1164-14-219 **Philipp di Dio** and **Mario Kummer*** (mario.kummer@tu-dresden.de). *Carathéodory numbers of high dimensional moment problems.*

Let X be a real algebraic variety and let V be a finite dimensional vector space of regular functions on X. The Carathéodory number is defined to be the smallest integer N such that for every measure μ on X the linear form on V that is given by integrating a function against μ can be written as a conic combination of at most N point evaluations on X. We prove lower bounds on the Carathéodory number and discuss some applications. This is joint work with Philipp di Dio. (Received January 19, 2021)