



# 2025 Newsletter

## Geosciences

### Message from the Chair

Welcome to the second edition of our annual Department of Geosciences newsletter. It's been a privilege to serve another year as Chair at Buffalo State. In geosciences, the world is our classroom. Our students gain hands-on experience exploring the connections between Earth, environment, and society—preparing them to succeed in their careers and make meaningful contributions locally and globally.

As you'll learn in these pages, Geosciences 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 distinguish themselves, working tirelessly to keep our programs and facilities moving forward. It was an excellent year filled with collaboration, accomplishments and accolades.

We held an Alumni-Student Networking event on December 3, 2024, that featured over 20 alumni interacting with our students and representing several career fields. 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!

Student field trips continued as usual, including regional and local outings led by faculty. A highlight this year was a 5-day petrology trip to Maine and New Hampshire. These hands-on experiences remain a hallmark of our commitment to excellence. Over 20 students attended the Northeastern Section GSA meeting (Erie, PA, March 2025), co-hosted with the North-Central Section, with two presenting posters. On campus, 45 students presented 22 faculty-mentored posters at Buffalo State's Student Research and Creativity Conference—the largest departmental showing this year.

Highlights of our faculty and staff accomplishments included the awarding of the Buffalo State President's Award for Excellence in Faculty Service to Kevin Williams, and the announcement that in the Fall Tao Tang will be receiving the SUNY Chancellor's Award for Excellence in Research. We had 3 members of our family reach the 25-years-of-service mark at Buffalo State University (Kelly Frothingham, Mary Perrelli, and me). Vida Vanchan again hosted a successful "Southeastern Asia Week" on Climate Change (March, 2025). Faculty-student interaction continued with a successful year for both the Astronomy and Geology Club and our chapter of the New York Water Environment Association (in its second year).

In closing, I hope you enjoy our newsletter. 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. As an alumnus, your success is our success, and vice versa. Our success story is a testament to you.

Thank you!



Dr. Gary Solar

## 2024-2025 Geoscience Department Graduates

### Environmental Geography B.S.

Jessica Auge

Patrick McMahon-Eagon

Allison Panek

Destiny Rivera

Mykala Williams

### Earth Science B.S.

Samantha Kaufman

Martie Jones

Chelsie Mckinnie

Cal Tomaka

Megan Weisedel

Anthony Puleo

### Geology B.S.

Heather Buskist

### Geography B.A.

Eva Maines

## Katheryne T. Whittemore Award for Outstanding Student in Geography & Planning — Allison Panek



**Allison Panek**

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.

Allison completed the Environmental Geography B.S. and the Geographic Information Systems (GIS) Certificate while maintaining a 3.82 GPA. While the Whittemore award recognizes a high GPA, it must be in tandem with efforts which go beyond the classroom. To this end, Allison was awarded a Buffalo State Summer Research Fellowship to study water quality at Hiram Lakes (Wyoming County). Aside from submitting her report, she interacted with and developed a relationship with the cottage community. In addition, she served as an intern with the campus Environmental Health and Safety Storm Water Pollution Prevention Program. She is a member of the NYWEA student chapter and the Astro-Geo club. There were also many 'little' things too numerous to mention, including pumpkin decorating for the pumpkin drop and designing a Christmas ornament for the Buffalo State's Christmas tree.

## Buffalo State University School of Arts and Sciences Dean's Medal (Geosciences) — Samantha Kaufman



**Samantha Kaufman**  
(pictured with Dean Frothingham and Dr. Solar)

Samantha is a dedicated scholar in the Muriel A. Howard Honors Program and a four-year student-athlete. As a 2024 recipient of the USRF Fellowship, she conducted geological mapping in southeastern Pennsylvania, prepared and analyzed thin sections. She presented her research at the Geological Society of America's Northeastern Section meeting.

In addition to her academics, Samantha served as President of the Astronomy & Geology Club, an academic mentor, and a Teaching Assistant for four geoscience courses: Introductory Geology, Mineralogy, Geomorphology, and Structural Geology. These experiences contributed to her selection as a finalist for the 2025 Buffalo State University President's Medal. She plans to become an Earth Science teacher and will continue her graduate education at Buffalo State.

Congratulations Samantha!

## National Center for Geographic Education Excellence of Scholarship Award (Geography) — Jessica Auge



**Jessica Auge**

The **National Center for Geographic Education Excellence of Scholarship Award (Geography)** recognizes outstanding academic achievement of a Geography major. The primary criterion of this award is academic performance. Secondary criteria can include departmental service, dedication, and enthusiasm.

In addition to her Environmental Geography major, Jessica is also completing a second major in Computer Science and the Geographic Information Systems (GIS) undergraduate Certificate. She has maintained a high GPA in each of these programs. Jessica is also a member of the Geospatial Technology honors society (Gamma Sigma Theta).

Jessica will receive an award from the NCGE as well as a certificate from the Geography and Planning Department. Nicely done, Jessica!

## **David Bullough Memorial Award for Academic Excellence — Brennan Postich and Cal Tomaka**



**Brennan Postich**

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.

Brennan completed a major in Urban Planning in Fall 2024, along with the Geographic Information Systems (GIS) Certificate. He maintained a high GPA in each of these programs.

Brennan currently works for the City of Salem, Massachusetts as an Urban Planner. His work involves helping run the City's Zoning Board of Appeals, determining potential electric vehicle charging station locations citywide, and conducting housing research for the City. He uses the City's GIS tools daily to look up zoning codes, communicate information to residents, and create maps for various City projects.

Brennan will receive a \$50.00 check and a certificate from the Geosciences Department. Congratulations, Brennan!

---

## **Geology and Earth Science Awards**

**The John Murtaugh Award for excellence in geological field work - Samantha Kaufman**

**The Carl Seyfert Award for excellence in geology- Heather Buskist**

**David Bullough Memorial Award for Academic Excellence - Cal Tomaka**

**The Irving Tesmer Award for excellence in geology – Martie Joines**

**Planetarium Director's Volunteer Award- Katy Pinter and 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:

**Jessica Auge (EVG, CIS) – Pictured at left**

**Daniel Krieger (URP, EVG) – Pictured at left**

**Allison Panek (EVG, EAS) – Pictured at left**

**Brennan Postich (URP)**

**Mapendo Tumani (URP)**

**Evan Maher (INR)**

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



The students in the NYWEA student chapter participated in several education events this year. Activities included a tour of the erosion and sediments control measures for construction on campus, illicit discharge training with Mary McSwan (alumna and Chief Environmental Compliance Specialist for the Erie County Department of Environment and Planning) and a World Toilet day presentation on the design of the sanitary sewer system for the new Bills Highmark Stadium,

Pictured to the left, students in the NYWEA chapter helped to weed and plant flowers in ten planters on the west side of SAMC. These planters will be maintained seasonally by students in the NYWEA chapter.

### 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 2024

- Benjamin Axberg
- Heather Buskist
- Gavin Clayton
- Ralph Garrett
- Sam Hellert
- Martie Jones
- Samantha Kaufman
- David Kicak
- Emily Meidel
- Cameron Murphy
- Madison Palmatier
- Allison Panek
- Cal Tomaka
- Natalie Zuefle

#### Fall 2024

- Benjamin Axberg
- Heather Buskist
- Rachel Donner
- Ralph Garrett
- David Kicak
- Gavin Clayton
- Martie Jones
- Emily Meidel
- Allison Panek
- Samantha Kaufman
- Anthony Puleo
- Dakota Roberts
- Raven Rybak
- Emily Gamble
- William Frederick
- Mykala Williams
- Mia Schuler
- Andrew Monteforte

### Alumni Networking Event

The Geoscience Department hosted an alumni networking event in December of 2024. 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 Spring and Fall in the 2025-2026 academic year. If you are interested in being part of a future alumni event, please email Mary Perrelli at [perrefmf@buffalostate.edu](mailto:perrefmf@buffalostate.edu).

Alumni, we want to hear from you! Where are you? What are you doing? Please contact the department so you can be featured in our next newsletter. Email: Mary Perrelli at [perrelmf@buffalostate.edu](mailto:perrelmf@buffalostate.edu)

## The Golden Snowball Trophy in Buffalo

**(It was a threepeater!)**

The Golden Snowball trophy is awarded yearly to the city in New York State that accumulates the most snow. The snow contest began in 1977 as a lighthearted contest between cities of Albany, Binghamton, Buffalo, Rochester and Syracuse. The prize, beyond the trophy, is the bragging rights.

The City of Buffalo has received the trophy over the past three years (2021-2024), and now it is time to send it to this year's winner— Syracuse. A send-off celebration took place in the Buffalo Brewing Company's tap room on Saturday June 7<sup>th</sup> and Mayor Walsh was present to accept the trophy on behalf of Syracuse. For Buffalo, there is always next year!

While in Buffalo, Buffalo State University hosted the trophy and Dr. Stephen Vermette served as its custodian. Over the past three years the trophy has toured WNY. Just a few of its stops included Buffalo's Wing Fest, the Buffalo Museum of Science, Duff's, the BFLOStore, Vidler's 5 & 10 Store, Becker Farms, Chef's, the Blueberry Treehouse Café, Off Beat Cinema, Buffalo State's Campus House to name a few, and several libraries' winter fairs, and post offices. The trophy found a second home at the Buffalo Brewing Company which raised a glass to winter by creating a craft brew - Golden Snowbeer – in honor of the contest. The unique ingredient was Buffalo's snow – “a blizzard in every can”!

The contest is more than just snow. It provides an opportunity to connect with the WNY community. It created a great deal of press and wherever I took the trophy it was welcomed. It also served as a vehicle to blend weather science with the humanities. Both the good and bad of snow is what binds our city and region (engrained in our DNA) and exemplifies why we are a “City of Good Neighbors”. It's a WNY Thing. We live it! My appreciation to the many who hosted the trophy on its tour over the past three years.

<https://centralcurrent.org/sean-kirst-after-buffalo-shows-the-way-the-golden-snowball-comes-home-to-syracuse/>



Trophy handoff to Syracuse Mayor

## Student Highlights

\*Heather Buskist (GEO) – Fabric Analysis of Metapelites from Western Connecticut. Faculty mentor, Professor Gary Solar

\*Allison Panek (EVG) – “Normalized Difference Vegetation Index (NDVI) Analysis of Southeast Alden, NY” and Faculty Mentor Dr. Tao Tang and “L.A. Wildfires: What Comes Next?” a joint class project for Extreme Weather GEG 386, Faculty mentor, Dr. Stephen Vermette

\*Jessica Auge (EVG, CIS) – “Temperature Data Comparison–Urban Buffalo Region vs. Rural Wyoming County Region with Co-author: Anthony Puleo, Jayme Meidel. Class project with Dr. Elisa Bergslien

\*Joel Willis (EVG) – Climate Trend Analysis: Extreme Weather in Western New York. Faculty mentor, Professor Stephen Vermette

\*Sam Kaufman (GEO) – Fellowship. Differential Strain Record among Different Metasedimentary Rocks Deformed During the Same Orogenic Event, Southeastern Pennsylvania. Faculty mentor, Professor Gary Solar

\*Andrew Monteforte (GEO) - Paleoecology and Taphonomy of the Middle Devonian Bay View and Smoke Creek Beds Andrew Monteforte, Geology Faculty mentors, Professors Nicholas Sullivan and Gary Solar

\*Anthony Puleo (EAS) - The Cephalopod Fossil Collections of Buffalo State University Anthony Puleo, Earth Sciences. Faculty mentors, Professors Nicholas Sullivan and Kevin Williams

\*Joshua Carlotto (GEO) - Investigating the Potential for a Buried Freighter at Tiff Nature Preserve Using Ground Penetrating Radar. Faculty mentor, Professor Kevin Williams

\*Ralph Garrett (EVG) – Fellowship. Pleistocene and Holocene Climatic Influence on Woodrats of the Sierra Juarez . Faculty mentor, Professor Camille Holmgren

\*Madine Djibrine (GEO) - How Lead Affects Soil Quality in Urban Areas. Faculty mentor, Professor Elisa Bergslien

\*Xinozea Ferguson-Giscombe (EVG) - Heavy Metal Content in Soil at Legacy Industrial Sites in Buffalo, NY Co-author: Benjamin Axberg, Raven Rybak, Natalie Zuefle. Faculty mentor, Professor Elisa Bergslien

\*Mykayla Williams (EVG) - Are You Fishing for Heavy Metals? A Case Study of Cayuga vs. Eighteen Mile Creeks. Co-author: Ralph Garret, George Reimers, Andrew Miller, Anthony Morin Faculty mentor, Professor Elisa Bergslien.

\*Martie Jones – Microfabrics in Mt. Washington area migmatites, New Hampshire. Faculty mentor, Professor Gary Solar, Geosciences

\* Presented research at the 2025 Buffalo State Student Research & Creativity Conference



## Faculty Highlights

**Dr. Camille Holmgren** – Dr. Holmgren presented her research on Best Practices for Ancient Rodent Midden Collection, Processing, and Curation at the American Quaternary Association conference in Salt Lake City. She also resumed teaching Past Climates and Environments after a long hiatus, as well as offering regular and Honors sections of her newer Oceanography and Introduction to Environmental Sustainability courses.

**Mary Perrelli** – Mary conducted a GIS training workshop for the NYS Master Teacher program and co-sponsored a half-day GIS Day conference with the Western New York GIS Users Group. She worked with faculty in the Social Work department to integrate a GIS data collection using Survey 123 and Story Maps into the SWK 340 class.

**Dr. Tao Tang**- In the Fall of 2024, Dr. Tang presented his study “Spatial and Temporal Mapping of Algal Bloom in the West Lake Erie Applying Landsat 8 and 9 Remote Sensing Data - 2013 to 2023” at the Faculty and Staff Creativity Conference. In the Spring of 2025, supervised four students to conduct the applied GIS and Remote Sensing research. Students presented at the Student Research and Creativity Conference. Some of these approaches were presented at the International Conference of Harvard University GIS Center in title of “Teaching the digital twin through undergraduate research projects applying self-made LiDAR hardware and data collections”.

**Dr Vida Vanchan**- Dr. Vida Vanchan was appointed as Interim Associate Dean for the School of the Professions where she served from August of 2024 to January of 2025. Prior to this appointment, Dr. Vanchan received a research grant from SUNY/CUNY Southeast Asia Consortium (\$5,000) to conduct a research project during the summer of 2024 related to climate change, circular economy, and global challenges. Her research findings have been presented at local and international meetings. In addition, her international collaborative research findings have been published in international peer-reviewed journals and books that are known to scholars in her field and other disciplines, such as business, economics, management, and development studies.

**Dr. Stephen Vermette** – An eclectic year of activities outside of the classroom. Published a couple articles. Most notably, one on the early years of Buffalo’s weather history. Gave presentations on one of my favorite geographers: Alexander von Humboldt. Worked with Joel Willis on a climate trend related project – some interesting discoveries. Served on a couple M.S. thesis defenses in Biology. Collaborated on two research proposals, one related to educational research in Cambodia and a second to obtain European funding with a focusing on climate policy. Service activities ranged from serving on the Board of the Erie County Soil and Water Conservation District to volunteering on a weather-related topic at the Explore & More Children’s Museum.

**Dr. Kevin Williams** - Dr. Williams was honored with a service award from the Western division of the Science Teacher Association of New York State (STANYS), which recognizes STANYS members who have made exceptional contributions in science education. Williams was nominated by former student, Samantha Stone, '14, '16, a science teacher in an English as a New Language co-taught classroom International Preparatory School in Buffalo, specifically for his work with Buffalo Public Schools and role in providing planetarium shows. He was also promoted to Full Professor this spring.