

Studies in Computational Intelligence, Volume 296

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Preface

The purpose of the 8th Conference on Software Engineering Research, Management and Applications (SERA 2010) held on May 24 – 26, 2010 in Montreal, Canada was to bring together researchers and scientists, businessmen and entrepreneurs, teachers and students to discuss the numerous fields of computer science, and to share ideas and information in a meaningful way. Our conference officers selected the best 16 papers from those papers accepted for presentation at the conference in order to publish them in this volume. The papers were chosen based on review scores submitted by members of the program committee, and underwent further rounds of rigorous review.

In Chapter 1, Emil Vassev and Serguei Mokhov discuss their work in creating a Distributed Modular Audio Recognition Framework capable of self-healing using the Autonomic System Specification Language.

In Chapter 2, Yuhong Yan et al. present a new model of the Web Service Composition Problem and propose a reparative method based on planning graphs.

In Chapter 3, Chandan Sarkar et al. explore options for conducting remote usability tests using their newly-developed Total Cost of Administration (TCA) tool to collect and analyze test results.

In Chapter 4, Idir Ait-Sadoune and Yamine Ait-Ameur focus on the formal description, modeling, and validation of web services compositions and suggest a refinement based method that encodes the Business Process Execution Language (BPEL) model's decompositions.

In Chapter 5, Emil Vassev describes his work on code generation of autonomous systems using the Autonomic System Specification Language (ASSL) including an overview of ASSL and features of autonomously generated code.

In Chapter 6, Mohamed Miladi et al. propose a UML extension as a model based solution for the continuous increase in systems complexity and the necessity of cooperation between applications.

In Chapter 7, Haeng-Kon Kim and Roger Lee improve the efficiency of the proxy driving service with the addition of location-based service support.

In Chapter 8, Ahmad Hosseingholizadeh and Abdolreza Abhari propose a new approach to risk analysis by combining various metrics in an attempt to take into account all risky aspects of the software project.

In Chapter 9, Noorulain Khurshid et al. develop a categorical modeling language as the first step toward the creation of a powerful modeling paradigm capable of modeling emerging and evolving behavior of complex software.

In Chapter 10, Vieri Del Bianco et al. investigate the impact of economic factors on the adoption of Open Source Software.

In Chapter 11, Samir Ouchani et al. propose a verification methodology of a composition of UML behavioral diagrams.

In Chapter 12, Haeng-Kon Kim and Sun Myung Hwang address mobile application systems maintenance overhead with a knowledge discovery agent for an effective routing method using simple bit-map topology information.

In Chapter 13, D. Mouheb et al. present an aspect-oriented modeling approach for specifying and integrating security concerns into UML design models.

In Chapter 14, Eric Famutimi et al. present several techniques for using Python as a tool in computational analysis in one dimensional systems.

In Chapter 15, Fracisco Valdés Souto and Alain Abran describe an experiment conducted to compare the performance of the Estimation of Projects in Contexts of Uncertainty (EPCU) model against the Expert Judgement Estimation approach using data from industry projects.

In Chapter 16, Hossein Mehrfard et al. discuss the drawbacks of Extreme Programming (XP) when confronted with the stringent regulations for medical software imposed by the Food and Drug Administration (FDA) and propose an extension to XP to combat its weakness.

It is our sincere hope that this volume provides stimulation and inspiration, and that it will be used as a foundation for works yet to come.

May 2010

Roger Lee
Olga Ormandjieva
Alain Abran
Constantinos Constantinides

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