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Anne Nolin  
**Curriculum Vitae**  
**Mountain Hydroclimatology Research Group**

Year hired: 2002

Specialty: Snow and ice in the climate system, remote sensing

Research interests: Cryosphere-climate interactions, snow hydrology, remote sensing of snow and ice, surface energy balance modeling, radiative transfer modeling, digital image processing

Recent Publications: Dozier, J., R. O. Green, A. W. Nolin, and T. H. Painter, [Interpretation of snow properties from imaging spectrometry](#), *Remote Sensing of Environment*, *in press*.

Jefferson, A., A. W. Nolin, S. Lewis, and C. Tague, [Hydrogeologic controls on streamflow sensitivity to climate variability](#), *Hydrological Processes*, DOI: 10.1002/hyp.7041, 2008.

Barry, R. G., R. Armstrong, J. Cherry, S. Gearhead, A. Nolin, D. Russell, and Christoph Zockler, Chapter 4: Snow in *Global Outlook for Ice & Snow*, United Nations Environment Programme, UNEP Job No. DEQ/0924/NA, UNEP/GRID, Arendal, Norway, 2007.

Nolin, A. W. and M. Payne, [Classification of glacier zones in western Greenland using albedo and surface roughness from the Multi-angle Imaging SpectroRadiometer \(MISR\)](#), *Remote Sensing of Environment*, 107, 264-275, 2007

Nolin, A. W., and C. Daly, [Mapping "at-risk" snow in the Pacific Northwest](#), U. S. A., *J. Hydrometeorol.* 7, 1166-1173, 2006.

Stroeve, J., J.E. Box, F. Gao, S. Liang, A. Nolin, C. Schaaf, [Accuracy assessment of the MODIS 16-day albedo product for snow: comparisons with Greenland in situ measurements](#), *Remote Sensing of Environment*, 94, 46-60, 2005

Diner, D.J., B.H. Braswell, R. Davies, N. Gobron, J. Hu, Y. Jin, R.A. Kahn, Y. Knyazikhin, N. Loeb, J-P. Muller, A.W. Nolin, B. Pinty, C.B. Schaaf, G. Seiz, J. Stroeve, [The value of multiangle measurements for retrieving structurally and radiatively consistent properties of clouds, aerosols, and surfaces](#), *Remote Sensing of Environment*, 97, 495-518, 2005.

Nolin, A.W., [Towards retrieval of forest cover density over snow from the Multi-angle Imaging SpectroRadiometer \(MISR\)](#), *Hydrological Processes*, 18, 3623-3636, 2004.

Marshall, S., R. J Oglesby and A. W. Nolin, [The predictability of winter snow cover over the western United States](#), *J. Climate*, 16, 1062-1073, 2003.

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Nolin, A. W., F. M. Fetterer, and T. A. Scambos, [Surface roughness characterizations of sea ice and ice sheets: Case studies with MISR data](#), IEEE Trans. Geosci. Remote Sens., 40, 1605-1615, 2002.

J. C. Stroeve and A. W. Nolin, [Comparison of snow albedo from MISR with ground-based observations on the Greenland ice sheet.](#), IEEE Trans. Geosci. Remote Sens., 40, 1616-1625, 2002.

Nolin, A. W. and J. Dozier, [A hyperspectral method for remotely sensing the grain size of snow](#), Remote Sensing of Environment, 74, 207-216, 2000.

Nolin, A. W. and S. Liang, [Progress in bidirectional reflectance modeling and applications for surface particulate media: Snow and soils](#), Remote Sensing Reviews, 18, 307-342, S. Liang and A.H. Strahler (Eds.) Land Surface Bidirectional Reflectance Distribution Function (BRDF): Recent Advances and Future Prospects, 2000.

Diner, D. J., G. P. Asner, R. Davies, J-P. Muller, A. W. Nolin, B. Pinty, C. B. Schaaf, and J. Stroeve, [New directions in Earth observing: Scientific applications of multi-angle remote sensing](#), Bull. Am. Meteorol. Soc., 80, 2209-2228, 1999.

Nolin, A. W., [Mapping the Martian polar ice caps: Applications of terrestrial optical remote sensing methods](#), J. Geophys. Res., 103, 25851-25864, 1998.

Nolin, A. W. and J. Stroeve, The changing albedo of the Greenland ice sheet: Implications for climate modeling, Ann. Glaciol., 25, 51-57, 1997.

Recent Graduate Student Titles: David Selkowitz, "Measurement, Modeling, and Remote Sensing of Snow Cover in Areas of Heterogeneous Vegetation"

Preeti Tuladhar, "Comparison of MODIS Binary and Fractional Snow Cover Mapping Techniques in the Himalayan Region, Nepal"

Jon Michael Bosley, "Mapping Vegetation Density and Water Inundation in a Recovering Wetland: The Mesopotamian Marshlands"

Robert Friedel, "Development and Application of a Mathematical Transformation for MISR Data for the Study of Vegetation Change"

Brooke Medley, "A Method for Remotely Monitoring Glaciers with Regional Application to the Pacific Northwest"

Jeff Phillippe, "Current and Future Glacier Meltwater Contributions to the Upper Middle Fork Hood River"

Courses taught: Geo 323, Climatology  
Geo 444/544, Remote Sensing of the Environment  
Geo 466/566, Digital Image Processing  
Geo 583, Snow Hydrology  
Geo 585, Advanced Techniques in Remote Sensing and Digital Image Processing

Degrees: Ph.D. 1993, Department of Geography, University of California - Santa Barbara  
M.S. 1987, Department of Soil and Water Science, University of Arizona  
B.A., 1980, Department of Anthropology, University of Arizona

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