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Ran Cui* (cranmail@gmail.com). *The Real-Quaternionic Indicator and its relation with the Frobenius-Schur Indicator.*

The well-known Frobenius-Schur indicator (we call the ε indicator) tells if a self-dual representation is orthogonal or symplectic. The real-quaternionic indicator (the δ indicator) indicates if a self-conjugate representation is of real or quaternionic type. The computation of the ε indicator is relatively straightforward. In fact, it has been proven in large generality that $\varepsilon(\pi)$ is given by a particular value of the central character. We would like a similar result for the δ indicator.

When G is compact, $\delta(\pi)$ and $\varepsilon(\pi)$ coincide. In general, they are not necessarily the same. In this talk, we will discuss a relation between the two indicators when G is semi-simple. We will also give a formula for $\delta(\pi)$ in terms of the central character when π is finite dimensional. The main tool we are using is the c -invariant Hermitian form and the theory of extended groups. (Received March 14, 2017)