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## Multiplication of free random variables and the S-transform: the case of vanishing mean

N. Raj Rao, *MIT* Roland Speicher, *Queen's University* 

## Abstract

This note extends Voiculescu's *S*-transform based analytical machinery for free multiplicative convolution to the case where the mean of the probability measures vanishes. We show that with the right interpretation of the *S*-transform in the case of vanishing mean, the usual formula makes perfectly good sense.

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