Editorial

We are proud to present you the first issue of the second volume of CIT. We celebrate the anniversary reiterating our commitment to the policy of covering the broad field of computing and information technology, including its social and educational aspects, with topical high-quality research contributions and competent overviews.

The last issue of Vol. 1 was consecrated to information systems. In this issue most papers deal with algorithmic problems, except for two which are software engineering oriented.

D. Skorin-Kapov and H. F. Beltrán analyze a cost allocation problem associated with the Star–Star Capacitated Concentrator Location problem in game-theoretical terms. They show that the core of the corresponding game has a polynomial representation, which in case of nonemptiness enables an efficient method to find the nucleolus. The case of emptyu core, which they show to be possible, is dealt with separately, introducing a concept of "weighted ε-core" for fair cost allocation.

M. Essert introduces the "method of saved vectors", of precomputing some information needed for the difficult computational problem of constructing symmetric block designs. The method is applied to the construction of a block desing operating on the Frobenius group of order 21.

A. Mahmood, D. J. Lynch and L. D. Philipp introduce a new parallel divide and conquer algorithm for computing the determinant of a tridiagonal matrix for shared memory MIMD architectures. The complexity of the algorithm is logarithmic for many processors, and it achieves linear speedup for few processors. Since the algorithm doesn't use division, it may be used also for symbolic computation.

A. B. Poore and N. Rijavec examine three near-optimal algorithms for NP-hard multidimensional assignment problem of matching the elements of several sets: greedy, limited branch and bound, and Lagrangian relaxation.

B. D. Czejdo and R. P. Tucci discuss a method for accessing database systems based on visual specification. They propose appropriate object-relationship based interfaces. The proposed visual language includes computational relationships and recursions.

H. Saiedean and J. Henderson in their paper examine factors affecting system maintainability and point out significant improvements that can be achieved by emphasizing preventive maintenance.

Two very different books are reviewed in this issue: the second edition of *Comparative Programming Languages* by L. B. Wilson and R. G. Clark, intended as a textbook for an undergraduate overview course, and *Categories for Types* by R.L.Crole, an advanced category-theoretic treatment of first-order and higher-order type theory.

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