
NEVENA FRANČETIĆ, Carleton University

Relation between optimal group divisible packing and covering designs

Group divisible designs are building blocks of numerous constructions in the design theory. Here we consider a natural generalization of GDDs to coverings and packings, which have the same structure as GDDs with the difference that any pair of points which is not a subset of a group is contained in at most (at least) one block.

In this talk, we discuss generalizations of the Schönheim and Johnson bounds on the size of group divisible packing designs. Then we construct an optimal family of group divisible packing designs with blocks of size three from a family of optimal coverings.