

*Speaker* : James Borger

*Title* : Witt vectors, Lambda-rings, and absolute algebraic geometry

*Abstract* :

Lambda-algebraic geometry is an enrichment of usual algebraic geometry in the same way that the theory of Lambda-rings, in the sense of Grothendieck's Riemann-Roch theory, is an enrichment of usual commutative algebra. It has the unlikely combination of being both formally natural and arithmetically nontrivial. It also happens to conform to many of the speculations about algebraic geometry over the field with one element. Indeed, in a certain precise functorial sense, it really is an algebraic geometry over a deeper base than the ring of integers.

In this talk, I will explain all this. I'll also discuss some of the deeper arithmetic theorems in the subject and the relations to other areas of active interest in arithmetic algebraic geometry.