

# RYAN J. KERRIGAN, Ph.D., P.G.

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## EDUCATION:

- University of Maryland, College Park, MD** **2011**  
*Doctor of Philosophy: Geology*  
*Dissertation Title:* Reaction rates and textural development of hydrolysis reactions in the system MgO-SiO<sub>2</sub>-H<sub>2</sub>O  
*Advisors:* Philip Candela and Philip Piccoli
- University of Minnesota, Minneapolis, MN** **2004**  
*Master of Science: Geology*  
*Thesis Title:* The relation of sulfur speciation and color in lazurite solid solution  
*Advisor:* James H. Stout
- Bridgewater State University, Bridgewater, MA** **2002**  
*Bachelor of Science: Geology, Bachelor of Arts: Chemistry, Minor: Geography*

## ACADEMIC EXPERIENCE:

- University of Pittsburgh at Johnstown, Johnstown, PA**  
Associate Professor **2020 – Present**  
Assistant Professor **2014 – 2020**
- Green River Community College, Auburn, WA**  
Adjunct Faculty Member **2012 – 2013**
- Seattle Central Community College, Seattle, WA**  
Adjunct Faculty Member **2011**

## PROFESSIONAL EXPERIENCE:

- Adapt Engineering, Seattle, WA** **2011 – 2014**  
Geologist / Environmental Scientist – Phase I and II environmental site assessment; pollution assessment and remediation; and geothermal energy project development.  
*Responsibilities include:* field assessment of polluted sites; determining approaches to accurately assess subsurface contaminants; borehole drilling supervision; monitoring well installation, well development, and groundwater sampling; soil logging and sampling; data analysis, interpretation, and reporting; feasibility studies; and site remediation

## RESEARCH EXPERIENCE:

### Current Research:

- Field mapping, petrological and geochemical analyses of hydrothermally altered ultramafic bodies in the Piedmont of the Appalachian Mountains to assess disequilibria reactions, kinetics, and resource enrichment as well as determining the provenance of intertectonic ultramafic bodies
- Examination of high-pressure granites containing magmatic epidote in the Pennsylvanian Piedmont to determine their provenance and their relationship with regional magmatic bodies
- Field mapping, petrological and geochemical analyses of pegmatites and their interactions with diverse varieties of country rock
- Delineating geochemical reaction gradients in the field to extrapolate fluid flow and alteration history of metamorphic rocks deformed during orogenesis

### **Additional Research Interests:**

- Thermodynamics and kinetics of water/rock interactions during hydrothermal alteration
- Understanding the necessary conditions for the development of particular phase assemblages, mineral habits, and rock textures by employing field studies as well as lab-based experimentation
- Fate and transport of subsurface contaminants and the effects of urbanization of the health and security of hydrological resources
- Pedagogy of effectively training scientists and exposing non-geologists to the wonders of our Earth by creating engaging and unique lesson plans that nurture natural curiosity

### **Doctoral Research:**

- The investigation of phase equilibria, kinetics, and textural development of hydrothermal reactions in mafic systems by experimentation using the hydrothermal diamond anvil cell

### **Masters Research:**

- Field mapping of skarn deposits in and around the Italian Mountain lapis lazuli mine, Gunnison National Forest, CO, processing of samples, and chemical characterization of the chromophore of lapis lazuli, lazurite

### **PEER REVIEW PUBLICATIONS:**

- Kerrigan, R. J., Mengason, M. J., \*Louderback, S., \*Miller, K. S., and \*Simboli, L. N. (*in preparation*) *Origins of the Ultramafic Bodies in the Pennsylvanian Piedmont: Petrology, Geochemical, and Structural Geology*. To be submitted to *Geology*.
- Kerrigan, R. J., \*Shirley, B. B., and \*Wolff, O. N. (2020) *Petrogenesis and Interactions of Serpentinites Intruded by Pegmatite Dikes, Unionville Serpentine Barrens, Chester County, Pennsylvania*. Pennsylvania Geological Survey, General Geology Reports.
- Kerrigan, R. J., Candela, P. A., Piccoli, P. M., Frank, M. R., and Wylie, A. G. (2017) *Olivine + quartz + water ± HCl at mid-crustal conditions: Controls on the growth of fibrous talc as determined from hydrothermal diamond anvil cell experiments*, *Canadian Mineralogist*, v. 55, n. 1, pp. 101-113.

\* denotes student author

### **FIELD GUIDEBOOK CONTRIBUTIONS:**

- Kerrigan, R. J., Mengason, M. J., and \*Simboli, L.N. (2017) *Petrology and Geochemistry of the Bells Mill Road Ultramafic Body, Philadelphia, PA*. in Bosbyshell, H. and Srogi, L. (eds.), 2017 Geological Association of New Jersey Annual Conference and Field Trip, West Chester, Pennsylvania, pp. 16-29.
- Bosbyshell, H., Srogi, L., Blackmer, G.C., Schenck, S., and Kerrigan, R. J. (2017) *The Piedmont: Old Rocks, New Understandings*. in Bosbyshell, H. and Srogi, L. (eds.), 2017 Geological Association of New Jersey Annual Conference and Field Trip, West Chester, Pennsylvania, pp. 77-105.
- Kerrigan, R. J. (2017) *Structural Geology of the Allegheny Front near Chimney Rocks Park, Hollidaysburg, PA*. in Kerrigan, R.J. (ed.), *Dinner at the Outcrop: Chimney Rocks, Hollidaysburg, Pennsylvania*. Guidebook, Annual Field Conference of the Northern Alleghenies Geological Society, pp. 3-9.
- Kerrigan, R. J., (2016), *Structural Geology of the Southwestern Section of the Appalachian Plateau*. in Anthony, R. (ed.), *Energy and Environments: Geology in the 'Nether World' of Indiana County, Pennsylvania*. Guidebook, 81<sup>st</sup> Annual Field Conference of Pennsylvania Geologists, Indiana, Pennsylvania, pp. 3-10.

\* denotes student author

## ABSTRACTS:

- \*Sarver, K., \*Ma, S. S-H., Kerrigan, R. J., and Coleman, N. (2020) *Using Geophysical Methods to Delineate Lithologic Boundaries in the Pennsylvania Piedmont*. Southeastern and Northeastern Joint Section Meeting of the Geological Society of America, Abstracts with Programs, v. 52, n. 2, pp. 45-1.
- \*Sarver, K., \*Ma, S. S-H., Kerrigan, R. J., and Coleman, N., (2020) *Using Geophysical Methods to Delineate Lithologic Boundaries in the Pennsylvanian Piedmont*. Pennsylvania Council of Professional Geologists Annual Conference, February 25, 2020, Harrisburg, PA.
- Kerrigan, R. J. (2019) *Exotic Spring Break Trips as an Educational and Recruitment Tool in the Geosciences*. Geological Society of America, Abstracts with Programs, v. 51, n. 5. (Oral Presentation)
- \*Sarver, K. and Kerrigan, R. J. (2019) *Alteration of the Newtown Square and Lima Ultramafic Bodies in Delaware County, Pennsylvania*. Geological Society of America, Abstracts with Programs, v. 51, n. 5.
- Kerrigan, R. J. (2019) *The Ultramafic Bodies of Southeastern Pennsylvania: Possible Dismembered Layered Mafic Intrusion*. Southeastern Section Meeting of the Geological Society of America, Abstracts with Programs, v. 51, n. 3. (Oral Presentation)
- Kerrigan, R. J. (2018) *Blackwall Alteration and Serpentinization of Ultramafic Bodies in Southeastern Pennsylvania*. Geological Society of America Abstracts with Programs, v. 50, n. 6, pp. 261-6.
- \*Wolff, O. N. and Kerrigan, R. J. (2018) *Serpentinization of the Unionville Serpentine Barrens: A Geochemical and Petrographic Study*. Northeastern Section of the Geological Society of America, Abstracts with Program, v. 50, n. 2, pp. 32-11.
- \*Shirley, B. B. and Kerrigan, R. J. (2018) *Investigating the Origin of Pegmatite Dikes in Unionville, Pennsylvania and the Geochemical Interactions with Surrounding Serpentinites*. Northeastern Section of the Geological Society of America, Abstracts with Programs, v. 50, n. 2, pp. 32-7.
- \*Louderback, S. V., Weyandt, C., and Kerrigan, R. J., (2018) *Bailing out the Technicians: Assessing Purge Volume Protocols*. Pennsylvania Council of Professional Geologists Annual Conference, March 20, 2018, Harrisburg, PA.
- Kerrigan, R. J. (2017) *Petrogenesis of Ultramafic Bodies in the Pennsylvanian Piedmont*. Geological Society of America, Abstracts with Programs, v. 49, n. 6, pp. 85-3.
- \*Louderback, S. V., Kerrigan, R. J., and Mengason, M. J. (2017) *Snaking Through the Pennsylvania Piedmont: Serpentinites of Southern Pennsylvania*. in Bosbyshell, H. and Srogi, L. (eds.), Geological Association of New Jersey Annual Conference and Field Trip, West Chester, Pennsylvania, pp. 1.
- \*Simboli, L. N., Kerrigan, R. J., and Mengason, M. J. (2017) *Petrographic and Geochemical Evidence for the Tectonic Origin of the Bells Mill Road Ultramafic Body of Southeastern PA*. Northeastern and North-Central Joint Section Meeting of the Geological Society of America, Abstracts with Programs, v. 49, n. 2, pp. 26-12.
- \*Hunsinger, C. F. and Kerrigan, R. J. (2017) *Determining the Origin of Granodiorites in the Pennsylvanian Piedmont using Geochemical and Petrographic Methods*. Northeastern and North-Central Joint Section Meeting of the Geological Society of America, Abstracts with Programs, v. 49, n. 2, pp. 26-13.
- \*Miller, K. S., Kerrigan, R. J., and Mengason, M. J. (2016) *Petrological, geochemical and structural investigation of alteration zones in the Youngsford Road ultramafic body, Southeastern Pennsylvania*. Northeastern Section Meeting of the Geological Society of America, Abstracts with Programs, v. 48, n. 2, pp. 22-2.
- Kerrigan, R. J., Candela, P. A. and Piccoli, P. M. (2009) *In-situ synchrotron radiation x-ray diffraction and visual imaging study of magnesite + quartz + water at mid-crustal temperatures*

*and pressures*, Eos Transactions. American Geophysical Union, Fall Meeting Supplement, v. 90, n. 52, Abstract V43B-2244.

Kerrigan, R. J., Candela, P. A., Piccoli, P. M. and Wylie, A. G. (2007) *Growth of Fibrous Talc and Anthophyllite in the Hydrothermal Diamond Anvil Cell*, Eos Transactions. American Geophysical Union, Fall Meeting Supplement, v. 88, n. 52, Abstract V12A-07.

Maglio, S. J., Frank, M. R., Aarestad, B., Scott, H., Huggins, S., Kerrigan, R. J., Prakapenka, V., and Kuznetsov, A. (2007) *An experimental study in the  $Mg_2SiO_4$  -  $Fe_{1-x}S$  -  $H_2O$  System: Implications for Ganymede's interior*. Geological Society of America, Abstracts with Program, v. 39, n. 6, pp. 57-1.

\* denotes student author

## INVITED TALKS:

September 19, 2019: *The Geology of Scotland and the Shetland Islands (co-presenter with Karen Cercone of Indiana University of Pennsylvania)*. Northern Alleghenies Geological Society, Ebensburg, PA.

June 26, 2018: *Exotic Bodies in the Piedmont: Using Petrologic, Geochemical, and Structural Analyses to Unravel the History of the Ultramafics of Southeastern Pennsylvania*. Northern Alleghenies Geological Society, Ebensburg, PA.

April 12, 2018: *Exotic Bodies in the Piedmont: Using Petrologic, Geochemical, and Structural Analyses to Unravel the History of the Ultramafics of Southeastern Pennsylvania*. Millersville University, Millersville, PA.

October 13, 2017: *The Bells Mill Road Ultramafic Body, Philadelphia, PA*. Geological Association of New Jersey Annual Conference and Field Trip, West Chester, Pennsylvania.

July 16, 2017: *Structural Geology of the Allegheny Front*. Annual Dinner Conference of the Northern Alleghenies Geological Society, Hollidaysburg, Pennsylvania.

## PROPOSALS:

Kerrigan, R. J. *Crossing Terrains, Interdisciplinary Teaching and Contextual Learning Approaches in General Education Curriculum: A Collaboration between Geology and Literature Faculty*. Innovation in Teaching Excellence, University of Pittsburgh. Submitted January 2020, accepted April 2020, Awarded \$11,630.

\*Scarbro, T.A. and Kerrigan, R. J. *Study and Classification of Lima Granitic Body*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted September 2019, accepted October 2019, Awarded \$800.

Kerrigan, R. J. *Petrogenesis of the Lima and Newtown Square Ultramafic Bodies near Philadelphia, PA*. University of Pittsburgh at Johnstown College Research Council Summer Research Support. Submitted March 2018, accepted April 2018, Awarded \$2,000.

\*Wolff, O. N. and Kerrigan, R. J. *Geochemical Analyses of Serpentinite Samples from the Unionville Serpentine Barrens*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted September 2017, accepted October 2017, Awarded \$800.

\*Shirley, B. B. and Kerrigan, R. J. *Petrogenesis of the Piedmont Pegmatite Veining*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted September 2017, accepted October 2017, Awarded \$800.

\*Wolff, O. N., \*Shirley, B. B., and Kerrigan, R. J. *Petrogenesis of the Unionville Serpentine Barrens and Pegmatite Veining*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted May 2017, accepted May 2017, Awarded \$900.

Kerrigan, R. J. *Petrogenesis of the Unionville Serpentine Barrens and Pegmatite Veining*. University of Pittsburgh at Johnstown College Research Council Summer Research Support. Submitted September 2017, Requested \$2,116, Not awarded.

- \*Hunsinger, C. and Kerrigan, R. J. *Granodiorite Emplacement in Southeastern Pennsylvania*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted September 2016, accepted October 2016, Awarded \$864.
- \*Simboli, L. N. and Kerrigan, R. J. *Uncovering the tectonic and deformational events related to the Bell's Mill Road Ultramafic Body, Southeastern PA*. Northeast Section of the Geological Society of America Stephen G. Pollock Undergraduate Student Research Grant. Submitted February 2016, accepted April 2016, Awarded \$1,458.
- Kerrigan, R. J. *Petrogenesis of Ultramafic Bodies in the Pennsylvania Piedmont*. University of Pittsburgh Central Research Development Fund. Submitted February 2016, Requested \$15,951, Not awarded.
- \*Louderback, S. and Kerrigan, R. J. *Snaking Through the Pennsylvania Piedmont: Serpentinites of Southeastern Pennsylvania*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted January 2016, accepted February 2016, Awarded \$864.
- \*Miller, K. S., \*Simboli, L. N., and Kerrigan, R. J. *Petrogenesis of Ultramafic Bodies in the Pennsylvanian Piedmont*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted January 2016, accepted February 2016, Awarded \$1,000.
- Kerrigan, R. J. *Detailed Bedrock Geologic Mapping of the portions of the Germantown and Norristown 7.5 minute quadrangles, Pennsylvania*. United States Geological Survey (USGS) The Educational Component of the National Cooperative Geologic Mapping Program (EDMAP). Submitted October 2015, Requested \$19,488, Not awarded.
- \*Miller, K. S. and Kerrigan, R. J. *Petrology of the Youngsford Road ultramafic body near Philadelphia, PA*. University of Pittsburgh at Johnstown Presidential Mentorship Funding. Submitted August 2015, accepted October 2015, Awarded \$1,000.
- Kerrigan, R. J., Candela, P. A. and Piccoli, P. M. *Magnesite decarbonation and growth of fibrous talc through hydrothermal reactions: kinetics, textures and the global carbon cycle*. National Synchrotron Light Source - Brookhaven National Laboratory. Submitted August 2009, accepted September 2009.
- Kerrigan, R. J., Candela, P. A. and Piccoli, P. M. *Hydrothermal reactions kinetics and fibrous mineral development in a non-equilibrium KFMASH ( $K_2O-FeO-MgO-Al_2O_3-SiO_2-H_2O$ ) system under greenschist to amphibolite facies metamorphic conditions*. National Synchrotron Light Source – Brookhaven National Laboratory. Submitted June 2009, accepted July 2009.
- Kerrigan, R. J., Candela, P. A. and Piccoli, P. M. *A study of olivine hydration reaction kinetics*. National Synchrotron Light Source – Brookhaven National Laboratory. Submitted August 2008, accepted September 2008.
- Kerrigan, R. J. and Stout, J. H. *Chemical Characterization of Lazurite by X-ray Photoelectron Spectroscopy*. Center for Microanalysis of Materials, University of Illinois, Urbana-Champaign (CMM-UIUC). Submitted August 2003, accepted September 2003.

\* denotes student author

## TEACHING EXPERIENCE:

### Courses Taught As Full Instructor:

- |  |             |
|--|-------------|
| – Structural Geology and Structural Geology Laboratory       | 7 semesters |
| – Historical Geology and Historical Geology Laboratory       | 5 semesters |
| – Mineralogy and Mineralogy Laboratory                       | 5 semesters |
| – Report Writing and Report Writing Laboratory               | 3 semesters |
| – Physical Geology and Physical Geology Laboratory           | 3 semesters |
| – Igneous and Metamorphic Petrology and Petrology Laboratory | 3 semesters |
| – Fossil Fuels   | 3 semesters |
| – Geodynamics and Geodynamics Laboratory                     | 1 semester  |

**Courses Taught As Teaching Assistant:**

- Physical Geology Lab, Igneous and Metamorphic Petrology Lab, Mineralogy Lab, Physical Oceanography Lab, Introductory Field Camp, Dillon MT, and Volcanoes of the Earth Lab.

**Awards:**

- 2019-20 University of Pittsburgh-Johnstown, Division of Natural Sciences, Dr. Edward A. Vizzini Teacher of the Year Award
- 2008-09 University of Maryland, Center for Teaching Excellence, Distinguished Teaching Asst.
- 2007-08 University of Maryland, College of Physical Sciences, Outstanding Teaching Assistant
- 2007-08 University of Maryland, Center for Teaching Excellence, Distinguished Teaching Asst.

**UNIVERSITY SERVICE:**

- Member of SPARKS - Pitt-Johnstown Project for Diversity and Inclusion** 2020 – Present  
*Responsibilities:* this group of faculty and staff aims to address issues of diversity and inclusion on the Pitt-Johnstown campus
- Member of Pitt-Johnstown Committee on Diversity and Inclusion** 2019 – Present  
*Responsibilities:* examine and implement policies that encourage diversity and inclusion in the curriculum at University of Pittsburgh at Johnstown
- Chair of Pitt-Johnstown Committee on Admissions and Student Affairs** 2018 – Present  
*Responsibilities:* liaison between faculty and the offices of Admissions and Student Affairs; attending to any admissions or student affairs concerns that may arise and require faculty attention
- Member of the Pitt-Johnstown Faculty Senate Council** 2017 – Present  
*Responsibilities:* discussing pertinent issues related to university development and betterment
- Publicity Organizer for Pitt-Johnstown's Fall into Research Symposium** 2016 – Present  
*Responsibilities:* arrange advertisement and coverage for the *Fall into Research* Symposium which highlights some of the research occurring at Pitt-Johnstown
- Volunteer for Symposium for the Promotion of Academic and Creative Enquiry** 2015 – Present  
*Responsibilities:* set-up and breakdown of the event, aid in planning
- Faculty Advisor Pitt-Johnstown Geology Club** 2014 – Present  
*Responsibilities:* aid and mentor students with volunteerism, outreach, and fundraising for the Geology Club as well as lead geology field trips (Iceland, Hawaii, Scotland, among others)
- Authored Energy and Earth Resources Curriculum Revisions** 2014, 2018  
*Responsibilities:* reviewed curriculum, assessing deficiencies, proposing solutions to better students in the Energy and Earth Resources Department
- Chair of Energy and Earth Resources Faculty Search Committee** 2017 – 2018  
*Responsibilities:* assessed candidates and organized/conducted interviews
- Reviewer for the Pitt-Johnstown Presidential Mentorship Fund** 2017  
*Responsibilities:* reviewed proposals to fund student-faculty research and educational endeavors
- Member of Pitt-Johnstown Committee on Welfare** 2015 – 2017  
*Responsibilities:* addressed issues related to faculty welfare including significant revision of a faculty judicial process, which was presented to the faculty senate in the spring of 2016

**PROFESSIONAL SERVICE:**

- Peer Reviewer** 2019 – Present  
*Responsibilities:* review submitted journal articles for the journal *Microscopy and Microanalysis*
- Board Member Northern Alleghenies Geological Society (NAGS)** 2016 – Present  
*Responsibilities:* arranging speakers for the geologic seminar series; contacting members about upcoming NAGS events; collect dues and track all society expenditures; organizing and coordinating geologic field trips for members

- Judge of Scientific Posters at Geological Society of America Meetings** 2015 – Present  
*Responsibilities:* evaluating scientific posters at Geological Society Meeting to determine awards
- Bus Leader for the Field Conference of Pennsylvania Geologists** 2016, 2018  
*Responsibilities:* responsible for the safety and well-being of a charter bus of geologists while acting as tour guide for a bus during the two-day field conference
- Nominee for Member-At-Large, Northeast Section Geological Society of America** 2017  
*Responsibilities:* key duties would have been evaluating research proposals, I was not elected

## WORKSHOPS:

- Geology and Geophysics Applied to Industry: *An American Association of Petroleum Geologists short course*. Convener: Fred Schroeder, University of Maryland, College Park, MD, March 19, 2010.
- Pursuing an Academic Career: *An On the Cutting Edge Workshop for Graduate Students and Post-docs*. Co-Conveners: Jon Lewis and Rachel Beane, Northeast – Southeast Regional Geological Society of America Meeting, Baltimore, MD, March 13, 2010.

## COMMUNITY OUTREACH:

- VE Arbutus Little League Baseball Coach** 2020 – Present  
*VE Arbutus Baseball League, Johnstown, PA*  
*Responsibilities:* Teach grade school students baseball basic and an enjoyment for the game
- Richland Elementary School Wrestling Coach** 2019 – Present  
*Richland Elementary Wrestling Booster's Club, Johnstown, PA*  
*Responsibilities:* Teach grade school students the principles of collegiate wrestling while instilling confidence and team building skills
- Cub Scout Geology Night Organizer** 2019 – Present  
*Pitt-Johnstown Geology Club, Johnstown, PA*  
*Responsibilities:* Organize and develop exercises conducted at a geology night that teach Cub Scouts the principles of geology and the importance of the geosciences
- Volunteer Speaker** 2018 – Present  
*Seeding STEM to Infuse Hope and Fight Violence in Johnstown Program, Johnstown, PA*  
*Responsibilities:* Speak with grade school students about STEM careers, particularly populations of students underrepresented in STEM fields
- Guest lecturer** 2017 – Present  
 Provided a geology lectures for pre-kindergarten and elementary school students
- Volunteer International Student Host** 2015 – 2016  
*Surrogate Host Family for International Student, Pitt-Johnstown, Johnstown, PA*  
*Responsibilities:* nurture student development and acclimation for foreign students
- Volunteer tutor** 2013 – 2014  
*Homework Helper Program, Seattle Public Libraries, Broadview Branch, Seattle WA.*  
*Responsibilities:* weekly meetings with Seattle K-12 students for tutoring in all subjects
- Guest lecturer** 2010  
 Provided a geomaterials lecture for high school students as part of the University of Maryland's College Preparation Workshop Series
- Volunteer tutor and mentor** 2006 – 2010  
*Community Club, New York Avenue Presbyterian Church, Washington, D.C.*  
*Responsibilities:* weekly meetings with Washington, D.C. high school students for mentoring and tutoring in all subjects
- Volunteer Delivery Driver** 2003 – 2004  
 Delivered meals to the needy via Meals-on-Wheels Program, Minneapolis, MN.

## **PROFESSIONAL CERTIFICATIONS:**

Washington State Licensed Professional Geologist  
Washington State Certified Underground Storage Tank Site Assessor  
40-hour HAZWOPER Certified

## **PROFESSIONAL AFFILIATIONS:**

American Geophysical Union - Since 2001  
Geological Society of America - Since 2001  
Mineralogical Society of America - Since 2001  
National Association of Geoscience Teachers - Since 2007  
Northern Alleghenies Geological Society (Board Member) - Since 2016

## **PRESENTED TERM PROJECTS:**

*Mentored one-semester research projects presented at the University of Pittsburgh at Johnstown, Campus-wide Research Symposium for the Promotion of Academic and Creative Enquiry (SPACE) – 49 mentored presentations.*

### **2020**

Cancelled due to Coronavirus.

### **2019**

Hockensmith, A. (2019) *Sedimentological Experimentation and Photogrammetric Methods within a Circulatory-Flow Flume Tank*. Presented for GEOL1108 Report Writing.  
Marsh, J. (2019) *The Impacts of Global Sea Level Rise on the Chesapeake Bay Area*. Presented for GEOL1108 Report Writing.  
Sarver, K. (2019) *Understanding Tectonic Plate Subduction under South America using Geochemical and Seismic Analysis of Ecuadorian Volcanoes*. Presented for GEOL1108 Report Writing.  
Smay, B. (2019) *How Evident is Global Warming in Cambria County, Pennsylvania?* Presented for GEOL1108 Report Writing.  
Taylor, A. (2019) *Factors affecting water quality in critical drinking water sources*. Presented for GEOL1108 Report Writing.  
Waltermire, K. (2019) *One fracking problem growing in “seis”*. Presented for GEOL1108 Report Writing.  
Wess, A. (2019) *Understanding Specific Characteristics of Mass Wasting Events in Johnstown, Pa Using Correlation Factors*. Presented for GEOL1108 Report Writing.

### **2018**

Cassidy, J. (2018) *How the White Mountain Batholith Felsic*. Presented for GEOL1004 Igneous and Metamorphic Petrology.  
Marsh, J. (2018) *A Rock in the Hand is Worth Two in the Bush-veld Complex*. Presented for GEOL1004 Igneous and Metamorphic Petrology.  
Roxby, K. (2018) *Plutonics of the Caribbean: Volcanics Tell No Tales*. Presented for GEOL1004 Igneous and Metamorphic Petrology.  
Smay, B. (2018) *Magmatic Differentiation of Hawaiian Volcanics*. Presented for GEOL1004 Igneous and Metamorphic Petrology.  
Shirley, B. (2018) *Distilling the Petrology of the Stillwater Complex of Southern Montana*. Presented for GEOL1004 Igneous and Metamorphic Petrology.  
Shirley, B. (2018) *Investigating the Origin of Pegmatite Dikes in Unionville, Pennsylvania and the Geochemical Interactions with Surrounding Serpentinites*. Presented for Undergraduate Research Project.  
Wolff, O. (2018) *Petrographic and Geochemical Investigation of the Bells Mill Road Ultramafic Body of Southeastern, PA*. Presented for Undergraduate Research Project.



## 2017

- Heidler, H. (2017) *The PIANO of Science: Petroleum Forensics on a Local Service Station*. Presented for GEOL1108 Report Writing.
- Hunsinger, C. (2017) *Acid Mine Drainage Effects on Paint Creek and Stonycreek River*. Presented for GEOL1108 Report Writing.
- Leger, M. (2017) *You Shook Me All Night Long: How Magnitude Affects the Frequency of Aftershocks*. Presented for GEOL1108 Report Writing.
- Louderback, S. (2017) *Going Hot: Terminal Ballistics Assessment of 9mm Cartridges*. Presented for GEOL1108 Report Writing.
- Marra, A. (2017) *Most Productive Aggregates in Mine Reclamation Projects*. Presented for GEOL1108 Report Writing.
- Norris, T. (2017) *Brushing Away Mysteries of Ancient Marine Life: a Paleontological Survey of the Brush Creek Marine Zone*. Presented for GEOL1108 Report Writing.
- Pastuch, J. (2017) *Saving Bens Creek from Orange Doom*. Presented for GEOL1108 Report Writing.
- Ponticello, J. (2017) *The Influence of Coarse Grain Aggregates on Concretes Strength*. Presented for GEOL1108 Report Writing.
- Sehn, D. (2017) *Connecting Plate Movement around the World with Earthquake Occurrences*. Presented for GEOL1108 Report Writing.
- Shirley, B. (2017) *Class II Injection Well Volumes and Earthquakes in Oklahoma*. Presented for GEOL1108 Report Writing.
- Simboli, L. (2017) *Estimating Earthquake Probability and Recurrence Intervals*. Presented for GEOL1108 Report Writing.
- Trevorrow, E. (2017) *Commodity Conundrum: The Link between Commodities and Country Growth*. Presented for GEOL1108 Report Writing.
- Wilt, H. (2017) *Land Sliding through El Nino*. Presented for GEOL1108 Report Writing.
- Wolff, O. (2017) *Three-Dimensional Modeling of Nazca Plate Subduction*. Presented for GEOL1108 Report Writing.

## 2016

- Leger, M. (2016) *Composite Deposit: The Composition of the Snoqualmie Batholith*. Presented for GEOL1004 Igneous and Metamorphic Petrology.
- Louderback, S. (2016) *Maybe it's Emplaced with it, Maybe it's Olivine*. Presented for GEOL1004 Igneous and Metamorphic Petrology.
- Norris, T. (2016) *The Roughest and Tuffest Volcanic Eruption in the West: a Review of the Long Valley Bishop Tuffs*. Presented for GEOL1004 Igneous and Metamorphic Petrology.
- Simboli, L. (2016) *Magmatic Conditions of the Central San Juan Volcanic Field, Southwestern Colorado*. Presented for GEOL1004 Igneous and Metamorphic Petrology.
- Trevorrow, E. (2016) *Petrology of the Dolerites of Tasmania*. Presented for GEOL1004 Igneous and Metamorphic Petrology.

## 2015

- Azar, B. (2015) *Healing from Hellfire*. Presented for GEOL1108 Report Writing.
- Barchowsky, A. (2015) *The Effects of Vegetation and Soil Cover on Acid Mine Drainage*. Presented for GEOL1108 Report Writing.
- Belinda, J. (2015) *Methane Hydrates: Are they the Future of Energy?* Presented for GEOL1108 Report Writing.
- Bert, C. (2015) *Does Hydraulic Fracturing Cause Groundwater Pollution in Washington County, Pennsylvania?* Presented for GEOL1108 Report Writing.
- Calhoun, E. (2015) *American Shale: Drilling Towards Energy Independence*. Presented for GEOL1108 Report Writing.

- Chamberlain, E. (2015) *Agricultural and Fertilizer Impacts on Water Quality of Raystown Lake, and the Raystown Branch of the Juniata River*. Presented for GEOL1108 Report Writing.
- Finlay, A. (2015) *Disappearance of the Aral Sea*. Presented for GEOL1108 Report Writing.
- Garber, J. (2015) *The Death of Fossil Fuels*. Presented for GEOL1108 Report Writing.
- Gerber, M. (2015) *The Minds of Movie Scientists*. Presented for GEOL1108 Report Writing.
- Keilman, A. (2015) *Explosive Volcanism in the Cascade Range*. Presented for GEOL1108 Report Writing.
- Kephart, S. (2015) *Could the Colorado River Run Dry?* Presented for GEOL1108 Report Writing.
- Kreider, A. (2015) *35 Year Analysis of the Ozone Layer*. Presented for GEOL1108 Report Writing.
- Lohr, H. (2015) *Land Movements along the San Andreas Fault*. Presented for GEOL1108 Report Writing.
- Miller, K. (2015) *Andean Volcanism: Subduction Angles Relation to Magma Chemistry*. Presented for GEOL1108 Report Writing.
- Shanley, R. (2015) *Cleaning Up Acid Mine Drainage: Biological versus Chemical Remediation*. Presented for GEOL1108 Report Writing.
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