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THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE  
Algebraic Geometry and Representation Theory Seminar

on Wednesday, Jan 19, 2022 at 17:00

The seminar will be held only in zoom: <https://weizmann.zoom.us/j/98304397425>  
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Howe duality for exceptional theta correspondences

Abstract:

The theory of local theta correspondence is built up from two main ingredients: a reductive dual pair inside a symplectic group, and a Weil representation of its metaplectic cover. Exceptional correspondences arise similarly: dual pairs inside exceptional groups can be constructed using so-called Freudenthal Jordan algebras, while the minimal representation provides a suitable replacement for the Weil representation. The talk will begin by recalling these constructions. Focusing on a particular dual pair, we will explain how one obtains Howe duality for the correspondence in question. Finally, we will discuss applications of these results. The new work in this talk is joint with Gordan Savin.