

Ross J. Guida

Assistant Professor, Dept. of Geography and Geology
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EDUCATION

Ph.D., Environmental Resources and Policy (2016)

Southern Illinois University, Carbondale (SIUC)

- Dissertation: *Hydraulic, Geospatial, and Socioeconomic Modeling of Strategic Floodplain Reconnection Scenarios for the Lower Tisza River (Hungary) and Illinois River (Illinois, U.S.A.)*
- Concentration: Water Resources

M.S., Environmental Science (2011)

University of Nevada, Las Vegas (UNLV)

- Thesis: *Climate and Vegetation Change in the Newberry Mountains, Southern Clark County, NV*
- Concentration: Policy and Management

B.A., Geography (2009)

University of Wisconsin, Eau Claire (UWEC)

- Concentration: Resource Management
- Capstone paper: Colorado River Indian Tribes' senior water rights
- Physical geography capstone field study: Lower Colorado River water resources and geomorphology; sediment remobilization on Wawheap Creek, a tributary to Lake Powell (UT)

Research Interests:

River dynamics; coupled natural-human systems, including hydrologic, hydraulic, and flood hazard modeling; physical environmental changes; water resources management and policy; climate impacts on landscapes and water resources; applied GIS; biogeography; perceptions of environmental issues.

PROFESSIONAL EXPERIENCE

Assistant Professor, Geography and Geology, Sam Houston State University (Aug. 2016 - present)

- Instructor of record for:
 - Weather and Climate; Physical Geography; Environmental Sustainability; Geomorphology; Hydrology and Water Resources
- Research on biogeography and historical climate change, hydrology, flooding, environmental modeling, and river dynamics

SIUC Dissertation Research Assistant/Awardee (Aug. 2015 - May 2016)

SIUC Graduate Research Assistant, Geography and Environmental Resources (Summer 2015)

SIUC Teaching Assistant, Geography and Environmental Resources (Aug. 2014 - May 2015)

SIUC Graduate Research Assistant, Geography and Environmental Resources (Summer 2014)

National Science Foundation (NSF) Integrative Graduate Education and Research Traineeship (IGERT) Fellow in Watershed Science and Policy, SIUC (June 2012 - June 2014)

Universities Council on Water Resources Graduate Assistant (Fall 2011, Summer 2012)

SIUC Graduate Research Assistant, Environmental Resources and Policy (Spring 2012)

UNLV Graduate Research Assistant, School of Environmental and Public Affairs (2009-2011)

UWEC Undergraduate Student Researcher, Department of Geography (2008-2009)

UWEC Blugold Undergrad Research Fellow, Departments of History and Geography (2005-2007)

TEACHING

Instructor of record at SHSU:

- **Geography 1401: Weather and Climate**
 - Spring 2018 (05): Teacher 4.5/5; Course: 4.4/5 (40% response rate; 57 students)
 - Spring 2018 (04): Teacher 4.8/5; Course: 5.0/5 (46% response rate; 69 students)
 - Fall 2017: Teacher 4.7/5; Course: 4.7/5 (38% response rate; 84 students)
 - Spring 2017: Teacher 4.5/5; Course: 4.4/5 (38% response rate; 84 students)
 - Fall 2016: Teacher 4.4/5; Course: 4.4/5 (51% response rate; 78 students)
- **Geography 2341: Physical Geography**
 - Fall 2017: Not included in dept. IDEA scores (14 students)
 - Fall 2016: Teacher 4.1/5; Course: 4.4/5 (57% response rate; 14 students)
- **Geography 4432: Geomorphology**
 - Spring 2018 Lecture: Teacher 4.9/5; Course: 4.6/5 (53% response rate; 15 students)
 - Spring 2018 Lab: Teacher 4.8/5; Course: 4.6/5 (33% response rate; 15 students)
 - Fall 2016 Lecture: Teacher 3.9/5; Course: 4.2/5 (45% response rate; 20 students)
 - Fall 2016 Lab: Teacher 4.0/5; Course: 4.4/5 (40% response rate; 20 students)
- **Geography 4075: Hydrology and Water Resources**
 - Fall 2017: Not included in dept. IDEA scores (12 students)
 - Spring 2017: Not included in dept. IDEA scores (32 students)

Instructor of record prior to SHSU:

- **Geography 303i: Physical Geography (SIUC)**
 - Spring 2015: Instructor evaluation 4.45/5 (4 = Very good; 5 = Exceptional); 45 students
- **Geography 320: Introduction to Environmental Sustainability (SIUC)**
 - Fall 2014: Instructor evaluation 4.19/5 (4 = Very good; 5 = Exceptional); 15 students

Assistant and/or selected lectures:

- **Geography 303i: Physical Geography (SIUC) (Fall 2015)**
 - Lectures on weathering and mass wasting, hydrologic cycle, and water quantity
- **Geography 436/536: Natural Hazards (SIUC) (Fall 2015)**
 - Floodplain management exercise and return period lab instructor
- **Geography 433: Field Methods in Geography (SIUC) (Spring 2014)**
 - Assistant for all labs, lead instructor for groundwater lab
- **Geography 434: Water Resources Hydrology (SIUC) (Fall 2013)**
 - Stream orders, stream morphology lecture and lab
- **Environmental Science 205: Environment and Development (UNLV) (Spring 2011)**

- Biodiversity, conservation vs. preservation, GIS applications for environmental science

Teaching Interests:

Biogeography; climate change; environmental conservation and sustainability; environmental modeling; environmental policy; geomorphology; hydrology; physical geography; natural hazards; water resources management and policy; weather and climate.

PUBLICATIONS

Refereed Articles

Guida, R.J., S.R. Abella, C.L. Roberts, C.M. Norman, and W.J. Smith, Jr. Assessing Historical and Future Habitat for Four Conservation-Priority Mojave Desert Species. *In Review with Journal of Biogeography* July 2018.

Abella, S.R., **R.J. Guida**, C.L. Roberts, C.M. Norman, and J.S. Holland. Persistence and turnover in desert plant communities during 37 years of global change. *In Review with Ecological Monographs* July 2018.

Remo, J.W.F., B.S. Ickes, J.K. Ryherd, **R.J. Guida**, and M.D. Therrell. 2018. Assessing the Impacts of Dams and Levees on the Hydrologic Record of the Middle and Lower Mississippi River, USA. *Geomorphology*. 313: 88-100. DOI: 10.1016/j.geomorph.2018.01.004

Remo, J.W.F., **R.J. Guida**, and S. Secchi. 2017. Screening the Suitability of Levee Protected Areas for Strategic Floodplain Reconnection Along the LaGrange Segment of the Illinois River, USA. *River Research and Applications* 33(6): 863-878. DOI: 10.1002/rra.3055.

Guida, R.J., J.W.F Remo, and S. Secchi. 2016. Tradeoffs of Strategically Reconnecting Rivers to Their Floodplains: The Case of the Lower Illinois River (USA). *Science of the Total Environment* 572: 43-55. DOI 10.1016/j.scitotenv.2016.07.190

Guida, R.J., J.W.F. Remo, and S. Secchi. 2016. Applying Geospatial Tools to Assess the Agricultural Value of Lower Illinois River Floodplain Levee Districts. *Applied Geography* 74: 123-135. DOI: 10.1016/j.apgeog.2016.07.002

Guida, R.J., T.L. Swanson, J.W.F. Remo, and T. Kiss. 2015. Strategic Floodplain Reconnection for the Lower Tisza River, Hungary: Opportunities for Flood-height Reduction and Floodplain-wetland Reconnection. *Journal of Hydrology* (521): 274-285. DOI: 10.1016/j.jhydrol.2014.11.080.

Guida, R.J., S.R. Abella, W.J. Smith, Jr., H. Stephen, and C.L. Roberts. 2014. Climatic change and desert vegetation distribution: Assessing 30 years of change in southern Nevada's Mojave Desert. *The Professional Geographer* 66 (2): 311-322. DOI: 10.1080/00330124.2013.787007.

Peer-Reviewed Reports

Guida, R.J., H. Marler, A. Marshall, S. McClain, J. Paul, T. Swanson, and W. Cherry. 2014. *Tisza River Connectivity: Past losses, present dynamics, and future opportunities*. NSF IGERT Report.

Cherry, W., **R.J. Guida**, H. Marler, A. Marshall, S. McClain, J. Paul, and T. Swanson. 2012. *Towards an Equitable and Sustainable Management Structure for the Upper Colorado River Basin*. NSF IGERT Report.

Newspaper Articles

Guida, R.J., S. McClain, and A. Marshall. 2013 “Transcending Flooding Boundaries: From Southern Illinois to Central Europe.” SIUC Imagining Geographies, Sharing Knowledge Series. *Waters of Southern Illinois: Past, Present, and Future* (insert in ~30,000 local papers and campus paper), November, p. 6.

CONFERENCE ABSTRACTS / PRESENTATIONS

Guida, R.J. and S. Abella. 2018. Assessing Climate Grid Resolution and Climate Time Step Impacts on Modeling Temporal Species Distributions in the Newberry Mountains, Nevada. Mountain Geography Session, *American Association of Geographers Annual Meeting*, New Orleans, LA.

Guida, R.J. 2017. Shifting vegetation patterns as a response to climate change in the Newberry Mountains, NV. *Southwest AAG Annual Meeting*, Huntsville, TX.

Guida, R.J. and J. Remo. 2017. Win-win? The tradeoffs of floodplain reconnection along the Illinois River. *Binghamton Geomorphology Symposium*, San Marcos, TX.

Remo, J., J. Ross, and **R.J. Guida**. 2016. Developing the Long View of the Mississippi River’s Flood History: Holocene “Megafloods” to yesterday. *Geological Society of America North-Central Section 50th Annual Meeting*, Champaign, IL.

Guida, R.J., J. Remo, S. Secchi, T. Swanson, and T. Kiss. 2015. Strategic Floodplain Reconnection Along the Lower Tisza and Illinois Rivers: Identifying Opportunities, Tradeoffs, and Limitations. *American Geophysical Union Fall Meeting*, San Francisco, CA.

Guida, R.J., J. Remo, and S. Secchi. 2015. Evaluating the Socioeconomic Tradeoffs of Floodplain Reconnection along the Lower Illinois River, USA. *Biennial Symposium of the International Society for River Science*, La Crosse, WI.

Remo, J., A. Rushing, and **R.J. Guida**. 2015. Hydro-Geomorphic Considerations for River-Floodplain Reconnection along the Lower Illinois River, USA. *Biennial Symposium of the International Society for River Science*, La Crosse, WI.

Guida, R.J. T. Swanson, J. Remo, and T. Kiss. 2015. Strategic Floodplain Reconnection for the Lower Tisza River, Hungary: Opportunities for flood-height reduction and floodplain-wetland reconnection. *Hazards, Risks, and Disasters Specialty Group Kasperson Student Paper Award Session, Association of American Geographers Annual Meeting*, Chicago, IL.

Remo, J., S. Secchi, **R.J. Guida**, and A. Rushing. 2015. Strategic floodplain reconnection for improving flood resilience of Illinois River floodplain communities. *Association of American Geographers Annual Meeting*, Chicago, IL.

Rushing, A., J. Remo, and **R.J. Guida**. 2015. Screening of large river floodplains for their habitat rehabilitation potential. *Association of American Geographers Annual Meeting*, Chicago, IL.

McClain, S., **R.J. Guida**, W. Cherry, A. Marshall, H. Marler, J. Paul, T. Swanson, N. Pinter. 2014. Transdisciplinary Science for promoting connectivity of the transboundary Tisza River. *International Conference on the Status and Future of the World's Large Rivers*, Manaus, Brazil.

- Remo, J. and **R.J. Guida**. 2014. Guiding Large River Management Using Retro- and Scenario-Modeling. *International Conference on the Status and Future of the World's Large Rivers*, Manaus, Brazil.
- Guida, R.J.**, T. Swanson, and J. Remo. 2014. Strategic Floodplain Reconnection for the Lower Tisza River, Hungary: Opportunities for flood-height reduction and floodplain-wetland reconnection. *Session on Water Resources, Hydrology, and the Environment, Association of American Geographers Annual Meeting*, Tampa, FL.
- Smith, Jr., W., Z. Liu, A. Safi, D. Koracin, and **R.J. Guida**. 2013. Mixed methods and multicultural teams for climate change perception research in Nevada. *Association of American Geographers Annual Meeting*, Los Angeles, CA.
- Guida, R.J.**, H. Stephen, C. Roberts, S. Abella, W. Smith, Jr., J. Holland, and Z. Liu. 2011. Vegetation and Climate Change in the Newberry Mountains, Southern Nevada: Maxent and GIS Modeling for Policy Decision Support. *Biogeography Specialty Group Student Paper Competition, Association of American Geographers Annual Meeting*, Seattle, WA.
- Guida, R.J.**, H. Stephen, C. Roberts, S. Abella, W. Smith, Jr., and J. Holland. 2011. Vegetation and Climate Change in the Newberry Mountains: Maxent Modeling for Policy Decision Support. *3rd Annual Tri-State NSF EPSCoR Consortium Meeting*, Albuquerque, NM.
- Guida, R.J.**, H. Stephen, C. Roberts, S. Abella, W. Smith, Jr., J. Holland, and Z. Liu. 2010. Vegetation Change in the Newberry Mountains, Southern Nevada. *Association of American Geographers Annual Meeting*, Washington, D.C.
- Guida, R.J.**, H. Stephen, C. Roberts, S. Abella, W. Smith, Jr., and J. Holland. 2010. Vegetation and Climate Change in the Newberry Mountains, Southern Nevada. *2nd Annual Tri-State NSF EPSCoR Consortium Meeting*, Incline Village (Lake Tahoe), NV.
- Guida, R.J.**, H. Stephen, C. Roberts, S. Abella, W. Smith, Jr., and J. Holland. 2010. Vegetation and Climate Change in the Newberry Mountains, Southern Nevada. *NSF EPSCoR Nevada Annual Component Meeting*, Las Vegas, NV.
- Guida, R.J.**, H. Jol, and D. Faulkner. 2009. Ground Truthing GPR Profiles: Half Moon Lake, Eau Claire, WI. *Association of American Geographers Annual Meeting*, Las Vegas, NV.
- Guida, R.J.**, H. Jol, and D. Faulkner. 2009. Ground Truthing GPR Profiles: Half Moon Lake, Eau Claire, WI. *UWEC Student Research Symposium*, Eau Claire, WI.

GRANTS

Research Awarded

PI. SHSU ERG. 2018. Assessing Dynamic Growth and Flood Risk in Metro Houston, SHSU Office of Research and Sponsored Programs, **\$15,000**.

PI. Dissertation Research Assistantship Award. 2015. Southern Illinois University, Carbondale Graduate School, **~\$28,000**.

Co-PIs R.J. Guida and H. Jol. 2008. Ground Truthing GPR Profiles: Half Moon Lake, Eau Claire, WI. UWEC Office of Research and Sponsored Programs, **\$2,800**.

Travel Awarded

International Society for River Science (ISRS) 4th Biennial (2015) Symposium Student Registration Scholarship, **\$320**.

SIU ERP Ph.D. Program, Grad. and Prof. Student Council, and Office of Sponsored Programs, **\$600** (2014 AAG Conference).

UNLV Graduate and Professional Student Association Travel Grant, **\$506** (2011 AAG Conference).

UWEC Office of Research and Sponsored Programs, **\$500** (2009 AAG Conference).

Declined

PI. 2017. NSF RAPID DRMS Collaborative for Post-Harvey Flood Work. **\$58,845**.

Co-PI with Fraass (PI) and Hill (Co-PI). 2017. PACE Teaching Grant for Collaborative Exam Implementation for Earth Science Concept Retention. **\$7,758**.

PROFESSIONAL MEMBERSHIPS

Association of American Geographers (AAG)

- Specialty Groups: Applied Geography; Geomorphology; Graduate; Hazards, Risks, Disasters; Human Dimensions of Global Change; Water Resources

American Geophysical Union (AGU)

- Group Memberships: Earth and Planetary Surface Processes; Global Environmental Change; Hydrology; Natural Hazards; Societal Impacts and Policy Sciences

International Society for River Science (ISRS)

LICENSES AND CERTIFICATIONS

Coursera: *Water in the Western U.S.* online through UC-Boulder

ESRI: *ArcGIS Spatial Analysis of Geohazards; ArcGIS Urban and Regional Planning Intro.*

SHSU SERVICE

University

- SHSU Convocation Committee Geography Representative (2016 – present)
 - Work all Fall, Spring, and Summer graduation ceremonies

Department

- SHSU Curriculum Committee (2016 – present)
- Graduate Committees:
 - Lindsey Aucoin (M.S. in GIS; defended May 2018)
- Undergraduate Research
 - Supervise 2 students on flood risk in metro Houston (Summer 2018)
- Faculty Search Committees

- Assistant Professor Sedimentology/Stratigraphy (2017-18)
- Assistant Professor Geophysics (2017-18)
- Visiting Assistant Professor Sedimentology/Stratigraphy (Spring 2017)

Manuscript Reviews

- *International Journal of Applied Geospatial Research* (2017)
- *Applied Geography* (2016)

Letters of Reference

- Raynie Leard (2018; received Air Force spouse's scholarship for M.S. in psychology)
- Miranda Jordan (2017; Full funding to Missouri St. M.S. program)
- Nic Jordan (2017; Full funding to Missouri St. M.S. program)
- Elizabeth Sosa (2017; NSF REU LAKES award recipient for summer research internship)

PRIOR SERVICE

Manuscript Reviews

2015 *Environmental Engineering and Management Journal*

Book Reviews

2015 Physical geography and environmental science texts for Pearson and Oxford Press

Planning Committees

2015 SIUC Natural Sciences Student Research Symposium

- Talks and poster sessions with awards for undergraduate and graduate research
- Anthropology, environmental resources and policy, forestry, geography, geology, microbiology, plant biology, zoology

2014-15 SIUC Environmental Resources and Policy Ph.D. student seminars (ERP 598)

- Organized events for internal and external speakers, including the USGS Columbia branch chief, with a total budget of \$2,000

2010-11 UNLV Climate Change Lab conference and research travel

- Assisted in organizing flights, hotels, and itineraries for between 5 and 7 people
- Organized internal grant applications for travel funding
- Led tour of Washington D.C. for international colleagues

Undergraduate Research Advised

2015 Travis Preston, ArcGIS applications to create a Hazus-MH database to assess flood damage along the Illinois River's LaGrange Pool.

2010-11 Quality control of undergrad team's data entry for NSF EPSCoR climate change survey results

Invited Presentations

2014 Panelist, SIUC and Sierra Club's *DamNation* screening

2013 Panelist, SIUC's *Imagining Geographies: From Illinois to Europe and Back: Watershed Science and Sustainability Research by SIU Fellows*

2010 Presenter, *First Annual Elko Band Tribal Leadership Conference*, Elko, NV. “Going Green”

Youth Mentoring

2015 IL State Science Fair judge (Junior High and High School students). Carbondale, IL.

2015 IL Region 8 Science Fair judge (Junior High and High School students). Carbondale, IL.

2011 Chaperone/volunteer for CommonBond Communities after-school program trip to Mill City Museum and Upper Mississippi Lock and Dam #1. Minneapolis, MN.

2005-2009 Camp assistant and head summer league coach, Bradford High School boys volleyball team. Kenosha, WI.

2005 and 2009 Special education 6th grade math tutor, Washington Middle School, small group and individual instruction. Kenosha, WI.

Community Service

2015, 2003-2009 American Diabetes Association *Tour de Cure* participant and fundraiser. Aurora, IL and Mequon and Grafton, WI.

2010 Environmental education booth at *Elko Band Tribal Leadership Conference*, Elko, NV.

AWARDS

Student Scholarship for Conference Attendance (June 2015)

- International Society for River Science (ISRS)

Dissertation Research Assistantship Award (April 2015)

- SIUC Graduate School

Honorable Mention for Dissertation Fellowship (March 2015)

- Ford Foundation via National Academies

Jeanne X. Kasperson Graduate Student Paper Presentation Award (Oct. 2014)

- Association of American Geographers' (AAG) Hazards, Risks, and Disasters Specialty Group

Second Place Graduate Student Paper Presentation (Oct. 2014)

- SIUC Center for Ecology-Sponsored Natural Sciences Student Symposium

NSF IGERT 2-Year Fellowship (June 2012)

- SIUC IGERT in Watershed Science and Policy

First Place Graduate Student Illustrated Poster Presentation (April 2010)

- National Science Foundation EPSCoR Nevada, Idaho, and New Mexico Tri-State Consortium

First Place Map (December 2007)

- NovoPrint USA Milwaukee office cartography competition