A novel particle swarm optimization - Based algorithm for the optimal communication spanning tree problem

Hoang A.T., Le V.T., Nguyen N.G.

Department of Mathematics - Mechanics - Informatics, Hanoi University of Science, Viet Nam; Faculty of Information Technology, Duy Tan University, Viet Nam

Abstract: In this paper, we propose a novel approach for the optimal communication spanning tree (OCST) problem. Our algorithm is based on the Particle Swarm Optimization (PSO) technique and take account into node biased encoding (NBE) scheme to find nearly optimal solution. The new algorithm can achieve a result that is better than known heuristic algorithms do, as verified by a set of public benchmark problem instances. ?? 2010 IEEE.

Author Keywords: Node biased encoding; Optimal communication spanning tree; Particle Swarm Optimization

Index Keywords: Benchmark-problem instances; Optimal communication; Optimal communication spanning tree; Optimal solutions; Particle swarm; Particle swarm optimization technique; Spanning tree; Spanning tree problems; Computer software; Encoding (symbols); Heuristic algorithms; Parallel architectures; Particle swarm optimization (PSO); Trees (mathematics); Communication

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Correspondence Address: Hoang, A. T.; Department of Mathematics - Mechanics - Informatics, Hanoi University of ScienceViet Nam; email: hoangtuananh@hus.edu.vn

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Authors with affiliations:

1. Hoang, A.T., Department of Mathematics - Mechanics - Informatics, Hanoi University of Science, Viet Nam
2. Le, V.T., Department of Mathematics - Mechanics - Informatics, Hanoi University of Science, Viet Nam
3. Nguyen, N.G., Faculty of Information Technology, Duy Tan University, Viet Nam

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