Intersections, circuits, and colorability of line segments

Boris Brimkov, Rice University, Jesse Geneson, Iowa State University, Alathea Jensen, Susquehanna University, Jordan Miller*, Washington State University, Pouria Salehi Nowbandegani, Vanderbilt University

We can derive sharp upper and lower bounds on the number of intersection points and closed regions that can occur in sets of line segments with certain structure, in terms of the number of segments. We will consider sets of segments whose underlying planar graphs are Halin graphs, cactus graphs, maximal planar graphs, and triangle-free planar graphs.

This abstract is for a talk to be given in the session on research from the GRWC.

Keywords: Line segment, intersection point, planar graph