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Dana Fry, Zvi Rosen and Jessica Sidman* (jsidman@mtholyoke.edu), Department of Mathematics and Statistics, Mount Holyoke College, South Hadley, MA 01075, and **Louis Theran** and **Cynthia Vinzant**. *Special positions of bar and joint frameworks*. Preliminary report.

Let G be a a generically rigid bar-and-joint framework. The bars in the framework correspond algebraically to a system of quadratic equations in which we view the joint coordinates as variables and the (squared) distances as parameters. In this talk I will discuss how algebraic methods may be used to determine bar lengths for which such a framework G is in a special position, i.e., a position for which it has nontrivial internal motions. (Received September 17, 2016)