

Tracy L. DeLiberty
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Education

Ph.D., Geography. 1994. *University of Oklahoma*, Norman, Oklahoma.
M.A., Geography. 1989. *University of Arizona*, Tucson, Arizona.
B.A., Environmental Studies. 1987. *Shippensburg University*, Shippensburg, Pennsylvania.

Professional Experience

Associate Professor, Department of Geography, University of Delaware, Newark, Delaware. 1995-present. *Tenured Spring 2003*
Joint-Appointment, College of Marine Studies, University of Delaware, Newark, Delaware. 1996 - present
Research Associate, National Research Council Research Associate Programs, Cooperative Institute for Meteorological Satellite Studies. Madison, Wisconsin. 1994 – 1995

Publications

Referred

DeLiberty, Tracy L., and David R. Legates. 2003. The interannual and seasonal variability of modeled soil moisture in Oklahoma. *International Journal of Climatology*, 23(9), 1057-1086.
DeLiberty, Tracy L. 2000. A regional scale investigation of climatological tropical convection and precipitation in the Amazon Basin. *Professional Geographer*. 52(2), 258-273.
Legates, David R., and Tracy L. DeLiberty. 1996. *Precipitation in the Southern Great Plains: Observations and model simulations of present-day and doubled atmospheric CO₂ concentrations*. Global Climate Change Response Program, Final Report. U.S. Department of the Interior, Bureau of Reclamation Technical Service Center. Denver, Colorado. 97pp.
DeLiberty, Tracy L. 1995. Spatial and temporal variability of soil moisture in Oklahoma. *Publications in Climatology*. 47(2), 77pp.

Proceedings Articles

DeLiberty, Tracy L. and Cathleen A. Geiger. Temporal and regional variations of sea ice thickness in the Ross Sea during 1995 and 1998. *Proceedings of the 8th Conference on Polar Meteorology and Oceanography*. San Diego, CA. January 10-14, 2005. Paper 9.5 (cdrom).
DeLiberty, Tracy L., Cathleen A. Geiger and Mary D. Lemcke. Examining Sea Ice in the Southern Ocean using ArcGIS. *ESRI International User Conference*. August 9-13, 2005. Paper No. 1965 (cdrom).
Schellenberg, Beth A., Tracy L. DeLiberty, Cathleen A. Geiger, Jordan Silberman, and Anthony P. Worby. Investigation of seasonal sea-ice thickness variability in the Ross Sea. *Proceedings of the 13th Symposium on Global Change and Climate Variations*. AMS. Orlando, FL. 13-17 January 2002. pp.130-132.

Grants

Current

Principal Investigator. NIC Weekly Ice Chart Quality Control in the Southern Ocean from 1995 to 2000. National Ice Center. September 2004 – August 2007. \$99,518

Previous

Principal-Investigator. Investigation of interannual sea-ice thickness variability in the southern ocean. *NSF, Antarctic Oceans and Climate Systems Program*. September 2001 – August 2004 (Co-

Investigators - Cathleen Geiger (PI Sep2001-Aug2003), Anthony Worby, Michael Van Woert, Steve Ackley) \$380,001

Principal Investigator. Continuation of the Digital Data Capture of the NIC Weekly Ice Charts for 1995 to 2000 in the Southern Ocean. *National Ice Center*. September 2003 – August 2003. \$30,000

Principal Investigator. Digital Data Capture of the NIC Weekly Ice Charts for 1995 to 2000 in the Southern Ocean. *National Ice Center*. September 2002 – March 2004 (Co-Investigator - Cathleen Geiger) \$33,826

Principal Investigator. Radar Estimated Precipitation as Input to Nutrient Loading Models. *Center for the Inland Bays*. October 2002 – September 2003. (Co-Investigator – David Legates) \$12,500

Synergistic Activities

My professional goals are to maintain an active research agenda and contribute to the teaching needs in the Center for Climatic Research and Department of Geography within the University of Delaware. Since joining the faculty in 1995, I have become a nationally known researcher in the area of hydroclimatology, remote sensing and GIS carving a niche for myself demonstrated by my published research and active grants. In addition, I have built the GIS concentration program that is serving the University of Delaware students and providing the “real-word” employers with GIS specialists.

My specific research has focused on land surface interactions with climate analyzing large regional and global observations and remotely sensed datasets relying very heavily on using GIS and image processing systems in the analysis. Studies areas of focus include the Southern Great Plains, Amazon Basin and recently the Southern Ocean. I have continued to participate actively in national conferences and in the peer review process in meteorological and climatological journals.

Relevant skills include experience in processing global/regional climate observational datasets and remote sensing data including GOES Imager, MODIS, AVHRR, and Landsat images. I also have experience in modeling with my dissertation focus on soil moisture. I rely on Fortran and scripting programming languages, statistical packages (e.g., IMSL), GIS, and image processing systems in the analysis to address hydroclimatology and climate change questions.

Collaborators

Dr. Stephen Ackley, Clarkson University

Dr. Cathleen Geiger, Cold Regions Research and Engineering Laboratory

Dr. Chandra Kambhamettu, University of Delaware

Dr. David Legates, University of Delaware

Dr. Thomas McKenna, Delaware Geological Survey

Dr. Michael Van Woert, National Ice Center (formerly)

Dr. Anthony Worby, Antarctic Climate & Ecosystems Cooperative Research Centre
Australian Antarctic Division

Graduate Advisors

PostDoc – Dr. W. Paul Menzel, NOAA/NESDIS Center for Satellite Applications Research

Ph.D. - Dr. David R. Legates, University of Delaware

M.A. – Dr. Richard Reeves, University of Arizona

Students

Modelski, Kimberly. Comparison of climatic conditions and mosquito abundances in New Castle County, Delaware. *Master's Thesis*. Spring 2006

Wang, Lillian., Identifying groundwater discharge locations in Rehoboth and Indian River Bays Using Landsat ETM+ Imagery. *Master's Thesis*. Department of Geography. Spring 2005

Schellenberg, Beth A., Investigation of sea-ice thickness variability in the Ross Sea. *Master's Thesis*. Department of Geography. Fall 2002