



The Math Colloquium
Department of Mathematics
San José State University



David Goulette
SJSU

Detecting Speed Bumps in Point Cloud Data

AUGUST 28, 2013, MH320

Abstract: In Fall 2012 our CAMCOS (Math 203) team worked with Volkswagen to develop methods for detecting objects in Point Cloud Data collected from a moving car. Specifically, our task was to develop methods for detecting speed bumps in the road. Developing fast algorithms for detecting objects in Point Cloud Data poses significant challenges due to noise in the data and the immense size of the data sets produced by the most advanced sensor devices. I will briefly describe two methods we developed for detecting speed bumps and also describe some possibilities for further development (including improved signal processing and statistical modeling).

Background: This presentation will be largely accessible to any student who has taken calculus and linear algebra, but some topics in signal processing and statistics will be mentioned.

About the speaker: David Goulette is currently a graduate student at SJSU and he is also a part-time lecturer for the Department of Mathematics. He was the graduate student leader for the CAMCOS project in Fall 2012 and he is currently working on his Master's thesis in the area of Möbius transformations and Riemann Surfaces.

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/>