Course "Toric Geometry" SoSe 21

(1) §1.0
(2) §1.1 The torus, the definition of affine toric variety
(3) §1.1 Lattice points, toric ideals
(4) §1.1 Affine semigroups, equivalence of constructions
(5) §1.2 Convex polyhedral cones, dual cones and faces
(6) §1.2 Relative interiors, strong convexity, separation, rational polyhedral cones
(7) §1.2 Semigroup algebras and affine toric varieties
(8) §1.3 Points of affine toric varieties
(9) §1.3 Normality and saturation, the normalization of an affine toric variety
(10) §1.3 Smooth affine toric varieties
(11) §1.3 Equivariant maps, faces and affine open subsets
(12) §1.3 Sublattices of finite index and rings of invariants
(13) §2.0 Homogeneous coordinate rings, rational functions
(14) §2.0 Affine pieces, products, weighted projective space
(15) §2.1 Lattice points and projective toric varieties, the affine cone
(16) §2.1 The torus of a projective toric variety, affine pieces, projective normality
(17) §2.2 Polytopes, sums, multiples and duals, lattice polytopes
(18) §2.2 Normal polytopes
(19) §2.2 Very ample polytopes, §2.3 The very ample case
(20) §2.3 The normal fan, examples of normal fans
(21) §2.3 Intersection of affine pieces, the toric variety of a polytope
(22) §2.4 Normality, Smoothness
(23) §2.4 Products
(24) §3.0
(25) §3.1