

# Brian Dickman, PE, PhD

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## Research Interests

The influence of hydrologic and hydraulic conditions on plant communities, particularly in relation to rare plants. The treatment of acid-mine drainage through passive means. Tracing stream submergence in mining refuse to acid-mine discharge at old mine portals.

## Education

Ph.D. (Civil and Environmental Engineering) Georgia Institute of Technology, 2008. GPA: 3.75.  
Thesis: Chemical and Hydromechanical Cue Structure in the Context of Turbulent Odor Plume Tracking. Advisor: Dr. Donald R. Webster

M.S. (Civil Engineering) Georgia Institute of Technology, 1990. GPA: 3.67.

B.S. (Civil Engineering) University of Cincinnati, 1985. GPA: 3.5.

## Experience

Assistant Professor, Institute of Technology WVU, Montgomery, WV 2012-present.

Postdoctoral Fellow, Colorado State University, Fort Collins, CO 2010-2011.

Graduate Research Assistant, Georgia Institute of Technology, Atlanta, GA 2003-2008

Graduate Teaching Assistant, Georgia Institute of Technology, Atlanta, GA 2004-2008

Environmental Engineer/Field Ecologist, Parsons Brinckerhoff, Atlanta, GA 1999-2003

Partner/Engineer/Ecologist, Sycamore Consulting, Atlanta, GA 1994-1999

Engineer in Training/Project Engineer/Field Ecologist, Post, Buckley, Schuh & Jernigan, Atlanta, GA 1989-1994

## Professional Registration

Georgia Professional Engineer #19992, license current.

West Virginia Professional Engineer #20388, license current

## Publications

Page, JL, BD Dickman, DR Webster and MJ Weissburg. 2011. Getting ahead: context-dependent responses to odorant filaments drive along-stream progress during odor tracking in blue crabs. *J. Exp. Biol.* 214:1498-1512.

Page, JL, BD Dickman, DR Webster and MJ Weissburg. 2011. Staying the course: chemical signal spatial properties and concentration mediate cross-stream motion in turbulent plumes. *J. Exp. Biol.* 214:1513-1522.

Dickman, BD, DR Webster, JL Jackson, and MJ Weissburg. 2009. Three-Dimensional Concentration Measurements around Actively Tracking Blue Crabs. *Limnol. Oceanogr. Methods* 7:81-95.

## **Presentations and Posters**

Dickman, BD, DR Webster, MJ Weissburg and JL Jackson, "Real-time turbulent odor plume quantification: I Signal structure perceived by blue crabs." Oral presentation, 2008 ASLO Aquatic Sciences Meeting, Orlando, FL, February 2008.

Jackson, JL, BD Dickman, DR Webster and MJ Weissburg, "Real-time turbulent odor plume quantification: II Correlation to specialized behaviors in blue crabs." Oral presentation, 2008 ASLO Aquatic Sciences Meeting, Orlando, FL, February 2008.

Webster, DR, BD Dickman, JL Jackson, MJ Weissburg, "Quantifying turbulent plume signals used by actively tracking blue crabs," Oral presentation, 2007 American Physical Society Meeting, Salt Lake City, UT, November 2007.

Jackson, JL, BD Dickman, MJ Weissburg, and DR Webster, "Three-dimensional concentration measurements around actively tracking blue crabs," Oral presentation, 2007 Benthic Ecology Meeting, Atlanta, GA, March 2007.

Dickman, BD, DR Webster, MJ Weissburg and JL Jackson, "Quantifying turbulent plume signals used by actively tracking blue crabs." Oral presentation, 2007 ASLO Aquatic Sciences Meeting, Santa Fe, NM, February 2007.

Jackson, JL, BD Dickman, MJ Weissburg, and DR Webster, "Three-dimensional concentration measurements around actively tracking blue crabs," Oral presentation, 2007 Society for Integrative and Comparative Biology Meeting, Phoenix, AZ, January 2007.

Dickman, BD, DR Webster, MJ Weissburg and JL Jackson, "Quantifying turbulent plume signals used by actively tracking blue crabs." Oral presentation, American Physical Society Division of Fluid Mechanics Meeting, Tampa, FL, November 2006.

Jackson, JL, BD Dickman, DR Webster, and MJ Weissburg, "Odor-tracking behavior of blue crabs in rough bed flow environments," Poster presentation, ASLO 2006 Ocean Sciences Meeting, Honolulu, HI, February 2006.

## **Honors and Awards**

Civil and Environmental Engineering, Georgia Institute of Technology, Graduate Teaching Assistant Award 2008.

## **Leadership and teaching**

Assistant Professor, WVU Institute of Technology, 2012 to present.

Lab Instructor, Fluid Mechanics of Organisms, Georgia Institute of Technology, 2005.

Undergraduate Teaching Instructor, Hydraulic Engineering, Georgia Institute of Technology, 2004-2008.