1068-49-174 **M. Seetharama Gowda*** (gowda@umbc.edu), 1000 Hilltop Circle, Baltimore, MD 21250. *On the equivalence of Q and P properties for Z-transformations on Euclidean Jordan algebras.*

In the setting of standard linear complementarity problems, for a Z-matrix (a matrix with non-positive off-diagonal entries), the solvability of all corresponding linear complementarity problems is equivalent to the P property (that is, all principal minors are positive). With appropriate generalizations, we study this equivalence in the context of symmetric cone linear complementarity problems. Motivated by results for Lyapunov and Stein transformations on the space of all real n by n symmetric matrices (with relevance to dynamical systems), we describe such an equivalence for Lyapunov-like transformations and provide a partial result for Z-transformations. (Received January 18, 2011)