Kyle Hambrook

SJSU

Measure and Dimension of Unions of Fractals

October 17, 2018, MH320

Abstract: Consider a collection of spheres. A classic problem in geometric measure theory asks how thin (in terms of dimension) the sets of centers and radii of the spheres can be while still guaranteeing the union of the spheres is thick (in terms of Lebesgue measure). I will explain my recent work (with Krystal Taylor) on a fractal version of this problem. Along the way, I will explain the concepts of fractal, Lebesgue measure, Hausdorff dimension, and Fourier dimension.

Background: One course in analysis.

About the speaker: Kyle Hambrook is Assistant Professor in Mathematics and Statistics at San Jose State University. Previously, he was an NSERC Fellow and Visiting Assistant Professor at the University of Rochester. He earned his Ph.D. in Mathematics at the University of British Columbia in 2015.

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/