PROCEEDINGS

SEKE 2010

The 22nd International Conference on Software Engineering & Knowledge Engineering

Sponsored by
Knowledge Systems Institute Graduate School, USA

Technical Program
July 1-3, 2010
Hotel Sofitel, Redwood City, San Francisco Bay, USA

Organized by
Knowledge Systems Institute Graduate School
# Table of Contents

Foreword .................................................................................................................. iii

Conference Organization .......................................................................................... iv

Prodigious Data, Logic, Processing, and Usage

*Dr. Alfred Z. Spector* ............................................................................................... 1

Building A Smarter Planet With University Collaboration: Empowering People Through Information Integration

*Dr. Josephine M. Cheng* ........................................................................................... 2

The multi-core programming challenge

*Dr. Daniel Cooke* .................................................................................................... 3

Future Research Directions for Software Engineering and Knowledge Engineering

*Dr. Guenther Ruhe* ................................................................................................. 5

Machine Learning with Value-Based Software Engineering

Absent features or missing values?

*Wen Zhang, Ye Yang, Qing Wang* ........................................................................... 6

Capturing Antagonistic Stakeholder Value Propositions in Value-Based Software Development

*Du Zhang* .................................................................................................................. 12

The effects of human-computer interaction modes for weak learners in an animation learning environment

*Yu-Fang Yeh* .......................................................................................................... 18
Software Requirement Engineering

Quality Indicators in Requirements Elicitation (S)
*Aneesh Krishna, Andreas Gregoriades, Chattrakul Sombattheera* ........................... 24

A UML Profile Oriented to the Requirements Collecting and Analyzing for the Multi-Agent Systems Project
*Gilleanes Thorwald Araujo Guedes, Rosa Maria Vicari* .............................. 28

Business-Object Oriented Requirements Analysis Framework for Data Warehouses (S)
*Anirban Sarkar, Sankhayan Choudhury, Nabendu Chaki, Swapan Bhattacharya* 34

Soft Systems in Requirements Engineering: A Case Study (S)
*Alejandra Yepez Lopez, Nan Niu* .......................................................... 38

Textual Software Requirements Specifications in the Context of Software Architecting (S)
*Matthias Galster, Armin Eberlein, Mahmood Moussavi* .................................. 42

Conditions for ignoring failures based on a requirements model
*João Pimentel, Emanuel Santos, Jaelson Castro* ........................................ 48

Software Validation

Ontology-Driven Enterprise Application Integration
*G. Bucci, V. Sandrucci, E. Vicario* ............................................................. 54

Introduction of Time and Timing Variability in Usage Model based Testing
*Sebastian Siegl, Reinhard German, Kai-Steffen Hielscher* ............................... 61

FLAT A Fast Lattice-Based Algorithm for Test Suite Reduction (S)
*Ahmed Raafat Abuzeid, Haitham S. Hamza, Ismail Abdel Hamid Taha* .............. 67
Interoperability and Semantic Web technologies

Semantic Document Architecture for Desktop Data Integration and Management
Saša Nešić, Dragan Gašević, Mehdi Jazayeri ........................................... 73

Using the whole structure of ontology for semantic relatedness measurement (S)
Ehsan KhounSiavash, Ahmad Baraani-Dastjerdi ........................................... 79

Composer-Science: A Semantic Service Based framework for Workflow Composition in e-Science Projects (S)
Laryssa Machado da Silva, Regina Braga, Fernanda Campos .......................... 84

Software Quality Assurance

A Stochastic Model for Optimizing the Patching Time of Software Bugs (S)
Yong Wang, Dianxiang Xu, William M Lively, Dick B. Simmons ........................ 88

Do More People Make the Code More Defect Prone?: Social Network Analysis in OSS Projects
Salifu Alhassan, Bora Çağlayan, Ayşe Bener ................................................. 93

Performance Analysis of a Web Server with Dynamic Thread Pool Architecture
Jijun Lu, Swapna S. Gokhale ................................................................. 99

Some Improvements for More Precise Model Checking
Zhi Zhang, Qingkai Zeng, Ming Huang ...................................................... 106

Software Development Effort and Quality Prediction Using Bayesian Nets and Small Local Qualitative Data
Łukasz Radliński ................................................................. 113

Multi-Tracker Collaboration in Bittorrent Systems
Sonia Guirajani, Anuja Oka, Xiao Su ....................................................... 117

An Evaluation of Tie-Breaking Strategies for Fault Localization Techniques
Xiaofeng Xu, Vidroha Debroy, W. Eric Wong, Donghui Guo ........................ 123
### Software Measurement

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Ontology Model to Support the Automated Evaluation of Software</td>
<td>Raúl García-Castro, Miguel Esteban-Gutiérrez, Mick Kerrigan, Stephan Grimm</td>
<td>129</td>
</tr>
<tr>
<td>Information-Theoretic Metrics for Project-Level Scattering and Tangling</td>
<td>Erik Linstead, Lindsey Hughes, Cristina Lopes, Pierre Baldi</td>
<td>141</td>
</tr>
<tr>
<td>Synchronization Complexity Metric (S)</td>
<td>Peter Yastrebenetsky, Mark Trakhtenbrot</td>
<td>147</td>
</tr>
<tr>
<td>Measurement Model of Software Requirements Derived from System Maintainability Requirements</td>
<td>Alain Abran, Khalid T. Al-Sarayreh, Juan J. Cuadrado-Gallego</td>
<td>153</td>
</tr>
</tbody>
</table>

### Software Architectures

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evolution Styles to Capitalize Evolution Expertise within Software Architectures (S)</td>
<td>Oliver Le Goaer, Dalila Tamzalit, Mourad Oussalah</td>
<td>159</td>
</tr>
<tr>
<td>Reasoning about Attribute Architectures</td>
<td>Tacksoo Im, John D. McGregor</td>
<td>165</td>
</tr>
<tr>
<td>Formal Specification of Software Architecture Security Tactics (S)</td>
<td>Andrew Wyeth, Cui Zhang</td>
<td>172</td>
</tr>
<tr>
<td>Enterprise Systems Development: Impact of Aspect Oriented Software Architecture (S)</td>
<td>Pawan Kumar Verma, Deepak Dahiya</td>
<td>176</td>
</tr>
</tbody>
</table>
Software Test Automation, Practice, and Standardization

Reducing Black-box Test Suite Using Input Parameter Relationships
Lixin Wang ............................................................... 180

Introducing Automated Environment Configuration Testing in an Industrial Setting
Caryna Pinheiro, Vahid Garousi, Frank Maurer, Jonathan Sillito .................. 186

An Ontology-based Software Test Generation Framework
Valeh H. Nasser, Weichang Du, Dawn MacIsaac .................................. 192

Automated Integration Testing and Verification of a Secured SOA Infrastructure - an Experience Report in eHealth
Mario Bernhart, Thomas Artner, Andreas Mauczka, Thomas Grechenig .......... 198

Software Engineering with Computational Intelligence and Machine Learning

A Novel Software Metric Selection Technique Using the Area Under ROC Curves
Taghi M. Khoshgoftaar, Kehan Gao ........................................ 203

Automatic Bug Triage using Semi-Supervised Text Classification
Jifeng Xuan, He Jiang, Zhilei Ren, Jun Yan, Zhongxuan Luo ..................... 209

Ensemble Feature Selection Technique for Software Quality Classification
Huanjing Wang, Taghi M. Khoshgoftaar, Kehan Gao ............................. 215

Web Services

Negotiating Software Acquisition Supported by Web Services in a Distributed Software Development Process (S)
Gabriel Costa Silva, Itana Maria de Souza Gimenes, Marcelo Fantinato, Maria Beatriz Felgar de Toledo ........................................ 221

Transforming Service-Oriented Business Models into Web Service Specifications
Hugo Estrada, Itzel Morales-Ramirez, Alicia Martinez, Oscar Pastor ............ 225
Reliable Web Service Selection based on Transactional Risk (S)
Ying Yin, Xizhe Zhang, Bin Zhang ................................................................. 231

Selecting Web Services for Choreography Implementation: Compatibility Checking Approach with Access Control
Emad Elabd, Emmanuel Coquery, Mohand-Said Hacid ........................................... 235

A Model-driven Approach to Flexible Multi-Level Customization of SaaS Applications
Zakwan Jaroucheh, Xiaodong Liu, Sally Smith ..................................................... 241

Weaving Functional and Non-Functional Attributes for Dynamic Web Service Composition (S)
Ajay Bansal, Srividya Kona, M. Brian Blake, Gopal Gupta ........................................ 247

Software Regression Testing

Improving Cluster Selection Techniques of Regression Testing by Slice Filtering
Yongwei Duan, Zhenyu Chen, Zhihong Zhao, Ju Qian, Zhongjun Yang .................. 253

A Constrained Particle Swarm Optimization Approach for Test Case Selection
Luciano S. de Souza, Ricardo B. C. Prudêncio, Flavia de A. Barros ....................... 259

Software Defect Estimation using Support Vector Regression (S)
Roberta A. A. Fagundes, Renata M.C.R. de Souza ............................................. 265

Analyzing the Relationship of Process Metrics And Classified Changes - A Pilot Study (S)
Andreas Mauczka, Mario Bernhart, Thomas Grechenig ......................................... 269

Cost-Effective Combinatorial Test Case Prioritization for Varying Combination Weights
Ziyuan Wang, Baowen Xu, Lin Chen, Zhenyu Chen ............................................ 273

E-Commerce and Mobile Commerce

A Multi-State Bayesian Network for Shill Verification in Online Auctions
Ankit Goel, Haiping Xu, Sol M. Shatz ............................................................... 279
An Empirical Evaluation on the Relationship Between Final Auction Price and Shilling Activity in Online Auctions

Fei Dong, Sol M. Shatz, Haiping Xu ................................................................. 286

Software Framework and Application Tools

A Framework for Solar Energy Applications Photovoltaic Systems (S)
Papatella, F., Carvalho, T., Zarate, L., Pereira, E., Song, M. .............................. 292

Data manipulation API in ERP systems (S)
Vadym Borovskiy, Wolfgang Koch, Alexander Zeier .......................................... 298

Ontology-Based Tools in the Service of Hardware Verification
Eyal Bin, Alaa Ghanayim, Karen Holtz, Eitan Marcus, Ronny Morad, Ofer Peled, Michal Rimon, Gil Shurek, Elena Tsanko ...................................................... 303

Knowledge Engineering

Smarter Software Engineering: Knowledge factors contributing to improved Individual Performance
Narayanan Srinivasaraghavan, Craig McDonald, John Campbell ........................... 309

Lattice-Context Based Digital Paper Search (S)
Chongyang Shi, Zhendong Niu, Xiyi Cheng .................................................... 315

Evaluating the Weighted Sum Algorithm for Estimating Conditional Probabilities in Bayesian Networks
Simon Backer, Emilia Mendes ................................................................. 319

An Ontology-based Mapping Repository for Meta-querier Customization
Xiao Li, Randy Chow ........................................................................... 325

Knowledge Engineering to Visualize Complexity for Legacy Modernization Planning (S)
Sarah B. Lee, Sajjan G. Shiva, K. S. Braunsdorf ................................................. 331

Using QVT for adapting question analysis to restricted domain QA systems (S)
Katia Vila, Jose-Norberto Mazón, Antonio Ferrández ............................................. 335
Software Maintenance and Evolution

Towards an Automation of Software Evolution Good Practices
_Chouki Tibermacine, Soraya Sakhraroui, Vincent Le Gloahec, Régis Fleurquin, Salah Sadou_ ................................................................. 339

VESTA: A View-based Software Quality Assessment Model for Software Evolution Management (S)
_Wei-Chung Hu, Chia Hung Kao, Feng Pu Yang, Hewijin Christine Jiau, Kuo-Feng Ssu_ ................................................................. 345

Detecting Emergent Behavior in Distributed Systems Using Scenario-Based Specifications
_Mohammad Moshirpour, Abdolmajid Mousavi, Behrouz H. Far_ ................. 349

Human-Computer Interface and Interaction

MMWA-ae: boosting knowledge from Multimodal Interface Design, Reuse and Usability Evaluation
_Americo Talarico Neto, Renata Pontin M. Fortes, Rafael Rossi, Solange Rezende_ 355

Human-Computer Interface Design Guidelines: An Expert System (S)
_Tiago Cinto, Cecilia Sosa Arias Peixoto_ ................................................................. 361

Assisting Developers to Read Code Help-Documents Efficiently through Discovering Document-section Relationships
_Lijie Wang, Leye Wang, Ge Li, Bing Xie_ ................................................................. 367

Empirical Software Engineering and Software Economics

Validity Threats in Empirical Software Engineering Research - An Initial Survey
_Robert Feldt, Ana Magazinius_ ................................................................. 374

A Comparative Study of Attribute Weighting Techniques for Software Defect Prediction Using Case-based Reasoning
_Elham Paikari, Michael M. Richter, Guenther Ruhe_ ................................................................. 380

xvii
Software Project Portfolio Selection A Modern Portfolio Theory Based Technique
Hélio R. Costa, Márcio O. Barros, Ana Regina Rocha ........................................ 387

Software Validation and Verification

Runtime Constraint Checking Approaches for OCL, A Critical Comparison (S)
Carmen Avila, Amritam Sarcar, Yoonsik Cheon, Cesar Yeep ..................................... 393

Refinement Checking for Interface Automata with Z Notation
Zining Cao ................................................................. 399

Multi-objective Genetic Algorithms: Construction and Recombination of Passive
Testing Properties
César Andrés, Mercedes G. Merayo, Manuel Nuñez .............................................. 405

Formal Verification of UML 2.0 Sequence Diagram
Sachoun Park, Taeman Han, Gihwon Kwon ................................................................. 411

Formal Methods and Modeling

A Hierarchical Timed Coloured Petri Nets for BPMN-based Process Analysis (S)
Ching Huey Wang, Pei Shu Huang, Feng Jian Wang .............................................. 417

Temporal Filter A Temporal Extension to Wireshark Display Filter (S)
Shaochun Wang ................................................................. 421

System Modeling from Extended Task Descriptions (S)
Jose Luis de la Vara, Juan Sánchez ................................................................. 425

Specification patterns can be formal and still easy
Fernando Asteasuain, Victor Braberman ................................................................. 430

A Context Conceptual Model for a Distributed Software Development Environment
(S)
Ana Paula Chaves, Elisa H. M. Huzita, Vaninha Vieira, Igor Steinmacher ............ 437
Service-Oriented Architectures and Applications

Service Automation Architecture as adopted by Unified Communication Audit Tool  
**Shadan Saniepour Esfahani, Talal Siddiqui** .................................................. 443

Knowledge Based Service Oriented Architecture for M&A (S)  
**Debasis Chanda, Dwijesh Dutta Majumder, Swapan Bhattacharya** .................. 448

ISE - Integrated Service Engineering: Applying an Architecture for Model to Model Transformations  
**Hao Hu, Gregor Scheithauer, Guido Wirtz** .................................................. 452

A Model-based Business Process Diagnosis Method in Service Oriented Architecture (S)  
**Soo Ho Chang, Soo Dong Kim** ................................................................. 458

Ontology-Based Dependency-Guided Service Composition for User-Centric SOA  
**Wei-Tek Tsai, Peide Zhong, Jay Elston, Yinong Chen, Xiaoying Bai** .............. 462

Feature Modeling for Service Variability Management in Service-Oriented Architectures  
**Mohammad Abu-Matar, Hassan Gomaa, Minseong Kim, Ahmed Elkhodary** ...... 468

Software Test Automation and Experience

TestDrive - A Cost Effective Way to Create and Maintain Test Scripts for Web Applications (S)  
**Sachin Patel, Priya Gupta, Prafullakumar Surve** ........................................ 474

Ontology-Based Test Case Generation For Simulating Complex Production Automation Systems (S)  
**Thomas Moser, Gregor Dürr, Stefan Biffl** ............................................... 478

PLeTs-Test Automation using Software Product Lines and Model Based Testing (S)  
**Elder de M. Rodrigues, Leonardo D. Viccari, Avelino F. Zorzo** ................. 483
Experience with Maintenance of a Functional GUI Test Suite using IBM Rational Functional Tester (S)
Yuri Shewchuk, Vahid Garousi ................................................................. 489

Agent-Based Systems

A Multiagent System for Automate Detection and Diagnosis of Active Tuberculosis on Chest Radiograph and CT Thorax (S)
Abdel-Halim Hafez Elamy, Behrouz H. Far, Richard Long ......................... 495

Impact Analysis Model for Brasilia Area Control Center using Multi-agent System with Reinforcement Learning (S)
Antonio Carlos de Arruda Junior, Alessandro Ferreira Leite, Cícero Roberto Ferreira de Almeida, Alba Cristina Magalhaes Alves de Melo, Li Weigang .......... 499

Mobile Agents for Active Media
Ichiro Satoh ............................................................................................. 503

An End-user Domain-specific Model to Drive Dynamic User Agents Adaptations
Ingrid Nunes, Simone D.J. Barbosa, Carlos J.P. de Lucena ............................ 509

Ontologies and Slow Intelligence Methodology

Towards Generation of Domain Ontology from LMF Standardized Dictionaries
Feten Baccar Ben Amar, Bilel Gargouri, Abdelmajid Ben Hamadou .............. 515

An Ontology-based Configurator for Customized Product Information based upon the Slow Intelligence Systems Approach
Emilio Zegarra, Francesco Colace, Massimo De Santo, Shi-Kuo Chang .......... 521

UFOCoRe: Exploring Fuzzy Relations According to Specific Contexts
Mauricio Jacó Cerri, Cristiane A. Yaguinuma, Marcela Xavier Ribeiro, Marilde T. P. Santos ................................................................. 529

Software Vulnerability

A String Constraint Solver for Detecting Web Application Vulnerability
Xiang Fu, Chung-Chih Li ................................................................. 535
Towards a Structured Model for Software Vulnerabilities (S)
*Ming Huang, Yisha Lu, Qingkai Zeng* .................................................. 543

Social Networks and Web Mining

Dynamic and semantic social networks analysis: a new model based on a multidisciplinary approach. (S)
*Christophe Thovex, Francky Trichet* .................................................. 548

Incremental Construction of Topic Hierarchies using Hierarchical Term Clustering
*Ricardo M. Marcacini, Solange O. Rezende* ........................................ 553

Software Security

A Framework for Detecting Code Piracy Using Class Structure
*Patrice Arruda, Pierre Chamoun, Dwight Deugo* .................................. 559

Detection of Malicious Software Engineer Intrusion
*Michael E. Shin, Nipul Patel, Snehadeep Sethia* .................................. 565

Developing Precise Misuse Cases with Security Robustness Analysis (S)
*Mohamed El-attar* .................................................................................. 571

Software Product Lines and Tools

Developing configurable extensible code generators for model-driven development approach
*Souvik Barat, Vinay Kulkarni* ............................................................... 577

Feature based Structuring and Composing of SDLC Artifacts (S)
*Nishigandha Hirve, Tukaram Muske, Ulka Shrotri, R. Venkatesh* .......... 583

Distributed and Adaptive Execution of Condor DAGMan Workflows (S)
*Selim Kalayci, Gargi Dasgupta, Liana Fong, Onyeka Ezenwoye, S. Masoud Sadjadi* ................................................................. 587
Towards Automated Synthesis of Executable Eclipse Tutorials

Nuyun ZHANG, Gang HUANG, Ying ZHANG, Ning JIANG, Hong MEI ........... 591

Knowledge Engineering Systems

An Examination of a Rule-Based Expert System to Aid in the Implementation of the CMMI Framework (S)

Tessa Adderley, Sheryl Duggins, Frank Tsui ........................................ 599

Tools for Ontology Modeling and Visualization (S)

Simon Suigen Guo, Christine W. Chan, Robert Harrison ......................... 604

Modeling and Testing a Knowledge Base for Instructing Users to Choose the Classification Task in Relational Data Mining (S)

Lidia Martins da Silva, Ana Estela Antunes da Silva .............................. 608

gOntt, a Tool for Scheduling and Executing Ontology Development Projects

Mari Carmen Suárez-Figueroa, Asunción Gómez-Pérez, Oscar Muñoz, Martín Vigo ................................................................. 614

Software Project Management

A Project Monitoring Cockpit Based On Integrating Data Sources in Open Source Software Development

Stefan Biffl, Wikan Danar Sunindyo, Thomas Moser ............................. 620

Software Configuration Management as a Crosscutting Concern: An Example on Software Testing

Elisa Yumi Nakagawa, João Vítor Tornisiello Trevisan, José Carlos Maldonado 628

Decision Support for Staffing of the Next Software Product Release (S)

Emadoddin Livani, Guenther Ruhe ....................................................... 634

Predicting Project Health Prior to Inception (S)

Rose Williams, Jim Graham, Katrina Reffett, Myles Wallace .................... 640

xxii
Software Engineering Tools and Experience Report

OCL Evaluation on AUTOSAR Model (S)
Sachoun Park, Taetnan Han, Hyoungju Lim, Gihwon Kwon .......................... 645

Intertwining Implementation with the RealSpec Executable Real-Time Specification Language (S)
Amir A. Khwaja, Joseph E. Urban ................................................................. 649

Self-Management of Component Executors for Robot Applications (S)
Michael E. Shin, Hemanth Thimme Gowda, Taeghyun Kang, Sunghoon Kim, Seungwook Jung, Choulsoo Jang, Byoungyoul Song .................................................. 653

Agent-Based Software Engineering and Applications

A Multi-Agent Model for a Business Continuity Information Network
Lily Chang, Xudong He .......................................................... 657

Agent-based Architecture for Service Ontology evolution management (S)
Soumaya Slimani, Salah Baïna, Karim Baïna .............................................. 664

Intelligent Software Agent Design Issues with Extensions to the Descartes Specification Language (S)
Vinitha H.Subburaj, Joseph E.Urban ...................................................... 668

Meta Context for Agent Planning (S)
Csaba Egyhazy .......................................................... 672

Component-Based Software Engineering

Software Components Search Approaches in the Context of COTS-based Development (S)
Nacim Yanes, Sihem Ben Sassi, Henda Hajjami Ben Ghezala ......................... 675

Architecture-centric development and evolution processes for component-based software
Huaxi (Yulin) Zhang, Christelle Urtado, Sylvain Vauttier .......................... 680
Conflict Analysis in Commercial Off-The-Shelf (COTS) Based Development

Hamdy Ibrahim, Tom Wanyama, Armin Eberlein, Behrouz H. Far ...................... 686

Achieve Semantic-based Precise Component Selection via an Ontology Model Interlinking Application Domain and MVICS

Chengpu Li, Xiaodong Liu, Jessie Kennedy ..................................................... 692

Process and Project Management


Mostafa Madiesh, Guido Wirtz ................................................................. 698

Supporting Software Process Improvement in Very Small Entities through a Template-based Guide

Miguel Morales Trujillo, Francisco J. Pino, Mario Piattini ................................ 704

Scrum and Plan-driven Process Integration and its Impact on Effort Estimation

Nelio Alves, William Carvalho, Edgard Lamounier ...................................... 710

A Case Study of Software Process Improvement Implementation

Daniela C. C. Peixoto, Vitor A. Bastista, Rodolfo F. Resende, Clarindo Isaias P. S. Pâdua ............................................................. 716

Software Process Reuse by Pattern Weaving (S)

Ya-sha Wang, Xiao-yang He, Jin-gang Guo, Jia-rui Jiang ................................ 722

Pervasive Computing and Ubiquitous Software

A Cross-Layer Design for Adaptive Multimodal Interfaces in Pervasive Computing

Jun Kong, Weiyi Zhang, Juan Li, Arjun G. Roy ............................................. 726

Characteristics of Ubiquitous Software Projects: Pertinence, Relevance, and Use

Rodrigo Oliveira Spinola, Guilherme Horta Travassos ..................................... 732


Daniel Feitosa, Katia R. Felizardo, Lucas Bueno R. de Oliveira, Denis Wolf, Elisa Y. Nakagawa ................................................................. 738
Software Engineering Tools and Applications

A Visual Bug Report Analysis and Search Tool
Carlos Eduardo Albuquerque da Cunha, Yguaratã Cerqueira Cavalcanti, Paulo Anselmo M. Silveira Neto, Eduardo Santana de Almeida, Silvio Romero L. Meira 742

CFM: A File Manager with Multiple Categorization Support (S)
Ali Sajedi Badashian, Hamidreza Afzali, Iman Khalkhali, Morteza Ashurzad Delceh, Mohammad Shoja Shafiei, Mehregan Mahdavi 748

TSRR: A Software Resource Repository for Trustworthiness Resource Management and Reuse
Junfeng Zhao, Bing Xie, Yasha Wang, Yongjun Xu 752

Software Dependability and Reliability

A Log-Assisted Approach Enforcing Consistency in the Presence of Exceptions
Nikolas Nehmer 757

An Automatic Failure Mode and Effect Analysis Technique for Processes Defined in the Little-JIL Process Definition Language
Danhua Wang, Jingui Pan, George S. Avrunin, Lori A. Clarke, Bin Chen 765

Network and System Security

Secure ad-hoc routing protocol
Thouraya Bouabana-Tebibel, Rym Nesrine Guibadj, Sara Mehar 771

A Pattern Methodology for Modeling Network Forensic Investigations in Converged Tactical Environments (S)
Juan C. Pelaez 777

P2PSecT: Peer-to-peer Security Testbed (S)
Eduardo Segura, Xiao Su 783
Software Development and System Design

Model-Driven Development of Java Enterprise Applications (S)
Andre Pflueger, Wolfgang Golubski, Tobias Haubold ........................................... 787

A documentation approach for the self-adaptive system design
Wenhui Zhu, David Lorge Parnas ............................................................................ 791

Designing Aspects with Use Cases: A Case Study
Junhua Ding, Christopher R. Westbrook, M. N. H. Tabrizi ............................. 797

Reviewer’s Index ................................................................................................... 804

Author’s Index ..................................................................................................... 807

Note: (S) means short paper.