

Number Theory Seminar

Tuesday, March 5th, 2019

4:00 pm in Hume 321

Rizwanur Khan

University of Mississippi

Distribution of mass of automorphic forms

ABSTRACT

Some years ago, the Quantum Unique Ergodicity problem made headlines when it was resolved for certain arithmetic surfaces by Lindenstrauss, with an important final step provided by Soundararajan, and led to a 2010 Fields Medal being awarded to Lindenstrauss. The QUE is a statement about how automorphic forms are distributed on the modular surface. It is actually part of a bigger conjecture in Arithmetic Quantum Chaos, known as the Random Wave Conjecture. The aim of this talk to explain what this conjecture is and where it comes from. We will also describe recent progress towards the conjecture going beyond the QUE, and thus offering some insight about the finer distribution of automorphic forms.