

EDITORIAL

We heartily thank all the people who have sent their congratulations and good wishes on the occasion of the first issue of CIT. The dynamics of submissions and their processing indicates that we are catching a steady rhythm, which gives us some confidence of meeting, in this first year, our goal of four issues per annual volume.

The call for papers for Special Issue on Intelligent Tutoring Systems, which the reader may find on p. 162, is the first step towards occasional special issues, devoted to a single subject.

This second issue contains four papers, one on complexity of parallel algorithms, two on aspects of database theory and one on classifying innovation in information technology.

Robert Manger develops several parallelizations of the classical Gauss-Seidel algorithm over a path algebra for tightly coupled multifariousness, comparing them to the straight forwardly parallelizable Jacobi algorithm. The results indicate that suitability of Gauss-Seidel for "single destination" problems on sparse graphs, known in the sequential case, remains valid under the chosen model of parallel computation.

Robert R. Goldberg, Jacob Shapiro and Jerry Waxman propose an automata-theoretic framework for syntactic analysis of semantic properties of relational databases. Semantic integrity of a database is defined in terms of predicates on its attributes, which determine a finite state automaton on checking integrity. The approach may be useful also for checking consistency, equivalence and redundancy of integrity constraints.

Mirko Maleković formalizes a proof of soundness for functional, multivalued and subset dependencies of a relational database scheme, in a way suitable for both automatic and interactive theorem provers.

Mary Brabston emphasizes the need to take situational context into account when examining the success of innovation in information technology. She introduces a framework based on combining Henderson and Clark's incremental-architectural-radical scale classifying innovation extent, with an individual-group-organization scale classifying its locus.

The papers are followed by separately edited Croatian Professional Newsletter on Computing and Information Technology.

Editors