periodica polytechnica

Electrical Engineering
51/3-4 (2007) 73–73
doi: 10.3311/pp.ee.2007-3-4.01
web: http://www.pp.bme.hu/ee

EDITORIAL

Preface

János Levendovszky

Received 2007-10-03

The enchanting city of Szeged is not only the cultural centre of Southeast Hungary with great traditions in arts and human sciences but also plays an important role in computer science due to its highly esteemed university. As a result, the city frequently hosts the Conference of PhD Students in Computer Science, commonly referred to as CSCS.

This special issue gives an account of the most important results presented in CSCS'2006 by publishing papers in the following domains:

- refactoring Erlang programs which touches upon one of the core issues of modern computer science in terms of changing programs without altering their meaning and objectives (in this way programs can be made more readable or can achieve a form of higher sophistication subject to a given a goal function);
- constructing languages for enabling system programmers to handle all data structures as objects and therefore exploiting the advantages of object oriented programming in the case of low level data structures as well;
- developing optimization algorithms for handling the constraints of Object Constraints Language obtaining more efficient modeling and faster validation process;
- investigating the performance of web based information systems with respect to the response time;
- studying the influence of caching on On-line Analytical Processing which is important in analyzing and processing multidimensional data bases;
- verifying component based systems by using incremental model checking which makes the verification of complex systems simpler and less time consuming as compared to traditional modular checking techniques;
- developing and analyzing a secure electronic voting scheme which does not require untappable channels or voting booths (these schemes are of great importance in e-administration where security reasons hindered wide-spread applications up till now);
- adding intelligence automation to the deployment of agents in health monitoring, which has important applications in improving the life quality of elderly citizens.

The problems addressed by the papers reflect on the major trends in modern computer science which are chiefly engaged with: (i) language constructs and program transformations; (ii) model driven techniques; (iii) resource utilization and performance analysis; (iv) verification of complex systems; (v) algorithms for e-commerce and e- administration; and (vi) applications in intelligent health monitoring.

As a result, the current issue of Periodica Polytechnica provides a brief coverage of this spectrum by publishing some results emerging from the work of promising PhD students and their supervisors. Hopefully, some of the work presented here will develop into complete PhD theses or large scale research projects in the coming years, which may further serve the interest of the readers of Periodica Polytechnica and- in general - the society of computer science.

Budapest, September 26, 2007.

Prof. Dr. János LEVENDOVSZKY

János Levendovszky
Department of Telecommunications, BME, H-1117 Budapest, Magyar tudósok krt. 2., Hungary