

Career & College Panelists

Dawn Davis	Auburn University Montgomery College of Education Civil Engineer
Imren Dinc	Troy University, Montgomery Assistant Professor, Department of Computer Science
Hannah Harding	Auburn University Montgomery Instructor, Department of Mathematics and Computer Science Mechanical Engineering
Gloria McDonald	Auburn University Montgomery Instructor, Department of Mathematics and Computer Science
Chelsea Ward	Auburn University Montgomery Distinguished Teaching Professor/Chair, Department of Biology

Workshop Leaders

Mosisa Aga	-Associate Professor, Dept. of Mathematics & Computer Science, AUM
Joe Albree	Assistant Professor (Retired)
John Bohannon	-Instructor, Dept. of Mathematics & Computer, AUM
Yue Chen	-Assistant Professor, Dept. of Mathematics & Computer Science, AUM
Ann Gulley	-Student Service Coordinator, Learning Center, AUM
Matt Ragland	-Professor, Dept. of Mathematics & Computer Science/Associate Provost for Graduate Studies and Faculty Services, AUM
Luke Smith	-Assistant Professor, Department of Curriculum, Instruction and Technology, AUM
Anneliese Spaeth	-Assistant Professor/Chair, Dept. of Mathematics, Huntingdon College
Myla Turk	-Instructor, Dept. of Mathematics & Computer, AUM

Additional Help Provided by

Debra Mangus, Administrative Assistant and The Math Club,
Department of Mathematics & Computer Science, AUM

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

Semih Dinc
Jerome Goddard II
Cheryl Hand
Enoch Lee
Gloria McDonald
Lili Moore
Rachel Paulk
Babak Rahbarina
Myla Turk
Sarah Valentine
Yi Wang
Luis Cueva-Parra (Technical Coordinator)

Sponsored By

AUM Department of Mathematics &
Computer Science
AUM College of Arts & Sciences
AUM Outreach

September 22, 2017



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

Workshops

Ann Gulley Making Math Accessible with Inclusive Design

Session 1

The beauty and logic of math have contributed to advances in medicine, economics, environmental science, computer science, and all fields of engineering. In addition to being beautiful, math can also be hard because it is based on a system of symbols representing abstract ideas. For students who have disabilities like low vision, blindness, dyslexia, and dyscalculia, the beauty and logic of math are often hidden behind insurmountable barriers created by our visual representation of math. Until we figure out how to reduce those barriers, we will miss out on the valuable contributions that many people with disabilities could make in mathematics and other fields that require math skills. Taking the time to figure out how to open the doors to math education for the many individuals with visual and print disabilities will benefit all of society. Come and explore alternative means of representation, expression and engagement to reduce Barriers in the field of mathematics.

Luke Smith Who doesn't like free money?

Session 1

If you want to learn something that can save you (and even your parents) thousands of dollars when you buy a house, come to this workshop.

Anneliese Spaeth Solving the "instant insanity" puzzle

Session 1

A fun demonstration of solving the "instant insanity" puzzle with colored cubes using graph theory.

Myla Turk Video Game Coding 101

Session 1

Session 2

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?

Yue Chen Mathematics in Material Science

Session 2

Advances in technology are often due to fundamental advances in our understanding of the materials of which things are made. In this workshop, we will see how mathematicians play a role in the current material science.

John Bohannon Why Did ... ?

Session 2

Session 3

If you've ever wondered why anyone spent a big piece of their life studying a mathematic detail, then come join us when we discuss circles, parabolas, trigonometry, astronomy, and any other mystery you can come up with. I know some of the stories, and we can contemplate anything I don't have a complete answer for. Talking about interesting things with interesting people is how a lot gets done, or at least how a lot gets thought about.

Mosisa Aga Alphametic Puzzles

Session 2

Session 3

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.

Matt Ragland Polygons, Polyhedrons and Polydrons Oh My!

Session 3

This hands on workshop discusses certain three dimensional solids; the Platonic, Archmedian, and Johnson solids. Students will create the five Platonic solids using Polydron manipulatives; the Tetrahedron, the Cube or Hexahedron, the Octahedron, the Dodecahedron, and the Icosahedron. In addition, some Archmedian solids and Johnson solids will be made. An algebraic equation, attributed to Euler, relating the numbers of faces, edges, and vertices of these solids will be explored and discussed.

Joe Albree Who was Sonia KovalevskAYA?

Session 3

Sofya Korvin-Kruskovskaya was born in Moscow in 1850. From Moscow, Sonia lived a peripatetic life in Palabino and St Petersburg (Russia), Heidelberg and Berlin (Germany), St. Petersburg and Moscow again, and finally Stockholm (Sweden). Sonia was equally a mathematician, a creative writer, and a political activist. In mathematics, she attained full expertise in partial differential equations and with some of the most advanced parts of integral calculus, and she put this knowledge to work in physics and astronomy. Sonia Kovalevskaya "was the greatest Woman mathematician prior to the twentieth century." [DSB, v. 7, p. 477]

SCHEDULE

ALL EVENTS WILL BE HELD IN GOODWYN HALL

Time:	Description:	Location:
8:00-8:30am	Registration & Refreshment	Lobby
8:40-8:50am	Welcome	109
9:00-10:00am	Parallel Workshop Session 1	Various (See ticket)
10:15-11:15am	Parallel Workshop Session 2	Various (See ticket)
11:20-12:05pm	Lunch	Lobby
12:15-1:15pm	Parallel Workshop Session 3	Various (See ticket)
1:25-2:25pm	Career Panel Discussion	109
2:25-2:30pm	Closing & Evaluations	109

