



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

on Wednesday, Jun 10, 2020
at 16:30

ZOOM MEETING: [HTTPS://WEIZMANN.ZOOM.US/J/98304397425](https://weizmann.zoom.us/j/98304397425)

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Unitarity, Eisenstein series, and Arthur's conjectures

Abstract:

Jim Arthur has conjectured the existence of some exotic "unipotent" representations of real reductive Lie groups, which are expected to form building blocks of the unitary dual. Though falling short of a full classification of the unitary dual itself, Arthur's conjectures touch on the essence of some of the most difficult questions concerning unitarity. In another direction, automorphic realizations of these representations are expected to have delicate arithmetic properties.

However, Arthur's unipotent representations are hard to identify, much show are unitary. I'll present a status report, including the unitarity of the "Langlands element" Arthur describes directly (in joint work with Joe Hundley), and the full identification the unipotent representations for exceptional real groups (joint work with Jeff Adams, Marc van Leeuwen, Annegret Paul, and David Vogan).

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