

Operadic calculus and formality criteria

Abstract

A differential graded algebraic structure A (e.g. a dg associative algebra, a dg Lie algebra, a dg operad, etc.) is formal if it is connected to its homology $H(A)$ by a zig-zag of quasi-isomorphisms preserving the type of algebraic structure. The formality of an algebraic structure actually reflects an intrinsic feature: the vanishing of some higher structure.

The aim of this talk is first to make precise the previous statement using the operadic calculus. I will then present how the equivalent characterization of formality thus obtained can be exploited to derive new formality criteria.

