

Rigidity of lattice actions on boundaries

mercredi 12 juin 2024 14:00 (1 heure)

Lattices in linear semi-simple Lie groups have a natural action on their (generalized) Furstenberg boundaries, e.g. a lattice in $SL_n(\mathbb{R})$ acting on the different flag varieties. For such natural actions, I will discuss the local rigidity question—are these actions ‘stable’ under small deformations in the homeomorphism group of the boundary? We will answer this question for higher rank uniform lattices by showing that any small deformation is semi-conjugate to the natural action. This is joint work with Chris Connell, Thang Nguyen, and Ralf Spatzier. Time permitting, I will discuss how local rigidity fails when we replace the Furstenberg boundary with the visual boundary of the symmetric space.

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