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John Shareshian and **Michelle L Wachs*** (wachs@math.miami.edu). *A geometric interpretation of an Eulerian number identity*. Preliminary report.

Chung, Graham and Knuth obtained the following identity involving Eulerian numbers and binomial coefficients

$$\sum_{m=1}^n \binom{n}{m} a_{m,j-1} = \sum_{m=1}^n \binom{n}{m} a_{m,n-j-1}.$$

In this talk we give geometric interpretations of this identity, of a q -analog due to Chung-Graham and Han-Lin-Zeng, and of a symmetric function generalization due to Shareshian-Wachs. Our interpretation involves the h-vector of the stellohedron and the representation of the symmetric group on the cohomology of the associated toric variety. (Received August 27, 2013)