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EDUCATION Ph.D. (Environmental Monitoring) University of Wisconsin-Madison, May 2001
Dissertation: *Topographic Mapping of Forested Areas in the Western Great Lakes Region Using Spaceborne Synthetic Aperture Radar Interferometry*
M.S. (Environmental Monitoring) University of Wisconsin-Madison, May 1996
Thesis: *Analysis of Spaceborne Synthetic Aperture Radar Images to Assist in Statewide Land Cover Mapping and Long-Term Ecological Research*
B.A. (Music) Dartmouth College, June 1990

PROFESSIONAL INTERESTS

Remote sensing, geographic information systems, spatial analysis
Satellite-based monitoring of hydrology and lake water quality
Environmental applications of synthetic aperture radar and SAR interferometry
Facilitating the adoption of geospatial science and technology in the curriculum

EMPLOYMENT

2007-present Director, Laboratory for Geographic Information Science & Applied Spatial Analysis, Dartmouth College
2004-2007 Assistant Scientist, Environmental Remote Sensing Center, University of Wisconsin-Madison
2001-2004 Research Associate, Center for Limnology, University of Wisconsin-Madison
1994-2001 Project Assistant, Environmental Remote Sensing Center, University of Wisconsin-Madison

TEACHING

Dartmouth College EARS 55/GEOG 55: Remote Sensing
GEOG 59: Environmental Applications of Geographic Information Systems
University of Wisconsin IES 301: Introduction to Aerial Photographic Systems
IES 302: Introduction to Electro-Optical and Microwave Remote Sensing Systems
Teaching assistant and/or co-instructor for courses in remote sensing, digital image processing, visual image interpretation, and geographic information systems

Recipient of the University of Wisconsin's Excellence in Teaching Award, 1999
Co-author of the textbook Remote Sensing and Image Interpretation (Lillesand / Kiefer / Chipman)

AWARDS AND GRANTS

- 2008 Computing Technology Venture Fund award. *Facilitating the Adoption of Geographic Information Systems and Spatial Analysis in the Curriculum*. Dartmouth College; 2008-2009; \$9868.
- Principal Investigator (2006-2007, at University of Wisconsin) and Co-Investigator (2007-present, at Dartmouth College). *Multisensor Spaceborne Monitoring of Large Lakes Worldwide: Assessment of Trends in Water Quantity and Quality*. NASA; 2006-2009; \$527,930.
- Principal Investigator. *LakeSat: Near Real-time Monitoring of Water Quality in Green Bay and Wisconsin's Lake Michigan Coastal Waters via Satellite Remote Sensing*. Wisconsin Sea Grant; 2004-2007; \$319,155.
- Co-Investigator, with PI Stephen Carpenter. *Comparative Study of a Suite of Lakes in Wisconsin*. National Science Foundation; 2002-2008; \$6,720,000.
- Co-Investigator, with PI Jonathan Patz. *Health Risks from Climate Variability and Change in the Upper Midwest: a Place-based Assessment of Climate-related Morbidity*. US EPA; 2005-2008; \$598,599.
- Principal Investigator on UW subcontract, with lead PI Steven Heiskary (North American Lake Management Association). *Assessing the Performance of Various Proximal and Remote Sensing Platforms for Estimating Lake Trophic Status and Trends*. US EPA Grant to North American Lake Management Society (NALMS), with subcontract to UW-Madison; 2005-2006; UW-Madison subtotal \$27,782.

PUBLICATIONS: BOOKS AND BOOK CHAPTERS

- Lillesand, T., R. Kiefer, and J. Chipman. 2008. *Remote Sensing and Image Interpretation*, 6th edition. John Wiley & Sons, NY.
- Benson, B., P. Hanson, J. Chipman, and C. Bowser. 2005. "Breaking the Data Barrier: Research Facilitation Through Data and Information Management." In J. Magnuson, T. Kratz and B. Benson, *Long Term Ecological Research of North Temperate Lakes: Dynamics of Lakes in the Landscape*. Oxford University Press, NY.
- Lillesand, T., R. Kiefer, and J. Chipman. 2004. *Remote Sensing and Image Interpretation*, 5th edition. John Wiley & Sons, NY.
- Chipman, J., R. Kiefer, and T. Lillesand. 2004. "Remote Sensing." In R. Dorf, *The Engineering Handbook*, 2nd edition. CRC Press, Boca Raton, FL.

PUBLICATIONS: PEER-REVIEWED JOURNAL ARTICLES AND REPORTS

- Heiskary, S., J. Chipman, A. Gitelson, L. Olmanson, M. Bauer, and T. Lillesand. In review. *Remote Sensing Methods for Lake Management: A Guide for Resource Managers and Decision-makers*. North American Lake Management Society.
- Chipman, J. and T. Lillesand. 2007. Satellite-based assessment of the dynamics of new lakes in southern Egypt. *International Journal of Remote Sensing*, 28(19): 4365-4379.
- Dash, J., A. Mathur, G. Foody, P. Curran, J. Chipman, and T. Lillesand. 2007. Land cover classification using multi-temporal MERIS vegetation indices. *International Journal of Remote Sensing*, 28(5-6): 1137-1159.
- Carpenter, S., B. Benson, R. Biggs, J. Chipman, J. Foley, S. Golding, R. Hammer, P. Hanson, P. Johnson, A. Kamarainen, T. Kratz, R. Lathrop, K. McMahon, B. Provencher, J. Rusak, C. Solomon, E. Stanley, M. Turner, J. Vander Zanden, C. Wu, and H. Yuan. 2007. Understanding regional change: a comparison of two lake districts. *BioScience*, 57(4): 323-335.
- Peckham, S., J. Chipman, T. Lillesand, and S. Dodson. 2006. Alternate stable states and the shape of the lake trophic distribution. *Hydrobiologia*, 571:401-407.
- Chipman, J., T. Lillesand, J. Schmaltz, J. Leale, and M. Nordheim. 2004. Mapping lake water clarity with Landsat images in Wisconsin, USA. Invited paper, *Canadian Journal of Remote Sensing*, Special Collection on Remote Sensing and Resource Management in Nearshore and Inland Waters, 30(1):1-7.

- Reese, H., T. Lillesand, D. Nagel, J. Stewart, R. Goldmann, T. Simmons, J. Chipman and P. Tessar. 2002. Statewide land cover derived from multiseasonal Landsat TM data: a retrospective of the WISCLAND project. *Remote Sensing of Environment*, 82(2-3): 224-237.
- Means, J., P. Hopkins, J. Jensen, S. Schill, J. Chipman, R. Ramsey, and D. Stow. 2001. ARC partnerships: industry and academia explore remote sensing applications. *Journal of Forestry* 99: 4-12.
- Chipman, J., T. Lillesand, J. Gage, and S. Radcliffe. 2000. Spaceborne imaging radar in support of forest resources management. *Photogrammetric Engineering and Remote Sensing*, 66(11): 1357-1366.
- Lillesand, T., J. Chipman, D. Nagel, H. Reese, M. Bobo, and R. Goldmann. 1998. *Upper Midwest Gap Analysis Program Image Processing Protocol*. Environmental Management Technical Center report EMTC-98-G001, Environmental Management Technical Center, US Geological Survey, Onalaska, WI.

WORKSHOPS AND PRESENTATIONS AT CONFERENCES

- Author or co-author of 40 talks presented at annual meetings of the American Society for Photogrammetry and Remote Sensing (ASPRS), the North American Lake Management Society (NALMS), the US-International Association for Landscape Ecology (IALE), and other conferences, symposia, and workshops.
- Moderated two sessions on remote sensing of lakes at the 2005 NALMS Annual Symposium, Madison, Wisconsin.
- Presented at the US National Science Foundation (NSF)/European Union (EU) International Workshop on Long-Term Environmental Research, 30 June - 6 July 2003, Motz, France.
- Organized a workshop on "Historical Trends in Land Use/Land Cover: Data and Implications," for the Long-Term Ecological Research (LTER) Program All-Scientists Meeting in Seattle, 18-21 Sept. 2003.
- Presented at the International Workshop on Remote Sensing and Resource Management in Nearshore and Inland Waters, organized by the Alliance for Marine Remote Sensing, October 2001, Wolfville, Nova Scotia, Canada.
- Participated in the LightSAR planning workshop, USGS EROS Data Center, Sioux Falls, SD, Aug. 1996.