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Operads of decorated trees and their duals

Comment.Math.Univ.Carolin. 55,4 (2014) 421 –445.

Abstract: This is an extended version of a talk presented by the second author on the Third Mile High Conference on Nonassociative Mathematics (August 2013, Denver, CO). The purpose of this paper is twofold. First, we would like to review the technique developed in a series of papers for various classes of di-algebras and show how the same ideas work for tri-algebras. Second, we present a general approach to the definition of pre- and post-algebras which turns out to be equivalent to the construction of dendriform splitting. However, our approach is more algebraic and thus provides simpler way to prove various properties of pre- and post-algebras in general.

Keywords: Leibniz algebra; dialgebra; dendriform algebra; pre-Lie algebra
AMS Subject Classification: 17A30, 17A36, 17A42, 18D50

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