Philadelphia Area Number Theory Seminar

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Relative Trace Formula and L-functions for $\mathrm{GL}(n+1) \times \mathrm{GL}(n)$

Abstract: We will introduce a relative trace formula on $\mathrm{GL}(n+1)$ weighted by cusp forms on $\mathrm{GL}(n)$ over number fields. The spectral side is an average of Rankin–Selberg L-functions for $\mathrm{GL}(n+1) \times \mathrm{GL}(n)$ over the full spectrum, and the geometric side consists of Rankin–Selberg L-functions for $\mathrm{GL}(n) \times \mathrm{GL}(n)$, and certain explicit meromorphic functions. The formula yields new results towards central L-values for $\mathrm{GL}(n+1) \times \mathrm{GL}(n)$: the second moment evaluation, and simultaneous nonvnanishing in the level aspect. Further applications to the subconvexity problem will be discussed if time permits.

Wednesday, February 1, 2023
3–5 PM

Bryn Mawr College
Department of Mathematics
Park Science Center **328**

Informal refreshments at 3PM – Talk at 3:30PM