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**John Donnelly\*** (jrdonnelly@usi.edu), 8600 University Blvd., Evansville, IN 47712. *Triangle Congruence in Absolute Plane Geometry.*

Plane geometry has a long and rich history dating back thousands of years to the time of Euclid and the ancient Greeks. Throughout the years, plane geometry has had numerous applications in engineering, the sciences, as well as other branches of mathematics.

Absolute Geometry is plane geometry in which we assume no parallel postulate. Absolute Geometry can be thought of as being a common ground between Euclidean Geometry and Hyperbolic Geometry. There are several criteria that one can use in Absolute Geometry to determine whether or not two triangles are congruent. For example, one can use the Side-Angle-Side, Angle-Side-Angle, Side-Angle-Angle, and Side-Side-Side criteria for congruence of triangles.

The speaker will give a brief history of Absolute Geometry, and then examine the various relationships between the criteria for triangle congruence. We will then state some recent results about these criteria and their relationships with one another. (Received September 09, 2012)