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# Positivity certificates for multivariate polynomials

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## Abstract

We present mathematical, algorithmic, and complexity results on defining and computing SOS certificates of positivity for (multivariate) polynomials (in  $n \geq 1$  variables) with rational coefficients, that are positive over  $\mathbb{R}^n$ .

Joint work(s) with Matias Bender, Chaoping Zhu, and Khazhgali Kozhasov.

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