
KIUMARS KAVEH, University of Pittsburgh

Toric degenerations of projective varieties

A toric degeneration of a variety X is a flat family over the affine line with reduced and irreducible fibers, such that away from 0 it is a trivial family with fiber X and the fiber over 0 is a toric variety. Often one is interested in the case when X is equipped with an (ample) line bundle and we can degenerate the line bundle along the family also. There are many important examples of toric degenerations coming from Gröbner theory/tropical geometry as well as representation theory (of reductive groups). I will discuss some on-going work on degenerations of projective varieties. This is joint with Takuya Murata and Chris Manon.