1092-06-234 **Joshua N Cooper*** (cooper@math.sc.edu), Columbia, SC 29208. *When Is Linear Extension Counting Easy?*

A now-classic result of Brightwell and Winkler is that counting linear extensions for general posets is #P-hard. It is well-known that counting antichains is also #P-hard (Provan-Ball), but that this can be done in polynomial time for dimension 2 posets (Möhring). For which classes of posets is counting linear extensions easy in the aforementioned sense? We introduce a new class, bwisic (an acronym for "bounded width indecomposable strong interval condition") posets, generalizing series-parallel posets, for which we provide a polynomial-time algorithm to count the number of linear extensions. (Received August 10, 2013)