

K-THEORY OF ADIC SPACES

DUSTIN CLAUSEN

Abstract: Morrow and Kerz-Saito-Tamme have each proposed a definition for the K-theory of rigid analytic varieties. They start with a construction on affinoids, then use pro-cdh descent of usual algebraic K-theory (a theorem of Kerz-Strunk-Tamme) to see that their construction satisfies descent for rigid coverings, which lets one extend it to the global case. We propose a definition which is inherently global in nature, and for which descent can be proven in a similar manner to the Zariski descent of usual algebraic K-theory. We rely on the theory of "solid modules", a convenient replacement for the usual notion of linearly topologized modules, plus Efimov's beautiful observation that K-theory naturally makes sense for certain large (dualizable presentable) categories. Namely, we take the Efimov K-theory of a full subcategory of solid modules called "nuclear". This is joint work with Peter Scholze.