

Derek J. Martin

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Boone, North Carolina 28607
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EDUCATION

Ph.D.	Geography	University of Tennessee	Knoxville, Tennessee	2014
M.S.	Geospatial Science	Missouri State University	Springfield, Missouri	2005
B.S.	Biology	Lake Superior State University	Sault Ste. Marie, Michigan	2002

TEACHING AND RESEARCH APPOINTMENTS

Assistant Professor of Geography , Appalachian State University	Boone, NC	2014-Present
Research Assistant , The University of Tennessee	Knoxville, TN	2013-2014
Teaching Associate , The University of Tennessee	Knoxville, TN	2011-2013
Head Teaching Assistant , The University of Tennessee	Knoxville, TN	2010-2011
Research Specialist , Ozarks Environmental and Water Resources Institute	Springfield, MO	2007-2010
GIS Technician , Upper Mississippi River Basin Association	St. Paul, MN	2005-2007
Research Assistant , Missouri State University	Springfield, MO	2003-2005
GIS/Field Technician , U.S. Bureau of Land Management	Shoshone, ID	2003
GIS/Field Technician , Manomet Center For Conservation Science	Manomet, MA	2002

AWARDS AND GRANTS

ASU Graduate Research Associate Mentor (GRAM) Program Award	\$24,000	2016
ORAU Ralph E. Powe Faculty Enhancement Award	\$10,000	2016
One of two proposals selected by ASU, Award pending from ORAU		
ASU RIEEE Concert Grant, Hemlock Impact Assessment (Co-PI)	\$4,000	2015
ASU RIEEE Concert Grant, AppAqua (Co-PI)	\$1,000	2015
University Research Council Grant, Appalachian State University	\$3,049	2015
Board of Trustees International Research Grant, Appalachian State University	\$2,500	2015
John Fraser Hart PhD Honors Paper Award, Southeast Division of the Association of American Geographers	\$1,000	2014
Yates Dissertation Fellowship, University of Tennessee	\$15,000	2013
Science Alliance Award, UT-Oak Ridge National Laboratory	\$3,600	2012
McCroskey Foundation Research Grant, University of Tennessee	\$500	2012
GTA@OIT Teaching Associate Grant, University of Tennessee	\$500	2012
Science Alliance Award, UT-Oak Ridge National Laboratory	\$3,600	2011
Shipleigh-Swan Graduate Fellowship, University of Tennessee	\$5,000	2010
Athletic Department Scholarship, University of Tennessee	\$1,200	2010
Thesis Research Grant, Missouri State University	\$500	2004

PUBLICATIONS

Martin, D.J., Pavlowsky, R.T., and Harden, C.P. **2016**. *Reach-scale characterization of fluvial wood in a mid-gradient, confined-meander river system*. *Geomorphology* 262, 91-100

Keck, B.P., Marion, Z.H., **Martin, D.J.**, Kaufman, J.C., Harden, C.P., Schwartz, J.S., and Strange, R.J. **2014**. *Fish functional traits correlated with environmental traits in a temperate biodiversity hotspot*. *PLoS ONE* 9(3): e93237. doi:10.1371/journal.pone.0093237.

Lecce, S.A., Pavlowsky, R.T., Bassett, G.S., and **Martin, D.J.** **2012**. *Metal contamination from gold mining in the Cid District, North Carolina*. *Physical Geography* 32 (5) 469-495.

Martin, D.J., and Pavlowsky, R.T. **2011**. *Spatial patterns of channel instability in an Ozark river, SW Missouri*. *Physical Geography* 32 (5) 445-468.

Pavlowsky, R.T., Lecce, S., Bassett, G. and **Martin, D.J.** **2010**. *Legacy Hg-Cu contamination of active stream sediments in the Gold Hill mining district, North Carolina*. *Southeastern Geographer* 50 (4) 503522.

PUBLICATIONS IN REVIEW

Martin, D.J. Tran, L., Harden, C.P. *A spatial statistical approach to identifying longitudinal patterns of fluvial wood arrangement in a Missouri Ozarks river*. In review at **River Research and Application**.

PUBLICATIONS IN PREPARATION

Martin, D.J., Ely, C., Finan, K. *Geomorphic characterization of an Ecuadorian Páramo river: Implications for hydropower development in Amazonian headwaters*. In preparation for **Mountain Research and Development**.

TECHNICAL REPORTS

Owen, M.R. Pavlowsky, R.T., and **Martin, D.J.** 2012. *Big River borrow pit monitoring project*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-003. Final Report to U.S. Fish and Wildlife Service, Columbia, Missouri.

Pavlowsky, R.T., Owen, M.R. and **Martin, D.J.** 2010. *Distribution, geochemistry, and storage of mining sediment in channel and floodplain deposits of the Big River system in St. Francois, Washington, and Jefferson Counties, Missouri*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-002. Final Report to U.S. Fish and Wildlife Service, Columbia, Missouri.

Pavlowsky, R.T., and **Martin, D.J.** 2010. *River sediment quality of the upper White River Basin*. Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWRI EDR-10-001. Final Report to Upper White River Basin Foundation, Branson, Missouri.

TECHNICAL REPORTS (CONTINUED)

Pavlowsky, R.T., and **Martin, D.J.** 2009. *River channel stability and sediment characteristics in the Upper White River Basin*, Ozarks Environmental and Water Resources Institute, Missouri State University, Springfield, MO, Report no. OEWR I EDR-09-005. Final Report to Upper White River Basin Foundation, Branson, Missouri.

Martin, D.J., and Pavlowsky, R.T. 2008. *Water quality gap report for Spring River*. Final report to Midwest Environmental Consultants, Columbia, MO, funded by USEPA.

Martin, D.J., and R. Pavlowsky, R.T. 2008. *Water quality gap report for Elk River*. Final report to Midwest Environmental Consultant, Columbia, MO, funded by USEPA.

Martin, D.J., and Pavlowsky R.T. 2008. *Water quality gap report for Sac River*. Final report to Midwest Environmental Consultant, Columbia, MO, funded by USEPA.

INVITED PRESENTATIONS

Martin, D.J. 2014. *Reading the River: How Geographers Look at Patterns to Understand Process in River Systems*. **Geography Awareness Week Seminar Series**, Missouri State University, Springfield, MO.

Martin, D.J. 2014. *Examining the Fluvial Contaminant Legacies of Historical Mining Operations: Case Studies from the North Carolina Piedmont and Missouri Ozarks*. **Department of Geography and Planning Fall Seminar Series**. Appalachian State University, Boone, NC.

Martin, D.J. 2013. *Where's the Wood: A geospatial analysis of fluvial wood deposition in a low gradient, Midwestern river system*. Fall 2013 University of Tennessee Department of Geography departmental colloquium series lecture.

Martin, D.J. 2009. *Channel disturbance in Ozark Rivers*. **Watershed Hydrology Class, Guest Lecture**. Department of Geography, Geology, and Planning, Missouri State University, Springfield, Missouri.

Martin, D.J. 2009. *Channel disturbance in the Finley River*. **Guest Lecture - Fluvial Geomorphology Class**. Department of Geography, Geology, and Planning, Missouri State University, Springfield, MO, November 2009.

CONFERENCE PRESENTATIONS

Martin, D.J., Ely, C., Finan, K. 2015. *Stream bank erosion in páramo ecosystems: Assessing the potential for fluvial export of organic carbon*. **Annual meeting of the Association of American Geographers**, San Francisco, California.

Colby, J., Balcomb, J., Carlyle, C., Swinson, B., Turner, A., Cockerill, K., Gu, C. **Martin, D.J.**, Tuberty, S., Ely, C., Rudolph, J. *Southern Appalachian headwater stream research: The Upper South Fork of the New River Watershed*. **Annual meeting of the Association of American Geographers**, San Francisco, California.

Pavlowsky, R.T., Pierson, M., Lecce, S., **Martin, D.J.**, Owen, M. 2015. *Channel and floodplain management of contaminated legacy sediment in Big River, Old Lead Belt, Missouri*. **Annual meeting of the Association of American Geographers**, San Francisco, California.

CONFERENCE PRESENTATIONS (CONTINUED)

Martin, D.J., Finan, K., McMahan, M. 2015. *Geomorphic characterization of an Amazonian headwater stream: Implications for hydropower development in the Andes*. **Annual meeting of the Southeast Division of the Association of American Geographers**, Pensacola, Florida.

Rudolph, J., Colby, J., **Martin, D.J.**, Tuberty, S. 2015. *Post-restoration streambank stability monitoring using structure from motion*. **Annual meeting of the Southeast Division of the Association of American Geographers**, Pensacola, Florida.

Martin, D.J. 2014. *Geospatial Characterization of Fluvial Wood Arrangement in a Mid-Gradient, Semi-Confined River system*. **Annual meeting of the American Geophysical Union**, San Francisco, California.

Martin, D.J., Harden, C.P., Tran, L. 2013. *Spatial Analysis of Fluvial Wood Arrangement in a Midwestern River System: Geomorphic Implications and Influences*. Poster. **Annual Meeting of the American Geophysical Union**, San Francisco, California.

Martin, D.J. 2013. *Longitudinal Arrangement of Fluvial Wood in a Low Gradient River System*. Ph.D. Honors Paper, **Annual meeting of the Southeastern Division of the Association of American Geographers**, Roanoke, Virginia.

Martin, D.J. 2013. *Large woody debris in an Ozarks River: Implications for sediment storage*. **Annual meeting of the Association of American Geographers**, Los Angeles, California.

Martin, D.J. 2012. *Large woody debris in an Ozarks River: Implications for contaminated sediment storage*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Asheville, North Carolina. Poster.

Owen, M, Pavlowsky, R.T., Lecce, S., and **Martin, D.J.** 2012. *Local-scale variations in floodplain contamination by historical mining in the Old Lead Belt, SE Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Asheville, North Carolina. Poster.

Martin, D.J. 2012. *Spatial patterns of channel instability along an Ozark River*. **Annual meeting of the Association of American Geographers**, New York, New York.

Martin, D.J. 2011. *Hydrology and water quality of regulated diurnal flows of the Nantahala River, NC*. **Annual meeting of the Association of American Geographers**, Seattle, Washington. Poster.

Lecce, S., Pavlowsky, R.T., and **Martin, D.J.** 2010. *Storage of mining sediment in floodplain deposits of the Big River, Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, Alabama. Poster.

Pavlowsky, R.T., **Martin, D.J.**, and Owen, M. 2010. *Channel morphology and sediment characteristics of Ozark Rivers*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, Alabama.

Owen, M., Pavlowsky, R.T., and **Martin, D.J.** 2010. *Geomorphic evaluation of channel dredging to control contaminated sediment transport in Big River, Old Lead Belt, Eastern Missouri*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Birmingham, Alabama.

CONFERENCE PRESENTATIONS (CONTINUED)

Martin, D.J. 2010. *Geospatial technologies: Water resource applications*. **Missouri Environmental Education Association Workshop**, Nixa, Missouri.

Martin, D.J., Pavlowsky, R.T. 2009. *Analysis of stream channel disturbance zones*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Knoxville, Tennessee.

Pavlowsky, R. T., Lecce, S., Schlomer, G., and **Martin, D.J.** 2009. *Legacy Hg-Cu contamination of active sediments in Gold Hill mining district, North Carolina*. **Annual meeting of the Southeastern Division of the Association of American Geographers**, Knoxville, Tennessee.

Martin, D.J. Pavlowsky, R.T. 2009. *Impacts of in-channel dredging for lead-contaminated sediment mitigation, Big River, Old Lead Belt, Missouri*. **Big River Workshop - Missouri Natural Resources Annual Conference**, Osage Beach, Missouri.

Martin, D.J. 2009. *Analysis and classification of channel disturbance zones in an Ozark River*. **Annual meeting of the Association of American Geographers**, Las Vegas, Nevada.

Dryer, P.W., Pavlowsky, R.T., Lecce, S., **Martin, D.J.** 2009. *Mining-related contamination of channel and overbank sediments in the Big River, Old Lead Belt, SE Missouri*. **Annual meeting of the Association of American Geographers**, Las Vegas, Nevada. Poster.

Martin, D.J. 2009. *Identification of channel disturbance zones in Ozark Rivers*. **Workshop on Ozark Streams – Missouri Natural Resources Annual Conference**, Osage Beach, Missouri.

Martin, D.J. *Classification of channel disturbance zones of the Finley River, Southwest Missouri*. **Annual meeting of the Great Lakes Division of the Association of American Geographers**, Bloomington, Indiana. Poster.

Martin, D.J. and Haack, J. 2008. *GIS applications for natural resources: Research and monitoring*. **Southwest Regional GIS User Group Workshop**, Springfield, Missouri.

Martin, D.J., Pavlowsky, R.T. 2008. *Historical patterns of channel stability in an Ozark watershed*. **Annual Binghamton Geomorphology Symposium**, Austin, Texas. Poster.

Martin, D.J., Pavlowsky, R.T. 2008. *Historical and present-day channel stability assessment of Finley Creek, Missouri, using aerial photography*. **Annual meeting of the Association of American Geographers**, Boston, Massachusetts.

Williams, A., Owen, M., Pavlowsky, R.T., and **Martin, D.J.** 2008. *Human disturbance and geomorphic response of a small Ozarks Plateau catchment*. **Annual meeting of the Association of American Geographers**, Boston, Massachusetts. Poster.

Martin, D.J. 2008. *Using historical aerial photography and GIS for stream channel monitoring and assessment: Finley Creek case study*. **Missouri Natural Resources Conference**, Osage Beach, Missouri.

Martin, D.J. 2007. *The Ozarks Environmental and Water Resources Institute: Geospatial science mission & GIS project application*. **Southwest Regional GIS Workshop**, Springfield, Missouri.

CONFERENCE PRESENTATIONS (CONTINUED)

Martin, D.J. 2005. *Geospatial analysis of gravel bar deposition and channel migration within the Ozark National Scenic Riverways, Missouri (1955-2003)*. **Annual Graduate Interdisciplinary Research Forum**, Springfield, Missouri.

Martin, D.J. 2005. *Geospatial analysis of gravel bar deposition and channel migration within the Ozark National Scenic Riverways, Missouri (1955-2003)*. **Annual Meeting of the Association of American Geographers**, Denver, Colorado.

Martin, D.J. 2005. *Development of a GIS/RS based method to monitor spatial patterns of gravel bar movement within the Ozark National Scenic Riverways, Missouri (1955-2003)*. **Annual Missouri Natural Resources Conference**, Osage Beach, Missouri. Poster.

Martin, D.J. and Pavlowsky, R.T. 2004. *Status and comparison of physical habitat assessments in the U.S.A.* **Annual Meeting of the American Society of Agricultural and Biological Engineers**, St. Paul, Minnesota.

DEPARTMENTAL SERVICE

Appalachian State University

2015-2016
Graduate Exam Committee
Departmental Personnel Committee
Appalachian Geographic Society Faculty Advisor
Gamma Theta Upsilon Faculty Representative

2014-2015
Graduate Exam Committee
Departmental Personnel Committee
Search Committee (Human Geography Hire)

University of Tennessee

2012-2013
Graduate Association of Research Geographers - President

2012
Graduate student representative on faculty search committee

2011-2012
Graduate Association of Research Geographers – Vice President

2011
Geography Awareness Week volunteer

2010-2011
Graduate Association of Research Geographers – Treasurer

MEDIA COVERAGE

2009
Radio interview regarding southwest Missouri water quality, KSMU public radio, Springfield, Missouri