

SPEAKER: Francois Loeser (École Normal Supérieure, Paris)

TITLE: Some applications of Model Theory to Arithmetic Geometry

ABSTRACT: I will illustrate the importance of the concept of definability in the study of valued fields by three different recent applications of Model Theory to Arithmetic Geometry:

(1) Proving global results on p -adic functions without using the mean value theorem nor connectedness (joint work with R. Cluckers and G. Comte).

(2) A generalization of Ax-Kochen-Eršov for integrals (joint work with R. Cluckers).

(3) Berkovich spaces as (pro-)definable sets (joint work with E. Hrushovski).