



2026 Newsletter

Geosciences

Message from the Chair

Geosciences again enjoyed another dynamic and productive year that saw our students achieve continued success in their courses, undergraduate research, and personal growth. Our faculty and staff continued to work tirelessly to benefit our students.

We continue to hold and host events that have positive impact on our students' experiences. We held our 4th Alumni-Student Networking event on December 1, 2025, that featured over 20 alumni interacting with our students and representing several career fields. Once again, if you were there, thank you very much. If you were not, I'm sure you'd have liked to have been there to share your experiences with us. Please reach out to us to be sure we have you on our list of interested alumni for next time.

Thanks to Mary Perrelli, we again hosted a talk on campus for World Toilet Day, and the GIS Day of presentations and exhibits at the Alumni Center. Vida Vanchan again hosted a successful "Southeast Asia Week" on Climate Change.

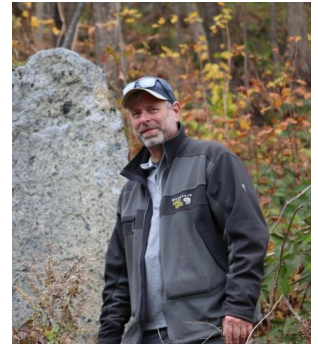
As one of the distinguishing features of our programs at Buffalo State, student field trips went on as usual including both regional and many local trips facilitated by our faculty. Also as usual, our students attended the annual regional meeting of the Northeastern Section of the Geological Society of America (Hartford, Connecticut, March 2026). One of our students presented a poster. The group also took a field excursion to Dinosaur State Park in Rocky Hill, CT, and hiked to the top of the Mesozoic flood basalt at Castle Craig in Meriden, CT. Similarly, students and faculty participated at the GIS/SIG conference in Rochester. On campus, our students presented posters mentored by Geosciences people at the annual Buffalo State University Student Research and Creativity Conference.

By now, it is well known that unfortunately, we suffered awful news in January that our Environmental Geography major and GIS certificate programs were to be deactivated at the end of the Spring 2026 semester. Despite this news, we have pushed forward and have proposed a revision to our B.S. Earth Sciences program to be changed to an environmental focus as Environmental Geoscience.

Personnel changes are afoot. We celebrate the career of Stephen Vermette who retired as of June 1, 2026. **Congratulations**, Stephen. Thank you for your many years of service! In a different way, we also celebrate the amazing contributions of Mary Perrelli who is moving on to a new role on campus. Thank you, Mary! The department misses you already!

In closing, I hope you enjoy our newsletter (the hard work of Mary Perrelli). Visit our Geosciences department website for details and for our department calendar. Please share our stories with friends, colleagues, and family. We are grateful for your continuing support and interest in our efforts and accomplishments. Your success is our success, and vice versa.

Thank you! - Gary Solar



Dr. Gary Solar

2025-2026 Geoscience Department Graduates

Environmental Geography B.S.

Daniel Brennan

Wilma Buchanan

Ralph Garrett

Daniel Krieger

Raven Rybek

Joel Willis

Earth Science B.S.

Benjamin Axberg

Madine Djibrine

Luie LeBron

Emily Meidel

Geology B.S.

Joshua Carlotto

Geography B.A.

Aubrey Atchinson

Katheryne T. Whittemore Award for Outstanding Student in Geography & Planning — Ralph Garrett



Ralph Garrett

Named after the founding member of the former Geography and Planning department, this award is given to the most outstanding senior in the Environmental Geography B.S or the Geography BA. This is our most prestigious award. Students must have demonstrated their ability and commitment to the major, above and beyond a good GPA. This year's recipient is **Ralph Garrett**

Ralph completed the Environmental Geography B.S., the Undergraduate Environmental Science and Society Certificate, the minor in Environmental Science, AND a Biology minor while maintaining an excellent GPA.

In the summer of 2024, Ralph worked with Dr. Holmgren on an undergraduate summer research fellowship where he investigated the relationship between desert woodrat body size and temperature during the last ice age and the current warmer Holocene period. To test this, Ralph estimated body size using fecal pellets from rodents over the past 55,000 years from Baja California.

Ralph presented this research last spring at the Student Research and Creativity Conference at Buffalo State.

Congratulations, Ralph!

Buffalo State University School of Arts and Sciences Dean's Medal (Geosciences) — Emily Meidel



(pictured with Dean Frothingham and Dr. Solar)

Emily Meidel is a senior in the Earth Sciences program graduating this spring. She is fascinated by structural geology—specifically the geometric patterns seen in meta-sedimentary rocks caused by ancient tectonic plate collisions. She plans on continuing her studies in structural geology in graduate school and completing a master's degree and potentially a Ph.D. to pursue a career as a college professor of geology.

Emily was awarded a 2025 Buffalo State Office of Undergraduate Research Summer Fellowship. During her fellowship research she conducted intensive field work on rock structures in coastal southeastern Maine that formed when the rocks were at the collision of North America and what is now Africa, when Pangaea was completing its formation. She found evidence supporting retrograde (down temperature) reaction in the rocks during tectonic deformation, meaning that the rocks went up in temperature and pressure, then recorded down-temperature recrystallization. She presented the results of her research at the Geological Society of America conference in March 2026.

Congratulations Emily!

Western New York GIS Association Merit Award— Daniel Krieger



New this year is an award from the Western New York GIS Association. Founded in 1995, the WNY GIS Users Group (WNYGISUG) is a professional organization devoted to the use and advancement of geographic information systems in Western New York. The mission of the WNYGISUG is to foster and encourage GIS technologies, advocate GIS use and development and provide the WNY GIS community with sharing and learning opportunities.

This year's award is presented to Daniel Krieger. Daniel graduated with a BS in Environmental Geography, a BS in Urban Planning and a GIS Certificate. He completed a GIS internship with Erie County where he created an Erie County Municipal Map Series, a Solar Siting Study Map, a map of MS4 General Permit Impaired Waters, and an interactive web map for Maple Weekend. He is an active member of the WNYGIS group.

Congratulations Daniel!

David Bullough Memorial Award for Academic Excellence — Corey Fragale



Corey Fragale

The **David Bullough Memorial Award for Academic Excellence** (named after the son of the late Vern Bullough, former Dean of SNSS) is awarded to the student minoring in Geography, Meteorology & Climatology, or GIS with the highest minor GPA who will not be receiving another departmental award that semester. Our winner is Corey Fragale.

Corey is an Applied Mathematics major. He also completed the undergraduate certificate in Statistics in Insurance, and, for this award, the minor in Meteorology and Climatology. In addition to multiple weather and climate related courses, Corey also took the capstone Research Methods course—unusual for a minor. In that course, Corey prepared an excellent research proposal on shifting patterns of tornado location, severity, and timing as a result of climate change. Corey also presented research last week at the Student Research and Creativity Conference using mathematical models to investigate Nipah Virus transmission dynamics among fruit bats, pigs, and humans.

It is a great pleasure to present this year's Bullough Award to Corey.

Geology and Earth Science Awards

The John Murtaugh Award for excellence in geological field work - Emily Meidel

The Carl Seyfert Award for excellence in geology- Emily Meidel

David Bullough Memorial Award for Academic Excellence – Benjamin Axberg

The Irving Tesmer Award for excellence in geology – Benjamin Axberg

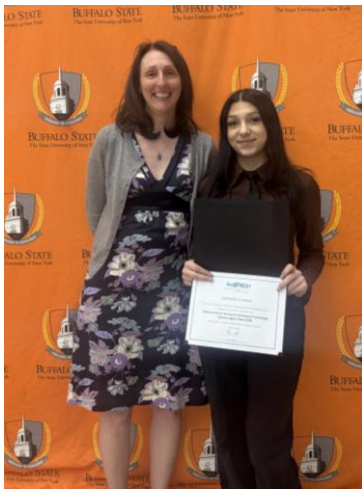
Planetarium Director's Volunteer Award- Skyler Gore, Katy Pinter, Beryl Remacle-Grimm



National Honor Society for Geospatial Technology- Gamma Sigma Theta

The Geospatial Technology Honor Society is sponsored by the GeoTech Center. Students receive various benefits from membership including a free one-year membership to the Urban Regional and Information Systems Association (URISA) and the American Society for Photogrammetry and Remote Sensing (ASPRS), free access to the GIS Certification Institute practice tests and access to the GIST LinkedIn page for networking. Students selected for membership in the National Honor Society for Geospatial Technology must meet the following requirements:

- 3 Geospatial Technology courses with a 3.3 or greater GPA
- An overall GPA of 3.0 or greater
- Evaluation of a class project



Inductees receive a certificate and a red, green and blue honors cord. This year's inductees include:

Zach Chase (CRJ)

Gabriella Correrra (CRJ) – Pictured at left

Rehn Pielchowski (BIO)

Heather Buskist (GES)

Annika Rauschelbach (GIS Certificate)

New York Water and Environment Association (NYWEA) / EcoBengals– Student Chapter



The students in the NYWEA/EcoBengals student chapter participated in several educational events this year. Activities included a tour of the Colonel Ward Pumping Station, a tour of the Great Lakes Field Station and the Buffalo River, painting with soil activity, fall flower planting and a World Toilet day presentation on the Buffalo Sewer System.

Pictured to the left, students in the NYWEA/EcoBengal chapter preparing for a boat tour of the Buffalo River with Field Station Manager Brian Haas.

Dean's List Students

Geoscience Department majors who have complete at least 12 credit hours and maintain a minimum grade point average of 3.5 for a term qualify for the Buffalo State Dean's List. Congratulations to all our Dean's List students.

Spring 2025

- Heather Buskist
- Gavin Clayton
- William Frederick
- Ralph Garrett
- Samantha Kaufman
- Sage Lambie
- Tumaini Mapendo
- Jaymee Meidel
- Madison Palmatier
- Allison Panek
- Cal Tomaka
- Mykayla Williams
- Natalie Zeufle

Fall 2025

- Samuel Adornetto
- Benjamin Axberg
- Ian Berst
- Gavin Clayton
- Ralph Garrett
- Salah Griffis
- Daniel Hines
- Jaymee Meidel
- Brooke Puffer
- Beryl Remacle-Grimm
- Giannah Schlueter
- Sophia Styles
- Dakota Roberts
- Natalie Zeufle

Spring 2026

- Ben Axberg
- Alyssa Chase-Herr
- Gavin Clayton
- Madine Djibrine
- Salah Griffis
- Ian Kruger
- Jonathan Lebron
- Kelly Normandin
- Brooke Puffer
- Beryl Remacle-Grimm
- Giannah Schlueter
- Sophia Styles
- Alex Wysocki

Alumni Networking Event

The Geoscience Department hosted an alumni networking event on December 1, 2025. Alumni from the former Earth Science and Geography and Planning Departments were invited. The event included a networking reception followed by a round table style format where students could talk to alumni working in Education, Earth Science, Geology, Geography and GIS. Students gained valuable job tips and insights into courses and skills needed to transition successfully to the workforce. We hope to plan similar alumni events for the 2026-2027 academic year. If you are interested in being part of a future alumni event, please email Dr. Solar at solargs@buffalostate.edu

Student Highlights

Ben Axberg (Williams) The Effect of Sea Level Fluctuations on Delta Formation on Saturn's Moon Titan

Alex Bader, Joel Willis, Daniel Hines (Williams) Reconstruction of Past Environments Using Fossils from Hamburg Beach

Wilma Buchanan (Bergslien) Hickory Woods/ Good Intentions: Toxic Consequences/ Then and Now

Corey Fragale (Bayram, Math) Nipah Virus Disease: A Mathematical Model Perspective

Mikayla James (Williams) ExPOSÉ: A Closer Look at Exoplanets!

Abijah O.J.C. Johnson (Chesterton, History) Three Piece Suit: Raúl Grigera, and the Politics of Visibility in Argentina

Abijah O.J.C. Johnson (Tang) The Empire State Grow-Down: Ranking Major NYS Cities by Local Produce Variety

Jonathan Lebron, Sidney Morris, Sam Adornetto, Ben Axberg (Williams) Changes in Sediment Load in Eighteenmile Mile Creek Throughout Early Spring

Emily Meidel (Solar) Across-Strike Micro- to Meter-Scale Structures in the Norumbega Shear Zone System in Harpswell Neck, ME

Emily Meidel, Andrew Monteforte, Mikayla James, Gavin Clayton (Williams) Observing the Coastal Changes of Woodlawn Beach State Park Over 100 Years Using Aerial Imagery

Andrew Monteforte (Sullivan) Paleoecology and Taphonomy of the Middle Devonian Bay View, Smoke Creek, & Adjacent Beds

Tithi Parmar (Bergslien) Heavy Metal Contamination in Everyday Health Foods

Brooke Puffer (Williams) Understanding Space Rocks: Different Types of Meteorites and What They Mean for The Bigger Picture

Shane Varrone (Williams) Participating in NASA's Citizen Science Program: Searching for Brown Dwarfs, Planet 9, and Exoplanets

Alex Wysocki, Brooke Puffer, Kelly Normandin, Madine Djibrine, Alyssa Chase (Williams) Plundering for Pyrite: Paleoenvironment of Western New York and Its Fossil Preservation Conditions

Presented at SRCC