2026 Upstate Science Librarians Meeting, Houghton University

Reinhold Campus Center, 2nd Floor

Friday, October 16, 2026

8:30 AM – 3:30 PM

8:30 - 9:00 am **Registration and Continental Breakfast**

9:00 - 9:15 am **Welcome Speech**
Dr. Jill Jordan, Assoc. Prof. of Mathematics & Dean of Natural Science & Mathematics

9:15 - 10:00 am

Microcalorimeters: Enabling New Paths for Science

Dr. Katrina Koehler, Houghton University

Associate Professor of Physics and Data Science

10:00 - 11:00 am **Presentation**

Notes From the Field: A Librarian's Findings From a Semester Auditing Biology Classes

Hilary Wong, SUNY Cortland (30 minutes)

Evidence synthesis instruction for graduate engineering students

Ally Wood and **Erin Rowley**, University at Buffalo (15 minutes)

Growing pains: what can the history of science publishing teach us about its future?

Marianne Donley, Syracuse University (15 minutes)

11:00 - 12:00 noon **Break / Chapel OR (on your own)**

12:00 - 1:00 pm **Lunch**

1:00 - 2:15 pm **Presentations**

Vibe Coding for STEM Librarians: What It Really Is and How It Can Help You

Juan Denzer, Cornell University (30 minutes)

First-Year STEM Students' Self-Evaluation of Preparedness for College-Level STEM

Samantha Dannick, Alfred University - NYS College of Ceramics (15 minutes)

From “I wish I knew this earlier” to “my librarian taught me this”: Librarianship viewed from a STEM Graduate Student Perspective

Lindsay Bahureksa, **Mark Xiang**, and **Sian Eisenhut,** Cornell University (30 minutes)

2:15 - 2:30 pm **Break**

2:30 - 2:45 pm **ePoster/Poster**

Spies, Sabotage and Subatomic particles: Atomic spying in Europe during World War II

Hilary Wong, SUNY Cortland

Meeting Researchers Where They Are: Piloting a Research Data Community in Zenodo

Sarah J. Wright, Henrik Spoon, Gabby Evergreen, and Lencia McKee, Cornell University

2:45 pm - 3:00 pm **Business Meeting**

3:00 - 3:30 pm **Tours (Optional)**

Laboratories and the Margaret Bush Greenhouse (Paine Center for Science) or

Houghton Ski Hill/Ropes Course Trail (0.66 mi) (HU Hiking-Trails)

Presentation Abstracts



Dr. Katrina Koehler, Houghton University
Bio: Katrina Koehler received her PhD and MA in physics from Western Michigan University and did her undergraduate studies in mathematics and physics at Houghton University. She teaches physics, programming, and data science classes at Houghton University in Houghton, NY during the academic year and conducts research in nuclear safeguards at Los Alamos National Laboratory in Los Alamos, NM. She loves to learn about active teaching techniques and how the human brain does its thing.

Microcalorimeters: Enabling New Paths for Science
Microcalorimeters are highly sensitive radiation detectors that can measure the energy of individual particles and photons with remarkable precision. This talk will introduce transition-edge sensors, a type of microcalorimeter that operates at extremely low temperatures, and explore how their capabilities are opening new avenues for scientific research. Examples will include efforts to measure the neutrino mass, research into cancer therapies involving actinium isotopes, improved nuclear data through high-resolution gamma spectroscopy, and applications in nuclear safeguards. Together, these examples illustrate how advances in detector technology can enable measurements that were previously difficult or impossible—and create new opportunities for scientific discovery.

Hilary Wong, SUNY Cortland
Notes From the Field: A Librarian's Findings From a Semester Auditing Biology Classes
Many STEM librarians lack academic background in their liaison areas. What can a librarian do in such circumstances to better understand the needs of their students and faculty? In this presentation, I will discuss my experience auditing undergraduate Biology lecture and lab classes during my sabbatical in Fall of 2025. I will describe the challenges and successes of the project, and my observations about our students, faculty, the

curriculum, and myself as a learner. I will explore the ways I am applying the lessons I learned to my instruction, outreach and interactions on campus.

Ally Wood and **Erin Rowley**, University at Buffalo
Evidence synthesis instruction for graduate engineering students
Evidence synthesis is a research methodology that produces rigorous, comprehensive literature reviews. While these evidence-based reviews began in the health sciences, they are gaining popularity in other disciplines, including engineering. This methodology draws on many areas of librarian expertise: database selection, keyword string development, and citation management, among others. As a result, librarians are well-suited to provide guidance and instruction to researchers who are interested in this type of study. This talk highlights a collaboration between two engineering librarians and an engineering professor to design an evidence synthesis assignment and two instruction sessions for graduate students. Hands-on activities and group discussions were major components of each session. Because traditional evidence synthesis projects can take years to complete and the methodology is still evolving in engineering, the assignment and instruction were tailored to meet the graduate students' needs. This initial collaboration provides a strong foundation that can be refined for years to come.

Marianne Donley, Syracuse University
Growing pains: what can the history of science publishing teach us about its future?

"Scholars have a lot to consider when they set out to publish a manuscript. Which venue will give their work the best exposure? Should they seek feedback from other scholars before publishing? Is it too early (or too late) in the project to share their research? Do they risk being "scooped" by a rival scholar? How do they comply with the requirements—and sometimes, the politics—of regulators or funders? What if their work is wildly misinterpreted by the general public? And who's paying for all of this?

Many of these concerns plagued researchers as far back as the Renaissance, when the adoption of the printing press drastically changed the pace, cost, and reach of scientific communication across Europe. Can we find solutions to these questions for today's authors by examining past transformations in scientific publishing? How can the history of science communication prepare us to navigate its fast-paced digital future? This presentation will propose a few questions for consideration and discuss parallels between recent developments in science publishing and historical shifts, from the Scientific Revolution through the Information Age.

Juan Denzer, Cornell University
Vibe Coding for STEM Librarians: What It Really Is and How It Can Help You
"Vibe coding," a term popularized in 2025 for building software by conversing with an AI coding assistant rather than writing every line by hand, has quickly moved from novelty to everyday practice. Tools like Gemini, Claude Code, ChatGPT Codex, and Cursor let users describe what they want in plain language and iterate toward a working script or application, shifting the skill that matters from syntax fluency to clear problem description and critical evaluation of output.

This session introduces vibe coding for STEM librarians with little to no assumed programming background. It will cover what these tools actually do, where they excel (automation scripts, data cleanup, quick prototypes, small internal utilities) and where they fail (security-sensitive code, anything requiring deep domain correctness without review. Using real examples from academic library work including Python scripts built to compare STEM A-Z database lists across libraries and to customize a GitHub repository for local use. I'll walk through a practical workflow: framing a request, iterating with the AI, and validating results before deployment. I'll also discuss how these tools can support reference and instruction work, including student consultations where the librarian's role shifts from knowing the code to teaching good evaluation of it.

Attendees will leave with a sense of which library problems are good candidates for this approach (repetitive data tasks, one-off tools, workflow automation), what guardrails to keep in mind (data privacy, licensing, code review), and how to get started even with zero coding experience.

Samantha Dannick, Alfred University - NYS College of Ceramics
First-Year STEM Students' Self-Evaluation of Preparedness for College-Level STEM
Working towards the development of an OER to support first-year STEM students, it was important to identify the areas of (greatest) need. In addition to looking to the literature, I sought to evaluate the situation at my own institution. I felt it was important to gather student perspectives about their confidence in the knowledge and skills involved in studying STEM in college. I was also interested in first-year students' attitudes and expectations of studying STEM in college. This presentation will report on the results of a survey administered to two cohorts of first-year students with a declared STEM major at Alfred University.

Lindsay Bahureksa, **Mark Xiang**, and **Sian Eisenhut,** Cornell University (30 minutes)
From "I wish I knew this earlier" to "my librarian taught me this": Librarianship viewed from a STEM Graduate Student Perspective
Many incoming graduate students enter their programs with confidence in the skills that helped them succeed previously. These skills are often shaped by their experiences, tools and research culture of their undergraduate institutions, laboratories, or mentors. However, graduate research frequently requires a broader and more complex set of skills than students initially recognized. As a result, many students discover gaps in their preparation only after navigating research challenges through trial-and-error, often leading to the reflection - "I wish I knew this earlier". Starting from this perspective, this talk explores the things we "wish we knew" as STEM graduate students – many of which are already part of the librarian's toolbox. Drawing on our experience as both researchers and librarians, we explore how these moments of realization will shape our approaches to librarianship and our understanding of graduate student support. Along the way, we explore common barriers that prevent STEM graduate students from engaging with existing library services, identify opportunities for librarians to connect with students earlier in their research journey, and discuss how libraries can help establish foundational research skills that reduce unnecessary trial-and-error. Ultimately, we consider how librarian expertise, collaboration, and targeted support can help students develop a stronger foundation for research success.

Hilary Wong, SUNY Cortland

Spies, Sabotage and Subatomic particles: Atomic spying in Europe during World War II

This poster summarizes a STEM librarian's research into the wild world of atomic spying and sabotage during World War II, and her efforts to utilize this research to benefit SUNY Cortland students and faculty. The poster will discuss:

- Moe Berg, the major-league-catcher-turned spy, who almost assassinated the head of the Nazi's nuclear program, Werner Heisenberg
- The accomplishments of the OSS, unruly precursor to the CIA, and ALSOS, a group of scientists/spies who traveled with invading American troops to investigate the Nazi's nuclear program
- The multiple attempts of Norwegian and British commandos to destroy a heavy water plant in Norway, critical to Nazi atomic research

This research is a culmination of the librarian's academic and professional backgrounds: She has a Masters degree in Modern European History, and previously worked as an Archivist, processing the papers of Manhattan Project Physicist Hans Bethe at Cornell University (along with colleague Jude Corina). She is currently Science Librarian at SUNY Cortland, and is pursuing avenues to make this research accessible and useful to her academic community.

Sarah J. Wright, **Henrik Spoon**, **Gabby Evergreen**, and **Lencia McKee**, Cornell University

Meeting Researchers Where They Are: Piloting a Research Data Community in Zenodo

In an effort to meet our researchers where they are already sharing data and code, the data curation team in collaboration with our Astronomy librarian launched a pilot Cornell University Research Data Community in the Zenodo generalist repository. The Realities of Data Sharing (RADS) project consistently identified Zenodo as a top 10 publisher of data and software DOIs for each institution queried; for our institution Zenodo represented almost 50% of the dataset DOIs published 2012-2022 (Johnston, 2024). We therefore considered it a very practical, low-cost effort to meet researchers where they are and provide curation support and expertise when and where they need it. We have a well-established and active curation service with dedicated data librarians who regularly curate data going into our institutional repository, so we decided to pilot a research data community in Zenodo to enable us to curate and improve the FAIRness of these submissions as well. Communities are shared areas on Zenodo where projects, institutions, domains, or conferences can curate and manage their research outputs at no cost. Any user on Zenodo can submit records for inclusion in a community either before or after publication; curators are responsible for curating the records and accept/decline the record into the community. This poster will showcase the pilot effort from initial concept to first submissions, including policy development, outreach efforts undertaken, and lessons learned.

Johnston, L. R., Mohr, A. H., Herndon, J., Taylor, S., Carlson, J. R., Ge, L., Moore, J., Petters, J., Kozlowski, W., & Vitale, C. H. (2024). Seek and you may (not) find: A multi-institutional analysis of where research data are shared. *PLOS ONE*, *19*(4), e0302426. https://doi.org/10.1371/journal.pone.0302426