

Career & College Panelists

Jennifer Cox - Alabama Math, Science, and Technology Initiative's Science in Motion Program

Jaime Demick - Huntingdon College. Chemistry

Tiffany Larcheveaux - Alabama Math, Science, and Technology Initiative's Science in Motion Program

Emma Si - Auburn University Montgomery. Chemistry

Karen Stine - Auburn University Montgomery. Biology and Environmental Science

Workshop Leaders

Mosisa Aga – Auburn University Montgomery. Mathematics and Computer Science

Sally Clark - Auburn University Montgomery. Mathematics and Computer Science

Lili Moore - Auburn University Montgomery. Mathematics and Computer Science

Randy Russell - Auburn University Montgomery. Chemistry

Nick Thomas - Auburn University Montgomery. Chemistry

Anneliese Spaeth - Huntingdon College. Mathematics

Sarah Valentine - Auburn University Montgomery. Mathematics and Computer Science

Yi Wang - Auburn University Montgomery. Mathematics and Computer Science

Terry Winemiller - Auburn University Montgomery. Biology and Environmental Science

History of Sonia Kovalevsky Day at AUM

AUM's SKDay is a one day event for young women who are enrolled in Algebra I or higher. Similar events have been presented across the country. This program has always been supported by AUM administration and has opened up opportunities for young women by having them actively learn about various mathematics and other STEM topics, hear from a female STEM field professional, and learn about numerous mathematics, computer science, and other STEM careers through a career panel.

Program Organizers

Sally Clark
Cheryl Hand
Enoch Lee
Gloria McDonald
Lili Moore
Rachel Paulk
Sarah Valentine
Yi Wang

Additional help provided by -
Michelle Williams, the Math/CS/Eng Clubs

Sponsored By

AUM Dept of Mathematics & Computer Science
AUM College of Sciences
AUM Provost Office

October 19, 2018



SONIA KOVALEVSKY
MATHEMATICS DAY



"...Many who have never had the occasion to discover more about mathematics confuse it with arithmetic and consider it a dry and arid science. In reality however, it is a science which demands the greatest imagination."

~Sonia Kovalevsky

Workshop

Mosisa Aga	Alphametic Puzzles	Session 1 222GH	Session 2 222GH	Session 3 222GH
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Alphametic Puzzles: An alphametic puzzle (also sometimes known as a cryptarithm) is a type of puzzle where words are put together into an arithmetic formula such that digits can be substituted for the letters to make the formula true. In this presentation we will first introduce the definition and the Guiding Rules of the puzzle and then have fun with some (selected) and easier examples of such puzzles.

Sally Clark	Chomp The Graph: Analyzing a Two-Player Game	Session 1 208GH	Session 2 208GH	Session 3 208GH
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We briefly learn about Graphs (from the mathematical subject area of Graph Theory); then we learn a 2-player game called Chomp The Graph. Players take turns doing certain moves to delete an initial graph. We will analyze some simple graphs to see who has the winning strategy – Player 1 or Player 2 – if both players make smart moves.

Lili Moore	Moore's Mortgage and Modeling in Math. (M^4)	Session 1 317GH	Session 2 317GH	Session 3 317GH
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Do you want to be Chip and Joanna? Understanding mortgage loans while you sharpen your basic mathematics skills is what I will show you in this session. Students will apply math formula in designing and modeling houses through real world application problems. D. Y. I. Girls can be tough!

Randy Russell	Exploring the Composition of Earth	Session 1 308GH	Session 2 308GH	Session 3 308GH
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Have you ever wondered how scientists know what is inside the Earth and other planets? We will learn about the concept of mass density and measure the density of rocks from the Earth's surface. We will then measure the density of the entire Earth. A comparison of the two densities leads us to a surprising conclusion about the composition of the Earth's interior.

Anneliese Spaeth	Breaking the Code!	Session 1 204GH	Session 2 204GH	
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Participants will be led through how to break some mystery codes, and do some code cracking themselves! Some examples will be given using the computer language Python, demonstrating how computers are much faster at breaking codes than humans are in many cases.

Nick Thomas	A Forensic Mystery: What contaminated the Sports Drink?	Session 1 306GH	Session 2 306GH	Session 3 306GH
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If you have ever watched a modern crime show like NCIS on television, you will know forensic science is used to solve crimes. In this activity, you will use the spectrometer to solve a similar mystery.

Sarah Valentine	Video Game Coding 101	Session 1 205GH	Session 2 205GH	Session 3 205GH
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Come join team coding in a fun filled workshop where you can create your own video game. Students will learn the basic concepts of computer coding and then will be allowed to go on their own adventure, problem solving and using their critical thinking skills to bring their gaming ideas to life. Computer science has never been more fun. How big is your imagination?

Yi Wang	Finite vs. Infinite			Session 3 204GH
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We will look at the difference and connection between finiteness and infinity, perhaps one of the ever-lasting themes of mathematics. With hands-on examples of finding the fraction form of a decimal number with a repeating tail, participants will be fascinated by the concepts of finiteness and infinity.

Terry Winemiller	Understanding Why: Solving Geospatial Problems with Geographic Information Systems	Session 1 221GH/310TW	Session 2 221GH/310TW	Session 3 221GH/310TW
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Students will view a short presentation on the power of Geographic Information Systems to solve questions about why a place exists or incident occurred in a particular geography. After the presentation, students will have an opportunity to work with GIS on the desktops in the GIS Lab.

2018 SKDay event:

Time:	Description:	Location:
7:45-8:15am	Registration & Refreshment	Lobby
8:15-8:30am	Welcome	109
8:40-9:40am	Parallel Workshop Session 1	Various (See ticket)
9:50-10:50am	Parallel Workshop Session 2	Various (See ticket)
11:00-12:00pm	Parallel Workshop Session 3	Various (See ticket)
12:10-12:40	Lunch	109
12:55-1:55pm	Career Panel Discussion	109
1:55-2:00pm	Closing & Evaluations	109

