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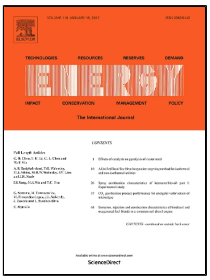

A Small-Population based Parallel Differential Evolution Algorithm for Short-term Hydrothermal Scheduling Problem Considering Power Flow Constraints

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1. Power flow constraints are introduced into the short-term hydrothermal scheduling (STHS) problem
2. A small-population based parallel DE algorithm is proposed to solve the considered STHS problem
3. The operations of gather and scatter and aggregative DE are introduced into the parallel algorithm
4. Four constraint handling rules as well as a lead operation are proposed to enhance the feasibility
5. Comparisons show the parallel DE approach performs effectively and yields competitive solutions

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