1145-05-805 **Grant Fickes*** (gfick710@live.kutztown.edu) and **Wing Hong Tony Wong**.

Edge-Distinguishing Chromatic Number for Three-Legged Spiders.

Let G denote a simple graph consisting of vertices and edges, where each edge connects two distinct vertices. When we color the vertices of G, each edge will then be labeled by the colors of the two vertices it connects. For example, if an edge connects a red vertex and a blue vertex, then this edge is labeled by $
$red, blue$
$. We call the coloring of G "edge-distinguishing" if all the edge labels are distinct, and the minimum number of colors that we need to create an edge-distinguishing coloring is called the "edge-distinguishing chromatic number" (EDCN) of G. In previous literature by Al-Wahabi et al., the EDCN was found when G was a path and a cycle. In this presentation, I will expand their ideas to find the EDCN when G is a three-legged spider graph. (Received September 15, 2018)