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Simulated Annealing on Single Change Covering Designs

A single change covering design is a sequence of b k-sets, called blocks, of a V-set in which exactly one element differs between consecutive blocks and every s-set of V is in some block. Single change covering designs are useful when designing experiments where it is costly to change elements of the experiment between runs.

We used a simulated annealing meta-heuristics search to find single change covering designs, experimenting with different neighbourhood selection methods. We will present efficacy and run times for these experiments.