



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



Ruriko Yoshida

Naval Postgraduate School

Evolution and Triangles in Tree Spaces

DECEMBER 9, 2016, MH320

Abstract: A phylogenetic tree, also known as an evolutionary tree, is a tree representation of evolutionary history among different species. Since Charles Darwin illustrated the notion of an evolutionary tree in his book *The Origin of Species*, such trees have provided a great statistical model to learn the evolutionary history of biological data. Motivated by statistical analysis on a set of phylogenetic trees, we are interested in the space of all possible phylogenetic trees with n species. In this talk we will discuss some properties of triangles in this space. (Joint with B. Lin, B. Sturmfels, and X. Tang)

Background: One semester linear algebra. Interest in geometry, statistics, or computational biology is helpful but not necessary.

About the speaker: Ruriko Yoshida is an associate professor of statistics at the Naval Postgraduate School. She received her Ph.D. at UC Davis, and has previously held positions at Duke Univ. and U. Kentucky. Her main interests lie in the application of algebra and combinatorics to problems in graphical models, Bayesian networks, discrete exponential families, and systematic biology.

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/>