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The log-concave moment problem

Let us fix real numbers $p_1, \dots, p_n > -1$. We say that a finite sequence of real numbers m_1, \dots, m_n is admissible, if there exists a symmetric log-concave function $f : \mathbb{R} \rightarrow \mathbb{R}$ such that $m_i = \int |t|^{p_i} f(t) dt$ for all $i = 1, \dots, n$. During the talk I will provide a description of all admissible sequences. Based on a joint work with A. Eskenazis and T. Tkocz.