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New approximations for maximum lifetime coverage. (English) Zbl 1291.90044
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Summary: We present a new polynomial-time approximation scheme for the well-known Maximum Lifetime Coverage problem in wireless sensor networks. For any $\epsilon > 0$, this scheme contains an approximation algorithm with performance $3 + \epsilon$, which improves the performance ratio $4 + \epsilon$ of previously known approximation in the literature.

MSC:

- 90B10 Deterministic network models in operations research
- 90B35 Deterministic scheduling theory in operations research
- 94C15 Applications of graph theory to circuits and networks
- 90C60 Abstract computational complexity for mathematical programming problems

Keywords:

maximum lifetime coverage; sensor cover; minimum weight set cover; approximation; optimal solution

Full Text: [DOI](#)

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