

[Videoconference] On the Motivic Cohomology of Schemes (1/3)

mardi 11 juillet 2023 14:30 (1h 15m)

We outline the theory of motivic cohomology of general equicharacteristic schemes, as developed jointly with Matthew Morrow. Roughly, the lectures will be divided as follows:

Lecture 1: cdh and A^1 -invariant motivic cohomology. I will first give a general, leisurely introduction to the cdh topology and some of its applications to algebraic geometry and K-theory.

Lecture 2: the construction of the motivic filtration on K-theory. I will then explain how to construct a motivic filtration on K-theory by gluing together the theory of syntomic cohomology and A^1 -invariant/cdh motivic cohomology. Some of the results presented here are joint with Tom Bachmann and Matthew Morrow.

Lecture 3: a sampler of motivic cohomology. I will then give some features of the resulting theory of motivic cohomology. Topics include an extension of the Nesterenko-Suslin isomorphism (with Milnor K-theory), a motivic refinement of Weibel's vanishing conjecture, and results on zero cycles.

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