2025 Women in Mathematics, Science and Technology Conference
April 1, 2025

Presenter Information and Presentation Synopses

SESSION 1 (10:15-10:45 a.m.)

Diving into Data Science

Stephanie Blanda, Assistant Professor of Mathematical Sciences, Lebanon Valley College

Biography: Dr. Stephanie Blanda is an Assistant Professor of Mathematical Sciences at Lebanon Valley College, focusing on computer and data science. She is a Project NExT fellow and is passionate about teaching and mentoring undergraduate students. Dr. Blanda runs a week-long intensive Computer and Data Science summer camp at LVC, which is designed to help high school students decide if they are interested in computer programming and/or data science careers. Dr. Blanda's research interests include machine learning, deep learning, data science, and mathematics education. She earned her B.S. with a double major in mathematics and computer science from Lebanon Valley College, and her Ph.D. in mathematics with a minor in computational science from Penn State University.

Areas of Expertise: Machine Learning, Deep Learning, Computer Science, Data Science

Presentation Synopsis: *Data science is a constantly evolving field that covers a wide variety of applications. As a professor who has transitioned from mathematics to computer and data science, I've learned that flexibility and a willingness to keep learning are keys to success. In this presentation, I will share my career journey, as well as some example projects in the areas of data science and deep learning. I will also briefly address my experience with the impact of AI on this field.*

Live Concerts Like Taylor Swift's "Eras Tour": An Auditory Risk?

Lisa D. Bolin, Manager of Environmental Health & Hygiene, High Environmental Health & Safety Consulting, Ltd.

Biography: Lisa earned two BS degrees from Millersville University -- Occupational Safety & Health Management and Biology. Lisa holds the designations of Certified Industrial Hygienist (CIH), Certified Safety Professional, Certified Indoor Air Quality Professional (CIAQP), Certified Ergonomic Assessment Specialists, and is a Pennsylvania licensed Asbestos Building Inspector.

Areas of Expertise: Lisa worked in health care as a respiratory therapist before transitioning into prevention of respiratory diseases. In the last twenty years, she focused her career on various environmental exposures and health protections. She assesses physical, biological and chemical hazards and recommends appropriate exposure controls.

Presentation Synopsis: *Taylor Swift has a dynamic and powerful voice, and her concerts have crowds of 70,000 people. Does this environment have a negative impact on your hearing? We will discuss how "dose makes the poison" and utilize various types of sound level monitoring equipment to evaluate noise levels. Each participant will be provided with a hearing protection device to evaluate.*

From Mice to Microbes – One Woman Scientist's Tale

Dr. Gail E. Gasparich, Provost and Senior Vice President for Academic Affairs, Millersville University

Biography: G Gail E. Gasparich, Ph.D. has been the Provost and Senior Vice President for Academic Affairs at Millersville University since July 2021. Prior to that she served as the Dean of the College of Arts and Sciences at Salem State University and then Professor of Biological Sciences and Associate Dean for the Fisher College of Science and Mathematics and Acting Assistant Provost at Towson University. She obtained a B.S. in Biology from The College of William and Mary and a Ph.D. in Microbiology from The Pennsylvania State University.

After doing a Postdoctoral fellowship at the U.S. Department of Agriculture she began her academic career at Towson University in 1996. She has mentored seven M.S. graduate and more than 70 undergraduate students. Dr. Gasparich has published over 65 peer-reviewed journal articles (many with students as coauthors) and has been awarded over 22 extramural research and training grants totaling over $9.5M from NSF, NIH, the MD State Department of Education and the Massachusetts Department of Higher Education as PI or Co-PI. Many of these grants have been used to develop programs for the recruitment and retention of women and underrepresented minorities into all areas of science and mathematics. As a result of this interest Dr. Gasparich served as Director of the Towson University Women in Science Program and initiated an annual forum for Women in Science.

Professional leadership experiences have included serving as the Secretary for the National Board of Association for Women in Science, as Division Chair for the American Society of Microbiology, as a member of the Diversity Committee of Sigma Xi, and as treasurer for the International Organization of Mycoplasmology.

Her work to increase equity in STEM for women and those in marginalized populations has been recognized with being named a Fellow of the Association for Women in Science, being recognized with an Inspiring Women in Stem Award from INSIGHT Into Diversity magazine, and with Towson University President's Diversity Award.

Area of Expertise: Microbiology

Presentation Synopsis: *I will share my career path going from starting as a Pre-Med major to becoming a Provost (and the story in between). A big part of that story will be about the research that my students and I have done over the years which focuses on a very interesting group of microorganisms called the Spiroplasmas.*

Saving Nature in Youth Centered Spaces

Lydia Y. Martin, Director of Community Engagement, Let's Go 1-2-3/Hidden Valley EDC

Biography: Lydia Martin serves as the Director of Community Engagement for Let's Go 1-2-3, a local nonprofit committed to alleviating barriers to outdoor experiences in Lancaster and Philadelphia. She also works as an ecological design consultant teaching private and public landowners how to restore and manage their properties for the benefit of people and wildlife. She manages 10 acres of woodlands, wetlands, pond, and meadow habitats at "Hidden Valley" with her family in southern Lancaster County. For more than 15 years she's pursued her love of conservation through various nonprofit and for-profit entities. She is passionate about promoting access and education to Lancaster's diverse community about trails, green space, and waterways in central Pennsylvania.

Areas of Expertise:
- Adaptability
- Administrative Skills
- Community Engagement
- Communications & Marketing
- Creativity & Design
- Ecological Landscape Design
- Grant Writing
- Natural Resource & Watershed Management
- Plant Community Knowledge
- Project Management
- Teamwork

Presentation Synopsis: *Journey with me and learn how to save nature in youth centered spaces by using ecological design practices integrating lessons learned, creative abilities, and knowledge in forestry, biology, soil science, hydrology, and technology. Meaningful, means more people have opportunities to discover nature and together we can alleviate barriers to outdoor experiences!*

Girl Power: Careers in Energy Engineering

Jeannie Sikora, Senior Energy Engineer, CLEAResult

Biography: Jeannie Leggett Sikora's career in energy efficiency spans the agricultural, residential, and industrial sectors. Her main responsibilities at CLEAResult include leading the company's agricultural subject matter expert group, measuring and verifying energy savings for efficiency programs, and consulting on utility energy efficiency program design. Prior to joining CLEAResult, Jeannie worked in university cooperative extension on various farm and food processing energy issues, conducted research and outreach for the home building industry, and operated a consulting business. Ms. Sikora holds an M.S. in Agricultural and Biological Engineering from Penn State, is an author of two books, and resides in Lancaster, Pennsylvania. In her free time, Jeannie's favorite moments are when she's being active outdoors or spending time with family and friends.

Areas of Expertise: Energy Efficiency, Agricultural Energy Use, Controlled Environment Agriculture

Presentation Synopsis: *This presentation will provide an overview of the energy engineering profession, including career preparation and typical roles and responsibilities. The program will introduce what energy engineers do and why energy engineering can be an interesting, challenging, and rewarding career choice.*

SESSION 2 (10:55 to 11:25 a.m.)

Empowered by Elements: My Radical Journey in Chemistry
Dr. Kristen Baker, Assistant Professor of Chemistry, Millersville University

Biography: Dr. Baker received her B.S. in Chemistry in 2016 from Gettysburg College. Her passion for teaching began when she became a teaching assistant for organic chemistry laboratory during college and confirmed her decision to pursue her Ph.D. in order to become a college professor. Dr. Baker worked with Mary Watson at the University of Delaware and earned her Ph.D. in Chemistry in 2021. Her work in graduate school focused on synthetic organic chemistry and she enjoyed mentoring other students in the research lab. After her graduate studies, Dr. Baker was a postdoctoral teaching and research fellow at Providence College where she mentored undergraduate students in the Mulcahy research group while also teaching both general chemistry and organic chemistry. After her postdoc, Dr. Baker joined the Chemistry Department at Millersville University as an Assistant Professor. She teaches Organic Chemistry and enjoys working with the six undergraduate students and one high school student that are currently in her research laboratory.

Areas of Expertise: Organic Chemistry, Methodology Development

Presentation Synopsis: *I'll be sharing how my passion for chemistry was ignited in high school and how that inspired my journey to becoming an organic chemistry professor. Join me as I discuss my personal career path and the various chemistry projects that shaped my journey.*

When You Can't Breathe, Nothing Else Matters
Elaine Chrissos, Respiratory Therapy Program Director, UPMC/Millersville University

Biography: BS Ed Millersville University, MS Respiratory Care Leadership Northeastern University
I have worked in the field of Respiratory Therapy for 36 years and have been the Program director for 10 years and the Director of Clinical Education for 17 years prior to that.

Area of Expertise: Respiratory Therapy

Presentation Synopsis: *I describe what RTs do, the diversity of employment within the field, discuss our program and course requirements.*

Engineers are Women, Too!
Joan V. Greenslade, Manager, Testing & Analysis Laboratory/Process Engineer, Armstrong World Industries

Biography: BS in Chemical Engineering from Penn State University. Majority of my career at Armstrong World Industries (AWI) with experience in Exploratory Research, New Product Development, Business and Operations Support, Sales and Customer Support and Training, Project Management, and Management of AWI's Physical Testing Laboratory.

Areas of Expertise: Collaborative Leadership, Project Management, Problem Solving, Process Development, Test Development, Data Analysis, Applied Acoustics

Presentation Synopsis: *Why choose engineering as a profession? Perception vs reality. Tackling the social myths about Engineers.*

Chasing the Shortest and Brightest Light Pulses: Nobel Prize-Winning Women in Physics
Amy Lytle, Professor of Physics, Franklin & Marshall College

Biography:
2001 BA Physics, The College of Wooster, Wooster, OH
2008 PhD Physics, The University of Colorado at Boulder, Boulder, CO
2008-10, Visiting Assistant Professor of Physics, Hamilton College, Clinton, NY
2010-17, Assistant Professor of Physics, Franklin & Marshall College, Lancaster, PA
2017-24, Associate Professor of Physics, F&M
2024-present, Professor of Physics, F&M

Areas of Expertise: Physics, Experimental nonlinear and ultrafast optics, Soft condensed matter physics, Physics education research

Presentation Synopsis: *Of the five total (!) female Nobel Laureates in Physics, two (Donna Strickland 2018 and Anne L'Huillier 2023) have been recognized for their ground-breaking contributions to optical science with extremely short pulses of light. In this talk, I'll share with you just how short light pulses can get, what they're used for, and some of the science behind creating them.*

SESSION 2 (10:55 to 11:25 a.m.) - CONTINUED

College Professor: What to do When You're Interested in Everything

Dr. Erin Moss, Professor of Mathematics, Millersville University

Biography: I double-majored in Mathematics and Theatre at UNC-Asheville, interning at a small actuarial firm in downtown Asheville. As a result of that experience, I decided to pursue a Master's Degree in Actuarial Science at the University of Connecticut. Comparing my graduate internship at The Hartford to my experiences as a Teaching Assistant at UConn helped me realize that becoming a college math professor was a path that aligned better with my interests. I pursued a PhD at Purdue University in Mathematics Education and began my career in higher education in 2009 at Millersville University.

Area of Expertise: Mathematics Education

Presentation Synopsis: *Curiosity and an active mind can make choosing a college major difficult, but they are great assets for establishing an interesting and meaningful career. As a professor of mathematics education, I am more than just a teacher--I get to be a writer, a designer, a performer, and an advocate. The diverse experiences I engaged in along the way prepared me to take full advantage of the opportunities this career provides to continue learning and exploring new passions.*

SESSION 3 (12:40 to 1:10 p.m.)

Student Panel
All Conference Attendees will meet in SMC 114

Join a panel of Millersville University students as they discuss their studies, research, and discoveries as women looking to enter the fields of science and technology.

SESSION 4 (1:20 to 1:50 p.m.)

Did You Know – That You Could Get A Great, Highly Paid Job … Fresh Out of Millersville University?

Nancy Adams, MS, Consultant, Nancy Adams Consulting

Biography: Nancy Adams held many different positions during her 33-year career with the Occupational Safety and Health Administration (OSHA), including field industrial hygienist, Area Director, Deputy Regional Administrator, Deputy Director Safety Standards, National Ergonomics Coordinator, and Director of Management Systems and Operations. She also served as the Executive Assistant to seven Assistant and Acting OSHA Assistant Secretaries.

Upon retiring from Federal service in 2008, she began a consulting career working with the National Institute for Occupational Safety and Health (NIOSH) Energy Employee Occupational Illness Compensation Program (EEOICPA), and its Advisory Board on Radiation and Worker Health. In 2011, she began work with NIOSH's World Trade Center Health Program (WTC Health Program) and its Scientific and Technical Advisory Committee (STAC).

Nancy received a Bachelor of Arts degree in Biology in 1973, from Millersville University; a Master of Science degree in Occupational and Environmental Health Services in 1995, from Hunter College of the City University of New York, New York, N.Y.; and is a 2004 graduate of the Federal Senior Executive Service (SES) Development Program.

Area of Expertise: Occupational Safety and Environmental Health, Industrial Hygiene

Presentation Synopsis: *Learn about a profession and science field of study at Millersville University that opens up an immediate graduation opportunity for a high paid in demand job. The field of Occupational Safety and Environmental Health.*

SESSION 4 (1:20 to 1:50 p.m.) - CONTINUED

A Successful Adulthood Starts with a Healthy Childhood – You Can be a Part of That!

Vinitha Moopen, MD, Pediatrician, WellSpan Family and Pediatric Medicine at Rothsville

Biography: I am Pediatrician. I completely my Pediatric residency at Brookdale Hospital in Brooklyn NY. I have been at this practice for 12 years.

Area of Expertise: Pediatrics

Presentation Synopsis: *I will go over the steps taken through high school, undergraduate education and medical school and beyond. Prerequisites for each step will be discussed and questions will be answered.*

Modeling Affective and Cognitive Behavior in Mice

Laura Murdaugh, Postdoctoral Scholar, Penn State University

Biography: Attended the Robert E. Cook Honors College at Indiana University of Pennsylvania and majored in Biology with a pre-veterinary focus and minored in Psychology and Chemistry. After university she worked as a laboratory technician at the University of North Carolina at Chapel Hill to investigate the effects of prenatal alcohol and cannabinoid exposure. She then completed a Ph.D. in Translational Biology, Medicine, and Health from Virginia Tech. Her graduate work involved implementing and improving assays to capture affective and operant behavior in mice, with a focus on pain-like and addiction models.

Areas of Expertise: Animal Behavior, Open-Source Science, Neuroscience

Presentation Synopsis: *An introduction to the kinds of tests used to measure depression-like behavior in mice, and why it's important to investigate multiple aspects of disease phenotypes when investigating genetic contributions to disease. Followed by an overview of a novel cognitive testing model using an open-source device.*

Engineering Her Path: A Woman's Remarkable Journey

Lindy Rabinovitz, Firmware Software Engineer, Phoenix Contact

Biography: Lindy Rabinovitz is a software engineer/SCRUM master who graduated from the Electrical Engineering program at Purdue University. Beyond her professional endeavors, her true passion lies in mentoring the engineers of tomorrow through STEM programs. Software engineering is constantly evolving, and Lindy volunteers her time to be a driving force behind a transformative digitalization project rooted in Artificial intelligence (AI). Her message to aspiring STEM enthusiasts is, “Dream big, work hard, and make your mark in the extraordinary world of science, technology, engineering, and mathematics. You have the power to shape the future!” This authentic desire to encourage the next generations comes from her beginnings with coding. She started as a child coding games in graphics on a Commodore 64. Over the years, she has developed and seamlessly integrated software systems in the industrial and automotive sectors. Within that focus, she contributed her expertise to renowned organizations, including General Dynamics, Cummins, Stanley Security Solutions, General Motors, and Allison Transmission. She continues to pursue her dream as a firmware software engineer at Phoenix Contact. Lindy has been involved in advanced technologies from the beginning of her career path. As an intern, she worked on General Motors electric vehicle EV1. Now, she is an AI Manager at Phoenix Contact to work on today’s latest Artificial Intelligence technologies.

Areas of Expertise: Software engineering development, specializing in designing and implementing system components for industrial and automotive applications with a strong emphasis on optimizing performance and functionality at the hardware level.

Presentation Synopsis: *Lindy Rabinovitz's lifelong passion for engineering has driven her desire to inspire Engineering in others. It can feel as though Engineering is an exclusive world all on its own. Lindy wants conversation. By delving into her personal journey, she aims to make engineering more accessible, allow you to discover the endless possibilities this field offers, and empower you to realize your potential.*

Engineering to Teaching to Management: You Don’t Have to Know What You Want to be When You Grow Up

Emmali Wertz, Senior Product Manager and Software Engineer, The Social Institute

Biography: Having graduated Millersville in 2018 with a degree in Computer Science and minor in Women’s and Gender Studies, I am now pursuing a Master’s in Engineering (focusing on Engineering Management) from Arizona State University. I’m also a certified SCRUM master. After 7 years in the software industry, I’ve now landed with a remote EdTech company where I’m pursuing a role I’ve naturally fallen into 3 times: project management. Outside of work, I also lead the Girls Code Club program out of the Lancaster Science Factory where 35 girls aged 8-13 just wrapped up learning Ruby or JavaScript. Recently, I was recognized as a runner up for the Next Gen award by TCCP’s Women in Tech organization.

SESSION 4 (1:20 to 1:50 p.m.) - CONTINUED

Areas of Expertise: Software engineering, consulting, eCommerce, ex-Uber, EdTech, project management, React, Typescript, JavaScript, Express, MongoDB, Ruby, Python, JIRA, and more.

Presentation Synopsis: *Throughout the course of your life, your interests and values are going to change. This presentation will tour the changing career path of an engineer, and even show some code, while driving home the fact that you will change over time and your career can, too.*

SESSION 5 – SCIENCE & TECHNOLOGY DEMONSTRATIONS (2:00 to 2:50 p.m.)

1. ***Science Demonstrations - Roddy and Caputo Halls***
   a) **Scanning Electron Microscopy**
   Mr. Calvin Montgomery, SEM Technician, Millersville University
   b) **Cloud in a Bottle**
   Meteorology Students, Melanie Jones, Lauren Tushar and Katelyn Ferrence
   c) **Leveraging Your Experiences to Advance Science**
   Biology Student, Nate Wilson

2. ***Technology Demonstrations – Osburn Hall***
   a) **Occupational Safety & Environmental Health-Fire Extinguisher Simulator Demonstration** Betty-Jo Bowers, Ph.D., MBA, CSP and the American Society of Safety Professionals (ASSP) Student Section
   b) **3D Printing and More – Facets of Applied Engineering**
   Mrs. Cindy L.W. English, MFA and CADD Majors Sydney Geist, Regan Stump, and Alexis Kellogg
   c) **Marauders Recycle: Giving Single-use Plastics a Second Life**
   d) Justin Egresitz, Ph.D., Mr. John Saveriano
   e) **Collaborating with Robotics: Human-Robot Interactions**
   John Haughery, Ph.D., CSCE, Ms. Elizabeth Maschke, CEG

Rev. 12/11/24 mlf