
CHRIS GODSIL, University of Waterloo, Waterloo, ON, N2L 3G1

Periodic Graphs

In some parts of quantum physics, a graph X with adjacency matrix A is *periodic* if there is a non-zero real number τ such that $\exp(iA\tau)$ is diagonal. Clearly a graph is periodic if all eigenvalues of A are integers, but this condition is only sufficient. I will present some recent work on this problem, and on the related subject of perfect state transfer.