

Class-Uniformly Resolvable Designs

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A Class-Uniformly Resolvable Design is a resolvable pairwise balanced design in which each of the resolution classes has the same number of blocks of each size. Such designs represent a generalisation of many types of resolvable design. We will investigate the necessary conditions which lead to some interesting extremal bounds and present some existence results for these extremal families in the case of block sizes 2 and 3. We will also consider Class-Uniformly Resolvable Group Divisible Designs, including a novel construction for shrinking the index of a master design, whilst increasing the group size.