

Some Applications of Non-Abelian Hodge Theory

lundi 16 septembre 2024 10:00 (1 heure)

We shall discuss ongoing investigations about some applications of non-abelian Hodge theory to the study of meromorphic flat bundles and more general holonomic D-modules, inspired by Kontsevich. The plan is as follows. First, we discuss a generalization of Barannikov-Kontsevich theorem about twisted de Rham cohomology. Then, after reviewing irregular Hodge filtration which was motivated by the study of Kontsevich complexes, we explain its application to an evidence for a conjecture of Kontsevich about cohomologically rigid holonomic D-modules. We would also like to discuss a boundedness of families of some families of meromorphic flat bundles.

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