1030-14-176 **Izzet Coskun*** (coskun@math.mit.edu), UIC Department of Math., Stat., and Comp. Sci, 851 So. Morgan M/C 249, Chicago, IL 60607. *Degenerations and the cohomology of homogeneous varieties.*

Positive, geometric rules for computing the structure constants of the cohomology of homogeneous varieties reveal the rich structure of these constants. These rules have applications in representation theory, algebraic geometry and combinatorics. In this talk, I will describe how to obtain such rules using degenerations. I will give examples of such rules for arbitrary partial flag varieties and ordinary and orthogonal Grassmannians. If time permits, I will state some applications to saturation conjectures. (Received August 01, 2007)