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

on Wednesday, Mar 16, 2022 at 17:00

in zoom only: <https://weizmann.zoom.us/j/98304397425>

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Covers of reductive groups and functoriality

Abstract:

In the study of the Langlands program one often comes in contact with subgroups of the L-group of a connected reductive group  $G$  that have a similar appearance as the L-group of a smaller group  $H$ , but often either fail to be isomorphic to the L-group of  $H$ , or fail to have a canonical isomorphism with it. We propose a resolution to this problem by constructing certain (non-linear) covers of the topological group  $H(F)$  as well as L-groups for these covers. This works for any local field, and follows work of Adams-Vogan for the real numbers. We will present two applications to this construction: A unique characterization of the local Langlands correspondence for supercuspidal parameters (subject to conditions on the base field), and a reinterpretation of the transfer factors in the theory of endoscopy.