MATTHEW K. DOGGETT
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PRISM Climate Group
Computational Modeling Researcher, Northwest Alliance for Computational Science and Engineering
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EDUCATION

Air Force Institute of Technology	M.S. (Meteorology)	1997
University of Washington	B.S. (Atmospheric Sciences)	1992

PROFESSIONAL EXPERIENCE

2001-	Sr. Faculty Research Assistant, Northwest Alliance for Computational Science and Engineering
2001-2015	Commander, 123rd Flight, Oregon Air National Guard
1993-1997	Meteorologist, US Air Force
1992-1993	Faculty Research Assistant, University of Washington

PROFESSIONAL ACTIVITIES

Matt Doggett's work interests involve the use of computer science technologies to solve problems and deliver data in the application of PRISM (Parameter-elevation Regressions on Independent Slopes Model) and geospatial climatology which relates patterns of climate and its relationship with geographical features of the Earth. With a background in Meteorology and the atmospheric sciences, combined with extensive technical and computing expertise in a variety of computing solutions, he enjoys taking complex scientific challenges and transferring them into real and applicable solutions that help other scientists and researchers in their analysis of climate-driven relationships.

Matt has been a Computational Modeling Researcher in Oregon State University's PRISM Climate Group, Northwest Alliance for Computational Science and Engineering, since 2001. The PRISM Climate Group is a recognized world leader in spatial climate analysis. The group developed and continues to update digital maps of long-term normals and daily and monthly time series for the conterminous US, downloaded approximately 750,000 times per month from the PRISM Web site. They developed the first-ever detailed climate and species suitability maps for the People's Republic of China, aiding Oregon grass seed growers in creating a multi-million dollar market for their seeds in China. They have also been updating official NOAA extreme precipitation maps that provide guidance used by states, counties, and municipalities to determine building codes and regulations. They released the first digital USDA Plant Hardiness Zone Map, the key plant selection guide for horticulturalists, nurserymen, and gardeners; this map received 20 million online accesses in the first two weeks of release. The group has an ongoing relationship with the USDA Risk Management Agency, which oversees the federal crop insurance program. In an effort to improve the integrity and efficiency of the claims process, the RMA asked the group to provide high-quality spatial weather and climate data on a daily basis for every farm in the lower 48 states. In addition, PRISM long-term climate datasets are being used in conjunction with soils data and a water balance model to establish

zones of crop suitability to provide greater accuracy and spatial detail in crop insurance underwriting.

Prior to his employment at OSU, Matt was a Meteorologist in the US Air Force. His experience there ranged from delivering aviation flight weather briefings to aircrew and command staff to being lead developer for a revolutionary program that created simulated climatology products for customers worldwide. After a successful term in active duty, he continued his military experience part-time in the Oregon Air National Guard. There he was a senior weather officer providing custom meteorological support to US Army operators and command staff. He completed his distinguished 23 year career by commanding the 123rd Weather Flight and leading their elite team of weather support personnel as they delivered meteorological support to the US military operations. He was deployed twice to Iraq supporting the military's needs for weather forecasting operations.

HONORS & AWARDS

2012   ARS Excellence in Information Award: Presented to the OSU PRISM Climate Group and selected USDA/ARS employees for contribution to the successful design, development, and implementation of the 2012 USDA Plant Hardiness Zone Map.

2012   Environmental Systems Research Institute international award: Special Achievement in GIS, presented to the OSU PRISM Climate Group and the USDA/ARS Office of National Programs for outstanding work in developing and communicating the 2012 USDA Plant Hardiness Zone Map for the United States and Puerto Rico.

1998   US Air Force Zimmerman Award for efforts in applied climatology

PUBLICATIONS

Daly, C., **Doggett, M.K.,** Smith, J.I., Olson, K.V., Halbleib, M.D., Dimcovic, Z., Loiselle, R.A., Ryan, A.D., Pancake, C.M., Kaspar, E.M. 2021. Challenges in observation-based mapping of daily precipitation across the conterminous United States. *Journal of Atmospheric and Oceanic Technology*. Accepted.

Daly, C., Halbleib, M., Smith, J.I., Gibson, W.P., **Doggett, M.K.,** Taylor, G.H., Curtis, J., and Pasteris, P.A. 2008. Physiographically-sensitive mapping of temperature and precipitation across the conterminous United States. *International Journal of Climatology*, 28: 2031-2064.

Daly, C., W.P. Gibson, G.H. Taylor, **M.K. Doggett**, and J.I. Smith. 2007. Observer bias in daily precipitation measurements at United States Cooperative network stations. *Bulletin of the American Meteorological Society*, 88:899-912.