

BAMA

School Year 2019–2020
Join us for a free talk...

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Michael Dorff

Frozen, Soap Bubbles, and Math

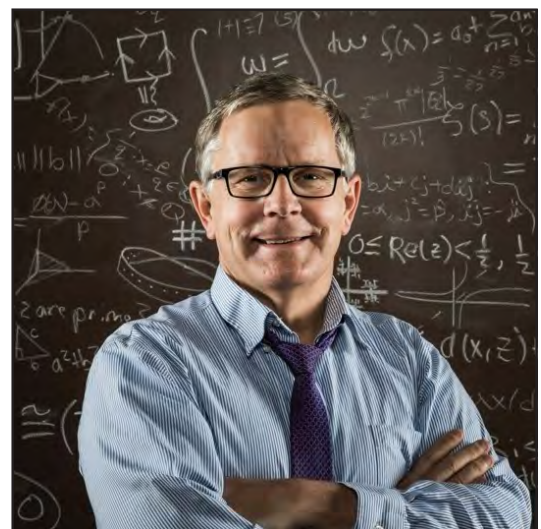


Santa Clara University, Daly Science 207

Friday, February 28, 2020, 7:30 pm

What's your favorite movie? Star Wars? Avatar? The Avengers? Frozen? What do these and all the highest earning Hollywood movies since 2000 have in common? Mathematics! You probably didn't think about it while watching these movies, but math was used to help make them. In this presentation, we will give one example by looking at how math was used in making realistic-looking snow in the movie Frozen. Then we will change gears and look at how math is related to soap bubbles. In high school geometry, we learn that the shortest path between two points is a line. What is the shortest path connecting four points at the corners of a square? From there, we move up a dimension and look at a few equivalent ideas in terms of shapes in 3-dimensional space. Surprisingly, these two ideas are connected through soap films that result when a wireframe is dipped into a soap solution. We will use a hands-on approach to look at the geometry of some specific soap films and "minimal surfaces".

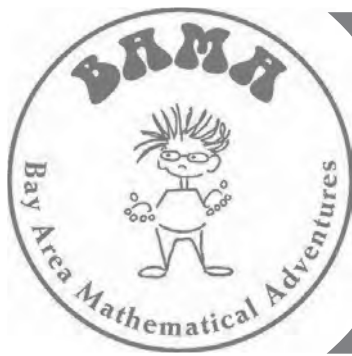
Michael Dorff is President of the Mathematical Association of America (MAA) and a professor of mathematics at Brigham Young University. He earned his Ph.D from the Univ. of Kentucky. He is interested in promoting mathematics to the general public, in non-academic careers in mathematics, and in undergraduate research. Also, he co-directs the MAA PIC Math program (Preparation for Industrial Careers in the Mathematical Sciences) and is a Fellow of the American Mathematical Society and a Fulbright Scholar in Poland. He is married with 5 daughters. In any free time he has, he enjoys reading, running, and traveling (he has traveled to 49 U.S. states and 48 countries).



* See back for map and directions.

Visit the Bay Area Mathematical Adventures (BAMA) at <http://mathematicaladventures.org>

To receive email notifications about BAMA talks, please contact Frank Farris at ffarris@scu.edu.



BAMA

Bay Area Mathematical Adventures

A series of presentations on diverse topics by remarkable mathematicians. All talks are free and open to the public.

WHY?

BAMA aims to challenge and motivate students to think mathematically. Speakers will present real mathematics, and will share with the audience modern views of mathematics. Some talks will provide students with related problems, or will enable teachers to expand later on the topics with their students.

WHO?

BAMA is aimed at bright high-school age students. However, all are welcome: younger or older students, teachers, parents, and the general public.

WHEN?

Evening talks will be given approximately once a month between September and April. Each talk will be self-contained (speakers will not assume their audiences have attended previous talks).

WHERE?

Santa Clara University Daly Science, rm. 207

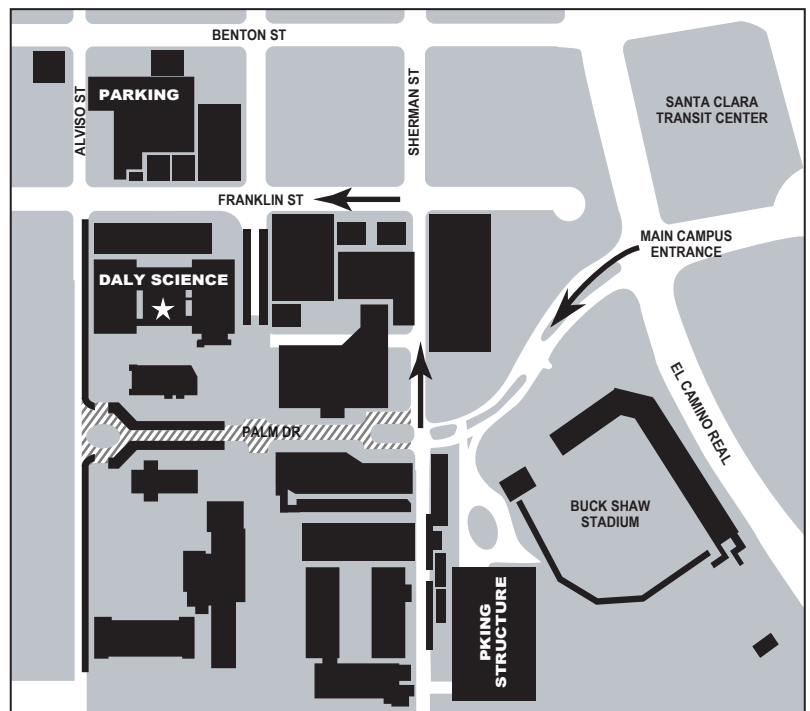
From US Highway 101, take the De La Cruz Blvd/Santa Clara exit and follow the signs to El Camino real and main campus entrance.

From I-280, take I-880 north toward Oakland to The Alameda exit. Turn left onto The Alameda (which becomes El Camino Real) to main campus entrance.

From I-880, take The Alameda exit, travel north (The Alameda becomes El Camino Real) to main campus entrance.

Note: If you arrive by car, you can go directly to the parking garage at Franklin and Alviso and purchase a permit at a self-serve kiosk. Alternatively, it is usually possible to find free street parking within a couple of blocks. The parking garage is free after 7 pm on Fridays.

If you have a disability and require reasonable accommodation, please call anyone on the steering committee, or 1-800-735-2929 (TTY—California Relay) 24 hours in advance.



SPONSORS:

San Jose State University
Departments of Mathematics and Computer Science
College of Engineering

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Department of Mathematics and Computer Science
American Institute of Mathematics
Mathematical Sciences Research Institute

FOR MORE INFO:

<http://www.mathematicaladventures.org>

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