G. Nolte, P. Dolwick, T.L. Spero, A. Curry Brown, S. Phillips, and S. Anenberg, 2015: The geographic distribution and economic value of climate change-related ozone health impacts in the United States in 2030. *J. Air Waste Mgmt. Assoc.*, 65, 570–580.

Spero, T.L., M.J. Otte, J.H. Bowden, and C.G. Nolte, 2014: Improving the representation of clouds, radiation, and precipitation using spectral nudging in the Weather Research and Forecasting model. *J. Geophys. Res. Atmos.*, 119, 11,682–11,694.

Mallard, M.S., C.G. Nolte, O.R. Bullock, T.L. Spero, and J. Gula, 2014: Using a coupled lake model with WRF for dynamical downscaling. *J. Geophys. Res. Atmos.*, 119, 7193–7208.

Herwehe, J.A., K. Alapaty, T.L. Spero, and C.G. Nolte, 2014: Increasing the credibility of regional climate simulations by introducing subgrid-scale cloud-radiation interactions. *J. Geophys. Res. Atmos.*, 119, 5317–5330.

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Education:

- M.S., Meteorology, Pennsylvania State University, 1994
- B.S., Earth and Atmospheric Sciences, Minor: Mathematics, Rutgers University, 1991

Professional Experience:

- Research Physical Scientist, U.S. EPA National Exposure Research Laboratory
Research Triangle Park, North Carolina, 2008–Present
- Meteorologist, NOAA Air Resources Laboratory
Research Triangle Park, North Carolina, 1998–2008
- (Supervisory) Meteorologist, Air Force Weather Agency
Offutt Air Force Base, Nebraska, 1995–1998

Honors and Awards:

- American Meteorological Society Editor's Award, *Journal of Applied Meteorology and Climatology* (2016)
- U.S. EPA Scientific and Technological Achievement Award (2015, 2013)
- U.S. EPA/NERL/AMAD Blue Ribbon Paper Award (2014, 2012, 2012, 2010, 2010)
- U.S. EPA/NERL/AMAD Leadership Award (2012)
- U.S. EPA Bronze Medal (2011, 2004, 1999)
- U.S. EPA Exceptional/Outstanding ORD Technical Assistance to the Regions or Program Offices (2011, 2009)
- U.S. EPA Silver Medal (2010)
- U.S. EPA Gold Medal (2009)
- U.S. EPA/NERL Special Achievement Award (2009)
- U.S. Department of Commerce Silver Medal (2005)
- Community Modeling and Analysis System Award of Appreciation (2005)
- U.S. Air Force Notable Achievement Award (1998, 1995)
- U.S. Air Force Mereweather Award (1997)
- Air Weather Service Civilian of the Year (1996)