1147-05-364 **Samuel F Hopkins*** (shopkins@umn.edu). *The coincidental down-degree expectations (CDE) property and dynamical algebraic combinatorics.*

I will survey some recent developments in algebraic combinatorics, which are based on two observations: 1) there are unexpected product formulas for the number of "barely set-valued" tableaux of certain shapes; 2) certain finite posets have unexpectedly simple formulas for their edge densities. Moreover, these two observations are in fact linked via the "coincidental down-degree expectations (CDE) property" for posets. I will highlight the close connections between the study of the CDE property and the nascent field of "dynamical algebraic combinatorics." The CDE property turns out to be very useful for understanding the homomesies exhibited by the rowmotion operator acting on a distributive lattice. In fact, the close connection between the CDE property and rowmotion persists even in generalized contexts such as: piecewise-linear and birational rowmotion; and rowmotion acting on semidistributive lattices. Time permitting I will explain these generalizations as well. (Received January 21, 2019)