

1106-15-1418

Keivan Hassani Monfared* (k1monfared@gmail.com) and **Bryan L Shader**. *Existence of a nowhere-zero eigenbasis for a matrix whose graph and eigenvalues are prescribed.*

In this talk we use the Jacobian method to show that for any given graph G on n vertices and a set of n distinct real numbers Λ , there is a real symmetric matrix A whose graph is G and its spectrum is Λ . Then we will show that if G is connected, then A can always be chosen such that none of its eigenvalues have a zero entry. (Received September 12, 2014)