

1104-05-180

**Ellen Veomett\*** ([erv2@stmarys-ca.edu](mailto:erv2@stmarys-ca.edu)). *On Coloring Box Graphs.*

This talk concerns the chromatic number of a family of geometrically defined graphs we call box graphs, which arise from a box complex in  $n$ -space. It is straightforward to show that any box graph in the plane has an admissible coloring with three colors, and that any box graph in  $n$ -space has an admissible coloring with  $n + 1$  colors. We show that for box graphs in  $n$ -space, if the lengths of the boxes in the corresponding box complex take on no more than two values from the set  $\{1, 2, 3\}$ , then the box graph is 3-colorable, and for some graphs three colors are required. We also show that box graphs in 3-space which do not have cycles of length four (which we call “string complexes”) are 3-colorable. (Received August 31, 2014)