

1154-VP-1398 **Zachary Tyler King*** (zking@uco.edu), 6616 Fawn Canyon Drive, Oklahoma City, OK 73162.
Iterated Line Graphs of Graphs with Regular and Bi-Regular Partitions.

Graph theory has many important applications to discrete mathematics and mathematical modeling. One tool that has been used to understand the underlying structure of graphs is the line graph. In 1965, van Rooij and Wilf characterized iterated line graphs by the growth of their vertex count. In 2017, Balch, Milligan, and Lane-Harvard detailed the properties of the iterated line graphs of regular graphs, bi-regular graphs, and stars. This presentation will detail new research being done to extend those results to larger classes of graphs, particularly graphs with regular and bi-regular sub-graphs or vertex partitions. (Received September 15, 2019)