

2012 IEEE 13th International Conference on Information Reuse & Integration

(IRI 2012)

**Las Vegas, Nevada, USA
8 – 10 August 2012**



**IEEE Catalog Number: CFP12IRI-PRT
ISBN: 978-1-4673-2282-9**

Proceedings of the 2012 IEEE 13th International Conference on Information Reuse and Integration (IEEE IRI 2012)

TABLE OF CONTENTS

Forward	xiii
Message from Program Co-chairs	xiv
Conference Organizers	xvi
Program Committee	xviii
Keynote Speech (I)	xxi
Keynote Speech (II)	xxiii
Keynote Speech (III)	xxiv
Panel	xxvi
DIM 2012 Program Committee	xxvii
WICSOC 2012 Program Committee	xxviii
EM-RITE 2012 Program Committee	xxix
IRI-HI 2012 Program Committee	xxx

Session A11: Software Testing I

A Novel Dataset-Similarity-Aware Approach for Evaluating Stability of Software Metric Selection Techniques	1
Huanjing Wang ⁽¹⁾ , Taghi Khoshgoftaar ⁽²⁾ , Randall Wald ⁽²⁾ and Amri Napolitano ⁽²⁾ <i>(1) Western Kentucky University, USA</i> <i>(2) Florida Atlantic University, USA</i>	
Reusing and Converting Code Clones to Aspects - An Algorithmic Approach	9
Samuel A. Ajila ⁽¹⁾ , Angad S. Gakhar ⁽¹⁾ , Chung H. Lung ⁽¹⁾ and Marzia Zaman ⁽²⁾ <i>(1) Carleton University, Canada</i> <i>(2) Cistel Technology Inc, Canada</i>	
Generating Test Cases via Model-based Simulation	17
Songqing Liu ⁽¹⁾ , Liping Li ⁽²⁾ and Hai-Feng Guo ⁽¹⁾ <i>(1) Univ. of Nebraska at Omaha, USA</i> <i>(2) Second Polytechnic Univ. Shanghai, China</i>	
A Software Product Lines System Test Case Tool and Its Initial Evaluation	25
Crescencio Rodrigues Lima Neto ^(1,3) , Eduardo Santana Almeida ^(2,3) and Silvio Romero De Lemos Meira ^(1,3) <i>(1) Federal University of Pernambuco (CIn/UFPE), Brazil</i> <i>(2) Federal University of Bahia (DCC/UFBA), Brazil</i>	

⁽³⁾ *Reuse in Software Engineering Labs (RiSE)*

Session A12: Artificial Intelligence and Special Session on Robotics

[Model-based Diagnosis with Default Information Implemented Through MAX-SAT Technology](#)33

Dominique D'Almeida and Eric Gregoire
Université d'Artois, France

[A Game Theoretic Approach for Adversarial Pipeline Monitoring using Wireless Sensor](#)

Networks37
Mohammad Saiful Islam, Robert Nix and Murat Kantarcioglu
The University of Texas at Dallas, USA

[A Web-Based User Interface for a Mobile Robotic System](#)45

Christopher Paolini and Gordon Lee
San Diego State University, USA

Session A13: Workshop on Empirical Methods for Recognizing Inference in Text I (EM-RITE)

[Evaluating and Enhancing Cross-Domain Rank Predictability of Textual Entailment Datasets](#).....51

Cheng-Wei Lee ⁽¹⁾, Chuan-Jie Lin ⁽²⁾, Hideki Shima ⁽³⁾ and Wen-Lian Hsu ⁽¹⁾
⁽¹⁾ *Academia Sinica, Taiwan*
⁽²⁾ *National Taiwan Ocean University, Taiwan*
⁽³⁾ *Carnegie Mellon University, USA*

[A Statistical Approach with Syntactic and Semantic Features for Chinese Textual Entailment](#).....59

Chun Tu and Min-Yuh Day
Tamkang University, Taiwan

[Improving Binary-class Chinese Textual Entailment by Monolingual Machine Translation Technology](#).....65

Shan-Shun Yang ⁽¹⁾, Shih-Hung Wu ^{(1)*}, Liang-Pu Chen ⁽²⁾, Wen-Tai Hsieh ⁽³⁾ and Seng-cho T. Chou ⁽³⁾
⁽¹⁾ *Chaoyang University of Technology, Taiwan*
⁽²⁾ *Institute for Information Industry, Taiwan*
⁽³⁾ *National Taiwan University, Taiwan*

Session A21: Data Mining and Machine Learning I

[Integrating Developer-related information across Open Source Repositories](#).....69

Aftab Iqbal and Michael Hausenblas
National University of Ireland, Galway, Ireland

[Rankbox: An Adaptive Ranking System for Mining Complex Semantic Relationships Using User Feedback](#).....77

Na Chen and Viktor Prasanna
University of Southern California, USA

[Dynamic Selection of k Nearest Neighbors in Instance-based Learning](#).....85

Carl Hulett, Andy Hall and Guangzhi Qu
Oakland University, USA

Finding Story Chains in Newswire Articles	93
Xianshu Zhu and Tim Oates <i>University of Maryland, USA</i>	

Session A22: Data Mining and Machine Learning II

Exploring An Iterative Feature Selection Technique for Highly Imbalanced Datasets	101
Taghi Khoshgoftaar ⁽¹⁾ , Kehan Gao ⁽²⁾ and Amri Napolitano ⁽¹⁾ ⁽¹⁾ <i>Florida Atlantic University, USA</i> ⁽²⁾ <i>Eastern Connecticut State University, USA</i>	

Machine Prediction of Personality from Facebook Profiles	109
Randall Wald ⁽¹⁾ , Taghi Khoshgoftaar ⁽¹⁾ and Chris Sumner ⁽²⁾ ⁽¹⁾ <i>Florida Atlantic University, USA</i> ⁽²⁾ <i>Online Privacy Foundation, USA</i>	

Multi-Model Integration for Long-Term Time Series Prediction	116
Zifang Huang, Mei-Ling Shyu and James Tien <i>University of Miami, USA</i>	

Multi-criteria Collaborative Filtering by Bayesian Model Based User Profiling	124
Pannawit Samatthiyadikul ⁽¹⁾ , Atsuhiko Takasu ⁽²⁾ and Saranya Maneeroj ⁽¹⁾ ⁽¹⁾ <i>Chulalongkorn University, Thailand</i> ⁽²⁾ <i>National Institute of Informatics, Japan</i>	

Session A23: Workshop on Empirical Methods for Recognizing Inference in Text II (EM-RITE)

Task-oriented Dependency Parsing Evaluation Methodology	132
Alexander Volokh and Guenter Neumann <i>DFKI, Germany</i>	

Calculating Emotional Score of Words for User Emotion Detection in Messenger Logs	138
Lun-Wei Ku and Cheng-Wei Sun <i>National Yunlin University of Science and Technology, Taiwan</i>	

Session A31: Multimedia Data Analysis and Information Integration

Model-driven Collaboration and Information Integration for Enhancing Video Semantic Concept Detection	144
Tao Meng and Mei-Ling Shyu <i>University of Miami, USA</i>	

An Improvement of Color Image Segmentation through Projective Clustering	152
Song Gao, Chengcui Zhang and Wei-Bang Chen <i>The University of Alabama at Birmingham, USA</i>	

Facial Feature Representation with Directional Ternary Pattern (DTP): Application to Gender Classification	159
Faisal Ahmed and Md. Hasanul Kabir <i>Islamic University of Technology, Bangladesh</i>	

Intelligent processing and analysis of groups of multispectral images	165
---	-----

Roumen Kountchev ⁽¹⁾, Stuart Rubin ⁽²⁾, Mariofanna Milanova ⁽³⁾ and Roumiana Kountcheva ⁽⁴⁾
⁽¹⁾ *Technical University of Sofia, Bulgaria*
⁽²⁾ *Space and Naval Warfare Systems Center (SSC), USA*
⁽³⁾ *UALR, USA*
⁽⁴⁾ *T&K Engineering, Bulgaria*

<u>Perceptual Edges Preservation Conformal to Human Vision Perception</u>	173
Chun-Shun Tseng, Chang-Te Lin, Chiao-Wei Lin and Jung-Hua Wang <i>National Taiwan Ocean University, Taiwan</i>	

Session A32: Agent-based Systems

<u>Simulated Protozoa Optimization</u>	179
James McCaffrey <i>Microsoft, USA</i>	

<u>A Method for Detecting Agents that Will Not Cause Emergent Behavior in Agent Based Systems - A Case Study in Agent Based Auction Systems</u>	185
Fatemeh Hendijani Fard and Behrouz Far <i>University of Calgary, Canada</i>	

<u>Human-centered Multi-target Tracking: A Random Set Theoretic Approach</u>	193
Bahador Khaleghi and Fakhreddine Karray <i>University of Waterloo, Canada</i>	

<u>Learning through Overcoming Inheritance Inconsistencies</u>	201
Du Zhang, Meiliu Lu <i>California State University Sacramento, USA</i>	

Session A33: Workshop on Data Integration and Mining (DIM)

<u>A Comparison of Anonymization Protection Principles</u>	207
Alexandre M. Pinto <i>HASLab - INESC TEC and Instituto Superior da Maia, Portugal</i>	

<u>Preserving Privacy of Outsourced Data: A Cluster-Based Approach</u>	215
Tummalapalli Sayi ⁽¹⁾ , Sai Krishna ⁽¹⁾ , Ravi Mukkamala ⁽²⁾ and Pallav Kumar Baruah ⁽¹⁾ ⁽¹⁾ <i>Sri Sathya Sai Institute of Higher Learning, India</i> ⁽²⁾ <i>Old Dominion University, USA</i>	

<u>Discovery and Cataloging of Deep Web Sources</u>	224
Chelsea Hicks ⁽¹⁾ , Matthew Scheffer ⁽¹⁾ , Anne H.H. Ngu ⁽¹⁾ and Quan Z. Sheng ⁽²⁾ ⁽¹⁾ <i>Texas State University, San Marcos, USA</i> ⁽²⁾ <i>The University of Adelaide, Australia</i>	

<u>Recognition of Fuzzy Contexts from Temporal Data under Uncertainty Case Study: Activity Recognition in Smart Homes</u>	231
Farzad Amirjavid, Abdenour Bouzouane, Bruno Bouchard and Kevin Bouchard <i>UQAC, Canada</i>	

<u>A Complete RM-ODP Case-study To Integrate Geospatial Services and Ecological Niche Modelling Systems</u>	239
Fabiana S. Santana ⁽¹⁾ , Renata L. Stange ⁽²⁾ , Antonio M. Saraiva ⁽²⁾ , Jorge L. D. Pinaya ⁽²⁾ and Jorge L. R. Becerra ⁽²⁾	

⁽¹⁾ *Universidade Federal do ABC, Brazil*

⁽²⁾ *Universidade de São Paulo, Brazil*

Session B11: Information Visualization

[Interactive Visualization of the Social Network of Research Collaborations](#).....247

Mohammad Alsukhni and Ying Zhu

University of Ontario Institute of Technology, Canada

[Integrated Provenance Data for Access Control in Group-Centric Collaboration](#).....255

Dang Nguyen, Jaehong Park and Ravi Sandhu

University of Texas at San Antonio, USA

[Developing an Open Source, Reusable Platform for Distributed Collaborative Information Management in the Early Detection Research Network](#).....263

Andrew F. Hart ⁽¹⁾, Rishi Verma ⁽¹⁾, Chris A. Mattmann ⁽¹⁾, Daniel Crichton ⁽¹⁾, Sean Kelly ⁽¹⁾, Heather Kincaid ⁽¹⁾, J. Steven Hughes ⁽¹⁾, Paul Ramirez ⁽¹⁾, Cameron Goodale ⁽¹⁾, Kristen Anton ⁽²⁾, Maureen Colbert ⁽²⁾, Robert R. Downs ⁽³⁾, Christos Patriotis ⁽⁴⁾ and Sudhir Srivastava ⁽⁴⁾

⁽¹⁾ *California Institute of Technology, USA*

⁽²⁾ *Dartmouth Medical School, USA*

⁽³⁾ *Columbia University, USA*

⁽⁴⁾ *National Institutes of Health, USA*

[An Extensible and Integrated Software Architecture for Data Analysis and Visualization in Precision Agriculture](#)271

Li Tan, Ronald Haley, Riley Wortman and Qin Zhang

Washington State University, USA

Session B12: Fuzzy Systems and Neural Network

[Automatic Labeling by means of Semi-Supervised Fuzzy Clustering as a Boosting Mechanism in the Generation of Fuzzy Rules](#).....279

Priscilla A. Lopes and Heloisa A. Camargo

Federal University of São Carlos (UFSCar), Brazil

[Ensemble Prediction of Monthly Mean Rainfall with a Particle Swarm Optimization-Neural Network Model](#).....287

Long Jin, Ying Huang and Hua-Sheng Zhao

Guangxi Climate Center, China

[Towards the Integration of Heterogeneous Uncertain Data](#).....295

Longzhi Yang and Daniel Neagu

University of Bradford, UK

[Designing a Computer-Aided Rule-Based Hourly Rainfall Prediction](#)303

Soo-Yeon Ji ⁽¹⁾, Sharad Sharma ⁽¹⁾, Byunggu Yu ⁽²⁾ and Dong Hyun Jeong ⁽²⁾

⁽¹⁾ *Bowie State University, USA*

⁽²⁾ *University of the District of Columbia, USA*

Session B13: Optimization and Search

[Constraint Driven Model Using Correlation and Collaborative Filtering for Sustainable Building](#).....309

Hsin-Yu Ha, Shu-Ching Chen, Yimin Zhu, Steven Luis, Scott Graham and Shahin Vassigh
Florida International University, USA

Multi-Criteria Decision Making with Skyline Computation	316
Wonik Choi ⁽¹⁾ , Ling Liu ⁽²⁾ and Boseon Yu ⁽¹⁾	
⁽¹⁾ <i>Inha University, Korea</i>	
⁽²⁾ <i>Georgia Institute of Technology, USA</i>	

Cost Excessive Paths in Cloud Based Services	324
Kevin Buell and James Collofello	
<i>Arizona State University, USA</i>	

Session B21: Semantic Data Modeling

CMAP: Tracking Equivalences from XML Documents to Relational Schemas	332
Douglas Negrini, Deise Saccol, Francisco Avelar and Eduardo Piveta	
<i>Universidade Federal de Santa Maria, Brazil</i>	

Formal modeling with SysML	340
Thouraya Bouabana-Tebibel ⁽¹⁾ , Stuart Rubin ⁽²⁾ and Miloud Bennama ⁽¹⁾	
⁽¹⁾ <i>National School of Computer Science – Algiers, ALGERIA</i>	
⁽²⁾ <i>SPAWAR Systems Center Pacific – San Diego, USA</i>	

Efficient Query Proseccing in the Semantic Model Approach to Information Integration	348
Tejaswi Chennubhotla and Fereidoon Sadri	
<i>University of North Carolina at Greensboro, USA</i>	

Session B22: Workshop on Information Reuse and Integration in Health Informatics I (IRI-HI)

A Review of the Stability of Feature Selection Techniques for Bioinformatics Data	356
Wael Awada, Taghi Khoshgoftaar, David Dittman, Randall Wald and Amri Napolitano	
<i>Florida Atlantic University, USA</i>	

A Decision Support System for Hospital Emergency Departments designed using Agent-Based Modeling and Simulation	364
Manel Taboada ⁽¹⁾ , Eduardo Cabrera ⁽¹⁾ , Emilio Luque ⁽¹⁾ , Francisco Epelde ⁽²⁾ and Ma Luisa Iglesias ⁽²⁾	
⁽¹⁾ <i>University Autonoma of Barcelona (UAB), Spain</i>	
⁽²⁾ <i>Hospital of Sabadell, Corporació Sanitaria Parc, Spain</i>	

MedReadFast: A Structural Information Retrieval Engine for Big Clinical Text	371
Michael Gubanov ⁽¹⁾ and Anna Pyayt ⁽²⁾	
⁽¹⁾ <i>University of Washington, USA</i>	
⁽²⁾ <i>Stanford University, USA</i>	

An Extensive Comparison of Feature Ranking Aggregation Techniques in Bioinformatics	377
Randall Wald, Taghi Khoshgoftaar, David Dittman, Wael Awada and Amri Napolitano	
<i>Florida Atlantic University, USA</i>	

Session B23: Data Mining and Machine Learning III

Simultaneous Pattern and Data Hiding in Supervised Learning	385
---	-----

Pengpeng Lin ⁽¹⁾, Jun Zhang ⁽¹⁾, Xiwei Wang ⁽¹⁾ and Art Shindhelm ⁽²⁾

⁽¹⁾ *University of Kentucky, USA*

⁽²⁾ *Western Kentucky University, USA*

[Health-Connect: An Ontology-Based Model-Driven Information Integration Framework and Its Application to Integrating Clinical Databases](#) 393

Junhee Park, Eva K. Lee, Qingyang Wang, Jack Li, Qifeng Lin and Calton Pu

Georgia Institute of Technology, USA

[A Novel Hybrid Genetic Algorithm and Simulated Annealing for Feature Selection and Kernel Optimization in Support Vector Regression](#) 401

Jiansheng Wu ⁽¹⁾, Zusong Lu ⁽²⁾ and Long Jin ⁽³⁾

⁽¹⁾ *Wuhan University of Technology, China*

⁽²⁾ *Liuzhou Teachers College, China*

⁽³⁾ *Guangxi Meteorological Bureau, China*

Session B31: Workshop on Information Reuse and Integration in Health Informatics II (IRI-HI)

[Integration, Reuse and Sharing of Data on Voice Disorders](#) 407

Anatoly Goldstein and Robert Hillman

Massachusetts General Hospital Center for Laryngeal Surgery and Voice Rehabilitation, USA

[Impact of Noise and Data Sampling on Stability of Feature Ranking Techniques for Biological Datasets](#) 415

Ahmad Abu Shanab, Taghi Khoshgoftaar, Randall Wald and Amri Napolitano

Florida Atlantic University, USA

[Optimization of Emergency Departments by Agent-Based Modeling and Simulation](#) 423

Eduardo Cabrera ⁽¹⁾, Manel Taboada ⁽¹⁾, Francisco Epelde ⁽²⁾, M. Luisa Iglesias ⁽²⁾ and Emilio Luque ⁽¹⁾

⁽¹⁾ *University Autònoma of Barcelona (UAB), Spain*

⁽²⁾ *Hospital of Sabadell, Spain*

Session C11: Database Modeling and Integration

[A Framework for Entity Resolution with Efficient Blocking](#) 431

Liangcai Shu ⁽¹⁾, Can Lin ⁽²⁾, Weiyi Meng ⁽¹⁾, Yue Han ⁽¹⁾, Clement T. Yu ⁽²⁾ and

Neil R. Smalheiser ⁽²⁾

⁽¹⁾ *State University of New York at Binghamton, USA*

⁽²⁾ *University of Illinois at Chicago, USA*

[The Cost of Increased Transactional Correctness and Durability in Distributed Databases](#) 441

Aspen Olmsted and Csilla Farkas

University of South Carolina, USA

[Performance analysis of Relationship-based access control in OSNs](#) 449

Barbara Carminati and Elena Ferrari

University of Insubria, Italy

[Disaster SitRep - A Vertical Search Engine and Information Analysis Tool in Disaster Management Domain](#) 457

Li Zheng, Chao Shen, Liang Tang, Chunqiu Zeng, Tao Li, Steve Luis, Shu-Ching Chen and

Jainendra K. Navlakha
Florida International University, USA

Session C12: Natural Language Understanding and Information Retrieval

<u>TASC - Crime Report Visualization for Investigative Analysis: A Case Study</u>	466
Chih-Hao Ku, James H. Nguyen and Gondy Leroy <i>Claremont Graduate University, USA</i>	
<u>Evaluating co-occurrence order for automatic thesaurus construction</u>	474
Roger Leitzke Granada, Renata Vieira and Vera Lucia Strube de Lima <i>Pontifical Catholic University of Rio Grande do Sul (PUCRS), Brazil</i>	
<u>Extracting Multi-document Summaries with a Double Clustering Approach</u>	482
Sara Botelho Silveira and Anto'nio Branco <i>University of Lisbon, Portugal</i>	
<u>A 3-Tuple Information Retrieval Query Interface with Ontology Based Ranking</u>	490
Jinwoo Kim and Dennis McLeod <i>University of Southern California, USA</i>	

Session C13: Special Session on Power and Energy

<u>Fuzzy Type-2 Electrode Position Controls for an Electric Arc Furnace</u>	498
Mohammad Taslimian ⁽¹⁾ , Faridoon Shabaninia ⁽¹⁾ , Mohanmad Vaziri ⁽²⁾ and Suresh Vadhva ⁽²⁾ ⁽¹⁾ <i>Shiraz University, Iran</i> ⁽²⁾ <i>California State University Sacramento, USA</i>	
<u>Understanding Slow Voltage Instability</u>	502
Matthew Johnson, Mohanmad Vaziri and Suresh Vadhva <i>California State University Sacramento, USA</i>	
<u>Type-2 Fuzzy Multiagent Traffic Signal Control</u>	509
Bahare Sabetghadam ⁽¹⁾ , Faridoon Shabani ⁽¹⁾ , Mohanmad Vaziri ⁽²⁾ and Suresh Vadhva ⁽²⁾ ⁽¹⁾ <i>Shiraz University, Iran</i> ⁽²⁾ <i>California State University Sacramento, USA</i>	
<u>Plug-In & Hybrid Electric Vehicle Charging Impacts: A survey of California's Uility Companies</u>	513
Cody Tudor, Eric Sprung, Linh Nguyen, and Russ Tatro <i>California Smart Grid Center, USA</i>	
<u>Volt/VAr Regulation and Issues with High Penetration of Renewables on Distribution Systems</u>	519
Mohanmad Vaziri ⁽¹⁾ , Suresh Vadhva ⁽¹⁾ , Farshad Tavatli ⁽¹⁾ and Sana Vaziri ⁽²⁾ ⁽¹⁾ <i>California State University Sacramento, USA</i> ⁽²⁾ <i>University of California, Berkeley, USA</i>	

Session C21: Knowledge Extraction, Representation, and Information Sharing

<u>Macro and Micro Pressures in Data Sharing</u>	525
Karina Kervin, Thomas Finholt and Margaret Hedstrom <i>University of Michigan, USA</i>	
<u>Meta-rule Enhanced Interoperation of Operations, Rules and Processes for Achieving Dynamic Inter-organizational Collaboration</u>	533

Xuelian Xiao and Stanley Su
University of Florida, USA

[Automated Ontology Construction based on Software Requirements](#) 541

Mohammad Moshirpour, Seyedehmehrnaz Mireslami, Reda Alhajj and Behrouz Far
University of Calgary, Canada

[Integration of Product Models by Ontology Development](#)..... 548

Samer Abdul-Ghafour, Parisa Ghodous and Behzad Shariat
University of Claude Bernard Lyon1, France

[Service-Oriented Knowledge Management](#)..... 556

Wei Dai ⁽¹⁾ and Stuart Rubin ⁽²⁾
⁽¹⁾ *Victoria University, Australia*
⁽²⁾ *Space and Naval Warfare Systems Center (SSC), USA*

Session C22: Biomedical Information Assurance

[RxSem: A Rule Based Semantic Integration Method for Medical Informatics](#)..... 564

Ali Ardestani ⁽¹⁾, Omprakash Eleti ⁽²⁾, Hamid Nemati ⁽²⁾ and Fereidoon Sadri ⁽²⁾
⁽¹⁾ *Harvard Medical School, USA*
⁽²⁾ *The University of North Carolina – Greensboro, USA*

[Electronic Medical Referral System: Decision Support and Recommendation Approach](#)..... 572

Wadhah Almansoori, Ayman Murshid, Konstantinos Xylogiannopoulos, Reda Alhajj and Jon Rokne
University of Calgary, Canada

[An Ontology-driven Approach to Mobile Data Collection Applications for the Health-Care Industry](#) 578

Gabriela Henriques ⁽¹⁾, Laura Lamanna ⁽¹⁾, Daniel Kotowski ⁽¹⁾, Hlomani Hlomani ⁽¹⁾, Deborah Stacey ⁽¹⁾ and Philip Baker ⁽²⁾
⁽¹⁾ *University of Guelph, Canada*
⁽²⁾ *Public Health of Canada, Canada*

[Evaluating Feature Selection Methods for Stress Detection](#)..... 584

Yong Deng ⁽¹⁾, Zhonghai Wu ⁽¹⁾ and Chao-Hsien Chu ⁽²⁾
⁽¹⁾ *Peking University, China*
⁽²⁾ *The Pennsylvania State University, USA*

[CompoPHC: AN ONTOLOGY-BASED COMPONENT FOR PRIMARY HEALTH CARE](#)..... 592

Eduardo Moraes, Kellyton Brito and Silvio Meira
Federal University of Pernambuco, Brazil

Session C23: Software Testing II and Information Integration in SE

[Test Criteria for Model-Checking-Assisted Test Vector Generation: A Computational Study](#)..... 600

Bolong Zeng and Li Tan
Washington State University, USA

[An Experimental Study to Evaluate a SPL Architecture Regression Testing Approach](#)..... 608

Paulo Anselmo Da Mota Silveira Neto (1, 3), Ivan Do Carmo Machado ^(2,3), Yguarata Cerqueira Cavalcanti ^(1,3), Eduardo Almeida ^(2,3), Vinicius Cardoso Garcia ^(1,3) and Silvio Romero de Lemos Meira ^(1,3)

- (1) *Federal University of Pernambuco (UFPE), Brazil*
 (2) *Federal University of Bahia (UFBA), Brazil*
 (3) *Reuse in Software Engineering (RiSE), Brazil*

[Towards an Integration Testing Approach for Software Product Lines](#) 616

- Ivan Machado ^(1,3), Paulo Silveira Neto ^(2,3) and Eduardo Almeida ^(1,3)
 (1) *Federal University of Bahia (UFBA), Brazil*
 (2) *Federal University of Pernambuco (UFPE), Brazil*
 (3) *Reuse in Software Engineering (RiSE), Brazil*

[Reengineering Legacy Systems towards System of Systems Development](#)..... 624

- Marcelo Ramos ⁽¹⁾, Paulo Masiero ⁽¹⁾, Rosana Braga ⁽¹⁾ and Rosângela Penteado ⁽²⁾
 (1) *ICMC-University of Sao Paulo, Brazil*
 (2) *DC-Federal University of Sao Carlos*

[Managing Reusable Learning Objects and Experience Reports in EduSE Portal](#) 631

- Rodrigo Santos ⁽¹⁾, Cláudia Werner ⁽¹⁾, Heitor Costa ⁽²⁾, Ramon Abílio ⁽²⁾ and Hudson Silva ⁽³⁾
 (1) *Federal University of Rio de Janeiro, Brazil*
 (2) *Federal University of Lavras, Brazil*
 (3) *Federal University of Minas Gerais, Brazil*

Session C31: Privacy and Information Security and Special Session on Education

[Multiplexing Aware Arbiter Physical Unclonable Function](#) 639

- Masaya Yoshikawa
Meijo University, Japan

[Privacy Preserving Delegated Access Control in the Storage as a Service Model](#) 645

- Mohamed Nabeel and Elisa Bertino
Purdue University, USA

[First Use: Introducing Information Security in High School Oracle Academy Courses](#) 653

- Roxann Stalvey ⁽¹⁾, Csilla Farkas ⁽²⁾ and Caroline Eastman ⁽²⁾
 (1) *College of Charleston, USA*
 (2) *University of South Carolina, USA*

[Secure Information Integration with a Semantic Web-Based Framework](#)..... 659

- Pranav Parikh, Murat Kantarcioglu, Vaibhav Khadilkar, Bhavani Thuraisingham, Latifur Khan
The University of Texas at Dallas, USA

Session C32: Industrial/Application/Gov Track

[Examining Social Networks between Educational Institutions, Industrial Partners, and the Canadian Government](#) 664

- Reda Alhadj, Connie Yau, Mark Straight, Rahul Bir, Omar Addam and Omair Shafiq
University of Calgary, Canada

[Full and Partial Data Cube Computation and Representation over Commodity PCs](#)..... 672

- Angelica Moreira and Joubert Lima
Federal University of Ouro Preto (UFOP), Brazil

[A Novel Numerical Integrator for Structural Control and Monitoring](#) 680

- Suresh Thenozhi and Wen Yu
CINVESTAV-IPN, Mexico

<u>Developing an Open Source Strategy for NASA Earth Science Data Systems</u>	687
Chris Mattmann ^(1,3) , Robert Downs ⁽²⁾ , Paul Ramirez ⁽¹⁾ , Cameron Goodale ⁽¹⁾ and Andrew Hart ⁽¹⁾	
⁽¹⁾ <i>California Institute of Technology, USA</i>	
⁽²⁾ <i>Columbia University, USA</i>	
⁽³⁾ <i>University of Southern California, USA</i>	

Session C33: Workshop on Issues and Challenges in Social Computing (WICSOC)

<u>In Search of User Privacy Protection in Ubiquitous Computing</u>	694
Simon Cleveland	
<i>Nova Southeastern University, USA</i>	

<u>Understanding asynchronous design work - segmentation of digital whiteboard sessions</u>	700
Lutz Gericke and Christoph Meinel	
<i>University of Postdam, Germany</i>	

<u>The “Wisdom of the Crowd Pattern”: A Person-centric data aggregation approach for Social Software</u>	706
Peter Lachenmaier and Florian Ott	
<i>Bundeswehr University Munich, Germany</i>	

<u>Analysis of Access Control Mechanisms for Users’ Check-ins in Location-based Social Network Systems</u>	712
Lei Jin, Xuelian Long, James Joshi and Mohd Anwar	
<i>University of Pittsburgh, USA</i>	

<u>Visualizing reciprocity in social networks</u>	718
Julita Vassileva	
<i>University of Saskatchewan, Canada</i>	

Session SP: Poster Exhibition

<u>One Way to cluster Documents by Meaning using Semantic-ball</u>	724
Chang-Yeol Seo	
<i>Korea</i>	

<u>A Framework for Vehicular Accident Management using Wireless Networks</u>	727
Fekri Abduljalil	
<i>Sana'a University, Yemen</i>	

<u>A Hybrid Reasoning System for Care Planning in End-of-Life Cancer Care</u>	730
Krista Elvidge	
<i>Dalhousie University, Canada</i>	

<u>Intelligent Health Information System to Empower Patients with Chronic Diseases</u>	734
Sifat Islam ⁽¹⁾ , Glenn Freytag ⁽²⁾ and Ravi Shankar ⁽¹⁾	
⁽¹⁾ <i>Florida Atlantic University, USA</i>	
⁽²⁾ <i>Shilpico, Inc., USA</i>	

<u>Dependency of Critical Dimension on Learning Machines and Ranking Methods</u>	738
Divya Suryakumar ⁽¹⁾ , Qingzhong Liu ⁽²⁾ and Andrew Sung ⁽¹⁾	
⁽¹⁾ <i>New Mexico Institute of Mining and Technology, USA</i>	
⁽²⁾ <i>Sam Houston State University, USA</i>	

<u>OOFM - A Feature Modeling Approach to Implement MPLs and DSPLs</u>	740
Victor Sarinho ⁽¹⁾ , Antônio Apolinário ⁽²⁾ and Eduardo Almeida ⁽³⁾	
<i>(1) UEFS – DEXA, Brazil</i>	
<i>(2) UFBA – IM, Brazil</i>	
<i>(3) UFBA – RiSE, Brazil</i>	
<u>Author Index</u>	743