Exposé du vendredi 17 juin 2016

COVERINGS OF THE p-ADIC UPPER HALF PLANE AND ARITHMETIC DIFFERENTIAL OPERATORS

MATTHIAS STRAUCH (INDIANA UNIVERSITY)

Résumé : The p-adic upper half plane comes equipped with a remarkable tower of GL(2)-equivariant etale covering spaces, as was shown by Drinfeld. It has been an open question for some time whether the spaces of global sections of the structure sheaf on such coverings provide admissible locally analytic representations. Using global methods and the p-adic Langlands correspondence for $\mathrm{GL}(2, \mathbb{Q}_p)$, this is now known to be the case by the work of Dospinescu and Le Bras. For the first layer of this tower Teitelbaum exhibited a nice formal model which we use to provide a local proof for the admissibility of the representation (when the base field is any finite extension of $\mathbb{Q}_p$). The other key ingredients are suitably defined sheaves of arithmetic differential operators and D-affinity results for formal models of the rigid analytic projective line, generalizing those of Christine Huyghe. This is joint work with Deepam Patel and Tobias Schmidt.

À noter : l'exposé aura lieu exceptionnellement le vendredi de 10h30 à 11h30 dans la salle de la bibliothèque.