

Wiesława Nizioł: **Syntomic complexes and p -adic nearby cycles.**

For a semistable scheme over a mixed characteristic local ring I will present a proof of a comparison isomorphism, up to some universal constants, between truncated sheaves of p -adic nearby cycles and syntomic cohomology sheaves. This generalizes the comparison results of Kato, Kurihara, and Tsuji for small Tate twists (where no constants are necessary) as well as the comparison result of Tsuji that holds over the algebraic closure of the field. I will also explain how to combine this local comparison isomorphism with the theory of finite dimensional Banach Spaces and finiteness of ℓ -adic cohomology of rigid analytic spaces proved by Scholze to prove a Semistable conjecture for formal schemes with semistable reduction. This is a joint work with Pierre Colmez.