Séminaire de théorie des nombres Londre – Paris

Le 8 novembre 2009 à 15h30 (à l'ENS Ulm)

On the topology of algebraic varieties over non-archimedean fields

Exposé de François Loeser (ENS Paris, France)

Résumé : Classically it is well known that if V is a complex algebraic variety its analytification V^{an} has good topological properties. For instance it retracts to a finite simplicial set and is locally contractible at each point. The aim of this talk is to present similar results for quasi-projective varieties over non-archimedean fields. In such a setting, the analytification V^{an} has to be understood in Berkovich's sense. Our approach is based in an essential way on considering the spaces of stably definable types on V. This space, which is a model theoretic analogue of V^{an} is pro-definable and admits a pro-definable strong retraction to a space definable over the value group with its piecewise linear structure. This is joint work with Ehud Hrushovski.