1145-18-2754 **Alex A Chandler*** (`achandl@ncsu.edu`), 2311 Stinson Dr., Raleigh, NC 27607. *Thin Posets and Homology Theories.* Preliminary report.

Inspired by Bar-Natan's description of Khovanov homology, we discuss thin posets and their capacity to support homology and cohomology theories which categorify rank-statistic generating functions. Additionally, we present two main applications. The first, a categorification of certain generalized Vandermonde determinants gotten from the Bruhat order on the symmetric group by applying a special TQFT to diagrams of torus links. The second is a broken circuit model for chromatic homology, categorifying Whitney's broken circuit theorem for the chromatic polynomial of graphs. (Received September 25, 2018)