



## Seminar/Talk

# Interaction of the local Langlands program with the generalized Springer correspondence

**Anne-Marie Aubert**

IMJ-PRG

Host: Tamas Hausel

(I) Born in a letter of Robert Langlands to Andr Weil in 1967, the Langlands program seeks to establish a far-reaching tissue of conjectures relating seemingly distant areas of mathematics, primarily number theory, representation theory, and algebraic geometry. I will give a survey of the local Langlands correspondence, which is at the core of the program, on both real and  $p$ -adic groups, and will illustrate it on several examples. (II) The Springer correspondence is an injective map from the set of irreducible representations of the Weyl group  $W$  of a complex connected reductive group  $G$  to the set of simple  $G$ -equivariant perverse sheaves on the nilpotent cone. In 1984, Lusztig promoted it to a bijective map by replacing the group  $W$  by a collection of relative Weyl groups. I will first explain Lusztig's construction and its extension to possibly disconnected reductive groups. Next, I will describe the role it plays in the Langlands correspondence for  $p$ -adic groups thanks to a Galois analogue of the Bernstein Center.

**Thursday, May 15, 2025 01:00pm - 03:00pm**

Office Bldg West / Ground floor / Heinzl Seminar Room (I21.EG.101)



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station.

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