

The Multi-Dimensional Truncated Moment Problem: Connections to Polytopes, Polynomials, and Waring Rank

In the present talk joint work with Konrad Schmüdgen about the truncated moment problem is presented. We will show that functional analytic tools still contribute to this problem despite possible purely algebraic formulations. The main aim is to show how bounds on the Carathéodory numbers can be found and how other branches of algebra benefit from the truncated moment problem.