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**A study of permutation operators for minimum span frequency assignment using an order based representation.** (English) [Zbl 0967.90075](#)

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Summary: The Genetic Algorithm (GA) described in this paper breeds permutations of transmitters for minimum span frequency assignment. The approach hybridizes a GA with a greedy algorithm, and employs a technique called generalized saturation degree to seed the initial population. Several permutation operators from the GA literature are compared, and results indicate that position based operators are more appropriate for this kind of problem than are order based operators. My offspring versus mid-parent correlation studies on crossovers show Pearson's correlation coefficient to be a reliable predictor of performance in most cases. Results presented herein represent improvements over previously published results.

**MSC:**

[90B80](#) Discrete location and assignment

[90C59](#) Approximation methods and heuristics in mathematical programming

Cited in 4 Documents

**Keywords:**

[genetic algorithm](#); [minimum span frequency assignment](#); [greedy algorithm](#); [permutation operators](#); [order based operators](#)

**Software:**

[FASoft](#)

**Full Text:** [DOI](#)