

Max P. Bleiweiss

Agricultural Research Scientist, Department of Entomology, Plant Pathology, and Weed Science, MSC 3BE; New Mexico State University, P.O. Box 30003, Las Cruces, New Mexico, 88003-8003
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Professional Preparation:

California State Polytechnic College at Pomona Physics BS 1966
California State College at Los Angeles Physics MS 1969

Appointments:

2005-present Agricultural Research Scientist, Dept of Entomology, Plant Pathology, and Weed Science, NMSU, Las Cruces, NM.
1998-present Director, Center for Applied Remote Sensing in Agriculture, Meteorology, and Environment, College of Agriculture and Home Economics, NMSU, Las Cruces, NM.
1998-2005 Adjunct Asst. Prof., Dept of Entomology, Plant Pathology, and Weed Science, NMSU.
1992-2005 Physicist, US Army Research Laboratory, White Sands Missile Range, NM.
Las Cruces, NM.
1989-1992 Physicist, US Army Atmospheric Sciences Laboratory, White Sands Missile Range, NM.
1985-1989 Physicist, US Army Dugway Proving Ground, Dugway, UT.
1977-1985 Worked in private sector not related to science.
1970-1977 Physicist, US Navy Naval Electronics Laboratory Center, San Diego CA.
1967-1970 Physicist, US Navy Ordnance Laboratory, Corona, CA.

Synergistic Activities:

2005-Present: Collaborate with various researchers at NMSU where satellite remote sensing is an integral part of that work. Currently involved in establishing the source characteristics required for dust storm initialization for projects with the NM Department of Health and NM Department of the Environment. I am also co-advising several PhD and MS candidates in Civil Engineering and Plant and Environmental Sciences.

Honors and Awards

Patent Awarded for technique to extract aerosol cloud from a "scene" and to the place into another scene representative of another time and place. February 1996, US Patent No. 5,489,211.

Bowker's **American Men and Women of Science**, 19th Edition, 1995/6

Bowker's **American Men and Women of Science**, 18th Edition, 1992/3

Marquis' **Who's Who in Science and Engineering**, 1st Edition

Marquis' **Who's Who in the West**, 24th Edition, 1994/5
Marquis' **Who's Who in the West**, 23rd Edition
Marquis' **Who's Who in the West**, 22nd Edition
Member: **Sigma Pi Sigma**, Honorary Physics Society, 1967
Best Paper Award: Smoke/Obscurants Symposium XVII, April 1993

Professional Affiliations:

American Astronomical Society, Full Member since 1977
American Geophysical Union, Full Member since 1972
Institute of Electrical and Electronics Engineers, Full Member since 1994
IEEE Computer Society, Full Member since 1994
IEEE Geoscience and Remote Sensing Society, Full Member since 1995
Remote Sensing Society (UK), Full Member since 1998
International Association of Hydrological Sciences, Member since 2000
Royal Astronomical Society (UK), Fellow since 2009

Publications: (most recent)

Bilal, M., J.E. Nichol, M.P. Bleiweiss, and, D.W. Dubois, 2013: "A Simplified high resolution MODIS Aerosol Retrieval Algorithm (SARA) for use over mixed surfaces", *Remote Sensing of Environment*, Volume 136, Pages 135-145

Samani Majd, A., M.P. Bleiweiss, D.W. DuBois, and M. Shukla, 2013: "Estimation of the fractional canopy cover of pecan orchards using Landsat 5 satellite data, aerial imagery, and orchard floor photographs", *International Journal of Remote Sensing*, Volume 34, Issue 16, pages 5937-5952

DuBois, D., R. Armenta, M. Bleiweiss, and M. Flores, 2013: "The Development of a Dust Event Climatology of the US/Mexico Border Region Including the Four Corners Region and the Panhandle of Texas During the Period 2000-2012", in **Proceedings, 93rd AMS Annual Meeting, Fourth Conference on Environment and Health**, Austin, TX, January 8, 2013

Maier, B., M.P. Bleiweiss, D.W. DuBois, and M.K. Shukla, 2012: "Wireless sensor technology for enhanced spatial and Temporal knowledge of crop growing conditions", In, C.M. Burt, L.A. Schroeder, and S.S. Anderson, ed., **Proceedings, USCID Water Management Conference: Managing Irrigation Systems in Today's Environment**, Reno, NV, November 13-16, 2012

Stringam, B., M.P. Bleiweiss, A.W. Bawazir, 2012: "Internet evapotranspiration tool to help water users Estimate water requirements", In, C.M. Burt, L.A. Schroeder, and S.S. Anderson, ed., **Proceedings, USCID Water Management Conference: Managing Irrigation Systems in Today's Environment**, Reno, NV, November 13-16, 2012

Z. Samani, R. Skaggs, A. Bawazir, M. Bleiweiss, V. Tran and A. Piñon, 2012: "Remote Sensing of Agricultural Water Use in New Mexico From Theory to Practice", *New Mexico Journal of Science*, Vol. 46, 1-15.

A. El-Sadek, M. Shukla, M. Bleiweiss, A. Fernald, and S. Guldan, 2012: "Evaluating Sensitivity Analysis and Auto-Calibration of a Semi-Distributed Hydrological Model for Two Semi-Arid Watersheds in New Mexico", *New Mexico Journal of Science*, Vol. 46, 65-88.

Samani, Z., Tran, V., Bleiweiss, M., and Skaggs, R. 2012: "Estimating Daily and 24-Hour Net Radiation for All Sky Conditions through Remote Sensing and Climatic Data", *Journal of Irrigation and Drainage Engineering*, doi: 10.1061/(ASCE)IR.1943-4774.0000539

McCarville, D., M. Buenemann, M.P. Bleiweiss, and J. Barsi, 2011: "Atmospheric correction of Landsat thermal infrared data: A calculator based on North American Regional Reanalysis (NARR) data". In **Proceedings Annual Conference of the American Society for Photogrammetry and Remote Sensing: Ride on the Geospatial Revolution**, 3 May 2011, Milwaukee, WI.

M. P. Bleiweiss and A. S. Bawazir, 2011: "Climate Data for Hydrologic and Agronomic Modeling" in Shukla, M. ed., **Soil Hydrology, Land Use and Agriculture: Measurement and Modelling**, CABI.

Aldo Piñón-Villarreal, Zohrab A. Samani, A. Salim Bawazir, Max P. Bleiweiss, Rhonda Skaggs, and Vien T. Tran, 2010: "Estimating Water Use Through Satellite Remote Sensing", New Mexico Water Resources Research Institute, New Mexico State University, Las Cruces, NM, WRRRI Technical Completion Report 357.

Ashraf El-Sadek, Max Bleiweiss, Manoj Shukla, Steve Guldan and Alexander Fernald, 2010: "Alternative climate data sources for distributed hydrological modelling on a daily time step", *Hydrological Processes*, Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/hyp.7917

Nancy I. Rivera Rivera, Thomas E. Gill, Max P. Bleiweiss and Jenny L. Hand, 2010: "Source characteristics of hazardous Chihuahuan Desert dust outbreaks", *Atmospheric Environment*, Vol. 44, Issue 20, 2457-2468.

A. S. Bawazir ;Z. Samani ;M. Bleiweiss ;R. Skaggs ;T. Schmutz, 2009: "Using ASTER satellite data to calculate riparian evapotranspiration in the Middle Rio Grande, New Mexico" *International Journal of Remote Sensing*, Vol. 30, No. 21, 5593-5603

Zohrab Samani, A. Salim Bawazir, Max Bleiweiss, Rhonda Skaggs, John Longworth, Vien D. Tran and Aldo Pinon, 2009: "Using remote sensing to

evaluate the spatial variability of evapotranspiration and crop coefficient in the lower Rio Grande Valley, New Mexico”, *Irrigation Science*, Vol. 28, No. 1, 93-100.

Zohrab Samani, A. Salim Bawazir, Rhonda K. Skaggs, Max P. Bleiweiss, Aldo Piñon, and Vien Tran, 2009: “Water Use by Agricultural Crops and Riparian Vegetation: An Application of Remote Sensing Technology”, *Journal of Contemporary Water Res. & Ed.*, Vol. 137, No. 1, 8-13

Nancy I. Rivera Rivera, Thomas E. Gill, Kristi A. Gebhart, Jennifer L. Hand, Max P. Bleiweiss and Rosa M. Fitzgerald, 2009: “Wind modeling of Chihuahuan Desert dust outbreaks”, *Atmospheric Environment*, Vol. 43, No. 2, 347-354

Zohrab Samani, A. Salim Bawazir, Max Bleiweiss, Rhonda Skaggs, and Vien D. Tran, 2007: “Estimating Daily Net Radiation over Vegetation Canopy through Remote Sensing and Climatic Data”, *J. Irrig. and Drain. Engrg.* Volume 133, Issue 4, pp. 291-297

El-Sebai, O. A., R. Sanderson, M.P. Bleiweiss and N. Schmidt. 2006. Detection of Grain Moth *Sitotroga cerealella* (Olivier) Internal Infestation in Wheat Kernels Using Hyperspectral Reflectance Data. *J. Entomol. Sci.* 41(2): 155-164.

Rivera-Rivera, N.I., M.P. Bleiweiss, J.L. Hand, and T.E. Gill. 2006. Characterization of dust storms sources in southwestern U. S and northwestern Mexico using remote sensing imagery. **In proceedings: 14th Conf. Satellite Meteorol. and Oceanog.. 86th AMS Annual Meeting** (Atlanta, GA)

Gomez-Landesa E, A Rango, M Bleiweiss. 2004. Addressing the MODIS bowtie effect for snow mapping. *Canad. J. Remote Sensing* 30.4:644-50.

Rango, A., E. Gomez-Landesa, M. Bleiweiss, D. Dewalle, G. Kite, J. Martinec, and K. M. Havstad. 2004. Integrating two remote-sensing-based hydrological models and MODIS data to improve water supply forecasts in the Rio Grande Basin. In proc. Int. Conf. Hydrol. Sci. and Prac. for 21st Century, Brit. Hydrol. Soc., 453-57

Rango, A., E. Gomez-Landesa, M. Bleiweiss, K. M. Havstad, and K. Tanksley. 2003. Improved satellite snow mapping, snowmelt runoff forecasting, and climate change in simulations in the upper Rio Grande basin. *World Resource Review* 15.1: 25-41.