1109-54-271 **Logan Hoehn** and **Lex Oversteegen*** (overstee@uab.edu), 1300 University Blvd, Birmingham, AL 35294. *A complete classification of homogeneous plane continua.*

A space X is *homogeneous* if for every pair of points $x, y \in X$ there exists a homeomorphism $h : X \to X$ so that $h(x) = h(y)$. Homogenous spaces are standard objects of mathematical study. For example, Euclidean spaces, manifolds and topological groups are homogeneous.

In 1920, Knaster and Kuratowski raised the question whether the unit circle is the only homogeneous plane continuum. To great surprise this question was answered in the negative by Bing who showed in 1948 that the pseudo-arc is another homogeneous plane continuum. Since then the question has been: what are all homogeneous plane continua?

A third example, the circle of pseudo-arcs, was added by Bing and Jones in 1959. We show in this talk that these three continua comprise the complete list of all homogeneous plane continua. As a consequence we also obtain a complete classification of all homogeneous plane compacta. The main technical result on which the above conclusions are based is the following new characterization of the pseudo-arc: a continuum is homeomorphic to the pseudo-arc if and only if it is hereditarily indecomposable and has span zero. (Received February 03, 2015)