Séminaire de théorie des nombres

Le 13 mai 2019 à 14h (PRG)

A walk on the wild side : evaluating p-torsion Brauer classes at p-adic points

Exposé de Rachel Newton
(University of Reading)

Résumé : In order to compute Brauer-Manin obstructions to the Hasse principle and weak approximation, one must evaluate elements of the Brauer group at adelic points of a variety X. If an element of the Brauer group has order coprime to p, then its evaluation at a p-adic point factors via reduction of the point modulo p. For p-torsion elements this is no longer the case : in order to compute the evaluation map one must know the point to a higher p-adic precision. Classifying Brauer group elements according to the precision required to evaluate them at p-adic points gives a filtration on $\mathrm{Br}X[p]$ which we describe using work of Bloch and Kato. This is joint work with Martin Bright.