

Contents

Parallel distributed algorithms for dense matrix computations – part II (mainly from Grama et al, 2nd ed., Chapter 8)

- Solution of linear systems $Ax = b$
 - LU factorization
 - Row-oriented versus 2D blocked data mappings
 - Synchronous versus asynchronous algorithms
 - Some numerical considerations
- Matrix multiplication of $n \times n$ matrices with n^3 processors in $O(\log n)$ time
 - The DNS algorithm
 - Scalability analysis of a blocked DNS on $p < n^3$ processors

Hand-outs: **Copies of slides (in Swedish)**

Design and Analysis of Algorithms for Parallel Computer Systems

F5: Lectures 9 and 10

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