

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



## Andrea Arauza Rivera CSU East Bay

## Calculus on Fractals (Also What Are Fractals) DECEMBER 04, 2019, MH320

Abstract: Together we will explore the world of fractal geometry. We will start with a number of examples of fractal sets, some made by humans and some by nature. Fractals have various interesting properties which we will explore in order to get an idea of why these sets are so strange. These properties include a non-integer dimension and a method for measuring the size of the set which is different from the usual counting, length, area, volume, etc. We will then consider how one can do Calculus on fractals.

Background: Multivariable calculus.

About the speaker: Dr. Andrea Arauza Rivera is a proud Chicana mathematician who began as a student at Modesto Junior College before transferring to CSU Stanislaus and then pursuing a PhD. She earned a PhD in Mathematics from UC Riverside in 2018. Her research is in the areas of functional analysis and fractal geometry. She is now an Assistant Professor at CSU East Bay.

> SNACKS IN MH331B AT 2:30 PM TALK STARTS AT 3:00 PM

For more information, see our full schedule at:

http://www.timhsu.net/colloq/