

1067-05-1360

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Melissa Keranen (msjukuri@mtu.edu). *Group Divisible Designs with Fixed Block Configuration*. Preliminary report.

A group divisible design $\text{GDD}(n, m; k, \lambda_1, \lambda_2)$ is a collection of k element subsets of a set of $v = nm$ points called blocks. These points are partitioned into m groups of size n , and the blocks have the property that each pair of points from the same group appears in exactly λ_1 blocks and each pair from different groups is in exactly λ_2 blocks. A $\text{GDD}(n, 2, k; \lambda_1, \lambda_2)$ has (s, t) fixed block configuration if each block has exactly s points from one group and $k - s = t$ points from the other. We give a survey of past work of GDD's with fixed block configuration with block sizes 3,4 and 5 and some new results on block size 6. (Received September 20, 2010)