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

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SJSU

Rat GPS:
Drawing Place Field Diagrams of Neural Codes
Using Toric Ideals

May 4, 2016, MH320

Abstract: A rat has special neurons that encode its geographic location. These neurons are called place cells and each place cell points to a region in the space, called a place field. Neural codes are collections of the firing patterns of place cells. In this talk, we investigate how to algorithmically draw a place field diagram of a neural code, building on existing work investigating neural codes, ideas developed in the field of information visualization, and the toric ideal of a neural code.

Background: Students of all backgrounds are welcome. Abstract algebra is encouraged, but certainly not required.

About the speaker: Nida Kazi Obatake is a teaching associate at SJSU. She is finishing up her Master's program at SJSU and is headed to Texas A&M in the fall, where she will begin her PhD studies. In her free time, she watches way more TV than she should.

Snacks in MH331B at 2:30 pm
Talks start at 3 pm

For more information, see our full schedule at:

http://www.math.sjsu.edu/∼hsu/colloq/