



BAMA

School Year 2007—2008
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Martin Isaacs

Soccer Balls, Pentagons and Euler



San Jose State University*
Engineering Auditorium, Rm. 189

7:30 pm
Wednesday, September 26

A traditional soccer ball is roughly a sphere, covered with pentagons and hexagons, with three of these polygons meeting at each vertex. This talk will discuss why the number of pentagons is forced to be twelve. This lack of freedom is a consequence of an amazing formula proved by the 18th century mathematician Euler, which shows that an arbitrary "scribble" is more predictable than you might think.

Martin Isaacs was a student of Richard Brauer at Harvard University, where he received his Ph.D in 1964, and he has been a professor at the University of Wisconsin Madison since 1969. Isaacs is the author of about 150 research papers and three books, mostly in abstract algebra, and specifically in group representation theory. His most recent book, however, is "Geometry for College Students". He has won the UW Distinguished Teaching Award, the Wisconsin Section MAA Teaching Award and the B. S. Reynolds award for teaching engineering students at the UW. Isaacs has been a Sloan Foundation Research Fellow and an MAA Polya Lecturer.



* See back for map and directions.

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