Grosse-Klönne, Elmar

Rigid analytic spaces with overconvergent structure sheaf. (English) Zbl 0945.14013

J. Reine Angew. Math. 519, 73-95 (2000).

It is known that the de Rham cohomology of a smooth rigid space X, which admits a closed immersion into a polydisk without boundary is (generically) finite dimensional, and there is a Serre duality for X. These fail for an affinoid smooth rigid space, which admits a closed immersion into a polydisk with boundary.

The author introduces a category of rigid spaces with an overconvergent structure sheaf, which improves this situation. Versions of the Serre and Poincaré duality are proved. An interpretation in terms of the new category is given for the rigid cohomology introduced recently by P. Berthelot.

Reviewer: Anatoly N.Kochubei (Kiev)

MSC:

14G22	Rigid analytic geometry
32P05	Non-Archimedean analysis (should also be assigned at least one other classification number from Section 32-XX describing the type of problem)
32C36	Local cohomology of analytic spaces

Keywords:

rigid space; dagger space; Serre duality; overconvergent structure; de Rham cohomology; Poincaré duality

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