

Dr. Joseph A. Shaw

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Professional Interests: Optical remote sensing systems and science; polarimetry; optics in nature.

Education:

1996	<i>Ph.D.</i>	Optical Sciences	University of Arizona
1994	<i>M.S.</i>	Optical Sciences	University of Arizona
1989	<i>M.S.</i>	Electrical Engineering	University of Utah
1987	<i>B.S.</i>	Electrical Engineering	University of Alaska

Experience:

2008 – present	<i>Professor</i> – Electrical & Computer Engineering (ECE) Department, Montana State University (MSU), Bozeman, Montana.
2004 – present	<i>Director</i> – Optical Technology Center, Montana State University.
2001 – 2008	<i>Associate Professor</i> – ECE Department, MSU, Bozeman, Montana.
1989 - 2001	<i>Electro-Optical Engineer</i> – National Oceanic and Atmospheric Administration (NOAA) Environmental Technology Laboratory, Boulder, Colorado.

Selected Awards:

- Cox Family Award for Excellence in Creative Scholarship and Teaching, 2012
- Fellow, SPIE (International Society of Optical Engineering), 2008
- Fellow, OSA (Optical Society of America), 2004
- Excellence in Outreach & Service Award, College of Engineering, Montana State Univ. 2008
- Excellence in Research Award, College of Engineering, Montana State Univ. 2007
- Vaisala Award, World Meteorological Organization (*for outstanding contributions to meteorological instruments and methods of observation*), 2000
- Presidential Early Career Award in Science and Engineering (PECASE), 1998

Professional Service: Dr. Shaw serves as the co-chair of the SPIE *Polarization Science and Remote Sensing* conference and on numerous national and international conference and award committees.

Selected Recent Publications:

- J. A. Shaw, N. J. Pust, "Icy wave-cloud corona and cirrus iridescence," *Appl. Opt.* **50**(28), F6-F11, doi:10.1364/AO.50.0000F6 (2011).
- N. J. Pust, A. R. Dahlberg, M. J. Thomas, J. A. Shaw, "Comparison of full-sky polarization and radiance observations to radiative transfer simulations which employ AERONET products," *Opt. Express* **19**(19), 18602-18613, doi:10.1364/OE.19.018602 (2011).
- A. R. Dahlberg, N. J. Pust, and J. A. Shaw, "Skylight polarization measurements at Mauna Loa, Hawaii," *Opt. Express* **19**(17), 16008-16021, doi:10.1364/OE.19.016008 (2011).
- N. J. Pust and J. A. Shaw, "Comparison of skylight polarization measurements and MODTRAN-P calculations," *J. Appl. Rem. Sens.* **5**, 053529, doi:10.1117/1.3595686 (2011).
- J. A. Shaw, P. W. Nugent, J. Johnson, J. J. Bromenshenk, C. B. Henderson, and S. Debnam, "Long-wave infrared imaging for non-invasive beehive population assessment," *Opt. Express* **19**(1), 399-408, doi:10.1364/OE.19.000399 (2011).
- Also included in *Virtual Journal of Biomedical Optics* **6**(2) (2011).
- P. W. Nugent, J. A. Shaw, M. R. Kehoe, C. W. Smith, T. S. Moon, R. Swanson, "Measuring the MTF of an imaging spectrometer with roof-lines of opportunity," *Opt. Eng.* **49**(10), 103201-1 – 103201-9 (2010).