Catherine Lee* (catherine.lee@yale.edu). Minimum coprime graph labelings.

A coprime labeling of a graph $G$ is a labeling of the vertices of $G$ with distinct integers from 1 to $k$ such that adjacent vertices have coprime labels. The minimum coprime number of $G$ is the least $k$ for which such a labeling exists. In this talk, we discuss the minimum coprime number for several well-studied classes of graphs, including the coronas of complete graphs with empty graphs, the joins of two paths, and prisms. In particular, we resolve a conjecture of Seoud, El Sonbaty, and Mahran and three conjectures of Asplund and Fox. We also provide bounds on the minimum coprime number of a random subgraph. (Received September 17, 2019)