## 1135-05-1228 Elizabeth Bailey Matson\* (eab0052@auburn.edu), Charles Camacho, Silvia Fernández-Merchant, Marija Jelic, Rachel Kirsch, Linda Kleist and Jennifer White. Bounding The Tripartite-Circle Crossing Number of Complete Tripartite Graphs. Preliminary report.

A k-circle drawing of a graph G is a drawing of G in the plane where the vertices are placed on the boundary of k disjoint circles with the requirement that the edges of G do not cross the boundary of any circle. The k-circle crossing number of a graph G is the minimum number of edge-crossings in any k-circle drawing of G. For the special case when G is a k-partite graph, it is additionally required that the k sets of disjoint vertices each be placed on separate circles and thus there are no edges in the interior of any circle. The corresponding crossing number is called the k-partite-circle crossing number. We extend recent work on the bipartite-circle crossing number of complete bipartite graphs to introduce and explore the tripartite-circle crossing number of complete tripartite graphs. (Received September 20, 2017)