Title: Toric degenerations via tropical geometry
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Abstract: Toric degenerations have been studied quite intensively in the last few decades and several methods have been applied. In this talk I am going to show results on the toric degenerations arising from the tropicalization of a variety. These are obtained as Gröbner degenerations associated to the initial ideals corresponding to the maximal cones of the topicalized variety. In particular I will show results for the full flag varieties of C^4 and C^5. I will then compare these degenerations with the ones arising in representation theory from string polytopes and FFLV polytopes. Moreover I will present a general procedure to find toric degenerations in the cases where the initial ideal arising from a cone of the tropicalization of a variety is not prime. This is joint work with L. Bossinger, K. Mincheva and F. Mohammadi.