Contents

Invited Paper

Empowering the Knowledge Worker: End-User Software Engineering in Knowledge Management ........................................ 3
Witold Staniszkis

Databases and Information Systems Integration

Fire Detection from Social Media Images by Means of Instance-Based Learning ............................................................... 23

Querying Time Interval Data ..................................................... 45
Philipp Meisen, Diane Keng, Tobias Meisen, Marco Recchioni, and Sabina Jeschke

Collaborative Knowledge Management Using Wiki Front-End Modules ................................................................. 69
Catarina Marques-Lucena, Carlos Agostinho, Sotiris Koussouris, João Sarraipa, and Ricardo Jardim-Gonçalves

Anything Relationship Management and Early Stage Prototype ......................................................... 87
Jonathan P. Knoblauch, Rebecca Bulander, and Bernhard Kölmel

How Can We Implement a Multidimensional Data Warehouse Using NoSQL? .................................................... 108
Max Chevalier, Mohammed El Malki, Arlind Kopliku, Olivier Teste, and Ronan Tournier

International ERP Teaching Case: Design and Experiences ......................................................... 131
Jānis Grabis, Kurt Sandkuhl, and Dirk Stamer

Artificial Intelligence and Decision Support Systems

International Standard ISO 9001 – A Soft Computing View ..................................................... 153
José Neves, Ana Fernandes, Guida Gomes, Mariana Neves, Antônio Abela, and Henrique Vicente

Possibilistic WorkFlow Net for Deadlock Avoidance in Interorganizational Business Processes .................. 168
Leiliane Pereira de Rezende and Stéphane Julia
Generation of Economical Driving Plans Using Continuous Case-Based Planning

André P. Borges, Osmar B. Dordal, Richardson Ribeiro, Bráulio C. Avila, and Edson E. Scalabrin

Resource Allocation Mechanisms and Time Constraint Propagation Techniques in Fuzzy Workflow Nets

Joslaine Cristina Jeske de Freitas, Stéphane Julia, and Leiliane Pereira de Rezende

Carpooling as Complement to Multi-modal Transportation

Kamel Aissat and Sacha Varone

A Simulated Annealing-Based Approach for the Optimization of Routine Maintenance Interventions

Francesco Longo, Andrea Rocco Lotronto, Marco Scarpa, and Antonio Puliafito

Dimension Enrichment with Factual Data During the Design of Multidimensional Models: Application to Bird Biodiversity

Lucile Sautot, Sandro Bimonte, Ludovic Journaux, and Bruno Faivre

Information Systems Analysis and Specification

Validating a Software Engineering Framework Through Technical-Action-Research in Union with Case Studies

Miguel Morales-Trujillo, Hanna Oktaba, and Mario Piattini

Taking Contextual Parameters into Account and Using RDF Patterns for the Semantic Web Image Annotation

Rim Teyeb Jaouachi, Mouna Torjmen Khemakhem, Maher Ben Jemaa, Ollivier Haemmerle, and Nathalie Hernandez

Characteristics of High Performance Software Development Teams

Alessandra C.S. Dutra, Rafael Prikladnicki, and Tayana Conte

Planning of Composite Logistics Services: Model-Driven Engineering and Evaluation

Michael Glöckner, Stefan Mutke, Christoph Augenstein, and André Ludwig

CrossCutting Concerns Identification Supported by Ontologies: A Preliminary Study

Paulo Afonso Parreira Jr. and Rosângela Dellosso Penteado

JOPA: Stay Object-Oriented When Persisting Ontologies

Martin Ledvinka and Petr Křemen
The Development of Information Models and Methods of University Scientific Knowledge Management ........................................ 429
Gulnaz Zhomartkyzy and Tatyana Balova

Software Agents and Internet Computing
Locality-Sensitive Hashing for Distributed Privacy-Preserving Collaborative Filtering: An Approach and System Architecture ............. 455
Alexander Smirnov and Andrew Ponomarev
An Approach to a Laser-Touchscreen System ........................................ 476
Jeremiah Aizeboje and Taoxin Peng
MiCATS: Middleware for Context-Aware Transactional Services ............. 496
Widad Ettazi, Hatim Hafiddi, Mahmoud Nassar, and Sophie Ebersold

Human-Computer Interaction
A Wearable Face Recognition System Built into a Smartwatch and the Blind and Low Vision Users ........................................ 515
Laurindo de Sousa Britto Neto, Vanessa Regina Margareth Lima Maike, Fernando Luiz Koch, Maria Cecília Calani Baranauskas, Anderson de Rezende Rocha, and Siome Klein Goldenstein
Guidelines for Evaluating Mobile Applications: A Semiotic-Informed Approach ........................................ 529
Flavio Nicastro, Roberto Pereira, Bruna Alberton, Leonor Patrícia C. Morellato, Cecília Baranauskas, and Ricardo da S. Torres
Personalization of Privacy in Mobile Social Networks .......................... 555
Tiago Antonio Rosa and Sergio Donizetti Zorzo

Enterprise Architecture
Modeling the Dynamics of Enterprise Architecture Adoption Process ...... 577
Nestori Syynimaa
A Model-Based Approach for Retrospective Analysis of Enterprise Architecture Metrics ........................................ 595
Manoj Bhat, Thomas Reschenhofer, and Florian Matthes
VASCO: Variability Specification in Business Process Models ............. 612
Raoul Taffo Tiam, Abdelhak-Djamel Seriai, and Raphael Michel