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**Sam Hopkins\*** ([shopkins@mit.edu](mailto:shopkins@mit.edu)). *The coincidental down-degree expectations (CDE) property for posets.*

Reiner, Tenner, and Yong recently introduced the coincidental down-degree expectations (CDE) property for posets. A poset  $P$  is CDE if the expected down-degree is the same for the uniform distribution on  $P$  and for the distribution on  $P$  that weights each element proportional to the number of maximal chains passing through that element. Reiner, Tenner, and Yong showed that many posets familiar to algebraic combinatorialists, such as certain intervals of the weak Bruhat order, are CDE. In earlier independent work with Chan, Haddadan, and Moci (which was motivated by some surprising combinatorial results arising from a new approach to Brill-Noether theory) we found a large family of CDE intervals of Young's lattice. In this more recent work I extend these results to the shifted setting. These shifted results complete the case-by-case proof that all minuscule lattices are CDE, as was conjectured by Reiner-Tenner-Yong. Time permitting I will explain some applications of the study of CDE posets: product formulas for certain kinds of set-valued tableaux (i.e., product formulas for certain square-free coefficients of stable Grothendieck polynomials), and homomesy results (in the sense of Propp and Roby) for rowmotion and gyration acting on sets of order ideals. (Received July 09, 2016)