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Department of Mathematics and Computer Science

Colloquium

Relative Trace Formula and Rankin-Selberg L-functions

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Abstract:

In this talk, we will introduce a relative trace formula on $\mathrm{GL}(n+1)$ over number fields, incorporating cusp forms on $\mathrm{GL}(n)$. This formula combines the spectral side, involving average Rankin-Selberg L-functions for $\mathrm{GL}(n+1) \times \mathrm{GL}(n)$ across the generic spectrum, with the geometric side, consisting of Rankin-Selberg L-functions for $\mathrm{GL}(n) \times \mathrm{GL}(n)$ and specific meromorphic functions. We will explain how this formula is regularized and explore its arithmetic consequences, particularly addressing the challenges in subconvexity and nonvanishing problems.

4 – 5pm
Wednesday, November 15, 2023
Room 204, Smith Hall