

### DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

## Colloquium

# PRODUCT OF RANKIN-SELBERG CONVOLUTIONS AND APPLICATIONS

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#### **ABSTRACT:**

The Rankin-Selberg method is a fruitful way to study zeta functions or *L*-functions. In this talk we construct a family of Rankin-Selberg integrals which represent the product of *L*-functions of  $GL(\ell) \times GL(m)$  and of  $GL(\ell) \times GL(n)$  when  $m + n < \ell$ . When n = 0, these integrals are those defined by Jacquet–Piatetski-Shapiro–Shalika up to a shift. We will also discuss applications of these integrals. This is joint work with Qing Zhang.

> 4 – 5pm Wednesday, November 8, 2023 Room 204, Smith Hall