BAMA
Bay Area Mathematical Adventures

Paul Zeitz
Continued Fractions and Hyperbolic Geometry

San José State UNIVERSITY

San Jose State University*
Science Building, Rm 142

7:30 pm
Friday, January 19, 2018

Continued fractions are, in some sense, the optimal way to represent numbers. The continued fraction of a number is thus an intrinsic property of that number, unlike, say, its base-10 representation. There is a little-known, amazing "folkloric" connection between continued fractions and hyperbolic geometry. In this talk, I will demonstrate this connection, and convince you of its "obviousness," using old-fashioned Eastern European problem-solving tools and really pretty computer graphics.

Paul Zeitz is a professor of math at the University of San Francisco, where he has been since receiving his PhD in 1992 from UC Berkeley. He grew up in Brooklyn and graduated from Stuyvesant High School in 1975. Between high school and graduate school in math, he majored in history, taught high school math for several years, and flirted with journalism and geology. He was a member of the first US team to participate in the International Math Olympiad, and later coached several US teams, including the 1994 team which was the only team in IMO history to receive a perfect score. He has devoted his career to teaching mathematical problem solving at all levels to diverse audiences and is very active in math circles in many locations. He wrote *The Art and Craft of Problem Solving* in 1998 and produced a 12-hour video course with the same name for The Teaching Company in 2009. He is a co-founder of Proof School, now in its third year, the nation's first secondary school for "kids who love math." When not doing math, he likes to pursue outdoor adventures with his wife, a former National Park Service ranger.

* See back for map and directions.
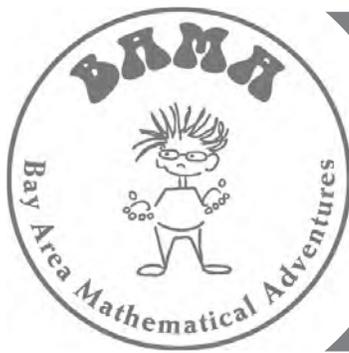
BAMA

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?

San Jose State University Science Building, Rm 142

■ From 101 take the First Street or Guadalupe Expressway exit and go to Fourth Street.

■ Take Fourth to San Salvador Street; turn left onto San Salvador and park in the South Garage. The automated pay stations located on level 3 and above accept coins, $1, $5 and $10 bills, Visa or Master Cards. Parking is $1.00 per ½ hour or $5.00 day pass after 5:30.

■ From 280 take the 7th Street exit and turn North on Seventh St. The garage is on the left after 5 or 6 blocks.
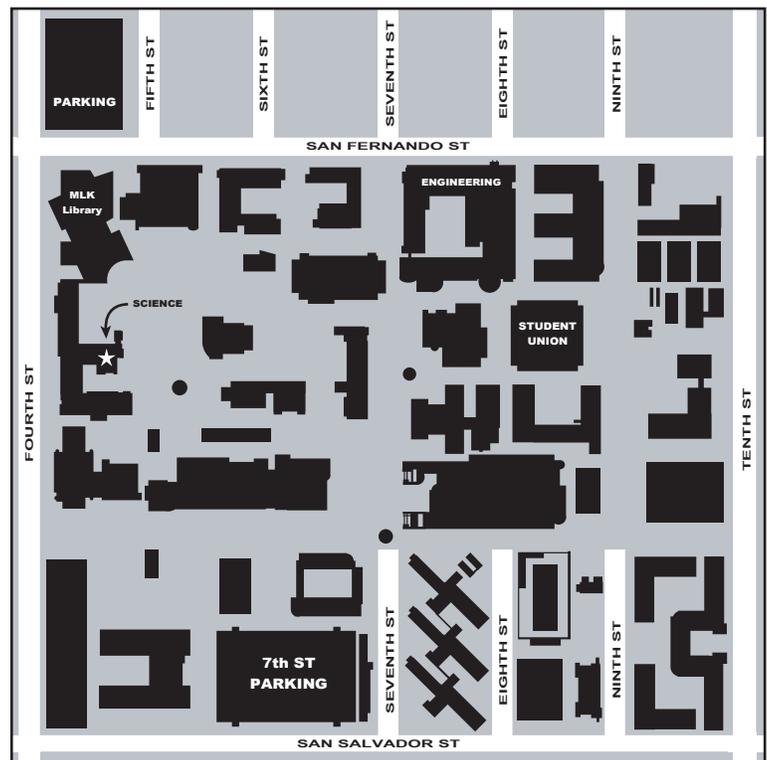
FOR MORE INFO:

http://www.mathematicaladventures.org

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