

Representations of Hecke algebras and enhanced Langlands parameters for p -adic reductive groups

Anne-Marie Aubert¹, Ahmed Moussaoui², Maarten Solleveld³

¹ Institut de Mathématiques de Jussieu-Paris Rive Gauche, C.N.R.S, Sorbonne Université, Université de Paris

² Laboratoire de Mathématiques de Versailles, Université de Versailles Saint-Quentin-en-Yvelines

³ Institute for Mathematics, Astrophysics and Particle Physics, Radboud Universiteit Nijmegen

The goal of the talk is to describe the parametrization in [3] of the enhanced Langlands parameters (ϕ, ρ) for the group G of F -points of a connected reductive group over a non-archimedean local field F by simple modules of generalized affine Hecke algebras. Here ϕ is an admissible morphism from the absolute Weil-Deligne of F to the L -group of G and ρ an irreducible representation of a certain finite group attached to ϕ . The parametrization relies on the notion of cuspidal support from [1] and uses as a crucial intermediate step the development of the representation theory of generalized graded Hecke algebras done in [2].

References

- [1] A.-M. AUBERT, A. MOUSSAOUI, M. SOLLEVELD, *Generalizations of the Springer correspondence and cuspidal Langlands parameters*, Manuscripta. Math. 157 (2018), 121–192.
- [2] A.-M. AUBERT, A. MOUSSAOUI, M. SOLLEVELD, *Graded Hecke algebras for disconnected reductive groups*, pp. 23–84 in: Geometric aspects of the trace formula, W. Müller, S. W. Shin, N. Templier (eds.) Simons Symposia, Springer, 2018.
- [3] A.-M. AUBERT, A. MOUSSAOUI, M. SOLLEVELD, *Affine Hecke algebras for Langlands parameters*, arXiv:1701.03593.