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Topological types of algebraic stacks. (English) Zbl 07398536

Summary: The main goal of this paper is to set a foundation for homotopy theory of algebraic stacks under model category theory and to show how it can be applied in various contexts. It not only generalizes the étale homotopy theory to algebraic stacks but also provides more suitable framework for the homotopy theory in a broader context. Also, a new result that the profinite completion of pro-simplicial sets admits a right adjoint is provided and integrated with the foundational work to generalize Artin-Mazur’s comparison theorem from schemes to algebraic stacks in a formal way.

MSC:
14-XX  Algebraic geometry
55U35  Abstract and axiomatic homotopy theory in algebraic topology
03-XX  Mathematical logic and foundations

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