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ORGANIZERS:
Alan Adolphson (University of Stillwater)
Francesco Baldassarri (Università di Padova)
Massimo Bertolini (Università di Padova)
Steven Sperber (University of Minneapolis)
Douglas Ulmer (University of Arizona at Tucson)

Kiran Kedlaya (University of California at Berkeley)

Finiteness of rigid cohomology with coefficients

ABSTRACT: Berthelot has constructed a p-adic cohomology theory, called rigid cohomology, for which he was able to prove finite dimensionality for any smooth variety. His theory also allows coefficients in an overconvergent F-isocrystal; on a curve, this more general finite dimensionality was proved by Crew assuming a certain conjecture on p-adic differential equations. This conjecture is now a theorem; we'll describe how, using fibrations in curves, it implies finite dimensionality for rigid cohomology of an arbitrary smooth variety with arbitrary coefficients.