

COLLOQUIUM

University of Notre Dame
Department of Mathematics

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Northwestern University

Will give a lecture entitled
Real and complex geometry of zero sets of eigenfunctions.

On

Thursday, March 10, 2011

at 4:00 PM in Room 129 Hayes-Healy Hall

Abstract:

Eigenfunctions of the Laplacian on a real analytic Riemannian manifold are analogues of polynomials. Their zero sets are analogues of algebraic varieties. The hypersurface volume should be roughly the degree (the square root of the eigenvalue).

In this talk, we discuss volumes and also the equidistribution theory of nodal sets, i.e. how they are spatially distributed in the manifold.