Bay Area Mathematical Adventures

Aparna Higgins

Pebbling on Graphs: Demonic Graphs and Troop Deployment

San Jose State University*
Science Building, Rm. 142

7:30 pm
Wednesday, November 4, 2015

San José State
U N I V E R S I T Y

Many mathematicians enjoy thinking about mathematics without concerning themselves about what, if any, applications those ideas may have. As more people work with these ideas, variations of the original ideas are defined, and occasionally, those variations lead to "real-world applications." In this talk, I will discuss some pebbling results by one of my undergraduate students, and then I will consider a variation of pebbling that was applied to troop deployment and used by other mathematicians in an attempt to explain the fall of the Roman Empire.

Aparna Higgins has taught mathematics at the University of Dayton since 1984. She grew up in India, where she completed her undergraduate education. She earned her Ph.D. degree at the University of Notre Dame in universal algebra in 1983. Eager to involve undergraduate students in mathematics research, Higgins started working in graph theory. She has directed several undergraduate students' Honors theses in graph theory, and co-directed research experiences for undergraduates in three summers.

Aparna Higgins has received four teaching awards in her career, including the Mathematical Association of America's Deborah and Tepper Haimo Award for Distinguished College or University Teaching of Mathematics in 2005. Higgins has served as the Director of Project NExT (New Experiences in Teaching), a faculty development program of the MAA.

Higgins and her husband, who is also a mathematician, are enjoying their current sabbatical at California Lutheran University in Thousand Oaks, CA, where they share a teaching position. Their previous sabbaticals were spent at the Naval Postgraduate School in Monterey, CA, the US Military Academy at West Point, NY, and California State University Channel Islands. Aparna Higgins enjoys reading, knitting, cooking Indian food and creating greeting cards (often with a mathematical design).

* See back for map and directions.
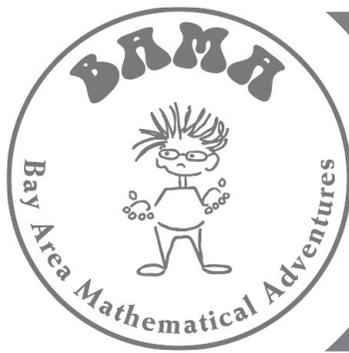
BAMA

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.
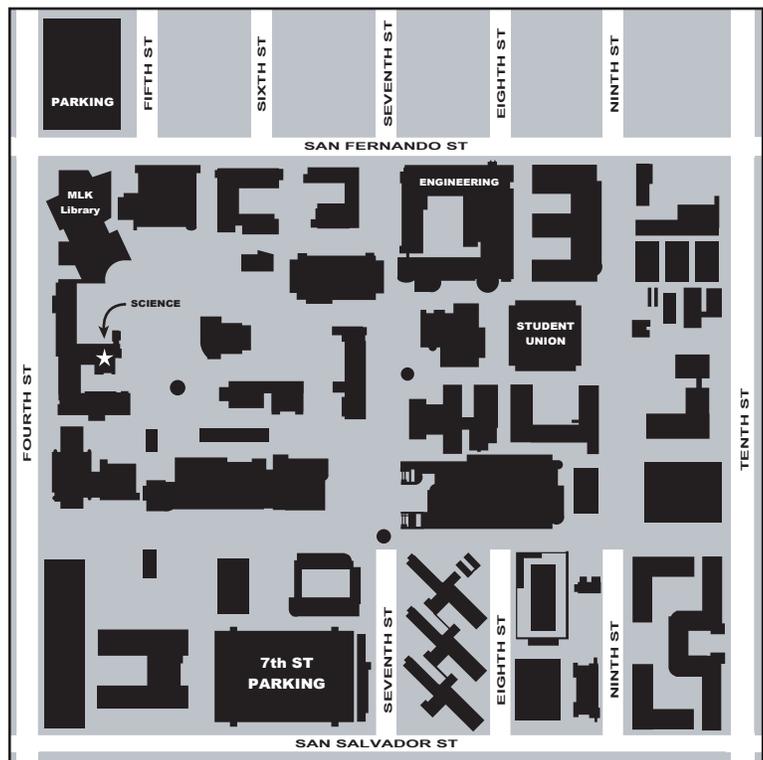
FOR MORE INFO:

http://www.mathematicaladventures.org

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