

**Bloomsburg University of Pennsylvania**  
**Department of Environmental,  
Geographical, and Geological Sciences**  
**Annual Report 2018**



# Bloomsburg University of Pennsylvania

## Department of Environmental, Geographical, and Geological Sciences

### Annual Report 2018- Table of Contents

**Chairperson Remarks.....1**

#### **Department Faculty**

**Patricia Beyer.....3**

**John E. Bodenman.....4**

**Jeff Brunskill.....5**

**Tina Delahunty.....6**

**Benjamin Franek.....7**

**Jennifer J. Haney.....10**

**John G. Hintz.....11**

**Sandra Kehoe-Forutan.....12**

**Brett R. McLaurin.....13**

**Michael Shepard.....15**

**Adrian Van Rythovan.....16**

**Cynthia Venn.....17**

**Jennifer Whisner.....19**

**Stephen Whisner.....21**

**Danqing (Dana) Xiao.....22**

**EGGS Department:**

**[bloomu.edu/eggs-department](https://bloomu.edu/eggs-department)**

**Support EGGS:**

**<https://giving.bloomu.edu/eggs>**

## A Note from the Chair

### Departing Faculty

We were sad to say goodbye to **Dr. Matt Ricker**, our soils expert and advisor to the **soil judging team**. He received an outstanding offer from NC State (one of the top soils programs in the U.S.) and could not refuse it. He also got married (congratulations!) and we wish him and **Megan** all the best. We are now in the process of searching for a full-time replacement for Dr. Ricker and hope to have someone this fall.

### Major Gift

In August 2016, **Professor John Enman**, a retired EGGS faculty member, passed away peacefully at age 94 after a long and productive life. He worked here for two decades, and would often drop by after his retirement and catch up on department and university news. In his will, Dr. Enman left \$700,000 to the department! That money is now endowed with the University Foundation, and the ***Enman Fund*** will be used to subsidize and enhance experiences for our students. We have already set aside some of those funds to help offset costs of our summer field courses (EGGS 330, see below, and the Regional Geography Abroad program this summer in Norway). We are truly grateful for his years of service and thoughtfulness in providing this fund for our students.

### New Learning Community

**Dr. Benjamin Franek** (EGGS) and **Dr. Lauri Green** (Biology) led our inaugural class of the newest learning community in ***Environmental Science***. This is a group of ~20 incoming freshmen who have expressed an interest in our fields. In addition to taking some classes together, their community revolves around organized activities with a theme of environmental science. It has been very successful and we look forward to a fresh group this fall.

### New Minor

This year, we were approved to offer a new minor in Hydrology! We have a number of faculty with expertise in water – surface, ground, resources, and chemistry – and the need for hydrologists is growing, with the Bureau of Labor Statistics projecting a growth of 10% (faster than average) over the next decade. Certification as a Professional Hydrologist is available from the American Institute of Hydrologists, and completing the minor with other well-chosen courses will enable our students to be eligible for this certification.

### Field Geology Course (*EGGS 330*)

Over a three-week period this past summer, students in our introductory ***Field Geology*** course (EGGS 330) were led by **Drs. Cindy Venn, John Hintz, and Brett McLaurin** to a variety of landscapes in the ***Four Corners*** region in southern Utah. The terrain was spectacular as you can see from the picture below (Gooseneck State Park in Utah).



## Soil Judging Team

With the departure of Dr. Ricker, we were concerned with the continuity of our soil judging team and their past success. Luckily, our temporary replacement, Mr. Michael Callahan, has extensive experience in soil judging and took on the challenge. The 2018 team competed at the Northeast Regional Championship hosted by Wilmington College in southern Ohio in October, and placed 9<sup>th</sup> overall.



Please drop by if you're in the area and say hello, or keep up with us on our Homepage ([www.bloomu.edu/eggs](http://www.bloomu.edu/eggs)), Facebook ([www.facebook.com/BUEGGSalumni](https://www.facebook.com/BUEGGSalumni)), or Foundation page ([giving.bloomu.edu/eggs](http://giving.bloomu.edu/eggs)).

*M. Sherrill*





**Patricia J. Beyer**  
**Associate Professor**

**Scholarly Interests**

Fluvial Geomorphology, Surface Hydrology, Student Success and Retention

**Education**

Arizona State University, Tempe, AZ, Ph.D., Geography 1997

University of Illinois, Urbana-Champaign, IL, M.S. Geography 1992

Valparaiso University, Valparaiso, IN, B.A. Geography/English 1990

**Teaching (2018)**

Spring 2018: EGGS 107 Natural Disasters, 3 sections (35 students each)  
EGGS 380 Dams, Reservoirs & Rivers, 1 section (13 students)

Summer 2018: EGGS 107 Natural Disasters, 1 section online (30 students)  
First online course offered by EGGS Department

Fall 2018: EGGS 107 Natural Disasters, 3 sections (35 - 40 students each)  
EGGS 301 Water Resources Management, 1 section (35 students)

Winter 2018: EGGS 107 Natural Disasters, 1 section online (30 students)

**Service Activities (2018)**

Spring 2018: Subcommittee co-chair, Middle States Review committee  
EGGS Department Committees: Observation & Evaluation

Fall 2018: Subcommittee co-chair, Middle States Review committee



**Dr. John E. Bodenman**  
**Professor**

### **Scholarly Interests**

Research interests include waste management and recycling, spatial dynamics of the financial services sector, and rural economic development programs and policies. Always rewarding is my work with student majors working on a wide variety of projects in the Geography and Planning Seminar (EGGS 498)—the course that students take in conjunction with their summer internships (please see picture below of Summer 2018 interns).

### **Education**

Ph. D. (1995) Geography. The Pennsylvania State University at University Park.  
M.S. (1991) Resource Economics. The Pennsylvania State University at University Park.  
B.A. (1985) Economics. Willamette University in Salem, Oregon.

### **Presentations and Publications (2016-2018)**

**Bodenman, J. E.** and J. Haney. "Creating Markets for Recyclable Materials: The Case of PeaceCYCLE in Haiti," poster presented at the 114th Annual Meeting of the American Association of Geographers, New Orleans, LA, April 12, 2018.

Haney, J. and **J.E. Bodenman**. 2017. "Creating Markets for Recyclable Materials: The Case of Municipal Solid Waste in Haiti." *Middle States Geographer* 50(1): 17-27.

Nomie, Darion, and **John E. Bodenman**. 2016. "An Economic Opportunity Analysis of Downtown Bloomsburg." *Middle States Geographer* 49(1): 21-31.

### **Teaching (2018)**

Spring: Environmental Issues and Choices (EGGS 105)  
Environmental Valuation (EGGS 304)  
Honors Environmental Issues and Choices (HONORS 105)  
Fall: Environmental Issues and Choices (EGGS 105)  
Economic Geography (EGGS 221)  
EGGS University Seminar (INTSTUDY 100)

### **Service Activities (2018)**

Executive Board Vice President, BU Protestant Campus Ministries  
Advisor, Gamma Theta Upsilon (GTU) Geography Honor Society  
BU Honors Program Advisory Committee (HAC)



**Summer 2018 EGGS 498: Geography and Planning Seminar**



**Jeff Brunskill, Ph.D.**

**Associate Professor**

### **Scholarly Interests**

My research interests focus on the public dissemination of meteorological information, spatial cognition, applications of geographic information system (GIS) technologies and geographic education. Over the last year I collaborated with students and faculty in the computer science department at Bloomsburg University to develop the Bloomsburg Weather Viewer (<http://organizations.bloomu.edu/weather/viewer/index.htm>), and a web-based portal for managing tenure documentation. I also worked with BU faculty and undergraduate research assistants on several GIS projects including a viewshed analysis of natural gas towers in Lycoming County, a street tree inventory in Danville, PA, and an analysis of how the natural gas industry uses GIS to routing natural gas pipelines. In addition, I designed a new upper-level applied course on GIS (EGGS 390 – Special Topics / GIS III) and I continued developing an introductory general education course on GIS (EGGS 160 – Geography and Information Systems) with Dr. Jenn Haney.

### **Education**

University at Buffalo, Buffalo NY, Ph.D., Geography, 2005

University at Buffalo, Buffalo NY, M.A., Geography, 2001

North Carolina State University, Raleigh NC, B.S., Meteorology, 1999

### **Publications / Conference Presentations (2018)**

**Research Report:** Ball, B., Ellis, A., Durkin, C., & Brunskill, J.C. (2018). *Town of Danville Tree Inventory*. (Unpublished research report for the Town of Danville, Pennsylvania)

**Conference Presentation:** Wickenheiser, O., Hess, M., Brunskill, J.C., and Franek, B., *Using GIS to Evaluate the Regulatory Structure When Routing Natural Gas Pipelines Across Streams*. Presented at the Annual Meeting of the Association of American Geographers, New Orleans, LA, April 14, 2018.

### **Teaching**

EGGS 160 – Geography and Information Systems

EGGS 242 – Map Use and Analysis

EGGS 255 – Meteorology

EGGS 360 – Principles of GIS I

EGGS 361 – Principles of GIS II

EGGS 390 – Special Topics / Principles of GIS III

Advisees: 10 majors; 26 minors

### **Service Activities / Committees**

Re-Developed EGGS 160 (Geography and Information Systems) as a General Education course for the EGGS Department, and developed EGGS 390 (Special Topics / GIS III)

**Committees:** EGGS Search Committee; EGGS Promotion Committee; EGGS Geography Curriculum Committee; Gamma Theta Upsilon (GTU) Geography Honors Society Advisor; University-wide Sabbatical Committee (Chair)



**Dr. Tina Delahunty**

**Assistant Professor**

### **Scholarly Interests**

Biogeography, Land Use Land Cover Change, Recreation Planning, GIS, Remote Sensing

### **Education**

Ph.D. University of Florida, Geography

### **Publications (2016-2018)**

2018. Muharam, F.M., Delahunty, T. (corresponding author), and Mass, S.J. "Evaluation of nitrogen treatment effects on the reflectance of cotton at different spatial scales." *International Journal of Remote Sensing*. Published online: 02 August. <https://www.tandfonline.com/doi/abs/10.1080/01431161.2018.1488286>

2017. Pitt, A.L., Shinskie, J.L., Tavano, S.M., **Delahunty, T.**, and Spear, S.F. "Decline of giant salamander assessed with historical records, environmental DNA, and multi-scale habitat data." *Freshwater Biology*. 62(6): 967-976.

2016. Liu, Ying, **Delahunty, Tina**, Zhao, Naixhou, and Cao, Guofeng. "These lit areas are undeveloped: Delimiting China's urban extents from thresholded nighttime light imagery." *International Journal of Applied Earth Observation and Geoinformation*. 50 (2016): 39-50.

### **Presentations (2016-2018)**

2018. Association of American Geographers Conference. Paper presentation: "Accuracy of Remotely Sensed Data for Land Cover Location and Quantification."

2017. International Congress for Conservation Biology. Paper presentation: "Using Old and New Data to Rapidly Identify Extent and Drivers of Aquatic Species Population Decline." Cartagena, Colombia.

2016. Southeast Division of the Association of American Geographers (SEDAAG) Conference. Paper presentation: "Utility of a Land Use Land Cover Dataset for Habitat Location."

2016. The Bog Learning Network, Winter Meeting. Paper presentation: "Use and Misuse of the National Land Cover Data Set for Wetland Monitoring."

### **Research Proposals (2016-2018)**

2016: National Science Foundation. Sedimentary Geology and Paleobiology Program 16536.

PI: "Holocene vegetation variability of southern Central Appalachia" \$236,268

### **Teaching (2018)**

Spring Principles of Geographic Information Systems (EGGS 360-01)  
Principles of Geographic Information Systems (EGGS 360-02)  
Introduction to Physical Geography (EGGS 101-01)  
Introduction to Physical Geography (EGGS 101-02)  
Fall Remote Sensing of the Earth (EGGS 320-01 and EGGS 320-01A)  
Principles of Geographic Information Systems (EGGS 360-01)  
Principles of Geographic Information Systems (EGGS 360-02)  
Introduction to Physical Geography (EGGS 101-05)





**Benjamin Franek, Ph. D.**  
**Assistant Professor**



### Scholarly Interests

I have several scholarly interests. One regards watershed management – I have refined and developed practices that watershed organization members can use to assess the integrity of stream systems via efficient visual techniques. This work has led to identification of degraded local stream reaches and, ultimately, to work toward their naturalization and restoration. Another interest concerns eliciting study behaviors of students that lead to success in the classroom. This work has led to development of techniques that instructors can use to help students recognize potential troubles before they happen. One more interest I have involves research at the eco-hydrological interface. I am currently working on a project which is establishing reptile usage of transformed/aged infrastructure near fluvial systems. With all of my scholarly interests, students have and will continue to be integral to success.

### Education

University of Connecticut, Storrs, CT, Ph.D., Geography, 2013. Dissertation Research: “On Stream Assessment: Human Perception and Spatiotemporal Delineation of Geomorphic Units.”

California University of Pennsylvania, California, PA, M.A., Geography and Regional Planning, 2004.  
Thesis: “The incorporation of renewable energy resources at the local and regional levels: A case study of Washington County, Pennsylvania municipalities.”

Pennsylvania State University, University Park, PA, B.S., Physical & Environmental Geography, 2001.

Pennsylvania State University, Dubois, PA, A.S., Wildlife Technology, 1998.

### Academic Production (2016-2018)

(\*Bloomsburg University undergraduate co-author/contributor)

**Franek, B. L., & \*Ruziecki, M. R. (2018).** *Glyptemys insculpta (Wood Turtle). Rail trail nesting challenges.* Herpetological Review.

**Franek, B. L. (2018).** *Researching Wood Turtles (Glyptemys insculpta) on the Pine Creek Rail Trail.* Susquehanna Heartland Coalition For Environmental Studies.

Brunskil, J. C., **Franek, B.L.,** \*Wickenheiser, O., & Hess, M. (2018). *Developing an enhanced GIS streams dataset to route natural gas pipelines across streams using open-cut trenching.* Paper Presentation. American Association of Geographers annual meeting. New Orleans.

\*Ruziecki, M. R., & **Franek, B. L.** (2017). *From industrial relic to wildlife corridor: establishing wood turtle nesting along Pine Creek Rail Trail*. Program with abstracts, 12<sup>th</sup> Annual Susquehanna River Symposium. Lewisburg.

**Franek, B. L.**, & Wenner, D. (2017). *A tale of two sites: The good, the bad, & the educational*. Poster Presentation. American Association of Geographers annual meeting. Boston.

\*Ruziecki, M. R., & **Franek, B. L.** (2017). *Developing a technique to efficiently establish Wood Turtle (*Glyptemys insculpta*) usage of the Pine Creek Rail Trail*. 7<sup>th</sup> Annual Susquehanna Valley Undergraduate Research Symposium. Bloomsburg.

\*Ruziecki, M. R., & **Franek, B. L.** (2017). *Investigating the hydrological setting function of Wood Turtles (*Glyptemys insculpta*) on the Pine Creek Rails-to-Trails*. Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.

\*Fackler, E. L., & **Franek, B. L.** (2017). *Investigating the biological function of Wood Turtles (*Glyptemys insculpta*) on the Pine Creek Rails-to-Trails*. Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.

**Franek, B. L.** (2017). *Faculty volunteering: affording experiential learning opportunity venues*. Teaching and Learning Enhancement (TALE) Center Seminar. Bloomsburg University. Bloomsburg.

Whisner, J., **Franek, B. L.**, & Beyer, P. (2016). *Structured encounters with real data: sneaking up on doing science*, Geological Society of America Abstracts with Programs, v. 48, no. 7. doi: 10.1130/abs/2016AM-284741, invited presentation at the Annual Meeting of the Geological Society of America, Sept. 25-28. Denver.

Haney, J. J. & **Franek B. L.** (2016). *Ways to incorporate reflective learning into your courses*. Teaching and Learning Enhancement (TALE) Center Seminar. Bloomsburg.

\*Ciecierski, D., \*Shapiro, N, Whisner, J., & **Franek, B. L.** (2016). *In search of data - Fishing Creek HydroWatch summer 2016*, Program with Abstracts, 11th Annual Susquehanna River Symposium. Lewisburg.

\*Ciecierski, D., Whisner, J., & **Franek, B. L.** (2016). *Fishing Creek Hydro Watch – A better flood prediction system*, Bloomsburg University College of Science and Technology Undergraduate Research Day. Bloomsburg.

\*Ciecierski, D. T., & **Franek, B. L.** (2016). *Tracking down the legacy of Brewington Dam*. Bloomsburg University, College of Science and Technology – Research and Scholarship Day. Bloomsburg.

**Franek, B. L.**, & \*Stephens, A. (2016). *Investigating hydrologic regime change: Modeling stream hydrodynamics on West Branch Run*. Hemlock Acres Property Owners Association. Iola.

\*Stephens, A., & **Franek, B. L.** (2016). *Investigating hydrologic regime change: Modeling stream hydrodynamics on West Branch Run*. Bloomsburg University, College of Science and Technology – Research and Scholarship Day. Bloomsburg.

#### *Peer Reviewer*

Journal: Journal of the Middle States Division American Association of Geographers.

Book: Abbott, P. L. (In Press). *Natural Disasters*, (11<sup>th</sup> ed.). New York, NY: McGraw-Hill.

#### *Grants/Funding*

Briar Creek Association for Watershed Solutions. (2018). *Trees (container seedlings) for flood mitigation on Briar Creek Watershed*. PPL Electric Utilities, Community Roots program: \$400.

**Franek, B. L.**, & Mock, L. (2018). *EGGS 211: Regional Geography Abroad*. Department of Environmental, Geographical, and Geological Sciences – John Enman Fund: \$2,000.

\*Ruziecki, M. R., & **Franek, B. L.** (2017). *Investigating the eco-hydromorphic setting function of the Wood Turtle (Glyptemys insculpta)*. Bloomsburg University Undergraduate Research Scholarship and Creative Activities (URSCA) Award: \$1,500.

**Franek, B. L.**, & Mock, L. (2017). *Course logistics, EGGS 211: Regional Geography Abroad*. College of Science and Technology, Dean's Office Faculty Support: \$1,000.

Briar Creek Association for Watershed Solutions. (2016-2017). *Weiss/Reeder property agricultural impairment mitigation and stream naturalization project*. Northecentral Pennsylvania Conservancy and Pennsylvania Department of Environmental Protection: \$5,246.

Whisner, J., & **Franek, B. L.** (2016-2017). *Collecting and analyzing GIS and stream discharge data in support of developing a flood-forecasting model for the Fishing Creek watershed*. Degenstein Foundation through the Susquehanna Heartland Coalition for Environmental Studies: \$4,254.

**Franek, B. L.**, & Mock, L. (2016). *Development of a new course, EGGS 211: Regional Geography Abroad*. Department of Environmental, Geographical, and Geological Sciences: \$500.

**Franek, B. L.**, & Mock, L. (2016). *Development of a new course, EGGS 211: Regional Geography Abroad*. College of Science and Technology, Dean's Office Faculty Support: \$1,000.

### **Teaching (2018)**

Spring: Surface Hydrology (EGGS 370)  
Water Resources Management (EGGS 301)  
Natural Disasters (EGGS 107)  
Fall: Environmental Conservation (EGGS 358)  
Introduction to Physical Geography (EGGS 101)

### **Service Activities**

2017-2018 Virtual Ambassador Program with the Royal Norwegian Embassy, Washington D.C. (**Co-Host**).  
2018-2020 Bloomsburg University, General Education Committee (GEC) (**Committee Member**).  
2018-2019 Bloomsburg University Environmental Sciences Learning Community (**Director**).  
2018 Bloomsburg University Majors, Minors & Career Pathway Options Fair.  
Briar Creek Association for Watershed Solutions (**President**).  
2015-Present, An exploration of EGGS materials for student interpreters, for Suzi Glowaski, Students with Disabilities Center. (**Invited presenter**).  
Columbia County Water Education Day (**Set-up team**).  
2013-Present, Bloomsburg University: Science Iditarod for regional high schools (**Quiz Master**).  
2011-Present: Regional watershed groups annual meeting (**Organizer/presenter**).



**Jennifer J. Haney, Ph.D.**  
**Assistant Professor**

**Scholarly Interests**  
**9/11 Museum**

Environmental Hazards and Vulnerability  
Societal Responses to Environmental Hazards  
Hazard perception  
Geographies and Drivers of Terrorism

**Education**

Ph.D. (2010) Geography (Hazard Vulnerability). University of South Carolina, Columbia, SC.  
M.A. (2006) Geography (Hazard Vulnerability). Binghamton University, Binghamton, NY.  
B.A. (2003) Geography with Environmental Planning Option. Bloomsburg University, Bloomsburg, PA.

**Presentations and Publications (2018)**

**Haney, J.J.** and C. Havice. "Factors that Influence Evacuation Behavior in the May 2018 Eruptions of Mt. Kilauea: An Examination of Residents in the Puna District, Hawaii." Quick Response Grant Report (QR 289). Natural Hazards Center, University of Colorado.

**Haney, J.J.**, C. Havice, and J.T. Mitchell. 2018. "Science or Fiction?: The Persistence of Disaster Myths in Hollywood Films." Submitted for publication.

Bodenman, J.E. and **J.J. Haney**. "*Creating Markets for Recyclable Materials: The Case of PeaceCycle in Haiti*", poster presented at the Annual Meeting of the American Association of Geographers, New Orleans, LA, April 12, 2018.

**Grants (2018)**

**Haney, J.J.** and C. Havice. (June 2018). "Factors that Influence Evacuation Behavior in the May 2018 Eruptions of Mt. Kilauea: An Examination of Residents in the Puna District, Hawaii." Natural Hazards Center, University of Colorado.

**Teaching (2018)**

World Cultural Geography (EGGS 102); Environmental Issues and Choices (EGGS 105); Environmental Risks and Hazards (EGGS 305); Geography of Terrorism (EGGS 311)

**Service Activities**

APSCUF Membership Committee, Bloomsburg University Chapter  
APSCUF Ad Hoc Teaching Committee, Bloomsburg University Chapter  
Chairperson for the Search Committee for the Temporary Faculty Soils Position  
Columbia County Emergency Management Agency – Volunteer  
COST Curriculum Committee  
Joshua D. Sonntag '14 & Chelci A. Kravabloski '16 EGGS Scholarship Selection Committee  
Textbook Reviewer: *Environment: The Science Behind the Stories*  
Manuscript Reviewer: *Disasters, International Journal of Environmental Research and Public Health*  
*Geographical Review, Social Sciences, Geomatics, Natural Hazards, and Risk*



**Spring 2018 EGGS 311 Field Trip to**





**John G. Hintz**  
**Professor**



### **Scholarly Interests**

My research interest center broadly on sustainable management of land resources. My two foci are publicly owned (especially federally owned and managed) lands and the politics and ideologies that guide their management. I am particularly interested in debates over the presence and role of vertebrate predators, including reestablishing their presence and roles in places where predators have been eradicated (i.e., rewilding). A second, related, research thread centers on sustainable agriculture, specifically land use methods by those farmers that self-identify as sustainable food producers. Ideally, I would like to bridge these two research foci, assessing the potential for planned integration of publicly owned and sustainably farmed lands into ecologically sustainable and trophically rich integrated landscapes.

### **Education**

**2005** University of Kentucky, Ph.D., Geography,

**1998** University of Idaho, M.S., Geography,

**1988** Florida State University, B.S., Geography

### **Teaching (20180**

Spring: Land Resources Management (EGGS 302, 1 section)  
Environmental Issues and Choices (EGGS 105, 3 sections)

Fall: Sustainable Food Systems (EGGS 351, 1 section)  
Environmental Issues and Choices (EGGS 105, 2 sections)

Summer: Special Topics in Field Geology (EGGS 330, 1 section)

### **Service Activities (2017-2018)**

APSCUF Meet and Discuss: faculty co-chair

EGGS Departmental Committees: Budget Committee (Chairperson); Sabbatical Committee;  
Curriculum/Assessment Committee; Observation and Evaluation Committee

Other University Service Work: BU Green Campus Initiative (member); Bloomsburg University Outdoor Classroom (supervisor)

### **Professional Conference Presentations**

“Break Up the Farms! The Threat of Lock-in on the U.S. Farmscape,” Paper presented at the Association of American Geographers Annual Meeting. New Orleans, LA.

### **Publications**

“Environmental Geography,” in Noel Castree, Mike Hulme, and James Proctor (editors), 2018.  
*Companion to Environmental Studies* (New York: Routledge). [refereed book chapter]

Review of Ashley Dawson, 2016. *Extinction: A Radical History*. OR Books, 2018; in The  
AAG Review of Books 6(4). (12 October) [book review]



**Dr. Sandra Kehoe-Forutan**  
**Professor of Geography and Planning**

**Scholarly Interests**

Necrogeography of St. Helena Island, South Carolina

**Education**

The University of Queensland, Australia. PhD 1991

The Ohio State University, Columbus OH. MCRP 1982

Queens University, Kingston, Ontario Canada. Hons. BA 1980

**Teaching (2018)**

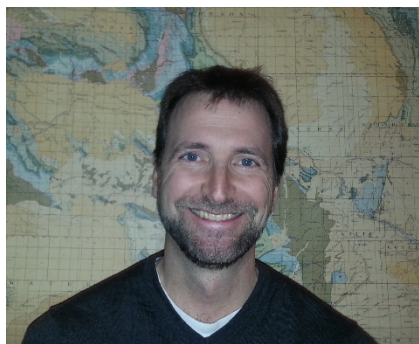
Spring: World Cultural Geography (EGGS102)  
Advanced Planning (EGGS350)

Fall: World Cultural Geography (EGGS102)  
Special Topics in Regional Geography – Australia (EGGS205)  
Elements of Planning (EGGS250)

**Service Activities (2018)**

Chairperson, Space & Facilities

Advisor, MPERS Student Organization



**Brett T. McLaurin, Ph.D., P.G.**  
**Professor**

### Scholarly Interests

I am a classically trained stratigrapher-sedimentologist who has worked in a variety of geologic settings in the United States and Mexico. Much of my research and geologic mapping has focused on fluvial successions in the Devonian – Pennsylvanian of Pennsylvania, the Cretaceous of Utah, Miocene-Pliocene fluvio-lacustrine deposits in Nevada, and fluvial systems in the Cretaceous of Sonora, Mexico. My industry background is largely in the aggregate mining industry (construction materials) and oil and gas exploration. Other research interests include geoarchaeology in northern Arizona and Mexico and medical geology studies in the Mojave Desert of southern Nevada. I utilize an integrative approach to research and lean heavily on GIS and remote sensing technology.

### Education

- 2000 Ph.D., Geology (Stratigraphy and Sedimentology), University of Wyoming  
 Dissertation: Alluvial and Sequential Architecture of the Castlegate Formation, East-Central Utah.  
 Advisor: Dr. Ronald J. Steel
- 1995 M. S., Geology (Stratigraphy and Sedimentology), UNC-Wilmington  
 Thesis: Stratigraphic and Sedimentologic Analysis of the Paleocene Beaufort Group, Lenoir and Craven  
 Counties, North Carolina. Advisor: Dr. William B. Harris
- 1993 B. S., Geology, UNC-Wilmington.

### Publications (2016-2018)

Keil, D.E., Buck, B., Goossens, D., **McLaurin, B.**, Murphy, L., Leetham-Spencer, M., Teng, Y., Pollard, J., Gerads, R., DeWitt, J.C., 2018, Nevada desert dust with heavy metals suppresses IgM antibody production: Toxicology Reports, Volume 5, p. 258-269.

Jamie C. DeWitt, Brenda J. Buck, Dirk Goossens, Yuanxin Teng, James Pollard, **Brett T. McLaurin**, Russell Gerads, Deborah E. Keil, 2017, Health effects following subacute exposure to geogenic dust collected from active drainage surfaces (Nellis Dunes Recreation Area, Las Vegas, NV), Toxicology Reports, Volume 4, p. 19-31, <https://doi.org/10.1016/j.toxrep.2016.12.002>.

David Larson, Amy Powers, Jean-Paul Ambrosi, Mika Tanji, Andrea Napolitano, Erin G. Flores, Francine Baumann, Laura Pellegrini, Cormac J. Jennings, Brenda J. Buck, **Brett T. McLaurin**, Doug Merkler, Cleo Robinson, Paul Morris, Meral Dogan, A. Umran Dogan, Harvey I. Pass, Sandra Pastorino, Michele Carbone & Haining Yang, 2016, Investigating palygorskite's role in the development of mesothelioma in southern Nevada: Insights into fiber-induced carcinogenicity, Journal of Toxicology and Environmental Health, Part B, 19:5-6, 213-230, DOI: 10.1080/10937404.2016.1195321

Keil, D.E., Buck, B., Goossens, D., Teng, Y., Pollard, J., **McLaurin, B.**, Gerads, R., and DeWitt, J., 2016, Health effects from exposure to atmospheric mineral dust near Las Vegas, NV, USA: Toxicology Reports, <http://dx.doi.org/10.1016/j.toxrep.2016.09.009>

Buck, B.J., Londono, S.C., **McLaurin, B.T.**, Metcalf, R., Mouri, H., Selinus, O., and Shelembe, R., 2016, The emerging field of medical geology in brief: some examples: Environmental Earth Sciences, v. 75, DOI 10.1007/s12665-016-5362-6

Leetham, M., DeWitt, J., Buck, B., Goossens, D., Teng, Y., Pollard, J., **McLaurin, B.**, Gerads, R., and Keil, D., 2016, Oxidative stress and lung pathology following geogenic dust exposure: Journal of Applied Toxicology, DOI 10.1002/jat.3297

Keil, D., Buck, B., Goossens, D., Teng, Y., Leetham, M., Murphy, L., Pollard, J., Eggers, M., **McLaurin, B.**, Gerads, R. and DeWitt, J., 2016, Immunotoxicological and neurotoxicological profile of health effects following subacute exposure to geogenic dust from sand dunes at the Nellis Dunes Recreation Area, Las Vegas, NV, Toxicology and Applied Pharmacology, Volume 291, p. 1-12, ISSN 0041-008X, <http://dx.doi.org/10.1016/j.taap.2015.11.020>.

**Conference Presentations (2016-2018)** (\*Bloomberg University undergraduate co-author)

Metcalf, R.V., Buck, B.J., and **McLaurin, B.T.**, 2018, Naturally occurring asbestos in southern Nevada: interpretations for distribution and human exposure: European Geosciences Union General Assembly Conference Abstracts, v. 20, p. 10380.

Metcalf, R.V., Buck, B.J., and **McLaurin, B.T.**, 2018, The life cycle of asbestos: understanding the distinctions between commercial and naturally-occurring asbestos: European Geosciences Union General Assembly Conference Abstracts, v. 20, p. 10720.

Helfrich, A.L.\* and **McLaurin, B.T.**, 2017, Lacustrine carbonate deposition and facies distribution within the Muddy Creek Formation (Miocene-Pliocene), Nellis basin, southern Nevada: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-304710.

Adams, J.M.\*, **McLaurin, B.T.** and Whisner, S.C., 2017, Variability in deformational style of Appalachian Plateau folds, Sullivan County, Pennsylvania: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-304737.

Metcalf, R.J., Buck, B.J. and **McLaurin, B.T.**, 2017, In defense of the term “naturally-occurring asbestos”: Geological Society of America Abstracts with Programs. Vol. 49, No. 6, doi: 10.1130/abs/2017AM-307158

Carter, M., **McLaurin, B.**, Glasbrenner, J., 2017, Paleoliquefaction reconnaissance in eastern North Carolina: is there evidence for large magnitude earthquakes between the Central Virginia Seismic Zone and Charleston Seismic Zone?: Geological Society of America Abstracts with Programs. Vol. 49, No. 3 doi: 10.1130/abs/2017SE-289779.

Buck, B.J., Metcalf, R.V., Berry, D., **McLaurin, B.T.**, Kent, D., Goossens, D., and Januch, J., 2016, Naturally occurring asbestos in soils, southern Nevada: Interpretations for wind distribution and human exposure: Geological Society of America Abstracts with Programs. Vol. 47, No. 7, doi: 10.1130/abs/2016AM-278831.

**Teaching (2018)**

**Spring:** Natural Disasters (EGGS 107), Petroleum Geology (EGGS 463)

**Fall:** Physical Geology (EGGS 120), Stratigraphy and Sedimentology (EGGS 368)



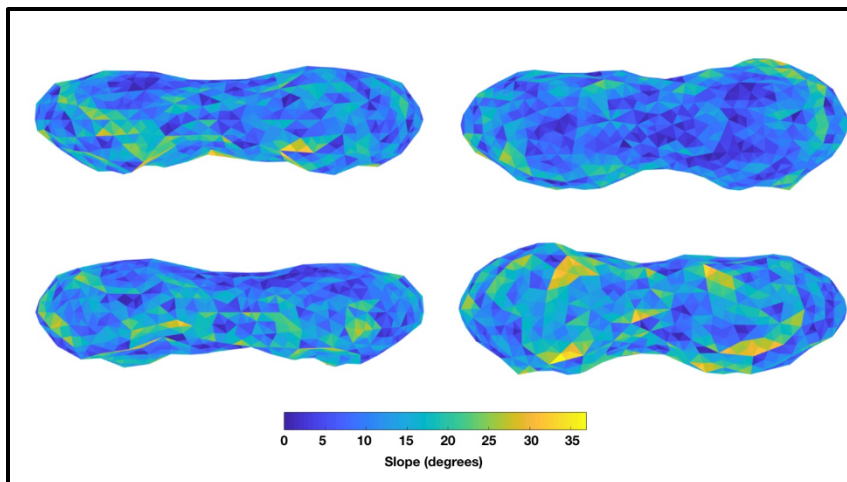


**Michael Shepard, Ph. D.**

**Professor & Chair**

### Scholarly Interests

I have two major interests. The first is the study of asteroids, and I published a general book on the field in 2015. This year, I used data from the Arecibo radar to generate a new 3D shape model for one of the largest metallic asteroids – 216 Kleopatra. The model is shown above, and this image was used as the cover of the journal issue when we published it. We have never visited a metallic asteroid and this object may be a future mission target for the European Space Agency. A year ago, I completed similar work for the largest metallic asteroid, 16 Psyche. My work on that asteroid is being used by NASA planners for a new mission, called Psyche, which will launch in 2022.



My second interest is in planetary photometry, the study of the way sunlight reflects off planetary surfaces and what we can learn from it. Last year, I published an introductory book on that topic with Cambridge University Press. I also published a large data set of lunar soil (regolith) observations I made with a custom laboratory instrument (Bloomsburg University Goniometer, or BUG) I built in 2001. The observations took a decade to accumulate and, because of the difficulty in getting lunar samples to study, are one-of-a-kind.

### Recent Publications (2016-2018)

**Shepard, M.K.** et al. A Revised Shape Model of Asteroid (216) Kleopatra. *Icarus* 311, 2018.

**Shepard, M.K.** *Introduction to Planetary Photometry*. Cambridge University Press. 2017.

**Shepard, M.K.** et al. Radar Observations and Shape Model of Asteroid (16) Psyche. *Icarus*, 281, 2017.

Sanchez, J., Reddy, V., **Shepard, M.K.** et al. Detection of Rotational Spectral Variation on the M-type asteroid (16) Psyche. *Astronomical Journal*, 153, Issue 1, article id. 29, 2017.

Takir, D., Reddy, V., Sanchez, J. **Shepard, M.K.**, Emery, J. Detection of Water and/or Hydroxyl on Asteroid (16) Psyche. *Astronomical Journal*, 153, Issue 1, article id. 31, 2017.

**Shepard, M.K.** D. Paige, and E. Foote, Apollo lunar sample BUG Observations, BUGLAB-L-BUG-4-APOLLO-SAMPLES-V1.0, NASA Planetary Data System, 2016.

### Courses (2018)

The Planets (EGGS 106), Quantitative Methods (EGGS 150)

### Service Activities (2018)

Friends of the Bloomsburg Town Public Library, President.

Central Columbia High School, Agricultural Science Advisory Council.



**Adrian Van Rythoven, Ph. D.**  
**Assistant Professor**  
**Mineralogy & Economic Geology**

**Scholarly Interests**

My research interests are mostly in the realm of economic geology and resource development. These interests encompass resources such as diamond/kimberlite, epithermal silver/base metals, carbonatites/rare earth metals, and industrial minerals.

**Education**

University of Toronto, Toronto, Doctor of Philosophy, diamond geology, 2012

University of Toronto, Toronto, Masters of Science, geochemistry, 2006

University of Toronto, Toronto, Honours Bachelors of Science, geology, 2005

**Funding (2018)**

Major Research Instrumentation Award (2018, \$129,192 National Science Foundation) – paid for the ‘Acquisition of a Powder X-ray Diffractometer for Research and Research Training at Bloomsburg University of Pennsylvania’.

Professional Experience Grant (PEG) Award (2018, \$1,000 internal) – paid for Professional Geology senior Connor Gray to research ‘A Cathodoluminescence Study of Ore Mineral Parageneses In Porphyry Copper Deposits of North America’

Professional Experience Grant (PEG) Award (2018, \$1,200 internal) – paid for Professional Geology junior Logan Beck to organize rock and mineral samples in the department collection.

Research and Scholarship ‘Mini-Grant’ (2018, \$3,785 internal) – paid for a trinocular microscope and camera to investigate ‘A Cathodoluminescence Study of Ore Mineral Parageneses In Porphyry Copper Deposits of North America’.

**Teaching (2018)**

Spring: Petrology (EGGS 262), Introduction to Environmental Science (EGGS 100) (2 sections)

Fall: Mineralogy (EGGS 261), Natural Disasters (EGGS 107) (2 sections)

**Scholarship (2018)**

Gray, C.A., Van Rythoven, A.D. (2018) A comparative study of porphyry Cu-Mo deposit mineralogy. A comparative study of porphyry Cu-Mo deposit mineralogy. GSA Rocky Mountain and Western Cordilleran Joint Session. Flagstaff, Arizona.

Van Rythoven, A.D., Pfaff, K., Clark, J.G., Ray, J. (2018) Cost-effective use of automated mineralogy to calibrate geometallurgical characterization of a rare earth element deposit. GSA Rocky Mountain and Western Cordilleran Joint Session. Flagstaff, Arizona.

**Service Activities (2018)**

I am the department representative to TALE.

Local outreach to Lime Ridge Pack 44 Cub Scouts for mineral and fossil excavating activities.

I was a department representative Open House events for prospective high school juniors and seniors.



**Cynthia Venn, Ph. D.**  
**Professor**

### **Scholarly Interests**

1. Distribution and growth rates of gooseneck barnacles across the tropical Pacific Ocean in relation to environmental parameters and ENSO cycles.
2. Small scale distribution of salt marsh plant species in the mid-Atlantic region with respect to elevation and hydrology changes associated with sea level rise.
3. Research conducted with students largely involves water chemistry of both unimpaired streams and those impacted by acid mine drainage, and evaluating the effectiveness of various AMD treatment systems.

### **Education**

University of Pittsburgh, Pittsburgh, Pennsylvania, Ph.D. Geology, 1996  
Texas A&M University, College Station, Texas, M.S. Oceanography, 1980  
Vanderbilt University, Nashville, Tennessee, B.A. General Biology, 1974

### **Teaching (2018)**

Spring: Earth Materials (EGGS 260)  
Oceanography (EGGS 259)  
Physical Geology Laboratory (EGGS 120-C)  
Summer: Special Topics in Field Geology: N. Arizona and S. Utah  
Fall: Oceanography (EGGS 259)  
Aqueous Geochemistry (EGGS 460)

### **Presentations (2016-2018) (\*) denotes undergraduate researcher**

\*Steinhauser, D.J.; **Venn, Cynthia** and Rier, Steven. 2018. Diatoms as water quality indicators in the headwaters of Fishing Creek (Columbia and Sullivan Counties), Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592  
doi: 10.1130/abs/2018NE-311276

\*Barrett, Lauren; Hallen, Christopher; and **Venn, Cynthia**. 2018. Assessment of passive AMD treatment systems in Schuylkill County, Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592; doi: 10.1130/abs/2018NE-311289

\*Lenker, Mitchell R.; **Venn, Cynthia**; and Hallen, Christopher P. 2018. Biogeochemical assessment of abandoned mine discharges on Wiconisco Creek, Schuylkill and Dauphin Counties, Pennsylvania. Presented at the Northeastern Section of the Geological Society of America Meeting, Burlington, VT, 18-20 March 2018. Geological Society of America Abstracts with Programs. Vol. 50, No. 2, ISSN 0016-7592; doi: 10.1130/abs/2018NE-31128

**Venn, Cynthia**. 2018. Use of a portable scanning electron microscope with energy dispersive x-ray spectrometer to enhance the undergraduate experience in Marine Science and in Geoscience. Presented at the AGU-ASLO-TOS 2018 Ocean Sciences Meeting, Portland, OR, 11-16 February, 2018.

Whisner, Jennifer and **Venn, Cynthia**. 2017. Hydrologic restrictions limit resilience of salt marsh in Greenbackville, VA. Presented at the Coastal and Estuarine Research Federation Biennial Conference, November 5-9, 2017, Providence, RI

**Venn, Cynthia**. 2017. Growth Rates for Tropical Pacific *Lepas anatifera* (Cirripedia: Lepadidae) Using Shell Oxygen Isotope Ratios. Presented at the Mid-Year Meeting of The Crustacean Society, Barcelona, Spain, June 19-22, 2017.

**Venn, Cynthia**. 2017. Correlation between Oxygen Isotopes and Temperature in shells of *Lepas anatifera* (Cirripedia: Lepadidae) from the Tropical Pacific in order to determine Growth Rate. Presented at the ASLO Aquatic Sciences Meeting, Honolulu, Hawaii, February 26-March 3, 2017.

\*Steinhauser, D.J.; \*Franz, Eric; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Are there effects of hydraulic fracturing on Crystal Lake in Lycoming County, Pennsylvania? Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291477.

\*Lenker, Mitchell R.; \*Hooker, David; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Inorganic geochemical analysis of the water quality of Catfish Bog at Crystal Lake Camps, Lycoming County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291470.

\*Adams, James M.; \*Shapiro, Nathan S.; Venn, Cynthia; and Hallen, Christopher P. 2017. An ongoing assessment of Scarlift 15 abandoned mine drainage remediation system, Ranshaw (Northumberland County) PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291449.

\*Brauckmann, Matthew A.; \*Ciecierski, Dereck T.; **Venn, Cynthia**; and Hallen, Christopher P. 2017. Geochemical Analysis of Fishing Creek in Columbia County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291465.

\*Sullivan, R.J.; \*Wessner, Lucas J.; **Venn, Cynthia**; and Hallen, Christopher P. 2017. A geochemical analysis of residential water wells in Columbia County, PA. Geological Society of America *Abstracts with Programs*. Vol. 49, No. 2. doi: 10.1130/abs/2017NE-291490.

**Venn, Cynthia**; Dunbar, Robert B.; and Mucciarone, David. 2016. Determining Growth Rates for *Lepas anatifera* (Cirripedia: Lepadidae) in the Tropical Pacific Using Shell Growth Patterns, Oxygen Isotope Ratios and In-situ Temperature Records. Presented at the AGU/ASLO Ocean Sciences Meetings, New Orleans, LA, February 9-14, 2016.

\*Thompson, Eric, **Venn, Cynthia** and Hallen, Christopher P. 2016. Determination of water quality of natural water sources in state parks around the Susquehanna River Valley. Geological Society of America *Abstracts with Programs*. Vol. 48, No. 5. doi: 10.1130/abs/2016NC-275086.

### **Service Activities (2018)**

Featured geologist on a program titled “Massive Engineering Mistakes” that aired on the Discovery Channel, talking about the Centralia Mine Fire

Member of Susquehanna River Heartland Coalition for Environmental Studies

COST Academic Grievance Board Pool

COST Research Day Committee, Chair (Spring 2017)

EGGS Facilities Committee

EGGS Hyperwall Committee

EGGS Budget Committee

EGGS Observation and Evaluation Committee

Co-advisor of the Maps, Plans, Environment and Rocks Society (student club)





**Jennifer Whisner, Ph. D.**  
**Associate Professor**

### Scholarly Interests

My research involves collecting, analyzing, and interpreting field-based data such as the orientation of layered rocks and water levels and water chemistry in streams and water wells. The results of my work can be used to explore for and exploit our natural resources, but also to identify and characterize the impacts of humans on our environment. My scholarly activities focus on three areas: 1) structural geology and the development of curvature in mountain chains, 2) the effects of human modifications on streams, specifically on sediment transport and channel changes, and 3) water (including groundwater) quality.



**Columbia County Water Education Day**

### Education

2010 Ph.D., Geology, University of Tennessee, Knoxville  
 1994 M.S., Geology, Western Michigan University  
 1991 B. S., Chemistry, University of Michigan, Ann Arbor

### Conference Presentations (2016-2018)

\*indicates Bloomsburg University student presenter

**Whisner J.**, 2018, Columbia County Water Education Day 2015-2018. *Invited presentation at the Annual Amalgamated Source Water Protection Coalition Meeting, Williamsport, PA, October 3, 2018.*

**Whisner, J.** and Venn, C., 2017, Hydrologic restrictions limit the resilience of salt marsh in Greenbackville, VA., *Presented at the Coastal and Estuarine Federation 24<sup>th</sup> Biennial Conference, Providence, RI, November 08, 2017.*

**Whisner, J.**, 2017, Undergraduate Research: The Good, the Bad, and the Ugly. *Keynote Presentation - Bloomsburg University College of Science and Technology Research Day, April 10, 2017.*

\*Sullivan, R., and **Whisner, J.**, 2017, Analyzing Local and Regional Groundwater Flow Using ArcGIS in Columbia County, PA. *Presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2017* **\*\*Winner - third place\*\***

\*Ciecirski, D. \*Shapiro, N., **Whisner, J.**, and Franek, B., 2016, In Search of Data – Fishing Creek Hydro Watch Summer 2016, *Presented at the Susquehanna River Symposium 2016 - A Tale of Two Rivers: The Delaware and Susquehanna, Bucknell University, Lewisburg, PA, November 11, 2016.*

**Whisner, J. K., Franek, B., and Beyer, P., 2016, Structured encounters with real data: sneaking up on doing science, Geological Society of America Abstracts with Programs, v. 48, no. 7. doi: 10.1130/abs/2016AM-284741, *invited presentation* at the Annual Meeting of the Geological Society of America, Sept. 25-28, in Denver, CO.**

**\*Shapiro, N., and Whisner, J., 2016, Developing a Hydrologic Atlas for the Fishing Creek Watershed, *presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2016***

**\*Ciercierski, D., and Whisner, J., 2016, Fishing Creek: Preliminary Ratings curves, *presented at the Bloomsburg University College of Science and Technology Research Day, April 10, 2016***

#### **Funding (2016-2018)**

**2017     Funded: \$11,500 Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Water quality and quantity along Fishing Creek and turtle population study along Pine Creek  
Co-PI with. B. Franek

**2016     Funded: \$4254     Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Collecting and analyzing GIS and stream discharge data in support of developing a flood forecasting model for the Fishing Creek Watershed.  
Co-PI with. B. Franek

**Funded: \$5746     Degenstein Foundation through Susquehanna Heartland Coalition for Env'l Studies**  
Water Quality and Soil Geochemistry in Alluvial Deltaic Deposits from Large Tributaries of the Susquehanna River  
PI.: M. Ricker, co-participant with M. Shepard

#### **Teaching (2018)**

Spring:     Introduction to Environmental Science (EGGS100)  
Groundwater Hydrology (470)  
Senior Seminar in Environmental, Geographical, and Geological Sciences (495)  
Fall:     Introduction to Environmental Science (100)  
Earth Materials (260)  
Surface Hydrology (370)

#### **Department Service (2018)**

Fall 2018-present Department Promotion Committee chair  
Fall 2018-present Department Tenure Committee chair

#### **University Service (2018)**

2018     EGGS panelist (with J. Bodenman, B. Franek, J. Hintz, and S. Whisner) at the Fall 2018 Honors Research Night  
2017-present     Chair, COST Research Day Committee  
2017-present     Member ad-hoc APSCUF Committee on Teaching  
2013-present     URSCA Grant Review Committee & Planning and Review Committee  
2012-present     Member of the Bloomsburg University Green Campus Initiative

#### **Community Service (2018)**

Jan. 14/15, 2018     Columbia County Vo-Tech: seven *Streams, Rivers, and Floods* presentations and accompanying hands-on stream table activities  
May, 2013-present     Chair Columbia-Montour Coalition for Source Water Protection  
<http://www.columbiamountourswp.org/>  
Fall 2017 - present     Member of the Central Columbia High School Ag Advisory Council/Occupational Advisory Council  
Apr. 7, 2018     Ran Clean Water Activity table (Enviroscape and Groundwater Models) for the Columbia County Family Center 28th Annual Children's Fair  
Apr. 3, 2018     Co-led Earth Rocks! Activity for two local Webelo troops  
Feb. 5, 2018     Co-led Earth Rocks! Activity for local Webelo troop  
Jan. 18, 2018     Columbia County Vo-Tech: four presentations and hands-on activities on Wetlands, Flooding, and water quality



**Dr. Stephen Whisner**

**Associate Professor**

### **Scholarly Interests**

I have a variety of interests. Foremost is the in the field of Structural Geology and Tectonics, I have worked in the Rockies and the Appalachians mainly in sedimentary foreland fold and thrust belts. I am currently interested in the changes in structural style at the boundary of the Pennsylvania Fold and Thrust belt and the Pennsylvania Plateau and how these changes manifest themselves in fracture patterns, changes in bedding orientation as well as change in microstructures. I have had a number of research students mapping in this area in the past and continued with a recent graduate, Jim Adams (Fall 2016) in the Spring of 2016. I am also interested in the use of thermal imagery for planetary analysis and terrestrial analogues of planetary features. My research interests also extend to past seismic activity (paleoseismology), especially in the comparatively seismically inactive Eastern United States. I am continuing to study a shear zone in the central Pyrenees with a colleague from Sam Houston University which started in Summer of 2017.

### **Education**

- 2005    Ph.D., Geology (Structural Geology and Tectonics), University of Tennessee  
Dissertation: The Middle Ordovician Tellico-Sevier Syncline: A Stratigraphic, Structural, and Paleoseismic Investigation. Advisor: Dr. Robert D. Hatcher, Jr.
- 1998    M. S., Geology (Structural Geology), Western Michigan University  
Thesis: Application of the Paleomagnetic Fold Test to Determine the Relative Timing of Sill Intrusion and Deformation in the Southwest Helena Salient, Montana. Advisor: Dr. Christopher J. Schmidt.
- 1994    B. S., Geology, Western Michigan University.

### **Teaching (2018)**

Spring:            Physical Geology (EGGS 120), Geomorphology (EGGS 265)

Summer:         Co-taught 6 week Geologic Field Camp in Spanish Pyrenees

Fall:                Physical Geology Lab (EGGS 120), Geomorphology (EGGS 265)  
Structural Geology (EGGS 369)

### **Service Activities (2018)**

Member COST Curriculum Committee

COST Science Iditarod

Teaching Volunteer for Columbia County Water Education Day

Outreach at Berwick High School demonstrating Stream dynamics



**Danqing (Dana) Xiao, Ph. D.**  
**Assistant Professor**

### **Scholarly Interests**

My research focuses on the visualization of Big Data in Geography, particularly making maps of people's ideological opinions. I am also interested in exploring the pattern within ideological data using machine-learning algorithms, such as Principle Component Analysis. Applying modern technologies and statistical methods to traditional survey data will bring us new understandings of various topics in human geography, such as electoral geography or urban planning.

### **Education**

- 2013      Ph.D. in Department of Geography, University of California Santa Barbara.
- 2009      Master of Science in Department of Spatial Information Science and Engineering, The University of Maine.
- 2006      Bachelor of Science in School of Space and Earth Science, Peking University.

### **Publications and Presentations (2016-2018)**

Lan, T. and **Xiao, D.** (Accepted with minor revision in November 2018). Geography of the popular support for the Chinese government. *Political Geography*.

**Xiao, D.**, & Lan, T. (2017). Mapping ideological opinions in China using online survey. *Annals of GIS*, 1-13.

### **Teaching (2018)**

EGGS 102	World Cultural Geography (Spring)
EGGS 264	Applied Cartography (Spring)
COMPSCI 115	Introductory Python (Spring)
EGGS 242	Map Use and Analysis (Fall)
EGGS 102	World Cultural Geography (Fall)

### **Service Activities (2018)**

University Forum  
COST Recognition Committee  
EGGS Sabbatical Committee