Table of Contents: ICSEA 2006
International Conference on Software Engineering
Advances

Preface ............................................................................................................................................xii
Committees .....................................................................................................................................xv

ICSEA 1: Software Development I

A Two-Year Software Engineering M.Sc. Degree Designed Under the Bologna
Declaration Principles ..................................................................................................................1
  João M. Fernandes and Ricardo J. Machado

Metamodel Matching: Experiments and Comparison .................................................................2
  Denivaldo Lopes, Slimane Hammoudi, José de Souza and Alan Bontempo

Specification Model for Avoiding Miss-Detection of Feature Interactions ...............................3
  Sachiko Kawada, Masayuki Shimokura and Tadashi Ohta

A Toolkit for Design and Performance Analysis of Real-Time Component-Based
Software Systems .........................................................................................................................4
  Egor Bondarev, Michel Chaudron, Heorhiy Byelas and Peter H. N. de With

Increasing Software Engineering Efficiency Through Defect Tracking Integration ...............5
  David Russell and Nilesh Patel

ICSEA 2: Software Development II

Avoidance of Feature Interactions at Run-Time ........................................................................6
  Daisuke Harada, Hiroaki Fujiwara and Tadashi Ohta

Extracting Simulation Models from Complex Embedded Real-Time Systems ...........................7
  Johan Andersson, Joel Huselius, Christer Norström and Anders Wall

Enforcing Interaction Properties in AOSD-Enabled Systems ....................................................8
  Constantin Serban and Shmuel Tyszberowicz

Enterprise Resource Planning Diffusion: Measuring the Impact of Network Exposure
and Power ......................................................................................................................................9
  Robert Pellerin, Gilbert Babin, Pierre-Majorique Léger and Kim St-Georges
Extending UML 2.0 to Augment Control Over Enterprise Information System Engineering Process ........................................................................................................................................10
M. Nikolaidou, N. Alexopoulou, A. Tsadimas, A. Dais and D. Anagnostopoulos

UbiNet: A Generic and Ubiquitous Service Provider Framework ........................................11
Jinsuo Zhang and Sumi Helal

ICSEA 3: Software Development/Testing I

An Empirical Study of Software Changes in Statoil ASA - Origin, Priority Level and Relation to Component Size ........................................................................................................................................12
Anita Gupta, Odd Petter N. Slyingstad, Reidar Conradi, Parastoo Mohagheghi, Harald Rønneberg and Einar Landre

Applicability of IEEE 1219 within Corrective Maintenance ................................................13
Mira Kajko-Mattsson

A Graph-Search Based Approach to BPEL4WS Test Generation ........................................14
Yuan Yuan, Zhongjie Li and Wei Sun

On the Assessment of the Mean Failure Frequency of Software in Late Testing ...............15
Sandro Morasca

ICSEA 4: Software Development/Testing II

Using Model-Checkers for Mutation-Based Test-Case Generation, Coverage Analysis and Specification Analysis ........................................................................................................................................16
Gordon Fraser and Franz Wotawa

A Partition-Based Approach for XPath Testing ....................................................................17
Claudio de la Riva, José García-Fanjul and Javier Tuya

Evaluating Behavior Correctness of Synchronous Systems through Time to Service Distribution Analysis: Tools Required ........................................................................................................................................18
L. du Bousquet

Estimating Software Quality with Advanced Data Mining Techniques: Multimethod Tool for Building Software Fault Prediction Model ........................................................................................................................................19
Matej Mertik, Mitja Lenic, Gregor Stiglic and Peter Kokol
ICSEA 5: Software Development/Testing III

Specification Based Regression Testing Using Explicit State Space Enumeration
Sujit Kumar Chakrabarti and Y. N. Srikant

Assessing Impacts of Changes to Business Rules through Data Exploration
Suzanne M. Embury, David Willmor and Lei Dang

DuoTracker: Tool Support for Software Defect Data Collection and Analysis
Olusegun Akinwale, Sergiu Dascalu and Marcel Karam

A Combined Approach for Reachability Analysis
Abdelaziz Guerrouat and Harald Richter

ICSEA 6: Advanced Software Mechanisms I

A Model of Front-End Pre-Change Corrective Testing
Mira Kajko-Mattsson and Stefan Britts

Towards an Identification Framework for Software Drifts: A Case Study
Yutao Ma, Keqing He, Jianghua Wu and Jianxun Chen

SWS-ASE: Leveraging Web Service-Based Software Engineering
Ulrich Dinger, Roy Oberhauser and Christian Reichel

Programmable Ad Hoc Networks
Daiki Okada, Daisuke Kasamatsu, Norihiko Shinomiya and Tadashi Ohta

A Framework for Reengineering Software Development Methods
Marko Bajec, Rok Rupnik and Marjan Krisper

ICSEA 7: Advanced Software Mechanisms II

A Conceptual Framework for Business Process Engineering: A Case Study
Zeljka Car, Hrvoje Belani and Antun Caric

Application of Computational Redundancy in Dangling Pointers Detection
Zakarya Alzamil

Testing a Network by Inferring Representative State Machines from Network Traces
Nancy Griffeth, Yuri Cantor and Constantinos Djouvas
ICSEA 8: Advanced Software Mechanisms III

A Domain Formal Ontology and the Application in Service Component Retrieval........33
Junmei Sun, Huaikou Miao and Xiaoxia Cao

Automatic Generation of Functional Programs from CASL Specifications..............34
Agnès Arnould, Laurent Fuchs, Marc Aiguier and Thibaud Brunet

Towards Rules and Laws for Software Factories and Evolvability:
A Case-Driven Approach.................................................................35
Herwig Mannaert, Jan Verelst and Kris Ven

Defining Agile Software Quality Assurance.................................................36
E. Mnkandla and B. Dwolatzky

Checking Data Integrity via the UML Class Diagram........................................37
Ahmad Alsaadi

ICSEA 9: Advanced Software Mechanisms IV

Generating Proof Obligation to Verify Object-Z Specification..............................38
Zhicheng Wen, Huaikou Miao and Hongwei Zeng

Software Confederations - An Architecture for Agile Development in the Large........39
Jaroslav Král, Michal Zemlicka and Michal Kopecky

Defining the Architectural Design of Frameworks through a Group of
Subframeworks Created from Frozen and Hot Spots....................................40
Simone Nasser Matos and Clovis Torres Fernandes

Modeling Multi-View Software Process with Object Petri Nets..........................41
Jidong Ge, Hao Hu, Qing Gu and Jian Lü

Using RDL to Facilitate Customization of Variability Points.............................42
Toacy C. Oliveira and Marcilio Mendonça
ICSEA 10: Advanced Software Mechanisms V

Data Based Application Partitioning and Workload Balance in Distributed Environment.................................................................43
   Xiaohu Yang, Ming Mao and Xinyu Wang

Component-Based Development Process and Component Lifecycle..................44
   Ivica Crnkovic, Michel Chaudron and Stig Larsson

On Describing, Analyzing, and Executing Complex Behavior of Services........45
   Dumitru Roman, Ioan Toma and Dieter Fensel

A Model of Open Source Software Style R&D on Business............................46
   Masashi Ueda

Performance Model Interchange Format: Semantic Validation.........................47
   Daniel García, Catalina M. Lladó, Connie U. Smith and Ramon Puigjaner

ICSEA 11: Advanced Software Mechanisms VI

An Architectural Modeling Approach with Symmetric Alignment of Multiple Concern Spaces.........................................................48
   Semih Cetin, N. Ilker Altintas and Cevat Sener

Using Styles to Improve the Architectural Views Design..............................49
   Rogelio Limon Cordero and Isidro Ramos Salavert

Specification of Software Component Requirements Using the Trace Function Method..............................................................50
   Colm Quinn, Sergiy Vilkomir and David Parnas, Srdjan Kostic

Design and Implementation of Chronological Web Server for Web-Based Applications.............................................................51
   Shann-Chiuen Wu and Tzao-Lin Lee

ICSEA 12: Open Source

Evaluation Framework for Open Source Software Maintenance....................52
   Timo Koponen
Exploring the Maintenance Process through the Defect Management in the Open Source Projects - Four Case Studies
Heli Lintula, Timo Koponen and Virpi Hotti

RaSOSS - Remote Analysis System for Open Source Software
Timo Koponen

Developing an Open Source Integrated Development Environment for a Mobile Device
Juha Järvensivu, Matti Kosola, Mikko Kuusipalo, Pekka Reijula and Tommi Mikkonen

ICSEA 13: Software Performance

The Method, the Tools and Rationales for Assessing Dynamic Memory Efficiency in Embedded Real-Time Systems in Practice
Christian Del Rosso

Efficient Evaluation of CSAN Models by State Space Analysis Methods
Mohammad Abdollahi Azgomi and Ali Movaghar

Modeling and Evaluation of Software Systems with Object Stochastic Activity Networks
Mohammad Abdollahi Azgomi and Ali Movaghar

Performance of MPI Parallel Applications
S. Richard, B. Miegemolle, J. M. Garcia and T. Monteil

ICSEA 14: Software Security

Java Object Behavior Modeling and Visualization
Ji Wu, Xiao-xia Jia, Yong-po Liu and Guo-huan Li

Analysing Countermeasures Against Privacy-Invasive Software
Martin Boldt and Bengt Carlsson

SOA-Aware Authorization Control
Christian Emig, Heiko Schandua and Sebastian Abeck

A Class of Traceability Codes with an Efficient Tracing Algorithm
Yizhou Ma, Chang-hui Choe and Moon Ho Lee
A Remote IDS Based on Multi-Agent Systems, Web Services and MDA..................64  
Mauro Silva, Denivaldo Lopes and Zair Abdelouahab

Template-Based Development of Fault-Tolerant Embedded Software.......................65  
Christian Buckl, Alois Knoll and Gerhard Schrott

High Speed and Reliable Anti-Spam Filter................................................................66  
Jalel Rejeb, Thuy T. Le and Narinder Anand

ICSEA 15: Special Applications

New Scheme of Implementing Real-Time Linux.........................................................67  
Xue-Yu Hong, Ling Zhang and Jin-Long Hu

Architecture of a Universal Relation Data Source for Web Applications with  
Advanced Access Control and Simplified Migration...................................................68  
Vit Vrba, Lubomir Cvrk, Vit Novotny and Karol Molnar

A Platform for the Development of Spoken Dialog Systems.....................................69  
Emilio Sanchis, David Griol, Lluís Hurtado and Encarna Segarra

Reflection: Improving Research through Knowledge Transfer.....................................70  
Andre Oboler, Simon Lock and Ian Sommerville

Adaptive Manufacturing: A Real-Time Simulation-Based Control System....................71  
Benoît Saenz de Ugarte, Abdelhakim Artiba, Khalid Jbaida and Robert Pellerin

Author Index................................................................................................................72