

## Jason P. Julian

Ph.D. candidate

Department of Geography, University of North Carolina

Chapel Hill, NC 27599-3220

(919)599-6969, email: [jjulian@unc.edu](mailto:jjulian@unc.edu)

[www.unc.edu/~jjulian/](http://www.unc.edu/~jjulian/)

### **RESEARCH INTERESTS**

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Earth Systems Science: hydrologic and geomorphic controls on ecosystem processes; watershed-scale restoration

Fluvial Geomorphology: sediment erosion; suspended sediment transport; reservoir sedimentation; channel evolution

Ecohydrology: benthic light availability; spatio-temporal trends in water quality; biotic responses to flow variability and watershed disturbances

Anthropogenic Influences in Watersheds: dam removal; urbanization; stream restoration

### **EDUCATION**

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**Ph.D. Geography** Department of Geography, University of North Carolina, Chapel Hill, NC, **ABD, expected June 2007**, Dissertation: "Hydrogeomorphic Controls on Light Availability in Rivers"

**M.S. Geology** Department of Geological Sciences, University of South Carolina, Columbia, SC, **2004**, Thesis: "Fluvial Erosion of Cohesive Riverbanks"

**B.S. Geography** Department of Geography, University of South Carolina, Columbia, SC, **2001**

### **RESEARCH AND PROFESSIONAL EXPERIENCE**

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2004 – 2007 Research Assistant, Downstream geomorphic and ecological effects of dam removal, Univ. of North Carolina

2004 – 2005 Research Assistant, Pre-urbanization impact assessment of river channel morphology, Univ. of North Carolina

2002 – 2004 Research Assistant, Effects of urbanization on river channel processes, Univ. of South Carolina

2001 – 2004 Consultant, Sand River Restoration Project, Hitchcock Woods, Aiken, SC

2000 – 2001 Surface Processes Lab Assistant, Geology Dept., Univ. of South Carolina

1996 – 1999 Space and Missile Systems Technician, U.S. Air Force, Minot, ND

### **TEACHING EXPERIENCE**

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Fall 2003 Teaching Assistant for "Environment of the Earth," Geology Dept., Univ. of South Carolina

Spring 2003 Teaching Assistant for "A View of the River," Geology Dept., Univ. of South Carolina

Fall 2002 Teaching Assistant for "Environment of the Earth," Geology Dept., Univ. of South Carolina

## **REFEREED PUBLICATIONS**

- Riggsbee, J.A., Julian, J.P., Doyle, M.W., and Wetzel, R.G. (In press). Sediment, dissolved organic carbon, and nitrogen export during the dam removal process. *Water Resources Research*.
- Julian, J.P. and Torres, R. 2006. Hydraulic erosion of cohesive riverbanks. *Geomorphology* 76: 193-206.
- Doyle, M.W. and Julian, J.P. 2005. The most-cited works in *Geomorphology*. *Geomorphology* 72: 238-249.

## **MANUSCRIPTS IN PREPARATION**

- Julian, J.P., Doyle, M.W., Powers, S.M., and Stanley, E.H. Optical water quality in rivers. *Limnology and Oceanography*.
- Julian, J.P., Doyle, M.W., and Stanley, E.H. Hydrogeomorphic controls on benthic light availability: A proposed model. *Water Resources Research*.
- Julian, J.P., Riggsbee, J.A., Doyle, M.W., and Stanley, E.H. Light along the river continuum: A review, meta-analysis, and case-study. *Freshwater Biology*.
- Julian, J.P., Riggsbee, J.A., Powers, S.P., and Doyle, M.W. Spatial and temporal trends in suspended sediment transport following dam removal. *Earth Surface Processes & Landforms*.
- Julian, J.P., Powers, S.P., Lottig, N.R., Stanley, E.H., and Doyle, M.W. Long-term nutrient storage in a dewatered reservoir, Big Spring Creek, WI. *River Research and Applications*.

## **PRESENTATIONS TO PROFESSIONAL SOCIETIES AND INSTITUTES**

- Julian, J.P., Doyle, M.W., and Stanley, E.H. 2007. "Light in Rivers: Hydrogeomorphic Controls and Spatial Trends." *North American Benthological Society, 55<sup>th</sup> Annual Meeting*, Columbia, SC.
- Riggsbee, J.A., Julian, J.P., Doyle, M.W., and Wetzel, R.G. 2007. "Effects of Suspended Sediments on Downstream Biogeochemistry following Dam Removal." *North American Benthological Society, 55<sup>th</sup> Annual Meeting*, Columbia, SC.
- Julian, J.P., Doyle, M.W., and Stanley, E.H. 2006. "BLAM (Benthic Light Availability Model): A proposed model of hydrogeomorphic controls on light in rivers." *American Geophysical Union, Fall Meeting*, San Francisco, CA.
- Julian, J.P., Riggsbee, J.A., Doyle, M.W., Stanley, E.H., and Zahn, S.E. 2006. "Hydrogeomorphic controls and anthropogenic influences on light availability in rivers." *Binghamton Geomorphology Symposium, 37<sup>th</sup> International Meeting*, Columbia, SC.
- Julian, J.P. and Torres, R. 2006. "Predicting Erosion Rates of Cohesive Riverbanks." *NC Stream Restoration Institute, Southeast Regional Stream Restoration Conference*, Charlotte, NC.
- Riggsbee, J.A., Julian, J.P., Doyle, M.W., and Wetzel, R.G. 2006. "Sediment and nutrient fluxes following dam removal." *NC Stream Restoration Institute, Southeast Regional Stream Restoration Conference*, Charlotte, NC.
- Riggsbee, J.A., Doyle, M.W., Julian, J.P., and Wetzel, R.G. 2005. "Channel Adjustment and Riparian Zone Recovery Following the Removal of a Low-Head Dam in North Carolina." *American Society of Civil Engineers, Watershed Management Conference*, Williamsburg, VA.

- Riggsbee, J.A., Wetzel, R.G., Doyle, M.W., and Julian, J.P. 2005. "Floodplain, Wetland, and Channel Biogeochemical Relationships following Dam Removal on a Coastal Plain River." *Society of Wetland Scientists*, 26<sup>th</sup> Annual Meeting, Charleston, SC.
- Julian, J.P. and Torres, R. 2005. "Hydraulic Erosion of Cohesive Riverbanks in Response to Urban Runoff." *American Geophysical Union – North American Benthological Society*, Joint Assembly, New Orleans, LA.

### **ACADEMIC HONORS AND AWARDS**

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- Department of Geological Sciences Fellowship (2002), Univ. of South Carolina
- Julian J. Petty Award for top graduate in Geography Department (2002), Univ. of South Carolina
- Magna cum laude (2001), Univ. of South Carolina

### **PROFESSIONAL SOCIETY MEMBERSHIP**

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- American Geophysical Union (Hydrology)
- Association of American Geographers (GIS, Geomorphology, Water Resources)
- North American Benthological Society (Environmental Impact/Assessment)

### **PROFESSIONAL ACTIVITIES**

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- Reviewer for Journal of the American Water Resources Association

### **REFERENCES**

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- Martin W. Doyle (Ph.D. Advisor) – Dept. of Geography, Univ. of North Carolina  
Email: [mwdoyle@email.unc.edu](mailto:mwdoyle@email.unc.edu); Phone: 919-962-3876
- Emily H. Stanley (Ph.D. Committee Member) – Center for Limnology, Univ. of Wisconsin  
Email: [ehstanley@wisc.edu](mailto:ehstanley@wisc.edu); Phone: 608-263-2567
- Raymond Torres (M.S. Advisor) – Dept. of Geological Sciences, Univ. of South Carolina  
Email: [torres@geol.sc.edu](mailto:torres@geol.sc.edu); Phone: 803-777-4506
- J. Adam Riggsbee (colleague) – Restoration Systems LLC  
Email: [ariggsbee@restorationsystems.com](mailto:ariggsbee@restorationsystems.com); Phone: 919-755-9490
- William L. Graf (M.S. Committee Member) – Dept. of Geography, Univ. of South Carolina  
Email: [graf@sc.edu](mailto:graf@sc.edu); Phone: 803-777-4437