

*Department of Mathematics,
University of California San Diego*

Joint seminar between Analysis and CCOM

Prof. Stefan Steinerberger

Yale University

Spherical Designs and the Heat Equation

Abstract:

Spherical Designs are finite sets of points on the sphere with the property that the average of low-degree polynomials over the sphere coincides with the average over the finite set. These objects are very beautiful, very symmetric and have been studied since the 1970s. We use a completely new approach that replaces delicate combinatorial arguments with the a simple application of the heat equation; this approach improves the known results and extends to other manifolds. We also discuss some related issues in Combinatorics, Irregularities of Distribution and Fourier Analysis.

Host: Alex Cloninger

Tuesday, March 13, 2018

3:30 PM

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