



# A Critical Element-Guided Perturbation Strategy for Iterated Local Search

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Résumé en anglais	<p>In this paper, we study the perturbation operator of Iterated Local Search. To guide more efficiently the search to move towards new promising regions of the search space, we introduce a Critical Element-Guided Perturbation strategy (CEGP). This perturbation approach consists of the identification of critical elements and then focusing on these critical elements within the perturbation operator. Computational experiments on two case studies—graph coloring and course timetabling—give evidence that this critical element-guided perturbation strategy helps reinforce the performance of Iterated Local Search.</p>
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