

Patterns of commuting nonnegative matrices

Bryan Shader

University of Wyoming

This work centers around the general question: for which zero-nonzero patterns P_1 and P_2 do there exist matrices A with pattern P_1 and B with pattern P_2 such that $AB = BA$. In particular, the case in which the graphs of both P_1 and P_2 are paths is completely characterized.

This is joint work with Justin Christian.