

Kramer-Mesner method enhancements

(Talk)

Mario Osvin Pavčević
University of Zagreb
Faculty of electrical engineering and computing
`mario.pavcevic@fer.hr`

(joint work with Vedran Krčadinac and Anamari Nakić)

The Kramer-Mesner method for constructing designs and similar incidence structures acted upon an assumed automorphism group is very general and hence very often used. It reduces the construction problem to solving a linear system of diophantine equations. After realizing that the method doesn't make use of some necessary conditions which were already known, we tried to find ways to implement these conditions and find new ones to reduce the search space of the problem, i.e. to decrease the dimension of the linear system. A successful implementation is that of tactical decomposition coefficient equations found for t -designs, enabling new positive constructive results. Examples will be on display.

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