



The Math Colloquium
Department of Mathematics
San José State University



Plamen Koev
SJSU

*Applications and Computational Challenges of
Random Matrices: From Genomics to Target
Recognition*

FEBRUARY 4, 2009, MH320

Abstract: How does one automatically classify a number of objects into groups given (a vector of) measurements on these objects? Are these objects distinct enough for such a classification to make sense?

These are some of the questions that can be answered by the methods of random matrix theory. Through examples that range from automatic 3-D target recognition and classification to genomics, I will present the elegant connections that the solutions to these problems have with the fields of combinatorics and algebra, as well as the multitude of challenges in computing and implementing these ideas in practice.

Background: No prior knowledge of statistics or numerical analysis is expected and the talk should be easily accessible to undergraduates who have had a course in linear algebra.

About the speaker: Plamen Koev received his Ph. D. at UC Berkeley and is now an Assistant Professor at SJSU. He works on algorithms in linear algebra, random matrix theory, and multivariate statistics.

SNACKS IN MH331B AT 2:30 PM
TALK STARTS AT 3 PM

For more information, see our full schedule at:

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