



THE PROPOSAL

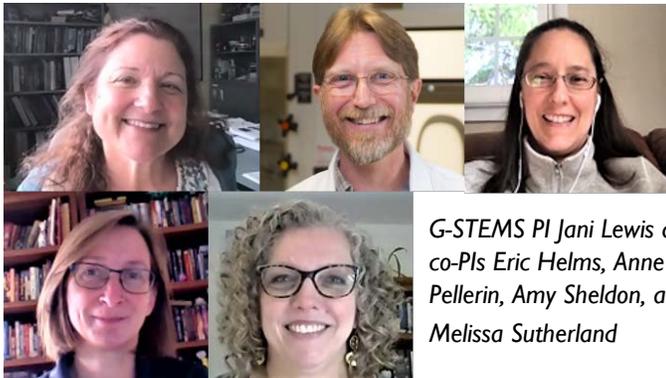
The Geneseo Office of Sponsored Research Newsletter

Fall 2020

\$1 Million for STEM Scholarships

The hard work of a team of SUNY Geneseo faculty has earned a \$1 million grant that will provide scholarships and other supports for STEM majors and contribute to the scholarship of teaching and learning.

Principal Investigator (PI) and Associate Professor of Biology Jani Lewis and co-PIs Associate Professor of Chemistry Eric Helms, Associate Professor of Physics and Astronomy Anne Pellerin, Associate Professor of Geological Sciences Amy Sheldon, and Associate Professor of Mathematics Melissa Sutherland were awarded the maximum amount for a National Science Foundation S-STEM grant entitled “G-STEMS: A Comprehensive Program for STEM Majors, Including an Interdisciplinary First-Year Seminar, to Increase Retention, Persistence, and Graduation Rates and Preparation for Successful Careers.” Associate Provost for Academic Success Joseph Cope and Director of Institutional Research Julie Rao were instrumental in providing ideas and information for the grant proposal.



G-STEMS PI Jani Lewis and co-PIs Eric Helms, Anne Pellerin, Amy Sheldon, and Melissa Sutherland

A new Interdisciplinary STEM Exploratory Seminar (ISES) will be offered to the G-STEMS scholars, and Professor of Psychology Anjoo Sikka will design a study to determine the seminar’s effect on retention, persistence, academic success, STEM identity and retention in a STEM major.

The 5-year G-STEMS program will provide scholarships for 30 low-income, academically talented students majoring in Biology, Biochemistry, Biophysics, Chemistry, Geochemistry, Geological Sciences, Geophysics, Mathematics, Applied Mathematics, Neuroscience, Physics, and Applied Physics, who will receive collectively a total of 120 year-long scholarships, averaging \$5,000 each. G-STEMS will also support the scholarship recipients with peer and faculty mentoring, cohort building activities, research experiences, and conference attendance and presentation experiences. The goal of the program is to

increase the scholarship recipients’ retention, persistence and graduation rates, and prepare them to enter the STEM workforce or graduate school in STEM disciplines.

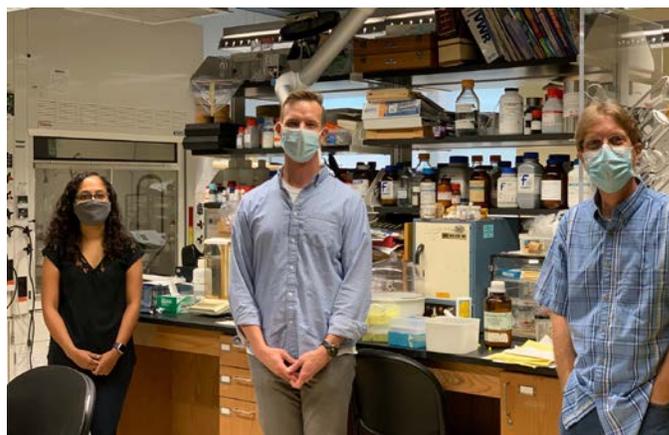


Professor of Psychology Anjoo Sikka will design the G-STEMS education study.

Investigation of the effect of the course will contribute to evidence-based methods that close the gap between low-income talented STEM students and their higher income counterparts at SUNY Geneseo. This research will inform institutional efforts to retain and graduate low-income STEM students in their majors. Depending on the outcome of the study, ISES could be adapted for other majors at Geneseo.♦

3 Faculty, 3 Years, \$300,000

Three Chemistry Department faculty have been awarded \$300,000 over 3 years from the National Science Foundation Improving Undergraduate STEM Education (IUSE) Program to conduct STEM education research on a novel approach to teaching chemistry. PI Associate Professor Jeffrey Peterson, Associate Professor Eric Helms and Assistant Professor Rabeka Alam wrote the successful proposal for “Institutionalizing Undergraduate Research throughout the Chemistry Laboratory Curriculum” to develop, implement, and evaluate course-based undergraduate research experience (CURE) curricula. *(continued on p. 2)*



Chemistry Professors Rabeka Alam, Jeffrey Peterson and Eric Helms



3 Faculty, 3 Years, \$300,000 *(continued)*

What makes their project unique is how the professors are incorporating CUREs into not just one course, but into four courses spanning several chemistry subdisciplines in a multi-year, sequenced fashion.

When the faculty team came up with the idea to deliver the in-lab research skills during all four years of the undergraduate chemistry program, they searched the literature to see if this approach had ever been tried before. They found many articles that discussed the benefits of CUREs, but no articles on multi-year sequenced CUREs. Their project will provide the first case-study that implements, documents, and evaluates a holistic CURE laboratory curriculum. It will help answer important questions about the impacts of multi-year CURE experiences on student learning.

The goals of the multi-year CURE project are to transform the chemistry laboratory curriculum to become centered on undergraduate research, and to improve student recruitment, retention, and participation in other undergraduate research experiences, especially students from historically excluded groups. In addition to providing funding for the educational research, equipment, materials, and supplies, the grant will fund the professional workshops at Geneseo, open to all STEM faculty, focusing on evidence-based teaching practices, CUREs, writing intensive courses, and collaborative assignments.

The PIs hope to catalyze broad changes across the chemistry curriculum, thereby improving student engagement, learning, and preparation for graduate studies and the STEM workforce. They anticipate that their three-year project, which begins in September, will help diversify the STEM student-body by attracting and engaging diverse students.♦

NEW this year: Pre-tenure Faculty Research Support Grants

For tenure-track faculty who have not yet submitted their tenure package and whose research and scholarly work has been impacted by the COVID-19 pandemic, the Research Council has established a small grants program funded by The Geneseo Foundation. Requests for awards up to \$250 will be reviewed and approved on a rolling basis. In their application, faculty may also request up to an additional \$250. Application deadline: October 5, 2020. Please see this link for guidelines: https://www.geneseo.edu/sponsored_research/pre-tenure-faculty-research-support-grants

Internal Funding Program Updates

Faculty and Student Travel Grants: This year we will not be funding in-person conference travel. However, Faculty Travel Grants and Undergraduate TRAC Travel applications may be submitted for registration costs for virtual conference presentations.

Faculty and Student Research Travel: Faculty and students must adhere to the research travel guidance from the Provost's Office: <https://wiki.geneseo.edu/pages/viewpage.action?spaceKey=PROVOST&title=Research+Travel+Guidelines> Please review these guidelines prior to preparing any application that includes research travel.

Hurrell/McNaron Award: This program has ended. The Research Council will be considering new ways to recognize faculty for their scholarly work.

Upcoming Deadlines for Faculty

https://www.geneseo.edu/sponsored_research/internal

October 5th at 8:00 AM: **Pre-Tenure Faculty Research Support Grants**

February 8th at 8:00 AM: **Faculty Travel Grants Incentive Grants, Research Development Awards, and Faculty Summer Fellowships**

March 1st at 8:00 AM: **Proposal Writing Support Awards**

Upcoming Deadlines for Students

https://www.geneseo.edu/undergraduate_research/campus-based-research-funding

October 19th at 8:00 AM: **Dean Johnston Student Research Assistantships**

November 2nd at 8:00 AM: **Undergraduate Travel Research and Creativity (TRAC) Grants** (early spring deadline)

February 15th at 8:00 AM: **Undergraduate Travel Research and Creativity (TRAC) Grants** (spring deadline)

March 1st at 8:00 AM: **Geneseo Foundation and Jason and Diana Kyrwood '95 Student/Faculty Research Undergraduate Summer Fellowships**



Using Children's Literature to Develop Mindfulness and Improve Behavior



Christina Interlichia
Class of 2021

Faculty Sponsor:
Dr. Michael Rozalski,
Education

Describe your project: It explores the benefits of using bibliotherapy to teach mindfulness to elementary students. Bibliotherapy is the practice of using literature to introduce new concepts or ideas, and mindfulness is the practice of focusing on the present moment by openly observing what you are surrounded by and what you feel and think. Studies show that mindfulness can reduce anxiety and improve interpersonal skills, executive function, and memory. This project seeks to determine how mindfulness practices through children's literature and activities can improve student behavior.

How is your project funded? The Geneseo Foundation Undergraduate Full-time Summer Research Fellowship.

What did you hope to gain from working on this project? I hope to determine strategies to implement mindfulness practices in schools to foster stronger classroom communities, provide students with positive coping mechanisms, and help students develop their social-emotional skills.

Is there anything that has surprised you? I have been surprised by how adopting mindfulness practices can provide benefits to students both academically and personally as they develop constructive strategies to handle their emotions and thoughts beyond the classroom to any setting.

How has working on this project impacted your long-term plans? This project has helped me to realize my passion for research and how crucial it is to be a life-long learner as an educator.

What have you enjoyed the most? I have appreciated the opportunity to gain research experience by working with Dr. Rozalski to explore an interesting topic.

What advice do you have for other students who may be interested in working on a research project? Challenge yourself. Reach out to your professors about learning opportunities outside of the classroom. ♦

Creating of a Digital Archive of Soil Properties



Abigale O'Connor
Class of 2022

Faculty Sponsor:
Dr. Amy Sheldon,
Geological Sciences

Describe your project: I created a digital archive of the soil properties surrounding a wetland in Livonia, NY, the basis for my honors thesis. First, I manually took soil cores from the wetland and determined the sediment size by a texture-by-feel analysis and visual observations. I digitized the cores and began systematic sieving, a more accurate way to determine sediment size. Understanding the sediment size of each soil horizon, or soil layer, indicates how water is moving through the subsurface. This is important because the Livonia wetland filters groundwater that eventually ends up in Conesus Lake.

How is your project funded? The Geneseo Foundation Undergraduate Full-Time Summer Research Fellowship.

What did you gain from working on this project? I gained a more thorough understanding of soil properties and proper sampling techniques by collaborating with soil scientists from the Natural Resources Conservation Service. I applied what I had learned to my own work.

Is there anything that has surprised you? Working around COVID-19 posed many challenges. What surprised was how helpful everyone within and beyond campus has been in aiding with my research.

How has working on this project impacted your long-term plans? This project has given me experience working with soils, which will be useful when I apply to graduate schools to study soil geomorphology – the interaction between soils and geology.

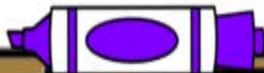
What have you enjoyed the most? I have most enjoyed collaboration. I think it is essential to approach the research question from all angles by collaborating with people who bring different skill sets to the table.

What advice do you have for other students who may be interested in working on a research project? I cannot recommend it enough. I have learned many technical skills during my research projects at Geneseo, but have also learned important soft skills. Working on a research project is very rewarding, and it is a great way to learn more from the faculty. ♦



2019-20 Faculty/Staff Grant and Fellowship Awards 15 Awards Totaling \$1,830,723

- Behrend, J., Adams, C. & Oberg, M., History, Underground Railroad (UGRR) Sights in the Genesee River Valley National Heritage Trust/NY State Parks Division of Historic Preservation, \$6,000
- Bosch, I., Biology, Conesus Lake Monitoring Program 2020: Macrophyte Studies, SUNY Brockport/Livingston County Planning Department, \$9,906
- Fletcher, K., Physics & Astronomy, Discovering Cosmic Ray Muons at Letchworth State Park: An APS Physics Outreach Project, American Physical Society/NSF, \$12,200
- Freeman, G. & Smith, L., Center for Integrative Learning, Supporting the Creativity and Skills Sharing of Refugees and Forced Migrants, College Compact of NY and Pennsylvania, \$1,500
- Herold, C. & Herold, A., Political Science & International Relations, Program on Constitutionalism and Democracy, Jack Miller Center, \$10,000
- Lindsay, R., Milne Library, 2019-20 Library Collection Aid, State Education Department, \$9,646
- Padalino, S., Freeman, C., Pogozelski, E., Fletcher, K., McLean, J. & Yuly, M. (Houghton), Physics & Astronomy Nuclear and Plasma Diagnostics for the EP-OMEGA Laser Systems and the NIF, Laboratory for Laser Energetics, University of Rochester, \$420,000
- Peck, S., Education, Gaming to Learn: Incorporating Games for Maximizing Interdisciplinary Learning, NEA Foundation, \$5,000
- Peterson, J., Alam, R. & Helms, E., Chemistry, Institutionalizing Undergraduate Research Throughout the Chemistry Laboratory Curriculum, National Science Foundation, \$299,548
- Pogozelski, W. & West, K., Chemistry and Political Science & International Relations, ADVANCE Partnership: Collaborative Research: COPLAC Partnering and Liaising Across the Nation Initiative (PLAN), National Science Foundation, \$808,444
- Rozalski, M. & Urso, A., Education, for Safer Schools: Preparing Future Teachers to Respond to First Aid and Cardiac Emergencies, NEA Foundation, \$5,000
- Showers, D., Education, RCSD Dr. Charles C. Lunsford School #19 Restart School Improvement Grant, Year 5, Rochester City School District, School Improvement Grant/USED, \$62,517
- Steinhauer, A., Physics & Astronomy, Collaborative Research: RUI: Understanding Stellar Structure with Lithium and New Steps Toward the Big Bang Lithium Abundance, National Science Foundation, \$166,212
- Urso, A., Education, The Soaring Stars Program at SUNY Geneseo, Livingston County United Way, \$4,750
- Urso, A., Education, The Soaring Stars Program at SUNY Geneseo, Feinbloom Supporting Foundation, Rochester Area Community Foundation, \$10,000



Program Spotlight

Cottrell Scholars Award

The Cottrell Scholar Award, which provides \$100,000 over three years, supports research that will add to fundamental scientific knowledge in Chemistry, Physics, or Astronomy. Applications must include both research and educational plans. Post-tenure Cottrell Scholars may compete for the prestigious Cottrell FRED and Fulbright-Cottrell Scholars Awards. Following previous announcements, it is expected that faculty members who started their first tenure-track appointment in 2018 will be eligible and that the online submission portal will open March 1, 2021 for a summer 2021 submission deadline. <https://rescorp.org/cottrell-scholars>





Art Historian and World Citizen



Assistant Professor of Art History and Coordinator of the Museum Studies Minor Alla Myzelev's comparative perspective in art and culture is constantly expanding, reflecting her lived experiences in several cultures. Born in Ukraine, Alla moved to Israel as a teenager and finished her undergraduate degree there with a double major in History of Art and French Studies. She earned her MA and PhD in Art and Visual Culture at York University and Queens University, respectively, in Canada. She was awarded two postdocs, one funded by the Mellon Foundation in London, England, and one funded by the Social Sciences and Humanities Research Council at the University of Western Ontario in London, Ontario. Afterwards she was curator at art institutions and taught at several institutions of higher education in Canada and the U.S.

In 2014 Alla came to SUNY Geneseo. Her areas of scholarly research include fashion and gender; modern and contemporary art and material culture in Eastern Europe; North American modern and contemporary (late 20th and 21st century) visual and material culture, design and practice; Museums theory and practice; Gender identity and third-wave feminism; and Design and craft theory and research methodology. Alla continues to undertake international scholarly research and has delved into digitization projects, both of which she has funded with an impressive array of fellowships and grants. She also occasionally takes on curatorial work. Currently, Alla and Distinguished Professor and Chair of the Department of Art History Lynette Bosch-Burroughs, supported by Geneseo's Proposal Writing Support Award, are developing a National Endowment for the Humanities application to develop a Museum Studies Major.

In 2017 Alla was awarded an IITG Tier 1 grant and in 2018 a Tier 2 grant to develop a digital object repository of objects related to women's arts and crafts such as embroidery, knitting, and sewing objects that can be used to

create teachable content for anthropology, art history, history and other humanities. Timestich (<http://timestitch.geneseo.edu/items/browse>) crowdsources materials and trains museum studies students to curate online content and create virtual exhibitions. Using OMEKA, an open source web-publishing platform, Alla and her students developed a database of more than 3,000 catalogued and photographed objects. While creating the TimeStitch platform, Alla became interested in possibilities that virtual and augmented reality (VR) can offer to teaching art history, for example taking students to virtual exhibits at international museums such as La Louevre and expanding their comparative perspectives. She is also seeking funding to develop her incipient VR skills. ♦

Introducing Sarah Macauley

Geneseo welcomes Sarah Macauley to the Grants Management Office. Sarah is a 2011 graduate from SUNY Brockport with a degree in Accounting. She worked at the University of Rochester in the Accounting Cost Standards Department, then was transferred to the Organ Donation Department where she worked for 8 years prior to starting at Geneseo. Beginning employment in the time of COVID has been challenging for Sarah, but she said that the upside has been the chance to learn about the job one-on-one with Betsy Colón.

Sarah is a mother of three daughters, Reagan (4), Penelope (3) and Quinn (2). She lives near Geneseo with her three children and husband on a family-owned farm. She says that she wanted to work in the community that she lives in, and when she saw the job announcement for her position, she jumped at the chance. At her job interview it was quite apparent that Sarah has the skills to excel as a Grants Management Associate, so it is a wonderful match for Geneseo as well.



Sarah says that her pet peeve is disorganization, so she strives to be ultra organized. Another of her strengths is creative thinking, which has served her well in the past and is a plus in the management of grants. Three words to describe Sarah are "funny," "sincere" and "loyal." ♦