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Samantha N. Sherman* (ssherma1@nd.edu), **Jonathan D. Hauenstein** (hauenstein@nd.edu) and **Charles W. Wampler** (charles.w.wampler@gm.com). *A method to determine the complete set of planar cognate linkages.*

This talk will describe a method for determining all coupler curve cognates for planar linkages with rotational joints. Previously, Dijksman presented a list of six-bar cognates but without proof it was complete. We use arguments concerning the singular foci of the coupler curve to constrain a cognate search and then use polynomial continuation to complete it and show a complete set. Our approach not only confirms that Dijksman's list is in fact comprehensive but provides an approach to compute cognates of mechanisms greater than 6 bars. (Received September 08, 2020)