

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-SiO₂-H₂O
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**
Department Chair **2021 – 2025**
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 included: 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 Re-port 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 \pm 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, 81st 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 Serpentinities*. 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: Serpentinities 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 14th, 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 9th, 2024: *Green Rocks of Northwest Portugal – Ultramafic correlations across the Galicia-Trás-os-Montes Zone (GTMZ)*. Friends of Mineralogy – Pennsylvania Chapter, Johnstown PA.

October 11th, 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_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	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 programming 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 programming 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

- Member of Pitt-Johnstown Committee on Diversity and Inclusion** 2019 – 2024
Responsibilities: examine and implement policies that encourage diversity and inclusion in the curriculum at University of Pittsburgh at Johnstown
- Publicity Organizer for Pitt-Johnstown's *Fall into Research* Symposium** 2016 – 2023
Responsibilities: arrange advertisement and coverage for the *Fall into Research* Symposium which highlights some of the research occurring at Pitt-Johnstown
- Member of SPARKS - Pitt-Johnstown Project for Diversity and Inclusion** 2020 – 2023
Responsibilities: this group of faculty and staff aims to address issues of diversity and inclusion on the Pitt-Johnstown campus
- Chair of Pitt-Johnstown Committee on Admissions and Student Affairs** 2018 – 2021
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 – 2021
Responsibilities: discussing pertinent issues related to university development and betterment
- Chair of Energy and Earth Resources Faculty Search Committee** 2017 – 2018
Responsibilities: assessed candidates and organized/conducted interviews
- Authored Energy and Earth Resources Curriculum Revisions** 2014, 2018, 2023-24
Responsibilities: reviewed curriculum, assessing deficiencies, proposing solutions to better students in the Energy and Earth Resources Department
- 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 – 2020
Responsibilities: evaluating scientific posters at Geological Society Meeting to determine awards
- Bus Leader for the Field Conference of Pennsylvania Geologists** 2016, 2018, 2021
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

WORKSHOPS:

- Summer School for Structural Geology Professors: Teaching Structural Geology Using Math, Statistics, & Computation:** *The National Science Foundation (Tectonics program).* 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.
- Math Your Majors Need To Know - Math in the Geosciences Integration Project:** *Science Education Resource Center.* 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.

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:

Little League Baseball Coach 2020 – Present
VE Arbutus Baseball League, Johnstown, PA

Responsibilities: Teach grade school students baseball basics 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 – 2022

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 – 2020

Provided a geology lectures for pre-kindergarten and elementary school students

Youth Football Coach 2020 – 2022

Richland Rockets Football, Johnstown, PA

Responsibilities: Teach grade school students flag football basics and an enjoyment for the game

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) – 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.
Nesbella, 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 Labyninthus: 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 Bushveld 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.
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- Shirley, B. (2017) *Class II Injection Well Volumes and Earthquakes in Oklahoma*. Presented for GEOL1109 Report Writing.
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- Trevorrow, E. (2017) *Commodity Conundrum: The Link between Commodities and Country Growth*. Presented for GEOL1109 Report Writing.
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- 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.
- 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 GEOL1109 Report Writing.
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