Séminaire Groupes Réductifs et Formes Automorphes

Le 9 janvier 2017 à 10h30 (PRG)

A quotient of the Lubin-Tate tower.

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Résumé : In this talk we explain how to construct the quotient of an infinite-level Lubin-Tate space by the Borel subgroup $B(Q_p)$ of upper triangular matrices in $GL(2, Q_p)$ as a perfectoid space. The motivation for this is as follows. Scholze recently constructed a candidate for the mod p Jacquet-Langlands correspondence and the mod p local Langlands correspondence for $GL(n, F)$, F/Q_p finite. Given a smooth admissible representation π of $GL(n, F)$, the candidate for these correspondences is given by the etale cohomology groups of the adic projective space P^{n-1} with coefficients in a sheaf F_π that one constructs from π. The finer properties of this candidate remain mysterious. As an application of the quotient construction one can show that in the case of n=2, $F = Q_p$, and π an irreducible principal series representation or a twist of the Steinberg representation, the cohomology $H^i_{et}(P^1, F_\pi)$ is concentrated in degree one.