Sprecher am 31.1.2019

**Klaus Altmann** (FU Berlin)

*Three kinds of differences among polytopes and their toric interpretation*

For two polytopes P,Q in a finite-dimensional vector space M we can introduce three different notions of differences:

1) the formal difference P-Q for turning the semigroup of polytopes

(under Minkowski addition) into a group,

2) the set (P:Q) consisting of all elements m of M such that m+Q

is contained in P, and

3) the set theoretic difference P\Q.

The goal of the talk is to explain the meaning of these constructions within toric geometry where the polytopes P and Q represent certain invertible sheaves.