

Eleanor C. Sayre, PhD

Fairport, NY 14450 | 785-313-5039 | LE@zapos.com
<https://www.linkedin.com/in/eleanor-sayre/> | www.zapos.com

Director of Data Science

Enabling Others to do Great Work | Intelligent System Design | Improving Learner Success

Collaborative executive leader skilled at facilitating project meetings and team activities for operational excellence. Proven track record managing multiple programs and projects, specializing in STEM education, international collaboration, and training and development. Strong believer in inclusive excellence, actively seeking diverse domain expertise, and articulating a compelling vision resonating across disciplines. Outstanding communication skills that enhance service delivery and efficiency. Action-oriented with exceptional leadership, and organizational skills; easily adaptive to change in work environment.

Cross Functional Collaboration - Actively solicits diverse expertise across domains. Articulates a clear vision that resonates across disciplines. Cultivates an environment of varying perspectives and leveraging a comprehensive and well-rounded approach to problem-solving, innovation, and decision-making.

Public Speaking - Dynamic, personable speaker to small and large audiences, short and long talks, workshops, and webinars. Invited to speak on 5 continents and 11 countries. Articulates difficult ideas with eloquence and clarity for memorable, lasting impact. Kind and focused moderator.

Research and Data Driven Story Telling - 20 years expertise in qualitative, quantitative, and mixed methods of research. Seamlessly fuses human-centered narratives with quantitative analyses. Distills complex information into digestible visualizations and relatable anecdotes. Data can't speak for themselves; they need humans to contextualize numbers and build compelling narratives.

Servant Leader or Team Leadership and Development - Transparent, collaborative, and an active listener. Ensures all employees have what they need to be successful and engaged in the organization. Leads by example and relies upon excellent communication skills. Develops leadership abilities in team members. Develops transparent and documented policies to promote cohesion, equity, and inclusion.

PROFESSIONAL EXPERIENCE

National Science Foundation | Alexandria, VA

2022 – Present

PROGRAM DIRECTOR, Division of Undergraduate Education/ Directorate for STEM Education

Managed proposals and awards across 5 NSF programs which build national capacity for high-quality evidence-based research and education in STEM. Analyzed proposals' intellectual merits and potential for broader impacts, coordinated award and decline recommendations across a diverse team to promote high-quality projects and a balanced portfolio, and negotiated with principal investigators (PIs) about their projects. Conducted outreach and engagement with STEM education community through conference presentations, webinars, and other materials. Proactively connected with prospective and declined applicants to promote engagement among historically underserved and underrepresented groups.

- Represented the Division of Undergraduate Education on cross-directorate and inter-agency working groups and programs to support broadening participation and community engagement.
- Portfolio focuses on building national capacity for high-quality research and education through broadening participation in STEM, particularly among new researchers and emerging research institutions.
- Award portfolio: \$65M, 90+ awards, 35 states.

Kansas State University | Manhattan, KS**2011 - 2022****PROFESSOR OF PHYSICS (2020 - 2022)**
ASSOCIATE PROFESSOR OF PHYSICS (2016 - 2020)
ASSISTANT PROFESSOR OF PHYSICS (2011 - 2016)

Directed internationally recognized research lab in STEM education with substantial external funding. Conceptualized, designed, and oversaw interdisciplinary research projects totaling >\$5M. Developed high-level vision, built partnerships, secured competitive external funding, managed budget and personnel, trained researchers, ensured on-time deliverables and high-quality scientific results. Fostered culture of inclusive excellence featuring human-centered policies and action-oriented rapid development. Outperformed all performance metrics, leading to early tenure and early promotion to full professor. Students are majority women (department overall: 20%), LGBTQ+, and people of color. Built collaborations with researchers in diverse STEM disciplines across North America, Europe, and Africa. Directly mentored junior faculty in research, leading to their successful tenure and promotion.

Lead cross-functional partnerships across campus to improve research mentor training, disciplinary writing skills, and student success. Improved student success in STEM through teaching and faculty development. Taught core physics classes, introductory service classes, and graduate courses in physics education using evidence-based pedagogy and diverse student-centered teaching methods. Founded the Women & Non-binary in Physics group and a founding member of the Diversity, Equity, and Inclusion Committee.

- Awarded \$500k annual external funding, exceeding departmental average of \$350k.
- Mentored graduate students, postdocs, and undergraduates in research at 3x departmental rates and with 100% postgrad placement rate. Increased matriculation rates despite declining institutional enrollments.
- Published research results in ~100 peer-reviewed publications across fields including engineering, physics, computer science, faculty development, and the learning sciences.
- Championed changes to reduce drop, failure, and withdrawal (DFW) rates for introductory courses while doubling enrollments in upper-division and graduate courses.

PEER (Professional Development for Emerging Education Researchers) | Worldwide**2014 – Present**

Rochester, NY, San Diego, CA, St. Thomas, USVI, & Chicago, IL, United States; Cologne, Germany; Monterrey, Mexico; Kigali & Rukara, Rwanda; Vancouver, BC, Canada; Ambleside, UK.

CO-DIRECTOR and FOUNDER

The PEER Institute (peerinstitute.org) runs intensive 1–2-week workshops to help STEM educators develop skills, community, and self-efficacy in discipline-based education research and the scholarship of teaching and learning. Continuously refined the PEER model for workshops and professional development to best serve the needs of disciplinary faculty, including high-level vision as well as curriculum development. Directed team for market research and knowledge generation, including peer-reviewed publication.

- Over the last 10 years, there have been 1000+ participants in PEER workshops worldwide.
- Lead business development efforts to identify new opportunities for growth and foster relationships with potential clients and partners nationally and worldwide, including Mexico, Canada, Rwanda, Germany, the UK, Kazakhstan, and virtually.
- Lead PEER workshops, including partnering with local hosts; localizing the curriculum; recruiting and training facilitators; and active facilitation.
- Aggressively pursued funding opportunities nationally and internationally earning >\$1M in grant funding.

Physport | Seattle, WA**2012 – 2023**

The leading resource for evidence-based pedagogy and assessment in Physics

RESEARCH DIRECTOR

Directed research on PhysPort's impact, leading to dramatic site redesigns. Articulated goals, planned projects, and secured \$3.5M funding to build PhysPort from a small website about teaching methods to the leading resource for evidence-based pedagogy and assessment in physics. Connected high-level vision for PhysPort with data-driven stories about users to drive engagement. Supervised cross-functional teams to conduct research on user needs and develop resources to support physicists in evidence-based teaching.

Physport- cont'd

Ensured compliance with human subjects' regulations and federal student data regulations. Recruited and trained junior researchers in qualitative and quantitative methods to generate and analyze disparate data corpora.

- Usage has doubled every 2 years since 2011. 20% of US physics faculty are members, representing 50% of US colleges and universities. There are roughly 5000 regular users worldwide.
- Built partnerships with external education researchers to empower their research using PhysPort tools, leading to 5 additional grants.
- Lead outreach events nationally and internationally, including 30+ workshops and invited talks.

Additional Appointments

Research Affiliate, Center for Advancing Scholarship to Transform Learning (CASTLE) Rochester Institute of Technology, Rochester, New York	2019 --
Fulbright Research Chair in STEM Education University of Calgary, Calgary, Alberta, Canada	2017 -1018
Visiting Assistant Professor & Lilly Teaching Fellow Wabash College, Crawfordsville, IN	2009 -2011
Postdoctoral Researcher The Ohio State University, Columbus, OH, Advisor Dr. Andrew Heckler	2007 – 2009

EDUCATION

Doctor of Philosophy - Physics	University of Maine	Orono, ME	2007
Plasticity: Resource Justification and Development, Advisor Dr. Michael C. Wittmann			
Master of Science in Teaching- Physics	University of Maine	Orono, ME	2005
Resource Selection in Nearly novel Situations, Advisor Dr Michael C. Wittmann			
Bachelor of Arts - Physics	Grinnell College	Grinnell, IA	2002

PROFESSIONAL PUBLICATIONS / PRESENTATIONS / GRANTS

Peer-reviewed publications: ~100.

Fields: engineering, learning sciences, physics, computer science, and education.

Invited talks & workshops: ~100.

Grants: \$5.5M as Project Principal (PI) + 7 as consultant or expert.

CORE COMPETENCIES

People Management - Curriculum Development - Team Building - Data Analytics - Research design - Writing - Change Management - Rapid Synthesis - Cross-Functional Collaboration - STEM Education - Data-Driven Storytelling - Project Management - Learning & Development - Strategic Planning - Time Management - Innovation - Problem Solving - Quantitative Research - Qualitative Research Microsoft Office Suite & One Drive - Asana - Google Docs, Sheets, Slides - Affinity Designer - R & RStudio - LaTeX