

Non-commutative independences defined by trees

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For each rooted subtree T of the rooted N -regular tree, we define a notion of T -free independence of N algebras. We describe how to compute joint moments of T -free independent variables. If the root vertex has more than one neighbor, we define T -free cumulants, prove a central limit theorem, and classify the infinitely divisible distributions.

Joint work with Weihua Liu.

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