



Neumann János
Számítógép-tudományi Társaság
Megőrizni a múlt értékeit, alkalmazkodni a jelenhez, befolyásolni a jövőt.



EÖTVÖS LORÁND TUDOMÁNYEGYETEM
INFORMATIKAI KAR *ik*



NJSZT Újklub (IEEE CS-NJSZT Fórum) presents:

Software Technology Forum

6 February 2015, Friday, 15:00

ELTE Faculty of Informatics, H-1117 Budapest, Pázmány Péter sétány 1/c, 0-803



Tamás Kozsik



Andreas Zeller

Let's PaRTE! - 15:00

Due to the traditional, sequential view of program execution that many programmers have, code is often written in a style that hinders effective parallelization. This is an obstacle for deploying existing software on the manycore hardware of the near future. If we restructure the code and replace sequentially designed constructs with instances of high-level parallel patterns, we can better exploit parallelism and, at the same time, we may enable the flexible dynamic mapping of software components to hardware elements as offered by the approach of the ParaPhrase EU project. Code refactoring to introduce patterns is hard to carry out manually. A software development tool allows us to automate the process to a certain extent: it can detect pattern candidates, and apply supervised transformations on the program text. This talk presents the ParaPhrase Refactoring Tool for Erlang, which improves programmability of manycore systems by facilitating parallelization of Erlang code.

Tamás Kozsik is associate professor at the Faculty of Informatics of Eötvös Loránd University, and vice dean responsible for R&D projects and innovation. His fields of research are programming languages and methodology, program analysis and transformations, and parallel/distributed computing.

Software tests for free - 16:00

Why test manually if one can generate tests? Recent advances in genetic algorithms automatically explore the behavior even of internet-scale applications by systematically evolving a population of inputs (keystrokes, clicks, settings) towards a testing goal such as coverage. To check the results of these tests, I present recent research that automatically mines patterns of normal behavior from a multitude of instances – for instance, by comparing web site behavior across multiple browsers, or comparing app behavior against similar apps from app stores. These techniques easily scale to industrial settings, and companies like Google or our Testfabrik startup are rapidly adopting them for full-fledged testing systems.

Andreas Zeller is a full professor for Software Engineering at Saarland University in Saarbrücken, Germany, since 2001 - a partner university of ELTE in the EIT ICT Labs Master School. Zeller's research concerns the analysis of large software systems and their development process. In 2010, he was inducted as Fellow of the ACM for his contributions to automated debugging and mining software archives. In 2011, he received an ERC Advanced Grant for work on specification mining and test case generation.



Organizers:

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