

Elliptic Cohomology and Derived Algebraic Geometry

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Abstract

We will begin by reviewing the classical theory of elliptic cohomology, leading up to the construction (by Hopkins and Miller) of the theory of "topological modular forms" (tmf). We will then introduce the language of derived algebraic geometry and show how it leads to a new and simpler construction of tmf. If time permits, some applications will be sketched.