

CURRICULUM VITAE

ZHI-JUN LIU

Department of Geography
The University of North Carolina at Greensboro
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EDUCATION

Ph.D., Geography, 1995, University of Iowa, USA

M.A., Geography, 1992, University of Iowa, USA

M.S., Statistics, 1991, University of Iowa, USA

B.S., Geography, 1982, Hebei Normal University, China

CURRENT POSITION

Associate Professor, Department of Geography, University of North Carolina at Greensboro

RESEARCH INTERESTS

Environmental geography
Hydrology/Watershed models
GIS and Spatial statistics
Scientific computing

PROFESSIONAL MEMBERSHIPS

Currently

Association of American Geographers (AAG)
American Water Resources Association (AWRA)

Formerly

American Statistical Association (ASA)
Ecological Society of America (ESA)

PROFESSIONAL EXPERIENCE

2007- Present	Associate Professor, Department of Geography, University of North Carolina at Greensboro
2001-2007	Assistant Professor, Department of Geography, University of North Carolina at Greensboro
2000-2001	Visiting Assistant Professor, Department of Geography and Urban Studies, Temple University, Philadelphia, Pennsylvania
1996-2000	Post-Doctoral Fellow/Visiting Scientist, Smithsonian Environmental Research Center, Smithsonian Institution

AWARDS

2007	Summer Excellence Research Award (\$4,000) University of North Carolina at Greensboro
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TEACHING

Teaching Positions

2007- Present	Associate Professor, Department of Geography, University of North Carolina at Greensboro
2001-2007	Assistant Professor, Department of Geography, University of North Carolina at Greensboro
2000-2001	Visiting Assistant Professor, Department of Geography and Urban Studies, Temple University
1987-1988	Teaching Assistant, Department of Geography, University of Iowa

Courses Taught at University of North Carolina at Greensboro

Undergraduate:

- (1) Geo 103 Introduction to Earth Science
- (2) Geo 330 Elements of Hydrology
- (3) Geo 524 GIS Programming: Design and Application
- (4) Geo 490 Special Problems in Geography

Graduate:

- (1) Geo 614 GIS Programming
- (2) Geo 620 Spatial Analysis
- (3) Geo 690 Research Problems in Applied Geography
- (4) Geo 750 Advanced Spatial Analysis

Courses Taught at Temple University

- (1) Introduction to Physical Environment
- (2) Fundamentals of Cartography
- (3) Fundamentals of Geographic Information Systems
- (4) Geographic Data Systems
- (5) Environment and Society

GRADUATE STUDENTS MENTORING

University of North Carolina at Greensboro

Ph.D. Committee Member (Current)

James Burke
Debasish Chaudhuri
Charles Folds
Suzanne Gallaway
Carly Hertz
Khaula Al Kaabi
Augustin Misage
Omer Omer
Prasad Pathak
Charles Watson

MA Committee Member (Current)

Jason Marshall
Rebecca H. Wells
Kathleen Wolfe
Chris Adamson

Ph.D. Committee Member

Russell Smith, "Newly Incorporated Municipalities (NIMs) in the United States 1990-2000: Socioeconomic Differences between NIMs and Cohort Cities." Graduation Date: December 2007.

MA Committee Chair

Evans Kwame Amankwah, "The Geography of Household Computer Waste Management: The Case of North Carolina." Graduation Date: May 2007.

Gavin Chance. Graduation Date: May 2007.

Richard Carlisle Haworth, "Web-based Automated Itinerary Planning for Public Transit: Improving Accessibility through Information." Graduation Date: May 2005

Brendan Blackburn, "A Model for Determining the Location of Airline Hubs." Graduation Date: May 2004.

Jason Ortegren, "A Comparison of Temperature Trends in Urbanized and Urbanizing Areas of North Carolina." Co-chaired with G. Jay Lennartson. Graduation Date: May 2004.

MA Committee Member

Bradley Bereitschaft (Biology), "Modeling Nutrient Attenuation by Riparian Buffer Zones along Headwater Streams." Graduation Date: May 2007.

Joseph Owusu-Adjei, "Characteristics of Coarse Woody Debris and its Impact on Urban Streambed Process and Structure, North Buffalo Creek, Greensboro, USA." Graduation Date: May 2007.

Chris Evans. Graduation Date: May 2007.

Amy Wolff, "Housing Affordability by Metropolitan Area." Graduate Date: December 2006.

Will Hughs, Graduation Date: December 2005.

Jack Dale, "Population Growth, Density and Migration of the Young, Single and College-Educated: US Sunbelt Metropolitan Areas, 1990-2000." Graduation Date: December 2005.

Daniel Brown, "Determining Park Visitor Profiles Using a Geographic Approach." Graduation Date: May 2005.

Debbie Shoffner, "Hydraulic Biotopes and the Characterization of Streambed Habitat Diversity in Rural and Urban Streams." Graduation Date: August 2005

Charles Davidson, "Developing an Intranet Data Service and GIS Application with Object Oriented Programming." Graduation Date: May 2005

Rebecca Renken, "The Geography of Low Weight Births in Guilford County, 2000-2002." Graduation Date: December 2004

Jennifer Alford, "Graphic Visualization: Internet Mapping for Non-Technical Users."
Graduation Date: May 2004.

Khaula Al Kaabi, "The Geography of Air Transport and Skilled Labor Markets by
Metropolitan Area, 1997." Graduation Date: May 2004.

Jason Lewis, "Internet Mapping: Dynamic Distribution of Spatial Information."
Graduation Date: December 2003.

Temple University

MA Committee Member

Jingcheng Liu, "Interoperability Implementation: A Case Study on Community
Information Systems at Harrison Plaza Public Housing Development." Graduation Date:
Summer 2001.

PUBLICATIONS

Books

Liu, Zhi-Jun, David Percy, and Larry Stanislawski. "*GIS Programming: Concepts and
Application*", Taylor and Francis (CRC Press): New York (under contract).

Refereed Journal Articles

Liu, Z.-J., D.E. Weller, D.L. Correll, T.E. Jordan, and K.B. Boomer. 2008. Integrated Modular
Modeling of Water and Nutrients from Point and Non-point Sources in the Patuxent River
Watershed. *Journal of the American Water Resources Association*. (in press).

Liu, Z.-J. and D.E. Weller. 2007. A Stream Network Model for Integrated Watershed Modeling.
Environmental Modeling and Assessment (DOI 10.1007/s10666-007-9083-9).

Liu, Z.-J., K. Debbage, and B. Blackburn. 2006. Locational Determinants of Major US Air
Passenger Markets by Metropolitan Area. *Journal of Air Transport Management* 12: 331-341.

Ortegren, J., Z-J Liu and G.J. Lennartson. 2005. Spatial Variability of Temperature Trends in
Urbanized and Urbanizing Areas of North Carolina. *The North Carolina Geographer* 13: 31-45.

Weller, D.E., T.E. Jordan, D.L. Correll, and Z.-J. Liu. 2003. Effects of Land Use Change on
Nutrient Discharges from the Patuxent River Watershed. *Estuaries* 26(2A): 244-266.

Liu, Z.-J. and G.R. Hallberg. 2002. Spatial Relations between Row Crops and Nitrate
Contamination in Groundwater. *Water, Air, and Soil Pollution* 134:369-387.

Liu, Z.-J., Donald E. Weller, David L. Correll, and Thomas E. Jordan. 2000. Effects of Land Cover and Geology on Stream Chemistry in Watersheds of Chesapeake Bay. *Journal of the American Water Resources Association* 36(6): 1349 -1365.

Liu, Z.-J., G.R. Hallberg, and G.P. Malanson. 1997. Structural Equation Modeling of Dynamics of Nitrate Contamination in Groundwater. *Journal of the American Water Resources Association* 33(6): 1219-1235.

Liu, Z.-J., G.R. Hallberg, D.L. Zimmerman, and R.D. Libra. 1997. Detecting Changes in the Spatial Distribution of Nitrate Contamination in Groundwater. *Journal of the American Water Resources Association* 33(6): 1209-1218.

Liu, Z.-J. and G.P. Malanson. 1992. Long-Term Cyclic Dynamics of Simulated Riparian Forest Stands. *Forest Ecology and Management* 48: 217-231.

Papers in Conference Proceedings

Zimmerman, D., Z.-J. Liu, and G.R. Hallberg. 1996. Using Trend Surface Methodology to Compare Spatial Surfaces. In: *The Proceedings of the Second International Symposium on Spatial Accuracy Assessment in Natural Resources and Environmental Studies*. Fort Collins, CO. Published by the United States Department of Agriculture, Forest Service, General Technical Report RM-GTR-277, pp. 129-136.

Hallberg, G.R., R.G. Libra, Z.-J. Liu, R.D. Rowden, and K.D. Rex. 1993. Watershed-Scale Water-Quality Response to Changes in Land Use and Nitrogen Management. In: *The Proceedings of the Conference on Agricultural Research to Protect Water Quality*. Minneapolis, MN. Published by Soil and Water Conservation Society, Ankeny, IA.

Reports

Hallberg, G.R., L.S. Seigley, R.G. Libra, Z.-J. Liu, R.D. Rowden, K.D. Rex, M.R. Craig, and K.O. Mann. 1994. Water Quality Monitoring Perspectives for Northeast Iowa. In: *Sny Magill Watershed Monitoring Project: Baseline Data*. Iowa Geological Survey, Iowa City, IA.

Book Reviews

Liu, Z.-J. 2007. *China's Geography: Globalization and the Dynamics of Political, Economic, and Social Change* (by G. Veeck, C.W. Pannell, C.J. Smith, and Y. Huang), in *Eurasian Geography and Economics* 48(6): 769-773.

Liu, Z.-J. 2007. *Adjustment Computations: Spatial Data Analysis*, 4th edition (by C.D. Ghilani and P.R. Wolf), in *The Professional Geographer* 59(3): 394-395.

Liu, Z.-J. 2005. *Geographic Information Analysis* (by O'Sullivan and Unwin), in *The Professional Geographer* 57(4): 624-626.

Liu, Z.-J. 2005. *River Processes: An Introduction to Fluvial Dynamics* (by A. Robert), in *The Professional Geographer* 57(1): 151-153.

Other Publications

Nieman, V. and Liu, Z.-J. Can Sumino Oysters Save Chesapeake Bay? The National Center for Case Study Teaching in Science at the University at Buffalo, SUNY. Published 2/22/2006 at http://www.sciencecases.org/chesapeake_bay/chesapeake_bay.asp.

GRANTS AND CONTRACTS

- 2003-2004 NOAA-Coastal Ocean Program. "A Risk-Based Decision Support System for Managing Coastal Systems Exposed to Multiple Stressors", Subcontract from the Smithsonian Environmental Research Center to UNCG. Funded at \$28,896.
- 2001-2002 NOAA-Coastal Ocean Program. "Complexity and Stressors in Estuarine Systems", Subcontract from the Smithsonian Environmental Research Center to Z.J. Liu. Funded at \$7,500.
- 2000-2001 NOAA-Coastal Ocean Program. "Complexity and Stressors in Estuarine Systems", Subcontract from the Smithsonian Environmental Research Center to Z.J. Liu. Funded at \$2,000.
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PRESENTATIONS

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, Thomas E. Jordan, and Kathleen B. Boomer. Integrated Modular Modeling of Water and Nutrients from Point and Non-point Sources in the Patuxent River Watershed. The 104th Annual Meeting of the Association of American Geographers, 15-19 April 2008, Boston, Massachusetts.

Liu, Zhi-Jun, P. Dan Royall, and Anita Henderson. Hydrologic Metrics as Indicators of Urban Influences on Streamflow Regime. The 62nd Annual Meeting of the Southeastern Division of the Association of American Geographers, 18-20 November 2007, Charleston, South Carolina.

Liu, Zhi-Jun, P. Dan Royall, and Anita Henderson. Long-term Dynamics and Downstream Propagation of Urban Influences on Hydrologic Regime. The 2007 Annual Meeting of the Association of American Geographers, April 17-21, 2007, San Francisco, California.

Debbage, Keith, Zhi-Jun Liu, and Brendan Blackburn. Locational Determinants of Major US Air Passenger Markets by Metropolitan Area. The 2007 Annual Meeting of the Association of American Geographers, April 17-21, 2007, San Francisco, California.

Royall, P. Dan, Anita Henderson, Zhi-Jun Liu. Downstream Reduction of Urban Influence on Channel Processes: a Case Study. The 2007 Annual Meeting of the Association of American Geographers, April 17-21, 2007, San Francisco, California.

Liu, Zhi-Jun, Donald E. Weller, Thomas E. Jordan, and David L. Correll. A Simple Modular Watershed Model and its Application in the Patuxent River Watershed. The 2005 Annual Meeting of the Association of American Geographers, 5-9 April 2005, Denver, Colorado.

Liu, Z.-J., A Landscape Model for Integrated Watershed Modeling, presented at the Patuxent Drainage Basin Model Comparison Workshop, sponsored by NOAA Coastal Oceans Program and Smithsonian Environmental Research Center, October 7, 2004, Edgewater, Maryland.

Weller, D. E., T. J. Jordan, D. L. Correll and Z.-J. Liu. March 2004. Effects of land use and land use change on nutrient discharges from the Patuxent River watershed. Invited presentation at Horn Point Laboratory (HPL), University of Maryland Center for Environmental Science, Cambridge, MD.

Weller, D. E., T. J. Jordan, D. L. Correll and Z.-J. Liu. March 2004. Effects of land use and land use change on nutrient discharges from the Patuxent River watershed. Invited presentation at the Center for Coastal Physical Oceanography, Old Dominion University, Norfolk, VA.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. A Stream Network Model for Integrated Watershed Modeling. The 58th Annual Meeting of the Southeastern Division of the Association of American Geographers, 23-25 November 2003, Charlotte, North Carolina.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. Integrated Modeling of Water Nutrients from Point and Non-point Sources in a Watershed, Part I: Model Development. The 57th Annual Meeting of the Southeastern Division of the Association of American Geographers, 23-26 November 2002, Richmond, Virginia.

Liu, Z.-J., D.E. Weller, D.L. Correll, and T.E. Jordan. Integrated Modeling of Water and Nutrients from Point and Non-point Sources. Presented at the final workshop of COASTES project sponsored by the NOAA's Coastal Ocean Program, September 18-19, 2002, Edgewater, Maryland.

Liu, Z.-J., D.E. Weller, D.L. Correll, and T.E. Jordan. Integrated Simulation Modeling of Water and Nutrients from Point and Non-point Sources in a Watershed. The 98th Annual Meeting of the Association of American Geographers, 19-23 March 2002, Los Angeles, California.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. A Stream Network Model Using Reach File-3. The 96th Annual Meeting of the Association of American Geographers, 4-8 April 2000, Pittsburgh, Pennsylvania.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. Simulation of Stream Flow Generation and Routing. The Workshop of COASTES, Complexity and Stressors in Estuarine Systems, Estuarine Research Center, The Academy of Natural Sciences of

Philadelphia, November 30-December 1, 1999.

Weller, Donald E., Thomas E. Jordan, David L. Correll, and Zhi-Jun Liu. Effects of Land Cover and Landscape Arrangement on Chesapeake Bay Watershed Nutrient Discharges. US EPA's Chesapeake Bay Program Conference, Reconnecting Landscapes-Rebuilding Forest Fragments in the Chesapeake Bay Watershed, 18-19 November 1999, Annapolis, Maryland.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. Effects of Landscape Characteristics on Stream Water Quality in Watersheds of Chesapeake Bay. The 83rd Annual Meeting of the Ecological Society of America, 3-6 August 1998, Baltimore, Maryland.

Liu, Zhi-Jun, Donald E. Weller, David L. Correll, and Thomas E. Jordan. Nutrient Discharges from Watersheds of Chesapeake Bay. The 94th Annual Meeting of the Association of American Geographers, 25-29 March 1998, Boston, Massachusetts.

Jordan, Thomas E., Donald E. Weller, David L. Correll, Zhi-Jun Liu, and Dennis F. Whigham. Discharges of Nutrients from the Chesapeake Bay Watershed. The 83rd Annual Meeting of the Ecological Society of America, 3-6 August 1998, Baltimore, Maryland.

Weller, Donald E., Zhi-Jun Liu, David L. Correll, and Thomas E. Jordan. Landscape Factors Affecting Stream Water Quality in the Patuxent River Drainage Basin. The 83rd Annual Meeting of the Ecological Society of America, 3-6 August 1998, Baltimore, Maryland.

Liu, Zhi-Jun. Long-term Cyclic Dynamics of Simulated Riparian Forest Stands. The 86th Annual Meeting of the Association of American Geographers, 19-22 April 1990, Toronto, Canada.

INVITED LECTURES

Geographic Information Systems: Job and Graduate Opportunities, presented to the Graphic Communication Systems and Technological Studies Program at North Carolina Agricultural and Technical State University, March 2002.

SERVICE ACTIVITIES

Professional Service: National and Regional

Professional Journal Referee

Journal of the American Water Resources Association
Journal of Contaminant Hydrology
Cartography and Geographic Information Science

Grant Proposal Reviews

2003-2006 Reviewed 4 four proposals for National Science Foundation

Text Book Reviews

2005 Reviewed three chapters of an Earth science book for McGraw-Hill.

Referee and Discussant at Professional Meetings

2002 Reviewed and discussed a paper for the 57th Annual Meeting of the Southeastern Division of the Association of American Geographers, Richmond, Virginia, 23-26 November 2002

2003 Reviewed and discussed a paper for the 58th Annual Meeting of the Southeastern Division of the Association of American Geographers, Charlotte, North Carolina, 23-25 November 2003.

Professional Service: Local

2001-2006 Judge/Score Keeper, North Carolina Geography College Bowl

University Service

2005-2008 University Graduate Studies Committee
(Elected to serve a three-year term)

2005-2007 University GEC Natural Science Area Committee

2004-2006 Faculty interviewer for the Merit Awards Program of UNCG

Departmental Service

2007-08 Graduate Admission Committee

2005 Search Committee for a physical geography faculty position

2004 Committee for the departmental policy on faculty work load

HOBBIES

Ice skating, piano, tennis, and table tennis (ping-pong)