Speaker: Peter Sarnak

Title: Zeros and nodal lines of holomorphic and Maass forms

Abstract: Thanks to the resolution of the arithmetic QUE conjecture by Holowinsky and Soundararajan, we know that the zeros of holomorphic hecke eigenforms are equidstributed on the modular curve as their weight goes to infinity. We review this and related results about Maass forms and then discuss some recent results about the finer distrubution of these zeros and nodal lines. In particular the latter behave like the ovals of random real projective curves of growing degree whose behaviour is itself quite fascinating.