

Department of: Earth and Environmental Sciences

Chair: Allen Burton

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1. Refereed publications and book chapters

Dr. Burton

- Custer KW, Burton GA, Coleho R, Smith P. 2006. Determining stressor presence in streams receiving urban and agriculture runoff: development of a benthic in situ toxicity identification evaluation (BiTIE) Method. *Environ Toxicol Chem* 25:2299-2305.
- Leppänen MT, T Ristola, J Johnson, GA Burton Jr. 2006. Applying adult emergence as an endpoint in a post-exposure laboratory test using two midge species (Diptera: Chironomidae). *Chemosphere* 64:1667-1674.
- Kapo, K., Burton GA. 2006. A geographic information system based weights-of-evidence approach for diagnosing aquatic ecosystem impairment. *Environ Toxicol Chem* 25:2237-2249.
- Maltby L, Burton GA. 2006. Editorial: Field based effects measures. *Environ Toxicol Chem* 25:2261-2262.
- Sterner, TR, Goodyear CD, Robinson PJ, Mattie DR, Burton GA. 2006. Analysis of algorithms predicting blood:air and tissue:blood partition coefficients from solvent partition coefficients. *J. Toxicol. Environ. Health, Part A*, 69:1441-1479.
- Norberg-King TJ, Sibley PK, Burton GA, Ingersoll CG, Kemble NE, Ireland DS, Mount DR, Rowland CA. 2006. Interlaboratory evaluation of the *Hyalella azteca* and *Chironomus tentans* short term and long term sediment toxicity tests. *Environ Toxicol Chem* 25:2662-2674.
- Burton GA. 2006. Editorial: No longer just déjà vu. *Environ Toxicol Chem* 25: 2819-2820.

Dr. Carney

- Howerton, K.A, Carney, C.K., and Boardman, M.R., 2006, Depositional history and diagenesis of a Pleistocene core, Andros Island, Bahamas: In, Davis, R.L., and Gamble, D., (eds.), *Proceedings of the Twelfth Symposium on the Geology of the Bahamas and other Carbonate Regions*: Gerace Research Center, San Salvador, Bahamas p.1-7.

Dr. Dominic

- Ritzi, R. W.; Dai*, Z.; Dominic, D. F.; Rubin, Y. N., Reply to comment by S.P. Neuman on our 2004 article: Spatial correlation of permeability in cross-stratified sediment with hierarchical architecture, *Water Resources Research*, 40(3), W03513doi: 10.1029/2003WR002420

Dr. Ritzi

Ritzi, R.W., and R.M. Allen-King, 2007, "Why did Sudicky (1986) find an exponential-like spatial correlation structure for hydraulic conductivity at the Borden research site?" *Water Resources Research*, 43, W01406doi: 10.1029/2006WR004935

†Ritzi, R.W. and Z. Dai*, 2006, Introduction: Modeling groundwater flow and reactive transport in physically and chemically heterogeneous media, *Geosphere*, 2(2), doi: 10.1130/GES0202INT.1

†Dai*, Z., J. Samper, and R.W. Ritzi, 2006, Identifying geochemical processes by inverse modeling of multicomponent reactive transport in the Aquia aquifer, *Geosphere*, 2(2), doi: 10.1130/GES00021.1

Ritzi, R. W., Z. Dai*, D. F. Dominic, and Y. Rubin, 2006, Reply to comment by Shlomo P. Neuman on "Spatial correlation of permeability in cross-stratified sediment with hierarchical architecture," *Water Resources Research*, 42, W05602doi: 10.1029/2005WR004402

Dr. Slattery

Schwerin, Theresa G.; Botti, James; Dauksys, Claudia; Low, Russanne; Myers, Robert; Slattery, William. (2006) The earth System Science Education Alliance: On-Line Professional Development for K-12 Teachers *Journal of Geoscience Education* v. 54 n.3 p, 215-222 May 2006

Lunsford, Suzanne K. Slattery, William (2006) An Interactive Environmental Science Course for Education Science Majors. *Journal of Chemical Education* v. 83 n.2 p. 233-236

2. Presentations and invited talks

Dr. Barton

Hubbard Brook Cooperator's Meeting, NH, July 2006

Cornell University, Department of Biological and Environmental Engineering (October 2006) [Invited]

Dr. Brown

The Evidence for Global Warming: Its Causes and Consequences Climate Change, Honors Dialog, Wright State University, February 17, 2006. (with Chris Barton)

Surfing the Atachafalaya, Eco-Seminar, Department of Biological Sciences, Wright State University, April 13, 2006.

Climate Change: Evidence and Causes, Departments of Physics/Electro-Optics Joint Seminar, Univ. Dayton, April 21, 2006. (with Chris Barton)

Dr. Burton

U.S. House of Representatives, Science Committee Hearing on Environmental Impacts of Emerging Contaminants. Regulating Emerging Contaminants. May 1, 2006

University of North Texas, Institute of Applied Sciences, Regional SETAC Meeting. Short course on Assessing Sediment Quality. May.

Ecotoxicology and its Paradigms: A Critical Overview. Keynote Lecture. Ecotox 2006, SETAC

Brasilian Society of Ecotoxicology Biannual Meeting. Sao Paulo, Brazil, July 2006.

Stressor Identification in Aquatic Ecosystems. Wright State University Department of Earth & Environmental Sciences. September 2006.

Short Course. Ecological Risk Assessment: Theory and Practice. CIAD. Mazatlan, Mexico. July 2006.

Dr. Cheng

Michael Belke and Songlin Cheng, Impact of Land Use on Water Quality in the Indian Lake Watershed : An Integrated GIS Approach. Water Management Association of Ohio (WMAO) Fall Conference November 15th & 16th, Columbus, Ohio. Poster

Dr. Dominic

Dominic, D.F., Guin, A., Ramanathan, R., Ritzi, R.W., and Lunt, I., 2006, Modeling hierarchical sedimentary architecture of braid-belt deposits using geometric simulation. abstract published in Proceedings of the Gordon Conference *Flow Through Porous Media*, presented as a poster August 2006.

Dr. Ritzi

Ritzi, R.W. and R.M. Allen-King, 2006, "Why did Sudicky (1986) find an exponential-like spatial correlation structure for hydraulic conductivity at the borden research site?" Fall Meeting of the American Geophysical Union, H43A-0491

Sun, A.Y., R.W. Ritzi, and D. Sims, 2006, "Characterization and modeling of the alluvium beneath Fortymile Wash, Nevada," Fall Meeting of the American Geophysical Union, H31B-1433

Ritzi, R.W., P. Bobeck, and E.S. Bair, 2006, "Darcy's public fountains of the City of Dijon, past and present," Fall Meeting of the American Geophysical Union, H41B-0375

Ritzi, R.W., 2006, "Linking sample permeability semivariograms to hierarchical stratal architecture," Gordon Conference on Flow Through Porous Media - invited

Ritzi, R.W., 2006, "Combining indicator- and continuous-variable geostatistics, for linking permeability correlation to hierarchical stratal architecture," Geological Society of America Annual Meeting

Dr. Slattery

Lowe, Rusanne, Slattery, William (2006) Forging a New Future: Harnessing the Power of Science Digital Libraries for Pre-service and In-service Teacher Education. Association for Science Teacher Education International Conference, Portland, Oregon, January 12-14, 2006. Oral

Teed, Rebecca, Slattery, William (2006) Using Content Pre- and Post-Testing In A Geoscience Class For Pre-service Teachers. Geological Society of America North-Central Section-40th Annual Meeting (20-21 April 2006. Oral

Slattery, William (2006) A Web Based Assessment Module For Faculty and Graduate Teaching Assistants Teaching Introductory Geoscience Courses. Geological Society of America North-Central Section-40th Annual Meeting (20-21 April 2006. Oral

Slattery, William (2006) Science Education Reform, High Stakes Testing and the Role of Earth and Space Science in Pre-service Teacher Preparation (Invited Presentation) Geological Society of America Annual Meeting, Philadelphia, October, 2006. Oral

Cole, Tiffany*; Teed, Rebecca; Slattery, William (2006) Earth Systems: a Course Designed to Build Earth Science Content and Pedagogy in Pre-service Middle-School Teachers. Geological Society of America Annual Meeting, Philadelphia, October, 2006. Oral

Cole, Tiffany*; Slattery, William; Teed, Rebecca (2006) Alignment of Content and Pedagogy in an Earth Systems Course for Pre-Service Middle School Teachers. American Geophysical Union Fall meeting, San Francisco, California, December 15th, 2006. Poster

Dr. Teed

Cole, T., Teed, R., Slattery W. 2006 "Alignment of Content and Pedagogy in an Earth Systems Course for Pre-Service Middle School Teachers", Presentation at American Geophysical Union, San Francisco, CA.

3. Invitations to participate or chair symposia

Dr. Barton

Chair, AGU Web Editors Committee. Lead reorganization of the content of section and focus group web pages. Chaired meeting of the Committee at AGU meeting in San Francisco, Dec. 2006.

Co-chair of session Application of Nonlinear Geophysics to Forecasting Extreme Events, AGU meeting in San Francisco, Dec. 2006.

Dr. Dominic

Allen-King, R., R.W. Ritzi, and D.F. Dominic, Collaborative Research on Reactive Transport: Modeling Spatial Cross-Correlation between Hydraulic and Reactive Aquifer Attributes as Determined by Sedimentary Architecture, 01/01/06-01/06/09, \$391,348, 26%, \$107,305 (WSU portion), National Science Foundation

Dr. Gregor

Gave seminar on soil erosion

Dr. Slattery

Slattery, William; Lunsford, Suzanne; Ciampaglio, Charles. Partners in Integrated Earth Systems Science. One year performance period. \$65,317. Overhead 8%. PI portion of the budget 100%, portion of the budget funded this year 100%. Ohio Board of Regents Improving Teacher Quality Program

4. Editorial board memberships

Dr. Burton

Aquatic Ecosystem Health & Management

Dr. Ritzi

Guest Editor, Special Issue: Modeling groundwater flow and reactive transport in physically and chemically heterogeneous media, *Geosphere*, Volume 2(2), (eight papers).

Dr. Slattery

Associate Editor of the *Journal of Geoscience Education*.

5. Granting Agency Study Section Memberships

None

6. Offices held in National professional organizations

Dr. Barton

Executive Committee, American Geophysical Union, Nonlinear Geophysics Focus Group (2004-present)

Trustee of Hubbard Brook Research Foundation, Hanover, NH Chair of the Education Committee

Dr. Burton

Science Advisory Board, U.S. Environmental Protection Agency, Scientific and Technological Achievement Awards (STAA) Panel.

National Research Council Committee on Sediment Dredging at Superfund Megsites.

Science Advisory Board, U.S. Environmental Protection Agency, Ecological Processes and Effects Committee.

Vice-President, Society of Environmental Toxicology and Chemistry

World Council, Society of Environmental Toxicology and Chemistry

International Organizing Committee. SETAC Asia/Pacific meeting. Beijing, China. September 2006.

Metals Advisory Group. Society of Environmental Toxicology and Chemistry. 2000-present.

USEPA ORD Panel on Earth Observations (invited, but declined).

Council of Environmental Deans and Directors. Washington, DC.

Dr. Carney

National Vice President, Northeastern Province, Sigma Gamma Epsilon
St Lawrence University Departmental Evaluation

Awards Committee - Association of Women Geoscientists, Outstanding Educator Award
Management Board – North Central Geological Society of America

Dr. Hauser

Member Institution Representative at the IRIS National Workshop (Tuscon, Arizona)

Representative to Annual EarthScope project meeting

Dr. Ritzi

GSA Hydrogeology Division Management Board, final year of heading a four-year campaign to increase the endowment supporting the Birdsall Dreiss Distinguished Lectureship. Existing funds were doubled through the contributions in response to this campaign.

Dr. Slattery

Secretary-Treasurer of the Geological Society of America's Geoscience Education Division.

7. Special events, symposia or colloquia

Dr. Burton

Houston Geology Alumni Meeting

Environmental Health and Protection Accreditation Council Reaccreditation San Antonio

University Review of Assessment of IEQ

Dr. Carney

BIOFEST – Boonshoft Museum, educational display on trilobites

Dr. Dominic

COSM Advising Days

8. Faculty who were awarded professional development leave

Robert Ritzi

9. Faculty, staff or students who were given awards locally, nationally or internationally

Dr. Gregor – Outstanding Faculty Award – College of Science and Mathematics

Sarah Tritschler – Outstanding Graduate Student Award – Department of Earth and Environmental Sciences

10. Outreach programs

Dr. Brown

WSU Visitation Day

COSM Advising Day

Dr. Burton

Houston alumni

Dr. Carney

Geology Research Coordinator for the Oakes Quarry Geology Park, Fairborn, OH

Presentation on Geologic Research at the Oakes Quarry Park: Columbus Historical Society

Field Trip on Research and Educational Opportunities at the Oakes Quarry Geology Park: State Representative DeWine

Field Trip on the Geology of the Oakes Quarry Park: Sinclair Community College faculty and students

Science Fair Judge – Xenia Christian School, Xenia, OH

Faculty mentor – Centerville Science Olympiad team

Dr. Cheng

TechFest 2006

Dr. Ritzi

Children's Water Festival participant (day long educational event for 4-6th graders in Dayton City Schools)

11. Student clubs and activities

Sigma Gamma Epsilon Honor Society (SGE) and the American Institute of Professional Geologists (AIPG) Activities:

- May Daze pie-throwing activity
- Arrange annual departmental dinner
- co-host AIPG-Ohio technical meeting
- Adopt-A-highway once per quarter; we share a 1-mile stretch of OH-844 with SGE
- Coordinate activities for members: Young's Jersey Dairy, Tom's Corn Maze (last October), field trips (Cleveland Museum of Natural History)
- Regularly sending care packages to former AIPG member Kurtz Miller & his fellow troops in Iraq

12. Undergraduate honors students

Not applicable

13. Off campus or special interest courses

None

14. Graduate students

First Name	Last Name	Title of Thesis or Presentation	Current Location	Employer	Grad School
Jill	Abner	Science and Social Studies Curriculum Integration	Ohio	*Little Miami Local Schools	NO
Donna	Anderson	A Field Trip to the Carolinas: Discovering the Paleontology and Geology of the Mesozoic and Cenozoic Eras	Ohio	*Huber Heights City Schools	NO
David	Bean	Geomagnetic and Gravity Survey of Falls township, Muskingum County, Ohio	Ohio	Miami Conservancy District	NO
Katharine	Brashear	Scripting for a Sunny Day: Finding Success through Scientific Writing	Ohio	*West Carrollton Schools	NO
Holly	Clark	Young Learners	Ohio	*Kettering City Schools	NO
Caleb	Conrad	Air-Based Measurements of Permeability in Pebbly Sands	Maryland	unknown	NO
James	Damico	Geostatistical Characterization of Heterogeneity in the Aberjona River Aquifer, Woburn, Massachusetts	Illinois	unknown	NO
Cullen	Erbacher	Feasibility Analysis of the Strontium Ratio Obtained from Pennsylvanian Chondrichthian Dentary	Ohio	Sinclair Community College	NO
Renee	Fry (Mays)	The Dangers of Plastic	Ohio	*Trotwood Madison Schools	NO
Patricia	Gram	Teaching students to Write Scientifically	Ohio	*Hudson City Schools	NO
Michael	Mathey	UNKNOWN - asking Committee members for assistance	Columbus, OH	Ohio EPA	NO
Jessica	McDonough	Characterization and Interpretation of the Cephalopod Marker Bed, Oakes Quarry Park, Fairborn, Ohio	Texas	Hess	NO

Kevin	Parkman	Geophysical Reconnaissance to Investigate Karst Features Associated with Sinkholes on Antioch University Campus, Yellow Springs, Ohio: Eastern Area	Unknown	Army Corp of Engineers *Xenia City Schools	NO
Amy	Rohrback	The Dirt on Soil	Ohio		NO
Chad	Runyon	Using Guided Inquiry to Address a High-School's Ohio Graduation Test (OGT) Requirements in Earth and Space Sciences	Unknown	Unknown	NO
Spencer	Stewart	Locating Abandoned Coal Mines by Means of Seismic Refraction Attenuation Near Georgetown Illinois	Houston, TX	Oil, Gas, Exploration Co. Franklin Middle School	NO
Paul	Thompson	Middle School Multidisciplinary Education of the Conservation of Fossil Fuels	Ohio		NO
Carol	Tichio	Virtual Field Trips: How Beneficial Are They	New York	unknown	NO
Lauren	Williamson	A Preliminary Morphometric Analysis of the Morphologically Variable Clypeasteroid (Enchinoidea) <i>Periarchus lyelli</i>	Dayton, OH	unemployed	WSU-MS program-F07
Jennifer	Wolters	Remote Sensing of Gneiss Domes in Southern Tibet	Texas	Hess College Professor	NO
Carrie	Wright	Inquiry-based Earth Science Education for Grades 9-12 at the Oakes Quarry Geology Park: A Focus on Geologic Time	Indiana	unknown employer	NO