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D. Gourevitch

Faculty of Mathematics and Computer Science, Weizmann Institute of Science, POB 26,
Rehovot 76100, Israel
`dimagur@weizmann.ac.il`

S. Sahi

Dept. of Mathematics, Rutgers University, Hill Center – Busch Campus, 110 Frelinghuysen
Road, Piscataway, NJ 08854-8019, U.S.A.
`sahi@math.rutgers.edu`

Intertwining Operators Between Line Bundles on Grassmannians

Let $G = \mathrm{GL}(n, F)$ where F is a local field of arbitrary characteristic, and let π_1, π_2 be representations induced from characters of two maximal parabolic subgroups P_1, P_2 . We explicitly determine the space $\mathrm{Hom}_G(\pi_1, \pi_2)$ of intertwining operators and prove that it has dimension ≤ 1 in all cases.

Keywords: Reductive group, maximal parabolic, degenerate principal series, derivatives of representations, Radon transform, cosine transform.

MSC: 22E50, 44A05, 44A12