



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



Abel Rodriguez

UC Santa Cruz

*Spherical Factor Analysis for Binary Data:
A Look at the Conservative Revolt in the House*
SEPTEMBER 27, 2017, MH320

Abstract: In political science, “spatial” voting models represent a legislator’s policy views by a point in some Euclidean “policy space”. A legislator’s votes are determined by the distance between their preferences and the position of a bill in the same policy space.

We introduce a class of models in which the policy space is the surface of an n -dimensional sphere, providing a mechanism for the “horse-shoe theory” in political science, which postulates that the far-left and far-right are more similar to each other than to the political center. For example, we show that voting in the 113th US House of Representatives is better explained by a circular model than by either a one- or a two-dimensional Euclidean model.

Background: One course in statistics.

About the speaker: Abel Rodriguez completed his PhD at Duke Univ. in 2007. He is currently Professor of Applied Mathematics and Statistics and Assoc. Dean for Graduate Affairs in the Baskin School of Engineering at UC Santa Cruz. His research interests focus on Bayesian statistical methods and applications to social and biological sciences.

SNACKS IN MH331B AT 2:30 PM

TALKS START AT 3:00 PM

For more information, see our full schedule at:

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