

**TWO PARALLEL NUMERICAL ALGORITHMS FOR SOLVING TRIDIAGONAL  
SYSTEM OF LINEAR EQUATIONS USING PARALLEL SPLITTING GAUSS – JORDAN  
AND THE GENERAL PARALLEL SPLITTING GAUSS – JORDAN METHODS**

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**ABSTRACT**

In this paper we introduce the design and implementation of two parallel algorithms for solving the general tridiagonal linear system of equations using two new parallel algorithms: Parallel splitting Gauss – Jordan and the general parallel splitting Gauss Jordan algorithms. These algorithms are very easily distributed over different number of processors. In addition our implementations are very efficient, generally a linear speed-up is obtained by increasing the number of processors.

**KEYWORDS:** Parallel Algorithms, Numerical Analysis, Tridiagonal Linear System of Equations, Gauss Jordan Algorithm