

## **CLAIRE A. JANTZ**

Shippensburg University  
Department of Geography and Earth Science  
1871 Old Main Dr.  
Shippensburg, PA 17257  
cajant@ship.edu  
717-477-1399

### **RESEARCH INTERESTS**

Land use change modeling; urbanization and “sprawl,” socio-economic factors of land use change; political ecology; spatial analysis; the application of Geographic Information Systems (GIS) and the integration of remotely sensed data to study social-environmental problems.

### **EDUCATION**

- Ph.D. (2005), Geography, University of Maryland, College Park  
Dissertation title: Analyzing Forest Change and Policy in Washington, DC Suburban Counties
- M.A. (2000), Geography, University of Maryland, College Park  
Concentrations: Cultural ecology, biogeography  
Scholarly paper: Land Use History and Planning in Montgomery County, MD and Fairfax County, VA: Implications for Landscape Patterns and Forest Fragmentation
- B.A. (1997), Summa Cum Laude, University of Tennessee, Knoxville  
Major: College Scholar Program, concentration in Ecology and Anthropology  
Senior thesis: Cades Cove: an Environmental History

### **EMPLOYMENT**

- Assistant Professor, Shippensburg University Department of Geography and Earth Science  
(August 2005 – present)
- Research Associate, The Woods Hole Research Center. Woods Hole, MA (July 2003 – July 2005)
- Research Assistant, Mid-Atlantic Regional Earth Science Applications Center (RESAC). College Park, MD (August 1999 – July 2003)
- Teaching Assistant, Department of Geography, University of Maryland. College Park, MD  
(August 1998 – July 2003)
- Undergraduate Advisor, Department of Geography, University of Maryland. College Park, MD  
(August 2000-May 2004)
- Field Assistant, Oak Ridge Institute for Science and Education. Oak Ridge, TN (June 1998-August 1998)
- Social Science Aide, Great Smokey Mountains National Park. Gatlinburg, TN (June 1997-August 1997)
- Field Assistant, University of Tennessee. Knoxville, TN (May 1996-August 1996)

## PEER REVIEWED PUBLICATIONS

- Jantz, P.A., S. J. Goetz and C.A. Jantz (2005). Urbanization and the loss of resource lands in the Chesapeake Bay watershed. *Environmental Management* 36(6): 808-825.
- Jantz, C.A. and S.J. Goetz (2005). Analysis of scale dependencies in an urban land use change model. *International Journal of Geographical Information Science* 19 (2): 217-241.
- Dougherty, M, R.L. Dymond, S.J. Goetz, C.A. Jantz and N. Goulet (2004). Evaluation of impervious surface estimates in a rapidly urbanizing watershed. *Photogrammetric Engineering and Remote Sensing* 70 (11): 1275-1284.
- Claggett, P.R, C.A. Jantz, S.J. Goetz, and C. Bisland (2004). Assessing development pressure in the Chesapeake Bay watershed: an evaluation of two land use change models. *Environmental Monitoring and Assessment* 94: 129-146.
- Jantz, C.A., S.J. Goetz, and M. K. Shelley (2003). Using the SLEUTH urban growth model to simulate the impacts of future policy scenarios on urban land use in the Baltimore-Washington metropolitan area. *Environment and Planning B* 31 (2): 251-271.

## BOOK CONTRIBUTIONS

- Elvidge, C., P. C. Sutton, T. W. Wagner, R. Ryznar, S. J. Goetz, A. J. Smith, C. Jantz, K. C. Seto, M. L. Imhoff, Y. Q. Wang, C. Milesi, and R. Nemani. (2004). Urbanization. In *Land Change Science: Observation, Monitoring, and Understanding Trajectories of Change on the Earth Surface*. Eds. G. Gutman, D. Skole, and C. Justice. Springer, New York.
- Goetz, S. J., D. Varlyguin, A. J. Smith, R. K. Wright, S. D. Prince, M. E. Mazzacato, J. Tringe, C. Jantz, and B. Melchoir. 2004. Application of multitemporal Landsat data to map and monitor land cover and land use change in the Chesapeake Bay watershed. In *Analysis of Multi-temporal Remote Sensing Images*, pp. 223-232. Eds. P. Smits and L. Bruzzone. World Scientific Publishers, Singapore.
- Goetz S. J., Jantz C. A., Prince S. D., Smith A. J., Wright R. and Varlyguin D. 2004. Integrated analysis of ecosystem interactions with land use change: the Chesapeake Bay watershed. In *Ecosystems and Land Use Change*, pp. 263-275. Eds. R. S. DeFries, G. P. Asner & R. A. Houghton. Geophysical Monograph Series, American Geophysical Union, Washington DC.
- Jantz, C.A. (2002). "Cades Cove: reconstructing human impacts on the environment prior to Euroamerican settlement." In *Culture, Environment and Conservation in the Appalachian South*. Ed. Benita J. Howell. University of Illinois Press, Champagne.

## CONFERENCE PROCEEDINGS

- Jantz, C.A., S.J. Goetz, P.A. Jantz and B. Melchior (2005). Resource land loss and forest vulnerability in the Chesapeake Bay watershed. In Proceedings of the 4th Southern Forestry and Natural Resources GIS Conference, December 16-17, 2004, Athens, GA, pp. 84-95. Warnell School of Forest Resources, University of Georgia, Athens, GA. Eds. P. Bettinger, C. Hyldahl, S. D. Danskin, J. Zhu, Y. Zhang, W. G. Hubbard, T. Lowe, M. Wimberly, and B. Jackson, eds.
- Goetz, S.J., A.J. Smith, C. Jantz, R.K. Wright, M.E. Mazzacato, and B. Melchoir (2003). Monitoring and modeling urban land-use change using multi-temporal satellite data. Proceedings of the International Geoscience and Remote Sensing Symposium (IGARSS), 21 July.

## **RESEARCH GRANTS**

- Jantz, C.A. (2006). Forecasting Land Use Change in Delaware and Sullivan Counties, NY. Delaware County Planning Commission. \$13,000.
- Mronzinski, M., C. A. Jantz, E. de Coulstoun and D. Forney (2006). Forecasting Land Use Change in Pike & Wayne Counties, PA. Pennsylvania DCNR Community Conservation Partnership Program Grants. \$25,000.
- Goetz, S.J., S.D. Prince, N. Bockstael, R. Holmes, T. Stone and C. Jantz (2005-2008). Urban growth impacts on surface hydrology in mid-Atlantic and New England watersheds. NASA Energy- and Water-Cycle Sponsored Research (NEWS) NRA, Land Cover and Land Use Change Program. \$570,000.
- Goetz, S.J. and C.A. Jantz (co-investigator) (2004-2006). Modeling the rates and spatial patterns of future land use change in the Chesapeake Bay watershed. Chesapeake Bay Program, US Environmental Protection Agency. \$100,000.
- Goetz, S.J. and C.A. Jantz (co-investigator) (2003). Modeling the effects of land use policies on urban land use patterns in Maryland. National Center for Smart Growth Research and Education Small Grants Program, University of Maryland, College Park, MD. \$20,000.00.

## **PRESENTATIONS**

- Jantz, C.A. and S.J. Goetz (2006). Calibration of an urban land cover change model for the Chesapeake Bay watershed. Association of American Geographers Annual Meeting. Chicago, IL.
- Jantz, C.A. and M.E. Geores (2005). Defining the suburban forest across space and time: a multi-scale analysis of forest management policies in the Washington, DC suburbs. Association of American Geographers Annual Meeting. Denver, CO.
- Jantz, C.A., S.J. Goetz, J. Opton-Himmel (2005). Vulnerability of National Parks to “sprawl:” a regional analysis in the eastern United States. George Wright Society. Philadelphia, PA.
- Jantz, C.A., S.J. Goetz, P.A. Jantz, and B. Melchoir (2005). Resource land loss and forest vulnerability in the Chesapeake Bay Watershed. Ecological Society of America, Mid-Atlantic Division. Baltimore, MD.
- Jantz, C.A., S.J. Goetz, P.A. Jantz, and B. Melchoir (2004). Resource land loss and forest vulnerability in the Chesapeake Bay Watershed. Southern Forestry and GIS Conference. Athens, GA.
- Jantz, C.A. and S.J. Goetz (2004). Modeling and assessing urban land use change in the mid-Atlantic region. The International Association of Landscape Ecology United States Regional Association, 19<sup>th</sup> Annual Symposium. Las Vegas, NV.
- Jantz, C.A., S.J. Goetz, and N. Bockstael (2004). Towards an integrated approach to modeling sprawl in the mid-Atlantic region. Association of American Geographers Annual Meeting. Philadelphia, PA.
- Jantz, C.A., S.J. Goetz, N. Bockstael, and B. Melchior (2003). Prediction of future growth in the Chesapeake Bay watershed using models calibrated with satellite observations. Mid-Atlantic Land Use/Land Cover Conference. Towson, MD.
- Jantz, C.A. (2003). Using aerial photographs to analyze the changing suburban landscape, 1937-1998. Social Science History Association. Baltimore, MD.
- Claggett, P.R., C.A. Jantz, S.J. Goetz, S. Painton-Orndorff, and M. Martinez (2003). Assessing the vulnerability of resource lands in the Chesapeake Bay watershed. EPA ReVA-MAIA Conference: Using Science to Assess Environmental Vulnerabilities. King of Prussia, PA.

- Jantz, C.A., S.J. Goetz, and A.J. Smith (2003). Mapping and modeling land use change in the Baltimore-Washington, DC area: tools for regional planning in the Chesapeake Bay watershed, USA. Framing Land Use Dynamics International Conference. Utrecht University, Netherlands.
- Jantz, C.A. (2002). Analyzing forest change in suburban environments. Annual Meeting, Mid-Atlantic Division of the Association of American Geographers. Richmond, VA.
- Jantz, C.A., S.J. Goetz, and A.J. Smith (2002). Mapping and predicting land use change within the Chesapeake Bay watershed. Chesapeake Bay Watershed Restoration Conference. Baltimore, MD.
- Jantz, C.A., S.J. Goetz, and A.J. Smith (2002). Mapping and modeling land use change in the Washington-Baltimore metropolitan region 1986-2030. Chesapeake Bay Program Tributary Strategy Workgroup meeting (invited). Annapolis, MD.
- Jantz, C.A., S.J. Goetz, and A.J. Smith (2002). Mapping and modeling land use change in the Washington-Baltimore metropolitan region 1986-2030. Spring Meeting, American Geophysical Union (invited). Washington, DC.
- Jantz, C.A., S.J. Goetz and A.J. Smith (2002). Modeling land use change and future scenarios in the greater Washington-Baltimore metropolitan area: linkages with ecosystem health. Healthy Ecosystems, Healthy People Conference sponsored by the International Society for Ecosystem Health (poster presentation). Washington, DC.
- Jantz, C.A., S.J. Goetz, and A.J. Smith (2002). Modeling future growth in the Baltimore-Washington metropolitan area. Mid-Atlantic Federal Partners for the Environment Urban Growth Workshop (poster presentation). Baltimore, MD.
- Jantz, C.A., M. K. Shelley, S.J. Goetz, and A.J. Smith (2002). Predicting land use change in the Washington, DC metropolitan region, 1985-2030. Annual Meeting, Association of American Geographers. Los Angeles, CA.
- Jantz, C.A. (2001). Evaluating the importance of land use history and planning on patterns of suburban development and forest fragmentation: a comparison of Montgomery County, MD and Fairfax County, VA. GIS and Remote Sensing Research Symposium, sponsored by Virginia Polytechnical Institute and State University. Roanoke, VA.

## **INVITED PRESENTATIONS**

- 17 July, 2006. Jantz, C.A. and S.J. Goetz (2006). Modeling land cover change in the Chesapeake Bay watershed: SLEUTH progress, performance and interactions. Invited speaker, Chesapeake Bay Program worksession, "Integrating Trend Information to Forecast 2030 Land Use." Annapolis, MD.
- 21 April, 2006. "Modeling land cover change in the Chesapeake Bay Watershed: an overview of the SLEUTH model." Presentation of modeling activities to the Pennsylvania Department of Environmental Protection and other Bay Program stakeholders in Pennsylvania. Harrisburg, PA.
- 7 February, 2006. Jantz, C.A. and S.J. Goetz (2006). Modeling land cover change in the Chesapeake Bay Watershed: an overview of the SLEUTH model. Presentation to the Chesapeake Bay Scientific and Technical Advisory Committee and Bay Program partners at the kick-off meeting related to CBP/EPA grant funded research activities. Edgewater, MD.
- 21 March, 2004. "Mapping and modeling land cover change in the Chesapeake Bay watershed." Harvard Division of Engineering and Applied Sciences GIS Colloquium guest speaker. Cambridge, MA.

23 September, 2004. "Mapping and modeling land cover change in the Chesapeake Bay watershed." Massachusetts Maritime Academy, Marine Safety and Environmental Protection Department seminar. Buzzards Bay, MA.

### **STUDENT PAPER AWARDS**

*First place winner, student paper competition.* Jantz, C.A. (2000). Land use, history and planning in Montgomery County, MD and Fairfax County, VA: implications for landscape patterns and forest fragmentation. Annual Meeting, Mid-Atlantic Division of the Association of American Geographers. Washington, D.C.

*Second place winner, student paper competition.* Jantz, C.A. (2001). Understanding forest change in northern Virginia: a case study. Annual Meeting, Mid-Atlantic Division of the Association of American Geographers. Frostburg, MD.

*Third place winner, student paper competition.* Jantz, C.A. (2001). Land use, history and planning in Montgomery County, MD and Fairfax County, VA: implications for landscape patterns and forest fragmentation. 11th Annual Graduate Research Interaction Day, University of Maryland. College Park, MD.

### **SCHOLARSHIPS AND AWARDS**

Faculty Research Award (2006). Department of Geography-Earth Science, Shippensburg University.

College of Behavioral and Social Sciences Outstanding Advisor Award (2003). University of Maryland, College of Behavioral and Social Sciences.

Outstanding Teaching Assistant of the Year Award (2000). University of Maryland, Department of Geography.

Recipient of the Alvin H. Nielsen Scholarship in Arts and Science (1996). University of Tennessee, Knoxville, TN.

### **SERVICE**

Environmental Steering Committee, APSCUF Representative, Shippensburg University. 2005 – present.

Facilities and Resource Management Committee, Department of Geography-Earth Science, Shippensburg University. 2005-present.

Graduate Student Representative for the Geography Undergraduate Committee, University of Maryland, 2001-2003.

Graduate Student Representative for the Geography Faculty Search Committee, University of Maryland, 2000 and 2001.

Graduate Student Representative for the Geography Chair Search Committee, University of Maryland, 2000.

Graduate Student Representative for the Geography Faculty Committee, University of Maryland, 2000.

## **PROFESSIONAL MEMBERSHIPS AND HONOR SOCIETIES**

Association of American Geographers (AAG)

American Geophysical Union (AGU)

The George Wright Society

International Association for Landscape Ecology (IALE)

Phi Beta Kappa National Honor Society

Golden Key National Honor Society

Phi Kappa Phi National Honor Society