

## CLASSIFICATION OF $h^*$ - POLYNOMIALS AND VOLUME BOUNDS

In the study of lattice polytopes the Ehrhart polynomial and hence the  $h^*$ -polynomial take a central role, since they encode a lot of information about the polytope and its dilates. An interesting problem in that direction is to characterize the possible  $h^*$ -polynomials. We will discuss some recent results in that respect and of the related problem on bounding the volume of lattice polytopes with a given number of interior lattice points.