

*Speaker* : Michel Vaquie

*Title* : Under Spec  $\mathbb{Z}$

*Abstract* :

(Joint work with Bertrand Toen.) We use techniques from relative algebraic geometry in order to construct several categories of schemes defined "under Spec  $\mathbb{Z}$ ".

We define this way the categories of  $\mathbb{N}$ -schemes,  $\mathbb{F}_1$ -schemes, where from an intuitive point of view  $\mathbb{N}$  is the semi-ring of natural numbers,  $\mathbb{F}_1$  is the "field with one element".

These categories of schemes are related by several base change functors, and they all possess a base change functor to  $\mathbb{Z}$ -schemes (in the usual sense).