

Editorial

Dear Readers:

What follows is a selection of 11 papers (out of 114) originally published in the ITI (Information Technology Interfaces) 2006 Conference Proceedings.

We tried, as usual, to satisfy two major criteria during the selection process: to select those papers receiving high ratings from both international referees, and, in the spirit of “interfaces”, we tried to cover as many topical areas as possible. Our initial investment in young scholars/researchers has paid an early dividend. Last year’s ITI Best Student Paper Award winner (who was also selected for the CIT journal publication) was subsequently honored by the Croatian National Science Foundation and “Novi list” newspaper with the “Science” Award as the best student paper author in the technical and biotechnical sciences for 2006. Again this year there are two student papers included in this group of 11 papers, one of which received a top award from the ITI Committee/Conference participants.

Out of 13 conference topics, eight are represented by at least one paper. These authors/articles were selected so as to give you a feeling for the overall intra – and interdisciplinary communication and ICT interfacing that occurred in Cavtat/Dubrovnik again this past year. Hopefully, this will encourage you to join us at the upcoming June 2007 ITI Conference.

The paper order parallels the Proceedings topic order, starting with a paper presented at this year’s Special Session and ending with a paper from the “Theory of Computing and Computing Methodologies” topic.

“E-learning” was a primary topic and an opportunity for innovative interfaces among IT centered researchers, users, and educators this past season. The Special Session was well represented by the work by Yoshiro Imai et al. titled “Application of a visual computer simulator into collaborative learning”. The simulator has been designed to visually illustrate how a computer works and to improve the current computer functionality teaching methodology.

Antonija Mitrovic’s (et al.) paper (under the topic “Databases, Data Warehousing, and Information Systems”) generally demonstrates the architecture and functionality of the three intelligent web-based database tutors designed for use by university-level students. The authors argue that the intelligent tutoring systems offer many advantages over the traditional classroom scenario and provide some empirical evidence supporting their claims.

This year, “Data Mining, Statistics and Biometrics” is represented by three papers: Khalid Benabdeslem and Younes Bennai present a dendrogram-based support vector machine as an alternative method for treating multi-class problems. A student paper written by Derya Birant and Kut Alp – proposes a three step procedure for detecting spatio-temporal outliers in large databases. Their

approach offers a new outlier detection algorithm aimed at finding small groups of data objects that are “exceptional” when compared to the body of the data. The last paper under the above topic, written by Dusan Heric and B. Potocnik, describes a novel image enhancement technique using a directional wavelength transform. The authors demonstrate that the directional information significantly improves image enhancement of the noisy images as compared with the standard approach.

The next topic “Human Interfaces and Interaction” includes one paper by S. Martincic-Ipsic and I. Ipsic “Croatian HMM-based Speech Synthesis”. The paper details the development of a trainable speech synthesis system, based on hidden Markov models (HMM). Results of Croatian HMM-based speech synthesis experiments are discussed.

The “Intelligent and Multi-Agent Systems” topic included the study/research performed by L. Corbalan et al. on “Image recovery using a new nonlinear adaptive filter based on neural networks”. The authors offer an approach based on feed-forward neural network as a way of reducing the additive noise in an image.

This year’s award winning student paper entitled “Comparison of Collocation Extraction Measures for Document Indexing”, written by S. Petrovic et al. is included in the new ITI topic Language Technologies. The paper describes the empirical evaluation/comparison study of various association measures used for extracting collocations consisting of two and three word groups in a corpus of Croatian legal documents.

Two papers are included under the topic “Networking, Grids, Middleware and Distributed Platforms”. The first one, by E. Imamagic et al., is about issues related to grid scheduling using the Condor-G matching mechanism. The second, written by Nguyen Hong Van et al., addresses an alternative approach to solving the problem of “taming down” the unresponsive flows and preventing severe and prolonged network congestion.

Damijan Rebernak’s (et al.) paper (under the topic “Theory of Computing and Computing Methodologies”) is about using an AspectLISA tool aspect-oriented approach to language specification. The paper explains the aspect-oriented approach and the tool for language development and offers an illustrative case study.

We hope that you’ll find this selection of articles informative, interesting, and motivating. Again this year, ITI 2006 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 Competition.

This year’s special topic on E-learning 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 technology topic: Knowledge Discovery for Business, Industry, Government and Education.

Finally, if you have an idea 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. We hope to see you in Cavtat/Dubrovnik for the June 2007 ITI Conference.

ITI, 2007.

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