

# Derek J. Martin, Ph.D.

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## EDUCATION

Ph.D.	Geography	University of Tennessee	Knoxville, TN	2014
M.S.	Geospatial Science	Missouri State University	Springfield, MO	2005
B.S.	Biology (Ecology)	Lake Superior State University	Sault St. Marie, MI	2002

## PROFESSIONAL APPOINTMENTS

Associate Professor of Geography	Appalachian State University	Boone, NC	2020 – Present
Graduate Program Director	Appalachian State University	Boone, NC	2018 – Present
Assistant Professor of Geography	Appalachian State University	Boone, NC	2014 – 2020
Research Associate	University of Tennessee	Knoxville, TN	2013 – 2014
Teaching Associate	University of Tennessee	Knoxville, TN	2010 – 2013
Research Specialist	Ozarks Env. & Water Resources Inst.	Springfield, MO	2007 – 2010
GIS Technician	Upper Mississippi River Basin Assoc.	St. Paul, MN	2005 - 2007

## PEER REVIEWED PUBLICATIONS

Vowels, L., Armstrong, W., McGrath, D., Rick, B, Overeem, I., Dye, A., **Martin, D.J. Under Review.** *Investigating changes in proglacial stream suspended sediment concentration and their drivers using large scale remote sensing.* **Geomorphology.**

Platt, J., **Martin, D.J.**, Mayfield, M., Armstrong, W. **2024.** *Geomorphic impact of the Ward's Mill Dam removal on the Watauga River, North Carolina.* **Southeastern Geographer** – Special Issue: Rivers of the Southeast. **In Press**

Owen, M.R., Pavlowsky, R.T., **Martin, D.J.** **2024.** *Spatial and temporal characteristics of channel disturbance zones in Big River, Southeast Missouri (1937-2018).* **Southeastern Geographer** 64(1):30-53.

Pavlowksy, R.T., Hess, J., **Martin, D.J.**, Dogwiler, T, Bendix, J **2023.** *Large wood loads in channels and on floodplains after a 500-yr flood using UAV imagery in Mark Twain National Forest, Ozark Highlands, Missouri.* **Geomorphology** 431.  
DOI:10.1016/j.geomorph.2023.108672

Hostens, D.S., Dogwiler, T., Hess, J.W., Pavlowsky, R.T., Bendix, J. **Martin, D.J.** **2022.** *Assessing the role of sUAS mission design in the accuracy of digital surface models derived from structure-from-motion photogrammetry.* In: sUAS Applications in Geography. Konsoer, K, Leitner, M., Lewis, Q. (Eds.). **Springer Publishing.**

**Martin, D.J.**, Pavlowsky, R.T., Bendix, J., Dogwiler, T., and Hess, J. **2021.** *Impacts of an extreme flood on large wood recruitment and transport processes.* **Physical Geography.** DOI: 10.1080/02723646.2021.1980958

McDade, B., **Martin, D.J.**, van de Gevel, S., and Mitchel, J. **2020.** *Impacts of the hemlock woolly adelgid (*Adelges tsugae*) on headwater stream large woody debris loads in the southern Appalachian Mountains.* **The Southeastern Geographer.**

## PEER REVIEWED PUBLICATIONS (Continued)

Rose, L.D., Akob, D.M, Tuberty, S.R., Corsi, S.R., DeCicco, L.A., Colby, J.D. and **Martin, D.J.** 2019. *Use of high-throughput screening results to prioritize chemicals for potential adverse biological effects within a West Virginia watershed.* **Science of the Total Environment** 677:362-372. DOI:10.1016/j.scitotenv.2019.04.180

**Martin, D.J.**, Ely, C., Wemple, B. 2019. *Stream bank erosion in an Andean páramo river system: Implications for hydro-development and carbon dynamics in the neotropical Andes.* **Journal of Mountain Science** 16(2):243-255.  
DOI: 10.1007/s11629-018-5110-3

Rose, L.D., Akob, D.M, Tuberty, S.R., Corsi, S.R., DeCicco, L.A., Colby, J.D. and **Martin, D.J.** 2018. Chemistry of waters collected in the Wolf Creek and Buffalo Creek watershed in West Virginia in 2016: U.S. Geological Survey data release.  
DOI: 10.5066/P9WE8RDV

Ely, C., and **Martin, D.J.** 2018. *Investigating the Geomorphic characteristics of an Amazonian headwater stream draining a Páramo ecosystem.* **Physical Geography.** DOI: 10.1080/02723646.2018.1513289

**Martin, D.J.** Tran, L., Harden, C.P., and Pavlowsky, R.T. 2018. *Identifying controls on in-channel wood deposition locations in a low-gradient, variably confined alluvial river system.* **Progress in Physical Geography** 42(2):139-161.  
DOI: 10.1177/0309133318759613

Pavlowsky, R.T., Lecce, S., Owen, M., and **Martin, D.J.** 2017. Legacy sediment, lead, and zinc storage in channel and floodplain deposits of the Big River, Old Lead Belt mining district, Missouri, USA. *Geomorphology* 299:54-75. DOI: 10.1016/j.geomorph.2017.08.042

**Martin, D.J.**, Pavlowsky, R.T., and Harden, C.P. 2016. Reach-scale characterization of large woody debris in a low-gradient, Midwestern USA river system. *Geomorphology* 262:91-100. DOI: 10.1016/j.geomorph.2016.03.005

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.

**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. DOI: 10.2747/0272-3646.32.5.445

Lecce, S.A., Pavlowsky, R.T., Bassett, G.S., and **Martin, D.J.** 2011. Metal contamination from gold mining in the Cid District, North Carolina. *Physical Geography* 32 (5):469-495. DOI: 10.2747/0272-3646.32.5.469

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.

## EXTERNAL GRANTS AND AWARDS

**Martin, D.J.**, Praskievicz, S, Pavlowsky, R.T. **Under Review.** *IRES: International Research Experience Using Geospatial Techniques to Investigate Jamaica's Changing Hydrosphere.* National Science Foundation, International Research Experience for Students. **\$421,000.**

**Martin, D.J.**, Platt, J. 2022. *Phase II Geomorphic monitoring of the Ward's Mill Dam removal, Watauga River, North Carolina.* Blue Ridge Resources Conservation & Development. **\$35,000.** Not funded.

Praskievicz, S., **Martin, D.J.** 2021. *Large wood in low-gradient floodplain rivers: Spatial distribution, physical controls, and geomorphic effects.* National Science Foundation, Geomorphology and Land Use Dynamics (GLD). **\$353,216. Funded.**

## EXTERNAL GRANTS AND AWARDS (Cont'd)

Gangloff, M., **Martin, D.J.** 2020. *Biotic and geomorphic monitoring of the Ward's Mill Dam removal, Watauga River, North Carolina*. American Rivers. **\$55,103. Funded.**

**Martin, D.J.**, Montoya, N. 2019. *Development of a hydrological monitoring network for Peru's Cordillera Vilcanota*. National Geographic Extreme Environments: Alpine Climate Change. **\$99,998. Not funded.**

**Martin, D.J.**, Wemple, B. 2018. *Fluvial carbon export from the neotropical páramo grasslands of the Northern Andes*. National Geographic Explorer Grant. **\$28,218. Not funded.**

Pavlovsky, R.T., Bendix, J., **Martin, D.J.**, Dogwiler, T. 2017. *Impacts of an extreme flood on riparian forests and large woody debris in the Ozark Highlands*. National Science Foundation RAPID. **\$40,000. Funded**

**Martin, D.J.** 2016. *Stream bank erosion in páramo ecosystems: Implications for fluvial export of organic carbon*. Oak Ridge Associated Universities Ralph E. Powe Junior Faculty Enhancement Grant. **\$10,000. Funded.**

## INTERNAL GRANTS AND AWARDS

**Martin, D.J.** 2023. Assessing the effectiveness of beaver dam analogs (BDA's) as an in-stream sediment management technique. Wachovia Environmental Research Award, Appalachian State University. **\$800**

**Martin, D.J.** 2022. Investigating the impact of large woody debris on geomorphic complexity of river systems. Student and Faculty Enhancement (SAFE) grant, Appalachian State University. **\$1,000**

**Martin, D.J.** 2021. *Expanding our study abroad to the Tropical Andes to include Ecuador*. Faculty International Travel Grant, Appalachian State University. **\$3,000.**

**Martin, D.J.** 2020. *Evaluating the geomorphic impacts of the Ward's Mill Dam removal on the Watauga River*. Graduate Research Associate Mentor (GRAM) Award, Appalachian State University. **\$24,000.**

**Martin, D.J.** 2019. *Soil organic carbon storage in valley bottom landforms of the upper Ningar River, Ecuador*. University Research Council grant, Appalachian State University. **\$4,958.**

**Martin, D.J.** 2019. *Monitoring the impacts of removing small dams in Southern Appalachian Rivers*. Student and Faculty Enhancement Grant, Appalachian State University. **\$500.**

**Martin, D.J.** 2016. *Chloride Toxicity and TSS in the Upper South Fork of the New River*. Graduate Research Associate Mentor (GRAM) Award, Appalachian State University. **\$24,000.**

Colby, J., Tuberty, S., **Martin, D.J.** 2016. *AppAqua Research Cluster*. Appalachian State University Research Institute for Environment, Energy, and Economics (RIEEE) Concert Grant. **\$4,990**

Mitchel, J., **Martin, D.J.**, Neufeld, H.S. 2016. *Hemlock Impact Assessment Research Cluster*. Appalachian State University Research Institute for Environment, Energy, and Economics (RIEEE) Concert Grant. **\$3,240**

**Martin, D.J.** 2015. *Geomorphic characterization of the Ningar River, a páramo-draining river system in the Ecuadorian Andes*. University Research Council grant, Appalachian State University. **\$3,049.**

**Martin, D.J.** 2015. *Establishing geomorphic monitoring stations along the Ningar River, a páramo-draining river system in the Ecuadorian Andes*. Board of Trustees International Research Grant, Appalachian State University. **\$2,500.**

## INTERNAL GRANTS AND AWARDS (Cont'd)

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Colby, J., Tuberty, S., **Martin, D.J.** 2016. *AppAqua Research Cluster*. Appalachian State University Research Institute for Environment, Energy, and Economics (RIEEE) Concert Grant. **\$1,000**

Mitchel, J., **Martin, D.J.** , Neufeld, H.S. 2016. *Hemlock Impact Assessment Research Cluster*. Appalachian State University Research Institute for Environment, Energy, and Economics (RIEEE) Concert Grant. **\$4,000**

**Martin, D.J.** 2013. *A geospatial characterization of large woody debris in the Big River, Missouri Ozarks*. Yates Dissertation Fellowship, The Graduate School, University of Tennessee. **\$15,000.**

**Martin, D.J.** 2012. *A geospatial characterization of large woody debris in the Big River, Missouri Ozarks*. McCroskey Foundation Grant, Department of Geography, University of Tennessee. **\$500.**

**Martin, D.J.** 2012. *Making a more active physical geography classroom*. GTA@OIT Teaching Associate Grant, University of Tennessee. **\$500.**

**Martin, D.J.** 2010 – Shipley-Swan Graduate Fellowship, University of Tennessee **\$5,000.**

## MASTERS THESES DIRECTED AND SERVED

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Ingram, A. **CURRENT.** *Impacts of large wood on channel bedform complexity in coastal plain river systems*. Committee: **Martin, D.J.** (Chair), TBD.

Platt, J. **2022.** *Short and long term impacts of dam removal on TSS transport: A case study from the Watauga River, North Carolina*. Committee: **Martin, D.J.** (Chair), Mayfield, M., Armstrong, W.

Williams, Q. **2022.** *Geomorphic VARIABILITY of the Watauga River in anticipation of the removal of Ward's Mill Dam, North Carolina*. Committee: **Martin, D.J.** (Chair), Mayfield, M., Gangloff, M.

Cappel, B. **2021.** *Geocomputational analysis of microhydro generation site parameters*. Committee: Colby, J. (Chair), Summerville, B. Martin, D.J.

McDade, B. **2019.** *Impacts of the hemlock woolly adelgid (*Adelges tsugae*) on headwater stream wood loads in the southern Appalachian Mountains*. Committee: **Martin, D.J.** (Chair), Van de Gevel, S., Mitchell J.

Rose, L. **2019.** *Use of high-through-put screening results to prioritize chemicals for potential adverse biological effects within a West Virginia watershed*. Committee: Tuberty, S.R. (Chair), Akob, D.M, Corsi, S.R., DeCicco, L.A., Colby, J.D. and **Martin, D.J.**

Sanders, Z. **2018.** *Chloride toxicity in the Upper South Fork of the New River: Implications for watershed health and aquatic life*. Committee: **Martin, D.J.** (Chair), Colby, J, Gu, C.

Ely, C. **2017.** *A geomorphic characterization of an Ecuadorian páramo river*. Committee: **Martin, D.J.** (Chair), Gu, C., Mayfield, M.

## UNDERGRADUATE HONORS THESES SERVED

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Vowels, L. **2023.** *Investigating drivers of changes in proglacial stream suspended sediment concentration using large scale remote sensing*. Department of Geological and Environmental Sciences. Committee: Armstrong, W (Chair), **Martin, D.J.**

Dickerson, C. **2023.** *Investigating clastic sediments deposited during rifting: EBSD and mineralogical analysis of the late Proterozoic grandfather mountain metaconglomerate of Western North Carolina*. Department of Geological and Environmental Sciences. Committee: Levine, J. **Martin, D.J.**

## MASTERS INTERNSHIPS DIRECTED AND SERVED SINCE 2018

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- Poupart, S. **Current**. *Watauga Housing Commission Intern*. **Martin, D.J.** (Chair), Thapa, B.
- Crider, E. **2023**. *Assisting Mountain True and the Watauga Riverkeeper*. **Martin, D.J.** (Chair)
- Bowen, J. **2021**. Committee: **Martin, D.J.** (Chair), Schroeder, K.
- Blaszyk, M. **2021**. *Working With the City of Rock Hill, south Carolina's Long-Range Planning Department to Create an Existing Conditions Report for the North Anderson Road Corridor*. Committee: Crepeau, R. (Chair), **Martin, D.J.**
- Blaszyk, P. **2021**. Assisting the Town of Indian Trail Planning Department with Day-to-Day Planning-Related Tasks. Committee: Crepeau, R. (Chair), **Martin, D.J.**
- Gastelle, N. **2021**. Project Homes: Keep RVA Cool. Committee: **Martin, D.J.** (Chair), Shay, E
- Magee, T. **2020**. *Promoting the Culture, Values, and Resources of Northwestern North Carolina through Land Prioritization Planning*. Blue Ridge Conservancy. Committee: **Martin, D.J.** (Chair), Sugg, M.
- Spagnolo, W. **2019**. *Water Quality Monitoring with the High Country Office of Mountain True*. Committee: **Martin, D.J.** (Chair), Mayfield, M.
- McMahan, M. **2018**. *Chandler Concrete*. Committee: **Martin, D.J.** (Chair), Schroeder, K.
- Johnson, K. **2016**. Land Surveying with Dedmon Surveys. Committee: **Martin, D.J.** (Chair), Schroeder, K.

## INVITED PRESENTATIONS

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- Martin, D.J.** **2022**. *Climate change and water resources*. Featured Guest Speaker. Bowling Green, Ohio chapter of ZONTA International.
- Martin, D.J.** **2017**. *You are here: Using geographic technologies to engage students*. **Tech 4 Teaching Fair**, Appalachian State University, Boone, North Carolina.
- Martin, D.J.** **2015**. *Reading the river: How geographers look at patterns to understand process in river systems*. **Geography Awareness Week Seminar Series**, Missouri State University, Springfield, Missouri.
- 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 seminar series lecture**. Appalachian State University, Boone, North Carolina.
- Martin, D.J.** **2013**. *Where's the wood?: A geospatial analysis of fluvial wood deposition in a low gradient, Midwestern river system*. **Department of Geography colloquium series lecture**. University of Tennessee, Knoxville, Tennessee.
- Martin, D.J.** **2009**. *Channel disturbance in Ozark rivers*. **Invited Lecture - Watershed Hydrology**. Department of Geography, Geology, and Planning, Missouri State University, Springfield, Missouri.

## CONFERENCE PRESENTATIONS

**Martin, DJ**, Platt, J., Ingram, A, Lucero, C, and Ryan, S. **2023**. Assessing the effectiveness of beaver dam analogs (BDAs) as a stream restoration tool. Annual Meeting of the Southeastern Division of the American Association of Geographers, Norfolk, Virginia.

**Martin, DJ**, Praskievicz, S, Sigdel, R, Platt, J. **2022**. Using SONAR to investigate the impact of large wood on channel bedform complexity in coastal plain rivers. 10<sup>th</sup> Meeting of the International Association of Geomorphologists, Coimbra, Portugal.

**Martin, DJ**, Praskievicz, S, Sigdel, R, Platt, J. **2022**. Using SONAR to investigate the impact of large wood on channel bedform complexity in coastal plain rivers. Annual Meeting of the Southeastern Division of the American Association of Geographers, Atlanta, Georgia.

Praskievicz, S, and **Martin, DJ**. **2022**. *Distribution of large wood in coastal plain rivers of the Southeast US*. SEDAAG, Atlanta, Georgia

Pavlowsky, RT, Hess, J, **Martin, DJ**, Dogwiler, T, and Bendix, J. **2022**. *Large wood loads in channels and on floodplains after a 500-year flood using UAV imagery in Mark Twain National Forest, Ozark Highlands, Missouri*. SEDAAG, Atlanta, Georgia

Platt, J. **Martin, DJ**, Mayfield, M, and Armstrong, W. **2022**. *Immediate channel response to a dam removal in Southern Appalachia*. SEDAAG, Atlanta, Georgia.

**Martin, D.J.**, Pavlowsky, R.T., Bournival, L., Bendix, J. Dogwiler, T. **2020**. *Impacts of a large flood (~1,000 yr) on in-channel wood loads in the North Fork River Basin, Ozark Mountains, Missouri*. **Annual meeting of the American Association of Geographers**, Seattle, WA (Virtual).

Kinlaw, T., Colby, J., **Martin, D.J.**, Tuberty, S., Goughnour, E., Sanders, E, Kuntz, C., Spagnolo, W., and Buckner, G. **2019**. *Local and Global Flow Accumulation Threshold and Drainage Line Analysis in the Upper South Fork of the New River*. New River Symposium, Boone, NC

Sanders, C, Colby, J, **Martin, D.J.**, Goughnour, E, Kuntz, N, Spagnolo, W, Buckner, G, Tuberty, S, Selong, J. **2019**. *Effects of Land Cover and Riparian Buffers on Cold-Water Fish Assemblages in Upper South Fork New River Headwater Streams*. New River Symposium, Boone, NC

**Martin, D.J.**, Pavlowsky, R.T., Bendix, J., Dogwiler, T. **2019**. *Impacts of a large flood (~1,000 yr) on in-channel wood loads in the North Fork River Basin, Ozark Mountains, Missouri*. **Annual meeting of the Southeastern Division American Association of Geographers**, Wilmington, North Carolina.

Tuberty, S., Colby, J., **Martin, D.J.**, **2019**. *The AppAqua Research Cluster at Appalachian State University: An Interdisciplinary, Long Term Monitoring Effort on the Upper South Fork of the New River*. New River Symposium, Boone, NC

Hess, J., Pavlowsky, R.T., Dogwiler, T., Bendix, J., **Martin, D.J.**, Bournival, L. **2019**. *Catastrophic flood effects on riparian forests in Mark Twain National Forest, Southern Missouri*. **Annual Missouri Natural Resources Conference**, Osage Beach, Missouri.

Kinlaw T., Colby, J., **Martin, D.J.**, Tuberty, S. Goughnour, E., Sanders, C. Kuntz, N., Spagnolo, W., and Buckner, G. **2019**. *Upper South Fork of the New River: Drainage Line Generation, Comparison, and Accuracy Assessment*. NCGIS Conference, Winston-Salem, NC.

## CONFERENCE PRESENTATIONS (CONTINUED)

- Goughnour, E., Colby, J., **Martin, D.J.**, Tuberty, S., Sanders, C., Kuntz, N., Kinlaw, T., Spagnolo, W. 2018. *Water Quality and Quantity Data Collection in the Upper South Fork of the New River: Implications of Hurricane Florence*. Poster, Annual Meeting of the Southeastern Division of the Association of American Geographers, Johnson City, TN, November 18-19.
- Wemple, B., Schloegle, C, Roske, M, Aravelo, P., **Martin, D.** 2018. *Building partnerships for long-term water monitoring in the southern Ecuadorian Andes*. **Joint Conference on Forests and Water**, Valdivia, Chile.
- Martin, D.J.**, Pavlowsky, R.T., Bournival, L., Bendix, J. Dogwiler, T. 2018. *Impacts of a large flood (~1,000 yr) on in-channel LWD loads in the North Fork River Basin, Ozark Mountains, Missouri*. **Annual meeting of the Southeastern Division American Association of Geographers**, Johnson City, Tennessee.
- Tuberty, S., Colby, J., **Martin, D.J.**, Gu, C., Sanders, C., Goughnour, E., Sanders, Z., Fleetwood, M. 2018. *The trouble with trolls: Applications and challenges of using aquatic data sondes in the Upper South Fork of the New River drainage*. **Carolinas Area Benthologists Workshop**, Hot Springs, North Carolina.
- Bournival, L., Pavlowsky, R.T., **Martin, D.J.** 2018. *Distribution of Large Woody Debris after a big flood, North Fork Watershed, Missouri Ozarks*. **Annual meeting of the American Association of Geographers**, New Orleans Louisiana.
- Bendix, J., Pavlowsky, R.T., **Martin, D.J.**, and Dogwiler, T. 2018. *Impact of an Extreme Flood on Riparian Forests in the Missouri Ozarks*. **Annual meeting of the American Association of Geographers**, New Orleans, Louisiana.
- Sanders, Z., and **Martin, D.J.** 2018. *Total Suspended Sediments and Chloride in Southern Appalachian Headwater Streams: Implications for Watershed Health*. **Annual meeting of the American Association of Geographers**, New Orleans, Louisiana.
- McDade, B., and **Martin, D.J.** 2018. *Hemlock Woolly Adelgid Induced Decline of Eastern Hemlock and Consequences for Southern Appalachian Streams*. **Annual meeting of the American Association of Geographers**, New Orleans, Louisiana.
- Martin, D.J.**, Ely, C. and Wemple, B. 2017. *Stream bank erosion in páramo ecosystems: Assessing the potential for fluvial export of organic carbon*. **9<sup>th</sup> International Conference on Geomorphology**, New Delhi, India.
- Martin, D.J.**, Ely, C. 2017. *Stream bank erosion in páramo ecosystems: Assessing the potential for fluvial export of organic carbon*. **Annual meeting of the American Association of Geographers**, Boston, Massachusetts.
- Martin, D.J.**, Ely, C., Finan, K. 2016. *Stream bank erosion in páramo ecosystems: Assessing the potential for fluvial export of organic carbon*. **Annual meeting of the American Association of 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. 2016. *Southern Appalachian headwater stream research: The Upper South Fork of the New River Watershed*. **Annual meeting of the American Association of 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.
- 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.

## CONFERENCE PRESENTATIONS (CONTINUED)

- 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.
- 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.



## CONFERENCE PRESENTATIONS (CONTINUED)

- 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.
- 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.

## COURSES TAUGHT OR CURRENTLY TEACHING

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GHY 1010	Global Environmental Systems
GHY 1012	Global Change of the Biosphere
GHY 3530	Water Resources in the Tropical Andes (Study Abroad)
GHY 3110	Ecoregions and Dynamic Landforms
GHY 3140	Andean Mountain Geography (Study Abroad)
GHY/PLN 3800	Introduction to Quantitative Methods
GHY 4820/5820	Geographical Hydrology
GHY 5100	Graduate Seminar in Physical Geography: Climate Change and Water in the Andes
GHY 5530	Special Topics: Jamaica - Environment and Culture (Study Abroad)
GHY 5530	Special Topics: Grant Writing in Geography
GHY 5800	Advanced Quantitative Methods

## OUTREACH ACTIVITIES AND REGIONAL COMMUNITY SERVICE

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2024	K-12 Geography Outreach: Talked and performed experiments with 3 <sup>rd</sup> grade classroom at Green Valley Elementary School on watershed processes, water supplies, and pollution
2019-Present	Associate Scientist for the High Country Office of Mountain True – Watauga River Dam Removal
2019-Present	Associate Scientist for Fundación Cordillera Tropical, Cuenca, Ecuador ( <a href="#">Web</a> )
2018	Volunteer for Watauga Watershed Field Days (North Carolina)
2017-Present	Citizen Observer, Weather Underground Weather Station Network (North Carolina)
2011	NSF K-12 Watershed Education Volunteer (Tennessee)
2009	Springfield Discovery Center Volunteer – Geocaching and GPS Education (Missouri)

## MEDIA

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2020	ASU College of Arts and Sciences YouTube: <i>Research in the time of COVID19</i>
2017	Appalachian Magazine. <i>Masters Matter: Dr. Derek J. Martin and Christopher Ely</i>
2016	Mountain Research Initiative Blog. <i>Ordinary Processes in an Extraordinary Environment</i>
2015	Mountain Research Initiative Blog. <i>Carbon and Erosion in the Páramo Shangri La.</i>
2010	Ozarks Magazine. <i>An Accurate Map of the Ozarks.</i>
2009	KSMU Public Radio, Springfield, Missouri. <i>Water Quality in Southwest Missouri</i>

## PROFESSIONAL AFFILIATIONS

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American Association of Geographers  
Southeastern Division of the American Association of Geographers  
American Geophysical Union  
Gamma Theta Upsilon – The International Geographical Honor Society

## DEPARTMENTAL SERVICE

Environmental GIS/Geographer Search Committee	2023 - 2024
Post-Tenure Review Committee	2023 - Present
Environmental Geographer/Planner Search Comm. (Chair)	2021 - 2022
Graduate Program Director	2019 - Present
Graduate Committee	2019 - Present
Departmental Seminar Committee	2018 - 2020
Periodic Comprehensive Review Committee	2017 - 2021
Map Library Committee (Chair)	2017 - 2019
Honors and Awards Committee	2016 - Present
Social Committee	2016 - 2019
Department Chair Search Committee	2016 - 2017
Comprehensive Exam Committee	2015 - 2017
Departmental Personnel Committee	2015 - Present
Gamma Theta Upsilon Faculty Representative	2015 - Present
Human Geographer Search Committee	2014 - 2015
World Geography Bowl Faculty Adviser	2014 - Present
Appalachian Geographical Society Faculty Adviser	2014 - 2019

## DISCIPLINARY SERVICE

### **Southeastern Division of the American Association of Geographers**

2022 - Present	North Carolina State Representative to SEDAAG
2018	Panelist - <i>Teaching as a Graduate Student</i>

### **Association of American Geographers**

2022 - Present	Geomorphology Specialty Group Representative to the International Association of Geomorphologists
2017	Panelist - <i>Active Teaching Approaches in Physical Geography Classes</i>
2016	Panelist - <i>Including undergraduates in Geographic research</i>

### **Manuscript Reviews**

Geomorphology	Physical Geography	Southeastern Geographer
Water	Journal of Flood Risk Management	

### **Proposal Reviews**

National Geographic	Southeast Division of the AAG
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