UC SANTA BARBARA

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Jim Logan

Sine Language

Like good mathematicians, Tamara Gomez and her friends wanted to solve a problem: How do you show female high school students what it's like to major in math or a math-related field in college?

The answer: "Powers 2017: Problem Solving for Women to Encourage Research in STEM." The event is a full day of activities designed to give high school girls a good look at majoring in science, technology, engineering and math (STEM) fields.

"We want to introduce them to female role models in STEM, and we also want them to have a lot of fun," said Phoebe Coy, an officer of UC Santa Barbara's student chapter of the Association for Women in Mathematics (AWM) and a third-year math major.

"Powers 2017" will be held Saturday, April 22, from 9:30 a.m. to 4:30 p.m. in UCSB's Old Little Theater. The day will include a team math competition, math and physics activities, a panel discussion with STEM undergraduate and graduate students, lunch at the lagoon and more. The event is free and open to female high school students in the Santa Barbara, Ventura and Santa Maria areas.

Kathy Foltz, an associate professor of molecular, cellular and development biology and interim dean of UCSB's College of Creative Studies, will welcome participants with a short address.

Women interested in attending should fill out an online form to register.

“We hope to have 50 students,” said Gomez, a third-year math major and AWM’s co-president. “Each student will be placed on a team of three to five people for the problem solving competition (they can also choose a team member when they sign up if they have one in mind). We will also be splitting up into groups to participate in fun math and physics activities.”

The competitions, Gomez said, are designed to be fun as well as instructive. “We have been looking through hundreds of problems and puzzles to see which ones would be the most interesting and exciting to solve,” she said.

After the competition, math graduate student Sherilyn Tamagawa will talk about “mathematical braids,” which she said involve very few numbers. She’ll describe what they are and their uses. And yes, they do look like braids of rope, she said.

After lunch, two workshops will explore physics and math topics. In the first, Sathya Guruswamy, a lecturer in UCSB’s Department of Physics, will answer the question, “ Can one hear the shape of a drum?” Next, math graduate student Carmen Galaz-Garcia will offer a look at topology, the geometric study of spaces.

Finally, a panel of math, physics and computer science undergrad and grad students will explore the various disciplines.

“ ‘POWERS’ is a free event, with a lunch included,” Gomez said, “so all you need to do to enjoy this event is have an appetite and be ready to engage in some great activities we have planned.”

For more information, email ucsb.awm@gmail.com or visit the group’s Facebook page, UCSB AWM Student Chapter.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.