

Arithmetic and Algebraic Geometry: A conference in honor of Ofer Gabber
on the occasion of his 60th birthday

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Type: **Non spécifié**

Prisms and deformations of de Rham cohomology

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Prisms are generalizations of perfectoid rings to a setting where “Frobenius need not be an isomorphism”. I will explain the definition and use it to construct a prismatic site for any scheme. The resulting prismatic cohomology often gives a one-parameter deformation of de Rham cohomology. For instance, it recovers the recently constructed A_{∞} -cohomology for smooth schemes over perfectoid rings (and thus crystalline cohomology when in characteristic p). A relative variant yields cohomological Breuil-Kisin modules, and related ideas also give a co-ordinate free construction of q -de Rham cohomology. Joint work with Peter Scholze.

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