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Movable 4-Configurations are Plentiful

A geometric k -configuration is a set of points and lines in the plane such that every point lies on k lines and every line passes through k points. Although it is easy to construct symmetric 3-configurations that are "movable"—that is, there is a continuous family of realizations of the same combinatorial configuration which retains the same type of geometric symmetry—finding movable 4-configurations has been more challenging. Indeed, researchers in the field thought that there were no movable 4-configurations that retained geometric symmetry until the first discovery of such a configuration, in 2006; to date, only two basic constructions are known. This talk will discuss preliminary results describing a new construction technique that produces a large variety of chirally symmetric, reasonably small, movable 4-configurations.