

2017 Women in Mathematics, Science, and Technology Conference
April 4, 2017

Presenter Synopses

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

Caterpillars, Kangaroos, Cats, and Cuttlefish: Animal Behavior is Great!

Jean Boal, Ph.D., Professor of Biology, Millersville University

I will trace the circuitous path that led me to my very satisfying career studying animal behavior. I will show that with an open and curious mind, you can stumble into all kinds of wonderful opportunities. I will also discuss how important it is to be prepared with a strong background in math, science, and English.

Behind the Scenes at WGAL; My Adventures as a Broadcast Meteorologist

Christine Ferreira, Meteorologist, WGAL-TV

Come travel with me as I explain how I learned to forecast the weather in four states. I'll detail the preparation and planning that go into crafting a forecast for hundreds of thousands of viewers per day.

Labs! Demos! The Excitement of Teaching Chemistry

Theresa Holton and Amy Thompson, Chemistry Teachers, Hempfield High School

We will discuss the education requirements of becoming a teacher, the day-to-day routine of a teacher, the perks and pitfalls of teaching, and why we became teachers. We will also show some video clips of demos.

A Nanosecond's Worth of Light: My Career in Science

Amy Lytle, Ph.D., Professor of Physics, Franklin and Marshall College

In this talk, I'll discuss my life and path toward my dream career in STEM: being a laser scientist and college professor. The keys to my success have been my passion for science and education, and the mentors, colleagues, friends, and family who have supported me in my work and life.

You're a Genetic What? ...Genetic Counselor

Erin Sutcliffe, Genetic Counselor, GeneDx

Conference attendees will gain a better understanding of genetic counseling, including who we are, what we do, and where we work. They will also learn how to prepare for a career in genetic counseling.

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

The 21st Century Zoo: Join the Mission to Save the World

Marina Haynes - Curator of KidZooU, Primates and Small Mammals, Philadelphia Zoo

Many people have strong opinions about zoos without understanding how they have evolved and the mission of modern zoos. The 21st century zoo is so much more than recreation and animal viewing – it is about teaching and inspiring people how to help animals and the natural world. Learn about the surprisingly diverse and unique jobs available in the zoo world and how to break into this highly competitive field. Explore the possibilities of having a career where the goal is to preserve the planet and its animals for future generations!

“Nuclear” Does Not Have to be a Scary Word

Paula Mancini, Program Chair, Nuclear Medicine Technology, PA College of Health Sciences

My presentation will be an overview of the career of nuclear medicine technology. It will include a general description of the field and the educational requirements (both at a high school and college level) needed to prepare for a job as a nuclear medicine technologist. We will also look at actual case studies to gain a better understanding of the role of a nuclear medicine technologist.

Finding the Sweet Spot in Environmental Education

Lydia Martin, Director of Education, Lancaster County Conservancy

Environmental education combines sharing a passion for nature and everything we learn in the natural sciences to motivate all ages to be inquisitive and inspired to make change happen. This ability to engage a diverse audience prompts active stewardship in support of sustainable communities and long term natural resource protection.

Using GeoSpatial Technology for Land Conservation

Rachel Ralls, Conservation Lands Program Manager, The Nature Conservancy

GeoSpatial Technology also known as Geographic Information Systems (GIS) is a rapidly advancing mapping technology that is used in so many industries, for example: Business, Government, Public Safety and Natural Resources. This presentation will show how GIS is used at The Nature Conservancy, the leading conservation organization working around the world to protect ecologically important lands and waters for nature and people.

Finding the Right Fit: A Shifting Career

Hannah Tims, Ph.D., Senior Scientist, Eurofins Lancaster Laboratories

My presentation will cover the educational career path that brought me to my current position. Although the work I am currently doing has little resemblance to my educational training, there are clear connections between my training and the success that I have had in this current position. I hope to encourage the women in attendance to pursue doing what they enjoy.

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

Hey, This Geophysics Stuff Really Works!

Felicia Kegel Bechtel, President, Enviroscan, Inc.

Geophysics is the science of detecting and mapping underground, underwater, or otherwise hidden objects without digging or drilling. Just as medical radiology is used to non-intrusively diagnose medical problems and make invasive surgery safer, geophysics is used to detect targets like utilities, sinkholes, rock depths, contaminant plumes, graves, drums prior to digging (which can often make future drilling or digging safer, and minimize or eliminate costly mid-project surprises).

Engineers Are Women, Too!

Joan Greenslade, Chemical Engineer, Armstrong World Industries

Why engineering? Perception vs. reality. How did I get here? My journey through the professional world and how I find balance to enjoy all my interests.

How to Pick Your Career

Ting He, Associate Professor, School of Electrical Engineering & Computer Science, Penn State

In this talk, I will share personal opinions about the right and wrong ways of selecting career paths, using my own experience as a concrete example. As a student, I have changed majors from computer science to electrical engineering; as a professional, I have changed career paths from industry to academia. But underlying the changes are some common principles I have always followed in making important career decisions. Through the sharing of personal stories and observations, I hope to inspire my audience to find the principles that work best for them.

Creativity is at the Heart of Discovery: Research on Cardiac Medicines

Lara Kallander, Ph.D., Director of Medicinal Chemistry, GlaxoSmithKline

Medicinal chemistry is a field of discovery that requires a creative approach to solving problems as well as collaboration with other scientists to identify medicines that will save lives. I've had an interesting journey including education in organic chemistry and employment in medicinal chemistry. I will share my career story and some information about research we are doing at GlaxoSmithKline.

Eat to Live, Not Live to Eat!

Jennifer Schaefer, Registered Dietitian, Lancaster General Health

Do you like to eat healthy? Then how about a career teaching others to do just that! Be a role model and become a nutritionist or dietitian. Learn what it takes and complete a nutrition assessment on yourself!

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

Crayons and Computers: Awesome Pictures of Mathematics

Annalisa Crannell, Ph.D., Professor of Mathematics, Franklin & Marshall College

It is easy to see, just by looking, that certain kinds of art are beautiful. But how could we see beautiful mathematics just by looking? It would help if we could first understand the mathematics that lies within various kinds of visual art. Dr. Crannell will lead us on an artistic mathematical tour past patterned Spanish walls (symmetry and tessellations), computer generated woodlands (fractal geometry), and Renaissance perspective painting (similar triangles).

Why I Love Being a Lady Doctor or Women in Medicine

Lena Dumasia, M.D., Hematologist-Oncologist, Lancaster Cancer Center

I am a hematologist-oncologist at the Lancaster Cancer Center. I hope to enlighten the audience about how women can make a difference in the lives of people through using our intelligence to help heal. I will discuss the history and evolution of women doctors in time.

Breathing Matters

Cheryl Garner - Pulmonary Rehabilitation Coordinator, Lancaster Regional Medical Center

Presentation on the role and duties of a respiratory therapist in a world with increasing respiratory disease.

Product Design: The Perfect Marriage of Art, Biology, and Engineering

Louise Manfredi, Ph.D., Asst. Professor, Applied Eng., Safety, & Technology, Millersville Univ.

For good product design to exist, many fields of study need to intersect. This presentation looks at my academic journey through art, design, engineering, and neuroscience, and my plight to not only become, but also train excellent product designers.

Girl Power...Is Energy Engineering Right for You?

Jeannie Sikora - Energy Engineer, CLEAResult

This presentation will give an overview of the energy engineering profession, including career preparation and typical roles and responsibilities of an energy engineer. The program will present reasons why women make great energy engineers including the unique skills that women engineers bring to the field and examples of great female engineers throughout history.