Editorial

Dear Readers:

Welcome to our regular edition of CIT devoted to the 2008 ITI (Information Technology Interfaces) Conference. The following 15 papers (out of 148) were selected from those originally published in the ITI 2008 Conference Proceedings (IEEE Catalog Number CFP08498-PRT).

As in previous years, papers were selected after having received high ratings from both of their respective international reviewers and as being representative of the broad scope character of the ITI Conference in terms of topics solicited over these last 30 years.

Again this year, a Student Paper Competition for undergraduate and graduate student/scholars (with 16 competing papers) was an exciting and well attended feature of ITI Conference and we have elected to publish all three winning submissions (by Ivan Voras and Mario Žagar, Biljana Stojkoska et al., and Antonia Gallardo et al.).

As a tribute of honor, respect, and simple gratitude commemorating the 30th year of the ITI Conference, two keynote speaker papers (out of six keynote contributions) and the submissions of two of the invited anniversary speakers (out of six invited papers) are also included as part of this year's fifteen works selected for the CIT journal publication.

Out of 12 conference topics, seven are represented by at least one paper. The paper order parallels the Proceedings' topic order, starting with four papers presented by our distinguished keynote and invited anniversary speakers and ending with two papers from the "Theory of Computing and Computing Methodologies" topic.

The first paper is from a work by our keynote speaker, Lynne Billard, on analyzing interval data typically obtained by aggregating data in very large datasets. After a brief overview of interval-valued data, the author illustrates the importance of using symbolic analysis methodology instead of classical surrogates which ignore some of the information contained in the original dataset. In his keynote paper, Mladen Vouk discusses the concept of "cloud" computing, the issues it tries to address, related research topics, and a "cloud" implementation available today.

Ivan Bratko's invited anniversary paper addresses the problem of autonomous robot discovery through experimentation in the robot's environment. The author introduces the XPERO project and presents some illustrative initial experiments in robot learning in XPERO. In his invited contribution, Felix Breitenecker (et al.) introduces and investigates a modelling approach for love dynamics and inspiration by means of System Dynamics.

This year's special topic was "Computer at the University": Once upon a time, for many of us, it was all about learning to use a computer (at the university); today, for many of us, it's mostly about using a computer (at the university) to learn. The Special Session was well represented by the research paper by Christian Stickel, Martin Ebner and Andreas Holzinger entitled "Useful Oblivion Versus Information Overload in e-Learning Examples in the Context of Wiki Systems". The authors present a novel approach of filtering, adapting and visualizing content inside a Wiki knowledge base.

The next topic "Databases, Data Warehousing and Information Systems" includes one paper by Mario Rapone, Livia Della Ragione and Giovanni Meccariello "An Integrated Knowledge Base for Modelling and Predicting Vehicle Real-world Emissions as a Function of Driving Behaviour Kinematics". An environmental decision support system is described that was designed to transform a modelling approach into an effective real-world emission analysis and prediction tool, both for research and for policy making.

Two papers are included under the topic "Data Mining, Statistics and Biometrics". The first one, written by Anja Habus-Korbar et al. investigates differences among school programs and geographic regions found in Croatian high school student performance on the mathematics examination, recently developed as part of the National Assessment Project. In the second paper under the same topic, the authors Nguyen-Khang Pham, Annie Morin and Patrick Gros propose an interactive graphical tool, CAViz, designed for displaying and extracting knowledge from the results of Correspondence Analysis on images.

The next topic "ICT in Education" includes one paper by Nerijus Aukstakalnis et al. "Graphical Model: The Means for Simulation-based Learning". The authors offer a graphical modeling method based on systematic point of view, experiential learning and expert-based modeling requirements.

A paper by Sherif Michael on „Modeling and Optimization Techniques of Electronic Devices using Genetic Algorithm" was selected from this year's „Modeling, Simulation and Optimization" topic. The author describes a new method for developing a realistic physical model of any type of solid state device. Application of the model includes advanced multi-junction solar cells, thermophotovoltaics, sensors, as well as other novel solid state devices.

This year's two award winning student papers were included under the ITI topic "Networking, Grids, Middleware and Distributed Platforms". In the paper written by Ivan Voras and Mario Žagar on "Web-enabling Cache Daemon for Complex Data", the authors present a cache daemon suitable for storing complex data while maintaining fine-grained control over data storage, retrieval and expiry. In the second award winning student paper from the same topic, Biljana Stojkoska et al. titled "N-Queens-based Algorithm for Moving Object Detection in Distributed Wireless Sensor Networks" argue that, in terms of energy savings, the results provided from their experiments show that the proposed algorithm is better than the traditional moving object detection techniques by a factor of $(N/2)$. The third paper from the same topic written by Antonia Gallardo et al. addresses the problem of a self configuring grid resource discovery (HGRID).

Two papers are included under the topic "Theory of Computing and Computing Methodologies". The paper by Matko Botinčan and Davor Runje offers an enhancement of the previously developed runtime for scheduling and executing futures based on the lazy task creation technique that aims to reflect the cache memory hierarchy present in modern multi-core and multiprocessor systems. In the paper by Li-Ren Chien and Daniel J. Buehrer titled "Using a Typed Mind Map as a Data Model in a TDD DICE System", the authors introduce a new typed mind map extension for a data model in parsetree-based online referee system with a Test-driven Development model and an adaptive learning model named DICE.

We hope that you'll find this selection of articles informative, interesting, and motivating. Again this year, ITI 2008 tried to provide a broad scientific program and to promote stimulating professional interaction and managed to attract participants from 35 different countries. We will continue the Best Student Paper Competition, with stimulating prizes, so as to encourage all young scholars/ researchers worldwide, to offer their papers for the Competition.

This year's special topic "Computer at the University" (reflecting both the original Conference title and ITI's continuous focus on ICT in education) has identified strong interest and enthusiasm for publishing in this area, as is reflected in the selection of articles for inclusion in this edition of CIT. We hope for the same type of response to next year's special topic: Medical Informatics.

Finally, if you have ideas on how to improve our selection performance, the CIT article selection process, or quality of the publication in general, contact us at `cit@srce.hr`.

Thank you again for your subscription, interest, and involvement. Perhaps we'll see you in Cavtat/Dubrovnik in June 2009 at the **31st ITI Conference**.

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