

California State University, Fresno
Spring 2007 Interdisciplinary Mathematics Lecture Series

presents

DONALD SAARI

UC Irvine

"Mathematics Of Voting Rules; Why Your Last Election Outcome Was So Lousy!"



Friday, April 13, 2007 from 4:00 to 5:00PM
IT 101

During the French revolutionary days of the late eighteenth century, the mathematicians Borda and Condorcet discovered that the choice of a voting rule can significantly change the election outcome; this was the birth of the mathematics of voting. The issue for the last couple of centuries is to understand why all of those paradoxes can occur and to use this information to determine which rule is the "best". This problem has only recently been solved by use of mathematics. During this lecture, where some people will leave worrying whether the "wrong person", or "calculus book," was selected during their last election, I will indicate what was done and what it means.

Donald Saari is a Distinguished Professor of Mathematics and of Economics as well as the Director of the Institute for Mathematical Behavioral Sciences at the University of California at Irvine. He received his undergraduate degree from Michigan Technological University and his PhD from Purdue University (advisor: Harry Pollard) where his thesis discussed the collision dynamics of the Newtonian N-body problem. After a postdoctoral position in the Yale University Astronomy Department, he joined the Mathematics Department at Northwestern University where he served as chair of the department and was the first Pancoe Professor of Mathematics. After three decades at Northwestern, in July 2000, he moved to California.

Saari's research interests center on dynamical systems and their applications to mathematical physics (primarily the Newtonian N-body problem) as well as to mathematical issues from the social sciences coming from economics, voting theory, and evolutionary behavior. He is the past Chief Editor of the Bulletin of the American Mathematical Society as well as serving on the editorial boards of several journals on analysis, dynamics, economics, and decision analysis. He is a member of the National Academy of Sciences and the American Academy of Arts and Sciences, a Guggenheim Fellow, the past chair of the US National Committee of Mathematics, chair of the US delegation to the 2002 general assembly of the International Mathematical Union, and a member of several NRC committees including Math Science Education Board. He has honorary doctorates from Purdue, Université de Caen, and Michigan Technological University.

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