

Oberseminar Geometrie	Wednesday 28th November 2012
Department of Mathematics	10:20–12:00
University of Fribourg	Seminar room, Math. II (Lonza)

RAFAEL GUGLIELMETTI (FRIBOURG)

‘The Brauer-Grothendieck Group.’

To study a (collection of) diophantine equations (polynomial equations with integer coefficients), one may be interested in the Hasse principle: when is the existence of a solution in all of the \mathbb{Q}_p and \mathbb{R} equivalent to the existence of a solution in \mathbb{Q} ? For a lot of cases, we can decide if the variety defined by the given equations satisfies the Hasse principle using the Manin obstruction which is computed with the Brauer-Grothendieck group of the variety.

I will present the construction of the Brauer group of a field and explain how to generalize this notion to define the Brauer-Grothendieck group of a variety (or a scheme).