1163-15-838 **Mike Boyle*** (mmb@math.umd.edu). *The stable algebra of (nonnegative) matrices.*

Realization questions for nonnegative matrices over the reals (for the spectrum, or Jordan form) have more tractable stable versions (for the nonzero spectrum, or the Jordan form away from zero). I'll review the status of these problems, some motivation, and the deeper stable relations one is forced to consider when studying matrices over the integers and more general rings. This leads to algebraic K-theory, as well as fundamental open problems for nonnegative real matrices. Primary references for this talk are "Symbolic dynamics and the stable algebra of matrices" with Scott Schmieding, https://arxiv.org/abs/2006.01051 , and "Path methods for strong shift equivalence of positive matrices", with Kim and Roush, Acta Applic. Math. 126, 65-115 (2013). (Received September 13, 2020)