Application of the method of counter runs for the synthesis of a parallel algorithm for solving grid equations of tridiagonal type

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Abstract

The article is devoted to the synthesis and analysis of parallel algorithms (with local communication) for solving grid equations of tridiagonal type. An optimal algorithm in terms of communication time, idle time and memory footprint has been developed in this class of algorithms. The article presents an experimental technique for increasing the acceleration of a parallel calculation process generated by the optimal algorithm.

Keywords: grid equation, parallel algorithm, parallel calculation, optimal algorithm.

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