

On the Cohomology of Shimura Varieties with Torsion Coefficients

jeudi 12 octobre 2023 15:15 (1 heure)

I will survey results concerning the cohomology of Shimura varieties with torsion coefficients from the past few years. I will discuss the geometry of the Hodge-Tate period morphism, including a recent generalization of Igusa varieties to Igusa stacks due to Mingjia Zhang. Then I will contrast the original approach of computing cohomology with torsion coefficients due to myself and Peter Scholze, which relies on the trace formula, with more recent approaches due to Teruhisa Koshikawa, Linus Hamann, and Si Ying Lee, who rely on deep local results. Finally, I will explain how, by combining the two approaches, one can obtain a new instance of local-global compatibility.

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