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**Rahul Krishna\*** (rahulkrishna@brandeis.edu). *On the global Gross-Prasad conjecture for orthogonal groups.*

The global Gross-Prasad conjecture suggests a deep relation between the value of a period integral of an automorphic representation on  $SO_n \times SO_{n+1}$  and the central value of its standard  $L$ -function.

In this talk, I will explain an unusual comparison of relative trace formulas (RTFs), the spectral sides of which encode the two halves of the global Gross-Prasad conjecture for orthogonal groups. After quickly surveying the global construction of these RTFs, I'll explain how this leads to several local conjectures, and provide a bit of evidence for these local statements in low ( $n \leq 4$ ) rank. (Received January 19, 2021)