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**Pure and o-substitution. (English summary)**

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The paper is an extended version of the author's conference article [in *Implementation and application of automata*, 150–161, Lecture Notes in Comput. Sci., 4094, Springer, Berlin, 2006; [MR2296454](#)] and, as the author declares at the end of the introduction, the full proof details for all the statements are in his technical report [“Pure and o-substitution”, Tech. Rep. TUD-FI06-05, Tech. Univ. Dresden, Dresden, 2006].

It studies basic properties of distributivity and deletion of pure and o-substitution; in particular it is proved that linear and recognizable tree series are closed under o-substitution if the underlying semiring is commutative, continuous and additively idempotent. Also it is proved that recognizable linear probability distributions, represented as tree series, are closed under pure substitutions, though it is known, in general, that pure substitution does not preserve recognizability.

Reviewed by [Saeed Salehi](#)

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