

String topology of classifying spaces

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Let G be a Lie group. Chataur and Menichi showed that the homology of the free loop space $L(BG)$ admits a rich algebraic structure: it is part of a homological field theory, meaning that it admits operations parameterised by the homology of mapping class groups. I will discuss a new construction of this field theory that radically enlarges the class of allowable cobordisms, trading surfaces with boundaries for arbitrary spaces with the homotopy type of a finite graph. The result is a new kind of field theory related to mapping class groups of surfaces and automorphism groups of free groups with boundary. This is joint work with Anssi Lahtinen.

Mots Clés / Keywords

string topology, classifying spaces, topological field theory

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