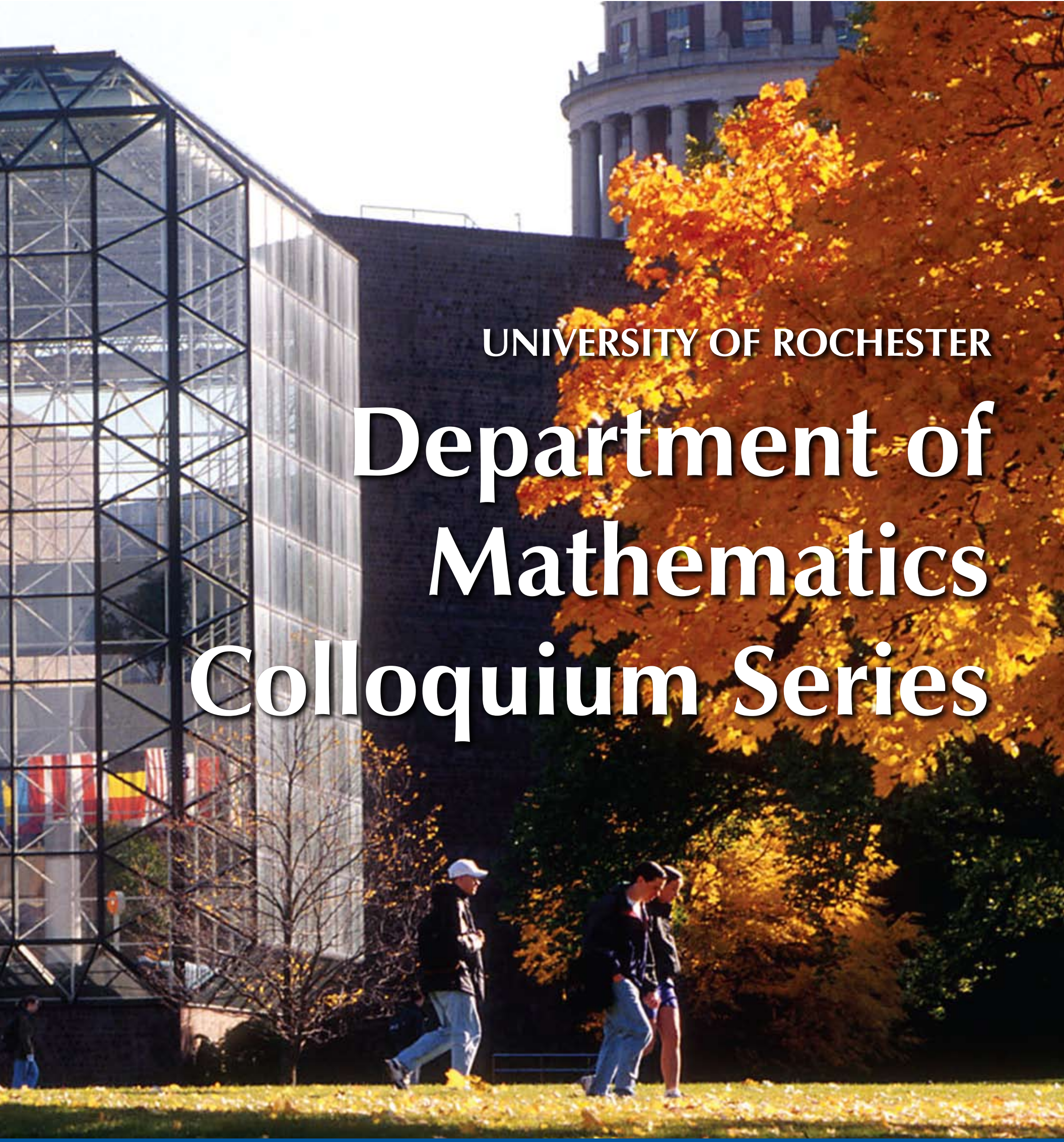

UNIVERSITY OF ROCHESTER

Department of Mathematics Colloquium Series

ABSTRACT

A fundamental problem in the area of quantum chaos is to understand the distribution of high eigenvalue eigenfunctions of the Laplacian on certain Riemannian manifolds. A particular case that is of interest to number theorists concerns hyperbolic manifolds arising as a quotient of the upper half-plane by a discrete "arithmetic" subgroup of SL_2(R) (for example, SL_2(Z), and in this case the corresponding eigenfunctions are called Maass cusp forms). In this case, Rudnick and Sarnak have conjectured that the high-energy eigenfunctions become equi-distributed. Professor Soundararajan will discuss some recent progress that has led to a resolution of this conjecture, and also on a holomorphic analog for classical modular forms.

Kannan Soundararajan

Professor of Mathematics
Stanford University

Quantum Unique Ergodicity and Number Theory

Thursday, March 19, 3:30–4:30 p.m.

Computer Studies Building

Room 209

UNIVERSITY of ROCHESTER