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Diagonals for the A-infinity operad

Abstract

I will explain how to construct a cyclic diagonal for the A-infinity operad. This diagonal provides a definition of the tensor product of cyclic A-infinity algebras and gives a combinatorial description of the cup product on the cohomology of the moduli space of Riemann surfaces. Finally I will show that the Kontsevich class of the tensor product of two cyclic A-inifinity algebras equals the cup product of the Kontsevich classes of the original algebras.