

## Parallel Algorithm for Spatially One-and Two-dimensional Initial-boundary-value Problem for a Parabolic Equation.

Pavol Purcz

*Abstract:* A generalization of the spatially one-dimensional parallel pipe-line algorithm for solution of the initial-boundary-value problem using explicit difference method to the two-dimensional case is presented. The suggested algorithm has been verified by implementation on a workstation-cluster running under PVM (Parallel Virtual Machine). Theoretical estimates of the speed-up are presented.

*Keywords:*

*AMS Subject Classification:* 65Y;