

**Katthän, Lukas**, Spanning lattice polytopes and the Uniform position principle

A lattice polytope is called spanning if its lattice points affinely span the ambient lattice. This property can be translated to a natural algebraic property of the Ehrhard ring of the polytope. In this talk, I will present recent joint work with Johannes Hofscheier and Benjamin Nill, where we use methods from commutative algebra and algebraic geometry to obtain new inequalities for the  $h^*$ -vector. This extends our previous work on the absence of inner zeros in the  $h^*$ -vector, as well as Hibi's inequality for polytopes with inner lattice points.