Chris Godsil* (cgodsil@uwaterloo.ca), Combinatorics & Optimization, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada. Covers of graphs and equiangular tight frames.

An $r$-fold cover of a graph $X$ is obtained by replacing each vertex of $X$ by a set of $r$ vertices, and then replacing each edge by a set of $r$ vertex-disjoint edges (an $r$-matching) joining the corresponding $r$-tuples. Covers of the complete graph are interesting, in part because in highly regular cases they give rise to equiangular tight frames. I will present my view of how this construction works, and I will discuss some generalizations. (Received January 16, 2017)