

1035-47-1404 **Sivaram K. Narayan*** (sivaram.narayan@cmich.edu), Department of Mathematics, Pearce Hall 218, Central Michigan University, Mount Pleasant, MI 48859. *Classes of Stable Complex Matrices Defined via the Theorems of Geršgorin and Lyapunov.*

In this talk we consider (and characterize) mainly classes of (positively) stable complex matrices defined via methods of Geršgorin and Lyapunov. Although the real matrices in most of these classes have already been studied, we sometimes improve upon (and even correct) what has been previously published. Many of the classes turn out quite naturally to be products of common sets of matrices. This is a joint work with Bryan Cain, Terry Lenker and Peter Vermeire. (Received September 19, 2007)