SEMPARIS – Séminaires en région parisienne

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TBA

Lundi 2 Mars 2020, 16 :30
IHES, Amphithéâtre Léon Motchane(Séminaire Géométrie et groupes discrets)
Domaines : math

Titre : *Spherical Functions on Hyperbolic Groups and Property RD (Rapid Decay)*

Orateur : **Adrien Boyer (IMJ-PRG)**

Résumé : *We investigate properties of some spherical fonctions defined on hyperbolic groups using boundary representations on the Gromov boundary endowed with the Patterson-Sullivan measure class. We prove sharp decay estimates for spherical functions as well as spectral inequalities associated with boundary representations. This point of view on the boundary allows us to view the so-called property RD (Rapid Decay, also called Haagerup's inequality) as a particular case of a more general behavior of spherical functions on hyperbolic groups. Then I will explain how these representations are related to the so-called "complementary series". The problem of the unitarization of such representations will be at the heart of the discussion. If time permits, I will try to explain the idea of a constructive proof, using a boundary unitary representation, of a result due to de la Harpe and Jolissaint asserting that hyperbolic groups satisfy property RD.*