SEMPARIS – Séminaires en région parisienne

`http ://string.lpthe.jussieu.fr/semparis/`

TBA

Lundi 16 Octobre 2017, 14 :30
IHES, Amphithéâtre Léon Motchane(Séminaire Géométrie et groupes discrets)
Domaines : hep-th

Titre : *The renormalized volume of quasifuchsian manifolds*

Orateur : **Jean-Marc Schlenker (Université du Luxembourg)**

Résumé : *Quasifuchsian manifolds are an important class of hyperbolic 3-manifolds, classically parametrized by two copies of Teichmüller space. Their volume is infinite, but they have a well-defined finite "renormalized volume" which has nice properties, both analytic and "coarse". In particular, considered as a function over Teichmüller space, the renormalized volume provides a Kähler potential for the Weil-Petersson metric ; moreover, it is within bounded additive constants of the volume of the convex core and is bounded from above by the Weil-Petersson distance between the conformal structures at infinity. After describing these properties, we will outline some recent applications (by Kojima, McShane, Brock, Bromberg, Bridgeman, and others) to the Weil-Petersson geometry of Teichmüller space or the geometry of hyperbolic 3-manifolds that fiber over the circle. We will then explain how properties of the renormalized volume suggest new questions and viewpoints on quasifuchsian manifolds. The talk will be accessible to nonexperts.*