1145-VP-1265   **Ethan Berkove*** (`berkovee@lafayette.edu`) and **Mike Brilleslyper**. *Graph labeling and social intervals.*

In a coprime labeling of a graph, two labeled vertices are connected precisely when their labels are coprime. In this talk we will discuss, given a consecutive set of labels starting at some positive integer k, which bipartite graphs admit a coprime labeling. We have found (to our surprise) that there are intervals which admit no coprime labeling of any bipartite graph at all. We call these collections of labels "social intervals"; they have interpretations both in terms of a construction based on modular arithmetic as well as in terms of the coprime graph associated to the collection. (Received September 20, 2018)