Invariant Factors of Cartesian Product and One Point Unions of Graphs

Wai Chee Shiu
Department of Mathematics, Hong Kong Baptist University,
224 Waterloo Road, Kowloon Tong, Hong Kong.

A matrix called Varchenko matrix associated with a hyperplane arrangement was defined by Varchenko in 1991. Matrices that we shall call $q$-matrices are induced from Varchenko matrices. Many researchers are interested the invariant factors of these $q$-matrices. In 2004, Shiu transferred this problem to graph model. In this talk, invariant factors of Cartesian product and one point union of some graphs will be discuss.

**Keywords**: $q$-matrix, invariant factors, Cartesian product of graphs, one point union of graphs