**Optimal BIBDs via Constraint Programming**

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Balanced Incomplete Block Designs are of use in the layout of data blocks in Redundant Arrays of Independent Disks (RAID). BIBDs that minimize the difference between the maximum and minimum row sums are often sought. In this paper, we present a new Constraint Programming model to achieve these optimal designs. We show that the new model is competitive with previous models and formulate a conjecture, based on our experiments, bounding the minimal difference of row sums.
Keywords: BIBD, Constraint Programming, Optimization model.