

Editorial

As it is already a tradition, this third issue of *Journal of Computing and Information Technology* — *CIT* is devoted to the selection of the best papers contributed at this year's conference *Information Technology Interfaces (ITI 2002)*. Under the title *Collaboration and Interaction in Knowledge-Based Environments* the conference concentrated on those topics of interest whose technological impact fosters building the information society of the future. Out of 80 papers presented at *ITI 2002*, which were authored by 159 researchers coming from 26 countries, the present selection brings those 13 covering most of such topics. The papers are ordered according to the usual layering, from infrastructural issues, to methodological ones up to those of characteristic application-related solutions.

The first group of papers addresses infrastructural issues. The first paper, *Data-Centric Collaboration for Wired and Wireless Platforms* by Ivan Maršić, one of *ITI 2002* keynote speakers, introduces a novel data-centric collaboration paradigm, which provides mobile users with different user-tailored visualization of shared data, and is verified in a number of complex groupware applications. Follows the paper by Strahil Ristov, titled *Using Inverted Files to Compress Text*, and describing a new approach to text compression in which the text file is represented with compressed inverted file index, in conjunction with a very compact lexicon for source text words. The procedure exhibits a two-pass decompression in linear time, thus making it competitive for larger texts to be decompressed in real-time. *An Approach to Validation of Fuzzy Qualitative Temporal Relations* by Slobodan Ribarić, Bojana Dalbelo Bašić and Lada Maleš brings a geometrical approach to validation of fuzzy temporal relations between fuzzy time primitives, which is based on possibility and necessity measures. This fuzzy temporal reasoning represents the base for building adequate models for temporal knowledge representation and reasoning in environments where the time is described fuzzy, unprecise and vaguely precise. Two following papers are from the area of human interfaces and interaction. *A Hybrid Approach to Adaptive User Interface Generation* by Guido Menkhau and Wolfgang Pree accounts for user interface tailoring and multi-platform access for mobile computing gadgets like cellular phones, proposing a hybrid approach to the generation of adaptive user interfaces based on a linking strategy of hierarchies of graphs. The paper by Andrina Granić and Vlado Glavinić: *User Interface Specification Issues for Computerized Educational Systems* is a case study of user interface specification for a specialized educational package — intelligent tutoring system, which advocates the User Action Notation as a suitable specification technique.

The second group of papers deals with various aspects of methodology-related matter, partly overlapping with descriptions of solutions to characteristic application problems. Two papers elaborate on the area of modeling, simulation and optimization. Branko Kaučić and Borut Žalik present in their paper *A New Approach for Vertex Guarding of Planar Graphs* a new dynamic algorithm for planar graphs guarding, a technique useful in applications requiring optimum positions for objects like transmitters in general and specifically radars, or energy resources like e.g. windmills. Rasmus K. Ursem, Bogdan Filipič and Thiemo Krink in *Exploring the Performance of an Evolutionary Algorithm for Greenhouse Control* bring experimental results on using evolutionary algorithms for providing an optimal online control strategy, here named “direct control”, for a crop-producing greenhouse. Four ensuing papers delve into particular issues in computing methodologies. *Task Scheduling in Distributed Systems by Work Stealing and Mugging — A Simulation Study* by Nenad Jovanović describes modeling and simulation of two online schedulers for parallel job execution on

a collection of networked heterogeneous computers. *A Cluster-based Evolutionary Algorithm for the Single Machine Total Weighted Tardiness-scheduling Problem* by István Borgulya describes a three-stage evolutionary algorithm targeting a good approximation within an acceptable time limit for recurrent tasks when using a PC, along with ease of use with adjustments of only few algorithm parameters. Antoine Trad, Damir Kalpić and Catherine Trad in the paper *Applying the ISRQCC Method in a Web Reengineering Process. The SwissInsurances (SWI) Web Engineering Audit* discuss a case study for the usage of the Information System Risk Quality Check Coefficient method in auditing a Web Engineering Information System eventually resulting in a major reengineering process. Josip Brumec and Neven Vrčec in *Strategic Planning of Information Systems (SPIS) — A Survey of Methodology*, comment the integration of several methods, techniques and templates, in order to obtain a consistent methodology for strategic planning of information systems, here named SPIS. This methodology was verified by applying it to 6 large-scale projects in diverse business environments.

The two last papers of this selection investigate applications in statistics and E-commerce, respectively. Vesna Lužar-Stiffler and Charles Stiffler in *Equivalence Testing the Easy Way* give a description of a SAS software based statistical application EquivEasy, which should provide a typical final user with an easier execution of equivalence testing procedures, along with ensuring both a high level of statistical competency and access to powerful features of the SAS software. Marjan Gusev, Ljupčo N. Antovski and Vangel V. Ajanovski in *E-Deposit in Academic Use* account for a 3-tier client-server architecture for supporting financial transactions on electronic deposits. The respective system is intended for student use, its main goal being to ensure fast and secure transactions with prepaid service within a university campus.

It is my deep conviction that the present selection will bring the interested reader of *Journal of Computing and Information Technology — CIT* an inviting and useful overview of research in the broad area of information and communication technology, and especially the one being performed in Central and South Eastern Europe, thus helping promote the exchange of ideas, experience and knowledge, particularly among researchers in these regions, as otherwise stated in *CIT*'s charter.

Vlado Glavinić

Chairman of ITI 2002 International Program Committee