

Special Issue on Principles of Information Technology and Applications

The International Conference on Principles of Information Technology and Applications (PITA'07) was held in Wisla, Poland in October 15-17, 2007. It was one of many events organized within *International Multiconference on Computer Science and Information Technology IMCSIT*.

PITA invited contributions presenting research results in many areas of computer science or information technology. All submissions were reviewed by at least two reviewers. The selected seven papers were invited for this special issue (the acceptance rate was 41%). Here we present to you the extended versions of these papers that were devoted to different topics, namely:

- Monitoring Services on Enterprise Service Bus, Ilona Bluemke, Marcin Warda - presents the tool for monitoring services in SOA architectures on the ESB (Enterprise Service Bus) level and results of experiments.
- Communication Management and its Impact on Successful IT Program, Rafał W. Cegielski, Jarosław A. Chudziak, Joanna Meyer - discusses the role of communication management in the success of a large implementation of IT solutions. Communication management model is illustrated by several examples of practical usage in real projects.
- Towards Model Transformation - a Case Study of Generic Framework for Traceability in Object-Oriented Designs, Anna Derezińska, Jacek Zawłocki - presents an application of model transformation in the development of the generic framework for traceability. Transformations are realized using the OMG standard QVT (Query/View/Transformation) or automat-based approach.
- Dependability of the Software Implementation of the Explicit DMC Algorithm, Piotr Gawkowski, Maciej Ławryńczuk, Piotr Marusak, Janusz Sosnowski and Piotr Tatjewski - studies dependability of software implementation of the explicit DMC (Dynamic Matrix Control) Model Predictive Control (MPC) algorithm applied for a rectification column. Dependability is evaluated experimentally using software implemented fault injection approach.
- Performance Improvements of MR-Tree operations on NAND Flash Memory, Hyun Seung Lee, Ha Yoon Song, and Kyung-Chang Kim - proposes adjustment of MR-tree parameters for a just fit for Flash memory and application of aggregated-delayed MR-tree operations on Flash memory.
- Compositional Abstractions for Process Networks, Maciej Koutny, Giuseppe Pappalardo and Marta Pietkiewicz-Koutny - presents a general compositional approach which allows one to deal with abstractions in networks of communicating processes, assuming no restriction about the channels a process can use and about the base processes.
- Exertion Oriented Programming, Michael Sobolewski - proposes a new network programming methodology that uses intuitive metacomputing semantics and the Triple Command design pattern. The pattern defines how service objects communicate by sending each other a form of service messages called exertions.