Abstract

The theory of algebraic stacks has in recent years found new applications in the study of certain singular varieties. This includes work of Lafforgue and others on compactifications of moduli spaces, the study of moduli spaces of stable maps, and recent work in the theory of log geometry. In this talk I will give an introduction to the notion of stack and this circle of ideas by applying them to study the monodromy operator on de Rham cohomology (in either the analytic or arithmetic setting). I will also discuss briefly applications to p-adic Hodge theory.