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The Jacquet-Rallis fundamental lemma

I will explain the idea of the proof of the conjecture of Jacquet-Rallis in characteristic $p > 0$. The original problem can be reformulated in to a lattice counting problem in p -adic vector spaces, which can be further related to a global counting problem of vector bundles. Counting problems are shadows of sheaf-theoretic statements. I will explain the geometric ingredients in resolving the global counting problem.