Abstract

Finite linear spaces consisting of two symmetric configurations

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We report on a joint work with Juraj Šiftar about finite linear spaces admitting a decomposition of the set of lines into two subsets, each one forming a symmetric configuration with the set of points. A general construction using projective planes is presented, and other small examples are constructed directly. A question whether any Steiner 2-design with twice as many lines as points belongs to this family of linear spaces is raised.