

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

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## EDUCATION:

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

## ACADEMIC EXPERIENCE:

<b>University of Pittsburgh at Johnstown, Johnstown, PA</b>	
Associate Professor	<b>2020 – Present</b>
Department Chair	<b>2021 – 2025</b>
Assistant Professor	<b>2014 – 2020</b>
<b>Green River Community College, Auburn, WA</b>	
Adjunct Faculty Member	<b>2012 – 2013</b>
<b>Seattle Central Community College, Seattle, WA</b>	
Adjunct Faculty Member	<b>2011</b>

## PROFESSIONAL EXPERIENCE:

<b>Adapt Engineering, Seattle, WA</b>	<b>2011 – 2014</b>
Geologist / Environmental Scientist – Phase I and II environmental site assessment; pollution assessment and remediation; and geothermal energy project development.	
<i>Responsibilities included:</i> 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	

## HONORS AND AWARDS:

- 2023-24 Fulbright Scholar Award - Portugal
- 2022-23 University of Pittsburgh-Johnstown, Mountain Cat Award for Outstanding Faculty Advisor for a Student Club (Geology Club)
- 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.

## RESEARCH INTERESTS:

- Petrology, Geochemistry, Field Geology, Tectonics, Phase Equilibria, and Geoscience Pedagogy

## 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. (2021) *Petrogenesis and interactions of serpentinites intruded by pegmatite dikes, Unionville Serpentine Barrens, Chester County, Pennsylvania*. Pennsylvania Geological Survey, 4th ser., General Geology Report 21-001.0, 19 p. plus appendix.

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:

\*Howard, C. and Kerrigan, R. (2024) A Geochemical and Petrological Analysis of the Bald Hill Bentonites at the New Paris Limestone Quarry. *in Kerrigan, R. (Ed.), Dinner at the Outcrop: New Paris Quarry, Bedford County, PA*. Northern Alleghenies Geological Society, pp. 39-47.

\*Shreckengost, A. and Kerrigan, R. (2024) Understanding Regional Hydrothermal Systems One Tiny Bubble at a Time: Hydrothermal Minerals of New Paris, PA. *in Kerrigan, R. (Ed.), Dinner at the Outcrop: New Paris Quarry, Bedford County, PA*. Northern Alleghenies Geological Society, pp. 33-38.

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:

\*Howard, C., Kerrigan, R.J., Mathur, R., and Valencia, V. (2025) *U/Pb Zircon Geochronology of the Bald Hill Bentonite Suite at the New Paris Quarry in Southwestern Pennsylvania*. Joint Northeastern/North-Central Section Meeting of the Geological Society of America, Abstracts with Programs, v. 57, n. 3, pp. 5-47.

\*Boyer, I., \*Howard, C., and Kerrigan, R.J. (2025) *From Waste to Wealth: Analyzing Rare Earth Elements in Coal Refuse Piles*. Joint Northeastern/North-Central Section Meeting of the Geological Society of America, Abstracts with Programs, v. 57, n. 3, pp. 45-3.

\*Shreckengost, A., \*Howard, C., Kerrigan, R. J., and Mutti, L. (2024) *Understanding Regional Hydrothermal Systems One Tiny Bubble at a Time: Hydrothermal Minerals of New Paris, PA*. American Geophysical Union Fall Meeting, Abstract V51D-3112.

Kerrigan, R.J., \*Howard, C., and \*Shreckengost, A. (2024) *Geochemical Correlations in Northwest Iberia: Searching for common trends in the allochthonous islands of rock across the Galicia-Trás-os-Montes Zone*. American Geophysical Union Fall Meeting, Abstract V21D-3284.

\*Howard, C., \*Shreckengost, A., and Kerrigan, R. J. (2023) *The Geochemistry and Petrology of the Bald Hill Bentonites in Southwestern Pennsylvania*. Geological Society of America, Abstracts with Programs, v. 55, n. 6, pp. 186-23.

\*Ma, S. S-H., \*Sikora, S.P., and Kerrigan, R. J. (2021) *Geochemical and Petrographic Characterization of Piedmont Granites, Lima, PA*. Northeast Section Meeting of the Geological Society of America, Abstracts with Programs, v. 53, n. 1, pp. 17-11.

\*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:**

November 14<sup>th</sup>, 2024: *The Geochemistry and Petrogenesis of the Bragança and Morais Massifs of northern Portugal: Examining islands of rock to understand how mountains are built*. Pennsylvania Council of Professional Geologists, Harrisburg, PA.

November 9<sup>th</sup>, 2024: *Green Rocks of Northwest Portugal – Ultramafic correlations across the Galicia-Trás-os-Montes Zone (GTMZ)*. Friends of Mineralogy – Pennsylvania Chapter, Johnstown PA.

October 11<sup>th</sup>, 2023: *From Acadia to Zion: A Geologic Tour of United States National Parks*. University of Lisbon, Faculty of Sciences, Lisbon, Portugal.

April 13, 2023: *The Geology of Corundum Hill, Chester County, PA – Serpentinites intruded by Pegmatites*. Philadelphia Mineralogical Society, Philadelphia, PA.

December 7, 2021: *The Ultramafic Rocks of the Pennsylvania Piedmont and their Mineralogical Associations*. Pennsylvania Council of Professional Geologists, Harrisburg, PA.

November 13, 2021: *The Geology of Corundum Hill, Chester County, PA – Serpentinites intruded by Pegmatites*. Friends of Mineralogy – Pennsylvania Chapter, Lancaster, PA.

September 15, 2021: *The Ultramafic Rocks of the Pennsylvania Piedmont and their Mineralogical Associations*. Pittsburgh Geological Society, Pittsburgh, PA.

April 8, 2021: *The Ultramafic Rocks of the Pennsylvania Piedmont and their Mineralogical Associations*. Philadelphia Mineralogical Society, Philadelphia, PA.

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:

\*Boyer, I. and Kerrigan, R.J. *From Waste to Wealth: Analyzing Rare Earth Elements in Coal Refuse Piles*. University of Pittsburgh at Johnstown Mentorship Fund. Submitted September 2024, accepted October 2024.

\*Howard, C. and Kerrigan, R.J. *U-Pb Isotopic dating of the volcanic ash layers in New Paris, PA to provide insight into regional deposition and tectonic activity*. University of Pittsburgh at Johnstown Mentorship Fund. Submitted September 2024, accepted October 2024.

\*Shreckengost, A. and Kerrigan, R. J. *Examining Mineral Fluid Inclusions to Assess the Economic Potential of Allegheny Hydrothermal Systems*. University of Pittsburgh at Johnstown Mentorship Fund. Submitted September 2023, accepted October 2023.

Kerrigan, R. J. *The Geochemistry and Petrogenesis of the Braganca and Morais Massifs of northern Portugal: Examining islands of rock to understand how mountains are built*. Fulbright Scholar Program, United State Department of State. Submitted September 2022, accepted March 2023.

Kerrigan, R. J. *The Geochemistry and Petrogenesis of the Braganca and Morais Massifs of northern Portugal: Examining islands of rock to understand how mountains are built*. University of Pittsburgh Momentum Fund - Priming Grants. Submitted October 2022, accepted February 2023.

\*Howard, C. and Kerrigan, R. J. *Examination of the 417-million-year-old volcanic ash layers in New Paris, PA to understand the building of the Appalachians*. University of Pittsburgh at Johnstown Mentorship Fund. Submitted December 2022, accepted January 2023.

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.

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

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.

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

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

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

\*Hunsinger, C. and Kerrigan, R. J. *Granodiorite Emplacement in Southeastern Pennsylvania*. University of Pittsburgh at Johnstown Presidential Mentorship Fund. Submitted September 2016, accepted October 2016.

\*Louderback, S. and Kerrigan, R. J. *Snaking Through the Pennsylvania Piedmont: Serpentinites of Southeastern Pennsylvania*. University of Pittsburgh at Johnstown Presidential Mentorship Fund. Submitted January 2016, accepted February 2016.

\*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 Fund. Submitted January 2016, accepted February 2016.

\*Miller, K. S. and Kerrigan, R. J. *Petrology of the Youngsford Road ultramafic body near Philadelphia, PA*. University of Pittsburgh at Johnstown Presidential Mentorship Fund. Submitted August 2015, accepted October 2015.

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<sub>2</sub>O-FeO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O) 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	8 semesters
– Mineralogy and Mineralogy Laboratory	7 semesters
– Fossil Fuels and Economic Geology	6 semesters
– Report Writing and Report Writing Laboratory	6 semesters
– Historical Geology and Historical Geology Laboratory	5 semesters
– Igneous and Metamorphic Petrology and Petrology Laboratory	5 semesters
– Geodynamics and Geodynamics Laboratory	4 semesters
– Physical Geology and Physical Geology Laboratory	3 semesters
– Geology of National Parks	3 semesters
– Geology and Cinema	2 semesters
– Geochemistry	1 semester
– Geologic Field Methods	1 semester

## UNIVERSITY SERVICE:

**President of Pitt-Johnstown Faculty Senate** 2024 – Present

*Responsibilities:* manage faculty grievances, serve as liaison for faculty to administration

**Vice President of Pitt-Johnstown Faculty Senate** 2024 – 2025

*Responsibilities:* manage faculty grievances, serve as liaison for faculty to administration

**Member of Pitt-Johnstown Communi-Teams** 2019 – Present

*Responsibilities:* assist in a program to promote and diversity and inclusion by working with the community to offer educational programing for underprivileged populations in the Johnstown area

**Volunteer for Symposium for the Promotion of Academic and Creative Enquiry** 2015 – Present

*Responsibilities:* set-up and breakdown of the event, aid in planning and publicity

**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)

**Treasurer of Pitt-Johnstown Communi-Teams** 2021 – 2024

*Responsibilities:* manage finances and purchase orders for Communi-Teams, a program aimed at providing educational programing for underprivileged populations in the Johnstown area

**Member of Pitt-Johnstown Committee on Admissions and Student Affairs** 2021 – 2024

*Responsibilities:* address issues at the University that pertain to Admissions and Student Affairs

<b>Member of Pitt-Johnstown Committee on Diversity and Inclusion</b>	<b>2019 – 2024</b>
<i>Responsibilities:</i> examine and implement policies that encourage diversity and inclusion in the curriculum at University of Pittsburgh at Johnstown	
<b>Publicity Organizer for Pitt-Johnstown's <i>Fall into Research</i> Symposium</b>	<b>2016 – 2023</b>
<i>Responsibilities:</i> arrange advertisement and coverage for the <i>Fall into Research</i> Symposium which highlights some of the research occurring at Pitt-Johnstown	
<b>Member of SPARKS - Pitt-Johnstown Project for Diversity and Inclusion</b>	<b>2020 – 2023</b>
<i>Responsibilities:</i> this group of faculty and staff aims to address issues of diversity and inclusion on the Pitt-Johnstown campus	
<b>Chair of Pitt-Johnstown Committee on Admissions and Student Affairs</b>	<b>2018 – 2021</b>
<i>Responsibilities:</i> 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	
<b>Member of the Pitt-Johnstown Faculty Senate Council</b>	<b>2017 – 2021</b>
<i>Responsibilities:</i> discussing pertinent issues related to university development and betterment	
<b>Chair of Energy and Earth Resources Faculty Search Committee</b>	<b>2017 – 2018</b>
<i>Responsibilities:</i> assessed candidates and organized/conducted interviews	
<b>Authored Energy and Earth Resources Curriculum Revisions</b>	<b>2014, 2018, 2023-24</b>
<i>Responsibilities:</i> reviewed curriculum, assessing deficiencies, proposing solutions to better students in the Energy and Earth Resources Department	
<b>Reviewer for the Pitt-Johnstown Presidential Mentorship Fund</b>	<b>2017</b>
<i>Responsibilities:</i> reviewed proposals to fund student-faculty research and educational endeavors	
<b>Member of Pitt-Johnstown Committee on Welfare</b>	<b>2015 – 2017</b>
<i>Responsibilities:</i> 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:

<b>Peer Reviewer</b>	<b>2019 – Present</b>
<i>Responsibilities:</i> review submitted journal articles for the journal <i>Microscopy and Microanalysis</i>	
<b>Board Member Northern Alleghenies Geological Society (NAGS)</b>	<b>2016 – Present</b>
<i>Responsibilities:</i> 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	
<b>Judge of Scientific Posters at Geological Society of America Meetings</b>	<b>2015 – 2020</b>
<i>Responsibilities:</i> evaluating scientific posters at Geological Society Meeting to determine awards	
<b>Bus Leader for the Field Conference of Pennsylvania Geologists</b>	<b>2016, 2018, 2021</b>
<i>Responsibilities:</i> 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	

## WORKSHOPS:

<b>Summer School for Structural Geology Professors: Teaching Structural Geology Using Math, Statistics, &amp; Computation: The National Science Foundation (Tectonics program).</b>	<b>National Science Foundation funded workshop with the purpose of training instructors of structural geology in quantitative methods, White Mountain Research Center, Crooked Creek Station, Bishop, CA, July 26 – August 2, 2024.</b>
<b>Math Your Majors Need To Know - Math in the Geosciences Integration Project: Science Education Resource Center.</b>	<b>National Science Foundation funded venture for developing tutorials that explain mathematical concepts in the context of the geosciences, Colorado School of Mines, Golden, CO, June 2-8, 2023.</b>

**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:

<b>Little League Baseball Coach</b> <i>VE Arbutus Baseball League</i> , Johnstown, PA <i>Responsibilities:</i> Teach grade school students baseball basics and an enjoyment for the game	<b>2020 – Present</b>
<b>Richland Elementary School Wrestling Coach</b> <i>Richland Elementary Wrestling Booster's Club</i> , Johnstown, PA <i>Responsibilities:</i> Teach grade school students the principles of collegiate wrestling while instilling confidence and team building skills	<b>2019 – Present</b>
<b>Cub Scout Geology Night Organizer</b> <i>Pitt-Johnstown Geology Club</i> , Johnstown, PA <i>Responsibilities:</i> Organize and develop exercises conducted at a geology night that teach Cub Scouts the principles of geology and the importance of the geosciences	<b>2019 – Present</b>
<b>Volunteer Speaker</b> <i>Seeding STEM to Infuse Hope and Fight Violence in Johnstown</i> Program, Johnstown, PA <i>Responsibilities:</i> Speak with grade school students about STEM careers, particularly populations of students underrepresented in STEM fields	<b>2018 – 2022</b>
<b>Guest lecturer</b> Provided a geology lectures for pre-kindergarten and elementary school students	<b>2017 – 2020</b>
<b>Youth Football Coach</b> <i>Richland Rockets Football</i> , Johnstown, PA <i>Responsibilities:</i> Teach grade school students flag football basics and an enjoyment for the game	<b>2020 – 2022</b>
<b>Volunteer International Student Host</b> Surrogate Host Family for International Student, Pitt-Johnstown, Johnstown, PA <i>Responsibilities:</i> nurture student development and acclimation for foreign students	<b>2015 – 2016</b>
<b>Volunteer tutor</b> Homework Helper Program, Seattle Public Libraries, Broadview Branch, Seattle WA. <i>Responsibilities:</i> weekly meetings with Seattle K-12 students for tutoring in all subjects	<b>2013 – 2014</b>
<b>Guest lecturer</b> Provided a geomaterials lecture for high school students as part of the University of Maryland's College Preparation Workshop Series	<b>2010</b>
<b>Volunteer tutor and mentor</b> Community Club, New York Avenue Presbyterian Church, Washington, D.C. <i>Responsibilities:</i> weekly meetings with Washington, D.C. high school students for mentoring and tutoring in all subjects	<b>2006 – 2010</b>
<b>Volunteer Delivery Driver</b> Delivered meals to the needy via Meals-on-Wheels Program, Minneapolis, MN.	<b>2003 – 2004</b>

## 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) – 83 mentored presentations.***

### **2025**

Freed, A. (2025) *Iceland Volcanic Geochemistry: Interactions between the Iceland Mantle Plume and the Atlantic Mid-Oceanic Rift*. Presented for GEOL1109 Report Writing.  
Hodgson, L. (2025) *Riders of the Storm Surge! The Tampa Bay Estuaries Stability Under Storm Surges*. Presented for GEOL1109 Report Writing.  
Howard, C. (2025) *Waste Not, Want Not – Mine Waste Volumetric Modeling*. Presented for GEOL1109 Report Writing.  
Premozic, J. (2025) *Earth, Wind, And Fire: Characterizing Wildfires in Southern California*. Presented for GEOL1109 Report Writing.  
Tallman, J. (2025) *Three Buckets of “Mud”: Unearthing a Fossilized Reef Hidden in Coral Caverns, Bedford County, PA*. Presented for GEOL1109 Report Writing.  
Weist, C. (2025) *Wild Water, Wild Fish: Using Wild Brook Trout and Water Chemistry for Stream Classification*. Presented for GEOL1109 Report Writing.

### **2024**

Boyer, I. (2024) *Insights into Volcanic Evolution: Petrologic Perspectives from the Lesser Antilles*. Presented for GEOL1004 Petrology.  
Freed, A. (2024) *Understanding the Geologic Significance of Mineral Abundances of the Boulder Batholith in Montana*. Presented for GEOL1004 Petrology.  
Howard, C. (2024) *Taking Gneisses for Granite: New Hampshire Plutonic Suite*. Presented for GEOL1004 Petrology.  
Shreckengost, A. (2024) *Fissures of Mass Destruction: Defining the Deccan Volcanic Province in India*. Presented for GEOL1004 Petrology.  
Stanley-Reeves, D. (2024) *The Powderhorn Carbonatite*. Presented for GEOL1004 Petrology.

### **2023**

Bontrager, T. (2023) *Aeration to Cleanup Acidic Mine Contamination: The Tanoma Trompe Advantage* Presented for GEOL1109 Report Writing.  
Boyer, I. (2023) *From Awareness to Action: Flood Prevention Measures on the Little Paint Creek in Johnstown, Pennsylvania*. Presented for GEOL1109 Report Writing.  
Nesabella, C. (2023) *Russian Roulette with Dams; Dam Failure in Johnstown, PA*. Presented for GEOL1109 Report Writing.  
Roxby, C. (2023) *The Receding of Glacier National Park: Losing Glaciers and Changing Ecosystems*. Presented for GEOL1109 Report Writing.  
Scelsi, N. (2023) *Are the Effects of Climate Change Affecting Our Rivers: A Case Study of the Laramie River, WY*. Presented for GEOL1109 Report Writing.

Scislowicz, K. (2023) *The North and Eastern Anatolian fault system, how it is shaking up Turkey.* Presented for GEOL1109 Report Writing.

Shreckengost, A. (2023) *Analyzing Apollo: Lunar Basalt Samples Re-Classified.* Presented for GEOL1109 Report Writing.

Smith, T. (2023) *Environmental Parameters Affecting Rhododendron Growth on Allegheny Mountain Anticline.* Presented for GEOL1109 Report Writing.

Stanley-Reeves, D. (2023) *The Drought of Mother Mead.* Presented for GEOL1109 Report Writing.

Weaver, O. (2023) *Anticipating an AMD Mine Pool's Seasonal Geochemical Changes.* Presented for GEOL1109 Report Writing.

## 2022

Nesbella, C. (2022) *The Boulder Creek Batholith: Putting the Boulder in Colorado.* Presented for GEOL1004 Petrology.

Roxby, C. (2022) *The South African Palabora Complex: The Rocking Complexity of Carbonatites.* Presented for GEOL1004 Petrology.

Scarbro, T. (2022) *Taking the feldsPATHoid Less Traveled: The Origins of the Feldspathoid Bearing Rocks in the Bancroft Region.* Presented for GEOL1004 Petrology.

Weaver, O. (2022) *Hawaiian Volcanics: A Petrographic Study of the Big Island of Hawaii.* Presented for GEOL1004 Petrology.

## 2021

Breyer, J. (2021) *Noctis Labyrinthus: The Construction of the Labyrinth of Night of Mars.* Presented for GEOL1109 Report Writing.

Cunningham, J. (2021) *Seasonal effects on petroleum remediation efforts.* Presented for GEOL1109 Report Writing.

Jones, J. (2021) *Erosion and Displacement Rates of Boney Pile: Mine 37, Windber, PA.* Presented for GEOL1109 Report Writing.

Mason, B. (2021) *An Understanding of the Always Changing, Little Paint Creek.* Presented for GEOL1109 Report Writing.

Newell, T. (2021) *A Paleontological Exploration of the Upper and Lower Freeport Coal Seams.* Presented for GEOL1109 Report Writing.

Raysich, L. (2021) *Mount Saint Helens: The Geochemistry of Past Eruptions.* Presented for GEOL1109 Report Writing.

Rokicki, J. (2021) *Environmental Impacts of Pittsburgh's Changing Climate.* Presented for GEOL1109 Report Writing.

Sikora, S. (2021) *Impacts of Acid Mine Drainage on Fish Populations in Blacklick Creek, Vintondale, PA.* Presented for GEOL1108 Report Writing.

Thomas, R. (2021) *Geology and Chemistry: Does Geology Affect Chemistry of Spring Water?* Presented for GEOL1109 Report Writing.

## 2020

Cancelled due to Coronavirus.

## 2019

Hockensmith, A. (2019) *Sedimentological Experimentation and Photogrammetric Methods within a Circulatory-Flow Flume Tank.* Presented for GEOL1109 Report Writing.

Marsh, J. (2019) *The Impacts of Global Sea Level Rise on the Chesapeake Bay Area.* Presented for GEOL1109 Report Writing.

Sarver, K. (2019) *Understanding Tectonic Plate Subduction under South America using Geochemical and Seismic Analysis of Ecuadorian Volcanoes*. Presented for GEOL1109 Report Writing.

Smay, B. (2019) *How Evident is Global Warming in Cambria County, Pennsylvania?* Presented for GEOL1109 Report Writing.

Taylor, A. (2019) *Factors affecting water quality in critical drinking water sources*. Presented for GEOL1109 Report Writing.

Waltermire, K. (2019) *One fracking problem growing in “seis”*. Presented for GEOL1109 Report Writing.

Wess, A. (2019) *Understanding Specific Characteristics of Mass Wasting Events in Johnstown, PA Using Correlation Factors*. Presented for GEOL1109 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 GEOL1109 Report Writing.

Hunsinger, C. (2017) *Acid Mine Drainage Effects on Paint Creek and Stonycreek River*. Presented for GEOL1109 Report Writing.

Leger, M. (2017) *You Shook Me All Night Long: How Magnitude Affects the Frequency of Aftershocks*. Presented for GEOL1109 Report Writing.

Louderback, S. (2017) *Going Hot: Terminal Ballistics Assessment of 9mm Cartridges*. Presented for GEOL1109 Report Writing.

Marra, A. (2017) *Most Productive Aggregates in Mine Reclamation Projects*. Presented for GEOL1109 Report Writing.

Norris, T. (2017) *Brushing Away Mysteries of Ancient Marine Life: a Paleontological Survey of the Brush Creek Marine Zone*. Presented for GEOL1109 Report Writing.

Pastuch, J. (2017) *Saving Bens Creek from Orange Doom*. Presented for GEOL1109 Report Writing.

Ponticello, J. (2017) *The Influence of Coarse Grain Aggregates on Concretes Strength*. Presented for GEOL1109 Report Writing.

Sehn, D. (2017) *Connecting Plate Movement around the World with Earthquake Occurrences*. Presented for GEOL1109 Report Writing.

Shirley, B. (2017) *Class II Injection Well Volumes and Earthquakes in Oklahoma*. Presented for GEOL1109 Report Writing.

Simboli, L. (2017) *Estimating Earthquake Probability and Recurrence Intervals*. Presented for GEOL1109 Report Writing.

Trevorow, E. (2017) *Commodity Conundrum: The Link between Commodities and Country Growth*. Presented for GEOL1109 Report Writing.

Wilt, H. (2017) *Land Sliding through El Nino*. Presented for GEOL1109 Report Writing.

Wolff, O. (2017) *Three-Dimensional Modeling of Nazca Plate Subduction*. Presented for GEOL1109 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.

Trevorow, 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 GEOL1109 Report Writing.

Belinda, J. (2015) *Methane Hydrates: Are they the Future of Energy?* Presented for GEOL1109 Report Writing.

Bert, C. (2015) *Does Hydraulic Fracturing Cause Groundwater Pollution in Washington County, Pennsylvania?* Presented for GEOL1109 Report Writing.

Calhoun, E. (2015) *American Shale: Drilling Towards Energy Independence*. Presented for GEOL1109 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 GEOL1109 Report Writing.

Finlay, A. (2015) *Disappearance of the Aral Sea*. Presented for GEOL1109 Report Writing.

Garber, J. (2015) *The Death of Fossil Fuels*. Presented for GEOL1109 Report Writing.

Gerber, M. (2015) *The Minds of Movie Scientists*. Presented for GEOL1109 Report Writing.

Keilman, A. (2015) *Explosive Volcanism in the Cascade Range*. Presented for GEOL1109 Report Writing.

Kephart, S. (2015) *Could the Colorado River Run Dry?* Presented for GEOL1109 Report Writing.

Kreider, A. (2015) *35 Year Analysis of the Ozone Layer*. Presented for GEOL1109 Report Writing.

Lohr, H. (2015) *Land Movements along the San Andreas Fault*. Presented for GEOL1109 Report Writing.

Miller, K. (2015) *Andean Volcanism: Subduction Angles Relation to Magma Chemistry*. Presented for GEOL1109 Report Writing.

Shanley, R. (2015) *Cleaning Up Acid Mine Drainage: Biological versus Chemical Remediation*. Presented for GEOL1109 Report Writing.

Tilves, S. (2015) *Soloman Run's Acid Mine Drainage Problem*. Presented for GEOL1109 Report Writing.