

# BAMA 3

School Year 2011–2012  
Join us for a free talk...

## Jesus De Loera

### *Easy to State But Hard to Solve: My Favorite Problems in Polyhedral Geometry*



Santa Clara University, Daly Science 207  
Friday, December 9, 7:30 pm

People often have totally wrong ideas that mathematics is completely finished without any new development coming up ahead, or that it has no direct connection to real life. Of course these myths have nothing to do with the truth and we will try to dispel them with the help of convex polyhedra – objects familiar to every child. Indeed, cubes, pyramids, and triangles are common staples in all kindergartens, yet surprisingly polyhedra, in their high-dimensional version, are widely used in many areas of applied mathematics such as operations research, voting, computer networks, and more. Intrinsic beauty and simplicity of polyhedra appeal to all, but very few people know of the many easy-to-state unsolved mathematical problems that hide behind their beauty. The purpose of this lecture is to introduce the audience to some of these fascinating open questions on the frontiers of mathematical research.

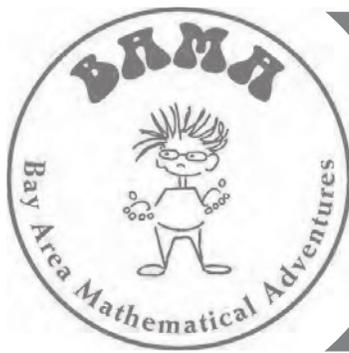
**Jesus De Loera** received his B.S. degree in Mathematics from the National University of Mexico in 1989, M.A. in Mathematics from Western Michigan in 1990, and Ph.D in Applied Mathematics from Cornell University in 1995. His work in the field of discrete mathematics leads to challenging computational problems in applied combinatorics and optimization while using tools from algebra and convex geometry. He arrived at UC Davis in 1999. His research has been recognized by an Alexander von Humboldt Fellowship, the 2010 INFORMS computer society prize, and a John von Neumann professorship at the Technical University of Munich. He has received over three million dollars in national and international grants. He also received several awards for his outstanding mentoring and teaching. He has supervised 7 Ph.D students, 5 postdocs, and over 20 undergraduate theses.



\* 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](mailto: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).

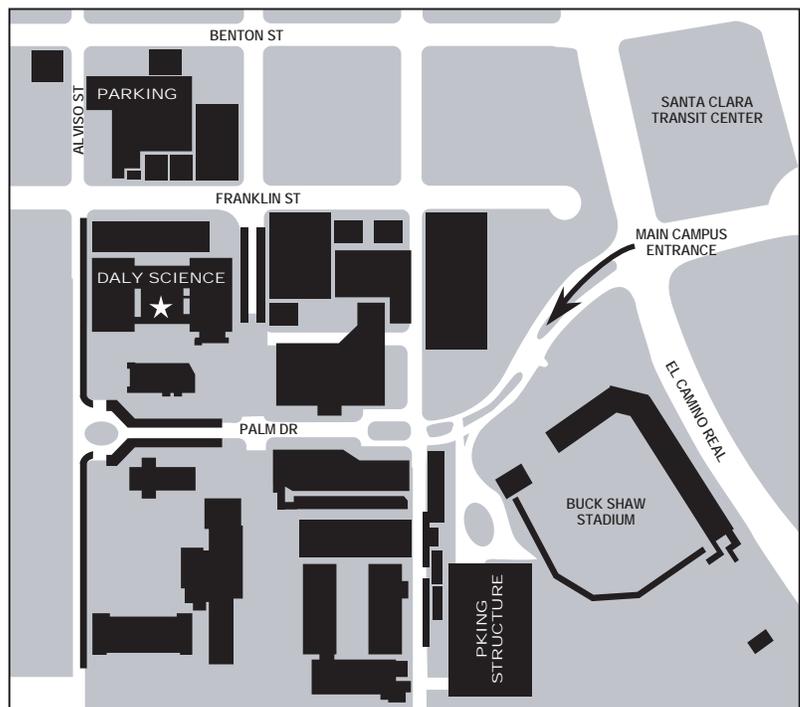
### WHERE?

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

**Note:** If you bring your car to a talk at SCU, use the formal entrance to the University and tell the parking guard that you are attending a BAMA talk, you will get a **free permit**, which you can use in the parking garage or in the lot on Franklin Street, which is closer to the talk location.

- 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:

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Departments of Mathematics and Computer Science  
College of Engineering

**Santa Clara University**  
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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