A Population-Based Fast Algorithm for a Billion-Dimensional Resource Allocation Problem with Integer Variables

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PII: S0377-2217(17)30121-2
DOI: 10.1016/j.ejor.2017.02.015
Reference: EOR 14252

To appear in: *European Journal of Operational Research*

Received date: 3 June 2016
Revised date: 9 February 2017
Accepted date: 10 February 2017

Please cite this article as: Kalyanmoy Deb, Christie Myburgh, A Population-Based Fast Algorithm for a Billion-Dimensional Resource Allocation Problem with Integer Variables, *European Journal of Operational Research* (2017), doi: 10.1016/j.ejor.2017.02.015

Highlights

- A computationally fast heuristic algorithm for solving a specific integer linear programming problem
- Two popular point-based algorithms cannot handle 2,000 variables
- Proposed methods handle one billion variable version of the problem
- A polynomial-time complexity on a wide range of variables (50 thousand to one billion)
- Parametric study reveals working principles of proposed algorithm