



Ravi Vakil *The Mathematics of Doodling*



Santa Clara University, Daly Science 207 Friday, March 1, 2019, 7:30 pm

Doodling has many mathematical aspects: patterns, shapes, numbers, and more. Not surprisingly, there is often some sophisticated and fun mathematics buried inside common doodles. I'll begin by doodling and see where it takes us. It looks like play, but it reflects what mathematics is really about: finding patterns in nature, explaining them, and extending them. By the end, we'll have seen some important notions in geometry, topology, physics, and elsewhere; some fundamental ideas guiding the development of mathematics over the course of the last century; and ongoing work continuing today.

Ravi Vakil is a Professor of Mathematics and the Robert K. Packard University Fellow at Stanford. He is an algebraic geometer, whose work touches on topology, string theory, applied mathematics, combinatorics, number theory, and more. He won a silver medal and two gold medals (once with a perfect score) at the International Mathematical Olympiad. He was named Putnam Fellow (the top award in the US/Canadian undergraduate competition) in each of his four undergraduate years. He received his Ph.D. from Harvard and taught at Princeton and MIT before moving to Stanford. He has received the Dean's Award for Distinguished Teaching, the American Mathematical Society Centennial Fellowship, the Terman fellowship, a Sloan Research Fellowship, the NSF CAREER grant, and the Presidential Early Career Award for Scientists and Engineers. He has also received the Coxeter-James Prize from the Canadian Mathematical Society, and the André-Aisenstadt Prize. He was the 2009 Hedrick Lecturer at MathFest and is the MAA Pólya Lecturer. He helped found the website Mathoverflow, and serves on the Board of Directors, where his unofficial title is "godfather". He works extensively with talented younger mathematicians at all levels, from middle school through recent Ph.D.'s. He is on the Board of Directors of the new high school "Proof School" in San Francisco.



* 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 .





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.



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