The Math/Stats Colloquium
Department of Mathematics and Statistics
San José State University

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SJSU

Voting Theory "Theorems" and Misapplied Math
October 28, 2016, MH320

Abstract: Voting theory is an interdisciplinary (math, economics, social science) field studying how to combine the preferences of many voters into a single preference (such as elected representatives or policy). I discuss some classical results and show how they can be applied and misapplied, focusing on the celebrated Arrow's Theorem and the slightly less-well-known May's Theorem, both "theorems" about how innocuous constraints on a voting system can force it to have certain restrictive, and often very strange, properties. My focus is not on the proofs but on the intuition the theorems give. I also discuss work in progress (joint with Mahendra Prasad, UC Berkeley) about a generalization of May's Theorem and implications for the social sciences.

Background: No particular background required; no prior familiarity with voting theory assumed.

About the speaker: Yan X. Zhang is an assistant professor of mathematics at San Jose State University, working in combinatorics. He received a Ph D. from MIT under Richard Stanley and was a Morrey Visiting Assistant Professor at UC Berkeley.

Snacks in MH331B at **2:00 pm**
Talks start at **2:30 pm**

For more information, see our full schedule at:

http://www.math.sjsu.edu/~hsu/colloq/