

Operads in Homotopical Physics

Jim Stasheff, UNC, Chapel hill, NC

Operads and their precursor non-symmetric operads were introduced originally as tools in homotopy theory, but for some time now they have been appearing in mathematical physics, first in Zwiebach's closed string field theory and most recently in the Connes-Kreimer approach to renormalization. This survey will present the simplest aspects of the theory of operads and then emphasize examples, primarily those relevant to physics.