

# The SUMO Speaker Series for Undergraduates

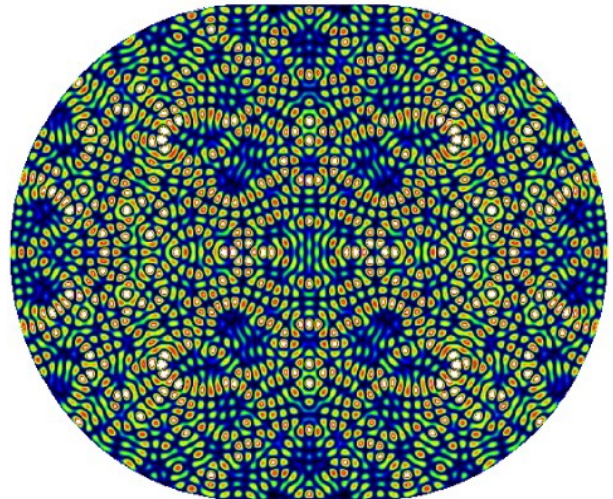
Wednesday, January 28<sup>th</sup>  
5:15-6:15, room 380C

## Spectral Geometry

Prof. Rafe Mazzeo

### ABSTRACT:

Any physical object has, in principle, an infinite sequence of simple vibrational modes, or “overtones”. In the most idealized model, these are the eigenvalues of the Laplace operator on that region. One of the basic problems in geometric analysis is to understand the relationship of this sequence of numbers to other physical or geometric characteristics of the region. One might ask whether this sequence actually determines the domain, or at least what geometric information can be extracted from it. I will discuss a number of different aspects of this problem. This field touches on geometry, number theory, mathematical physics, probability, etc.



Food from Pizza Chicago

<http://sumo.stanford.edu/speakers>