Title : Brauer-Manin Obstructions and Separable Pseudo-reductive Bands

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Abstract : In this talk, we explain the main components of the proof that the Brauer-Manin obstruction is the only obstruction to the Hasse principle (and to weak approximation) on homogeneous spaces of pseudo-reductive groups with smooth connected geometric stabilizer. This result extends the recent work of Demarche and Harari over global function fields in the reductive case.

The most significant input in the proof comes from a lifting lemma resting on the speaker's generalization to positive characteristic of Borovoi's abelianization theory for H^2 sets of algebraic bands, formulated using the new notion of a separable band on the fppf site. As intermediate results, we present interesting statements on global representability of pseudo-reductive bands and on the cohomology of affine algebraic groups over global function fields.

Schedule : Thursday 23rd April, 11am to 12pm.