

## **Characters of some unitary highest weight representations via the theta correspondence.**

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One of the main problems in representation theory is to determine the set of equivalence classes of irreducible unitary representations of a Lie group. Every irreducible unitary representation of a real reductive group is admissible, in the sense of Harish-Chandra, and such representations has a character. In few cases, the character is well-known, and the most general formula for irreducible unitary highest weight modules had been obtained by Enright.

In this paper, by using Howe's correspondence, we gave explicit formulas (on the compact Cartan) for the character of irreducible unitary highest weight modules obtained by a theta lift from a finite dimensional irreducible module of a compact group. Our formulas are Weyl denominator free and have a close resemblance to Harish-Chandra's formula for discrete series. Moreover, the resulting formulas are compatible with the orbit correspondence.

#### **References:**

A. Merino, "Characters of some unitary highest weight representations via the theta orrespondence".  
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