# Table of Contents

**Message from the Conference Co-Chairs** ..............................................................................xviii
**Message from the Program Chair** ..........................................................................................xix
**Program Committee** ................................................................................................................xx
**Reviewers** ..................................................................................................................................xxiv
**ICIS 2010 Sponsors** ..................................................................................................................xxvii
**Keynote Abstracts** ...................................................................................................................xxviii

## Algorithms

- Pipeline Architecture of Particle Swarm Optimization .................................................................3  
  
  *Xiao Cai, Syahrulamuar Ngah, Hui Zhu, Yuji Tanabe, and Takaaki Baba*
- Risk-Oriented Group Decision Making in Multi-criteria Analysis ...............................................9  
  
  *Santoso Wibowo and Hepu Deng*

## Artificial Intelligence

- Case-based Classification System with Clustering for Automotive Engine  
- Spark Ignition Diagnosis ........................................................................................................17  
  
  *C.M. Vong, P.K. Wong, and W.F. Ip*
- Least Squares Support Vector Prediction for Daily Atmospheric Pollutant Level  
- Least Squares Support Vector Prediction for Daily Atmospheric Pollutant Level ......................23  
  
  *W.F. Ip, C.M. Vong, J.Y. Yang, and P.K. Wong*
**Bioinformatics and Geoinformatics**

LEAF: Leave-One-Out Forward Selection Method for Cancer Classification
Using Gene Expression Data .................................................................31
   Kentaro Fukuta, Tomomasa Nagashima, and Yoshifumi Okada

Finger Motion Classification Using Surface-Electromyogram Signals ..................................................37
   Keisuke Ishikawa, Masashi Toda, Shigeru Sakurazawa, Junichi Akita, Kazuaki Kondo,
   and Yuichi Nakamura

Detection of Muscle Fatigue by the Surface Electromyogram and Its Application ..................................................43
   Takayuki Sakurai, Masashi Toda, Shigeru Sakurazawa, Junichi Akita, Kazuaki Kondo,
   and Yuichi Nakamura

**Communication Systems and Networks**

Design and Implementation of WSN Based Stable Management System ......................................................51
   Jeong-hwan Hwang, Hyun-joong Kang, and Hyun Yoe

**Computer Architecture and VLSI**

H/S Collaborative Development of a Ubiquitous Processor Free
from Instruction Scheduling and Pipeline Disturbance .....................................................................................57
   Masa-aki Fukase and Tomoaki Sato

Binary MEMS Optically Reconfigurable Gate Array .......................................................................................63
   Hironobu Morita and Minoru Watanabe

Thermal Analysis for 3D Multi-core Processors with Dynamic Frequency Scaling ..............................................69
   Young Jin Park, Min Zeng, Byeong-seok Lee, Jeong-A Lee, Seung Gu Kang,
   and Cheol Hong Kim

Comprehensive Evaluation of Packet Flow Control Methods for a Ring Network of Processors on Chip ................75
   Akiko Narita, Kenji Ichijo, and Yoshio Yoshioka

**Computer Security**

A Method for Describing Structure of System Security Based on Trust and Authentication .............................83
   Tsukasa Maeda and Masahito Kurihara

Web Services Security Issues in Healthcare Applications .................................................................................91
   Shelly Sachdeva, Saphina Mchome, and Subhash Bhalla
Data Mining for Broadband Services in NGN

Method for Analyzing Sociodynamics of Telecommunication-Based Services .................................................................99
Shinsuke Shimogawa and Motoi Iwashita

Internet Traffic Classification Using Score Level Fusion of Multiple Classifier .................................................................105
Masatsugu Ichino, Hiroaki Maeda, Takeshi Yamashita, Kentaro Hoshi,
Naohisa Komatsu, Kei Takeshita, Masayuki Tsujino, Motoi Iwashita, and Hideaki Yoshino

Customer Segmentation in Mobile Carrier Choice Modeling ................................................................................................111
Yuuki Takano, Akiya Inoue, Takeshi Kurosawa, Motoi Iwashita, and Ken Nishimatsu

Reference Traffic for Network Resource Dimensioning in FMC Environment .................................................................117
Takashi Satake

Databases, Data Warehousing, and Data Engineering

On the Security of Outsourced and Untrusted Databases ...........................................................................................................125
Johannes Heurix and Thomas Neubauer

Node Compression Techniques Based on Cache-Sensitive B+-Tree ..........................................................................................133
Rize Jin and Tae-Sun Chung

Dependable Distributed and Network-centric Systems

The Comparison of the Relative Entropy for Intrusion Detection on CPU and GPU ...........................................................................................................141
Quan Qian, Hongyi Che, Rui Zhang, and Mingjun Xin

DataXchg: A Portable Data Exchange Toolkit for Heterogeneous Computing ........................................................................147
Zhu Wang, Chonlei Mei, and Hai Jiang

A Carbon 2.0 Framework Based on Cloud Computing .............................................................................................................153
Jiandun Li, Wu Zhang, Junjie Peng, Zhou Lei, and Yu Lei

Distributed Computing

XML Based Virtual Disk Modeling Language for Constructing Large-Scale Storages .................................................................161
Minoru Uehara

Economic and Financial Systems

A Study on the Effectiveness of Short-Selling Regulation in View of Regulation Period Using Artificial Markets .................................................................169
Isao Yagi, Takanobu Mizuta, and Kiyoshi Izumi

Health Informatics

Collaborative Group Support in E-Health ............................................................................................................................................177
Paulo Novais, Ângelo Costa, Ricardo Costa, and Luis Lima

The Inference Process with Quality Evaluation in Healthcare Environments ........................................................................183
Jorge Ribeiro, António Abelha, José Machado, Alberto Marques, and José Neves
A Logic Programming Based Adverse Event Reporting and Learning System .................................................. 189
  Susana Rodrigues, Paulo Brandão, Luís Nelas, José Neves, and Victor Alves

Electronic Health Records in the Emergency Room ......................................................................................... 195
  Filipe Portela, Marta Vilas-Boas, Manuel F. Santos, António Abelha, José Machado,
  Alexandra Cabral, and Irene Aragão

Data Quality Evaluation of Electronic Health Records in the Hospital

Admission Process ............................................................................................................................................. 201
  Júlio Duarte, Maria Salazar, César Quintas, Manuel Santos, José Neves,
  António Abelha, and José Machado

Image Processing and Pattern Recognition

Augmented Reality System for Accelerometer Equipped Mobile Devices .................................................... 209
  Mateusz Skoczewski and Hitoshi Maekawa

Efficient Characteristics Vector Extraction Using Auto-seeded Region-Growing .............................................. 215
  Pablo Revuelta Sanz, José M. Sánchez Pena, and Belén Ruiz Mezcua

Shape Based Automatic Annotation and Fuzzy Indexing of Video Sequences ............................................. 222
  Vinay Chander and Shashikala Tapaswi

A Novel Fuzzy Ant System for Edge Detection ................................................................................................. 228
  Om Prakash Verma, Madasu Hanmandlu, Ashish Kumar Sultania, and Dhruv

Face/Non-face Classification Method Based on Partial Face Classifier Using LDA and MLP ............................. 234
  Sung-Hoon Kim and Hyon-Soo Lee

Movement Tracking in Real-Time Hand Gesture Recognition ............................................................................. 240
  Hong-Min Zhu and Chi-Man Pun

An Effective Optimization of Reference Pixel Arrangement in the Lossless Coding for HDTV image ................. 246
  Yuya Yamaguchi, Takashi Otsuki, Ken-ichi Iwata, and Shuichi Itoh

Towards Fast Gabor Wavelet Feature Extraction for Texture Segmentation by Filter Approximation .......... 252
  Wai-Man Pang

Fast and Accurate Template Matching with Silhouette Masking ........................................................................ 258
  Takahiro Hayashi and Yuto Kadosaki

Information Science and Systems

One-Finger Interaction for Ubiquitous Environment .......................................................................................... 267
  Takashi Nakamura, Shin Takahashi, and Jiro Tanaka
Intelligent Control Systems

Predictive Air-Ratio Controller for Automotive Engines Based on Online Neural Network: Design and Experimental Evaluation ................................................................. P.K. Wong, H.C. Wong, C.M. Vong, and W.F. Ip
Intelligent Data Prefetching for Hybrid Flash-Disk Storage Using Sequential Pattern Mining Technique ................................................................. Un-Keun Yoon, Han-joon Kim, and Jae-young Chang

Internet Marketing and Online Consumer Behavior

The Study on the Determinants of the Online Consumers’ Intention to Return Cheng-Tsung Lu and Dauw-Song Zhu
A Study on the Customer-Based Brand Equity of Online Retailers Dauw-Song Zhu and Min-Jone Kuo
The Impact of Website Attractiveness, Consumer-Website Identification, and Website Trustworthiness on Purchase Intention Zui Chih Lee, Jennifer Yurchisin, and Chih Te Lin
Potentials of 3D-Web-Applications in E-Commerce - Study about the Impact of 3D-Product-Presentations Franka Moritz

Internet Technology/Applications and E-Commerce

An Approach to Multi-stage Calculation Method for Multiple Items B2B Satoshi Takahashi and Tokuro Matsuo
Establishing an Expandable Architecture for a Tele-teaching Portal Maria Siebert, Franka Moritz, and Christoph Meinel
Examining the Uncertainty Unique to E-Business Companies’ Business Continuity in Japan Soichi Nishikiori and Kunihiko Higa

IWEA Workshop

Behavioral Verification in Hichart Development Environment for Embedded Software Takaaki Goto, Yasunori Shiono, Tetsuro Nishino, Takeo Yaku, and Kensei Tsuchida
An Attribute Graph Grammar Enabling Narrower Drawings of Trees Tadaaki Kirishima, Takaaki Goto, Takeo Yaku, and Kensei Tsuchida
Automatic Generation of SVG Program Documents with Animation Based on Attribute Graph Grammars Takaaki Goto, Tomoo Sumida, Tadaaki Kirishima, Takeo Yaku, and Kensei Tsuchida
The Trial Result of System That Supports PBL Makio Fukuda, Michinori Yamashita, Toshiyuki Ueyama, and Minae Nishimoto
Comparative Analysis of the People’s Character of Japanese Prefectures Based on SNS

Yuka Yamazaki and Kenji Kumasaka

Realization of an Expandable Search Function for an E-Learning Web Portal

Maria Siebert and Christoph Meinel

Mobile Web Usability Evaluation - Combining the Modified Think Aloud Method with the Testing of Emotional, Cognitive and Conative Aspects of the Usage of a Web Application

Franka Moritz and Christoph Meinel

Current Status of University Students’ Awareness of Information Technologies

Mieko Yamauchi

Information Visualization System Using Internet for Activation of Shopping Streets

Ippei Torii, Yousuke Okada, Takahito Niwa, Manabu Onogi, and Naohiro Ishii

Flexible Curricula for E-Learning of SME Staff in Electronic Engineering

Zoja Raud, Valery Vodovozov, and Tõnu Lehtla

Highly Efficient Transport Protocol for Large Capacity Data Files and Its Visualizing Methods

Tomoo Sumida, Takaaki Goto, Katsuyoshi Ito, and Kensei Tsuchida

Development of a System for Drawing Test

Yasunori Shiono, Megumi Uetsuhara, Hideo Shibutani, Chieko Kato, and Kensei Tsuchida

Construction of Decision Model for a System to Start Communicating with a Human Using Hidden Markov Model

Yoshito Ogawa, Jungo Katsuyama, Takahiro Miyajima, Katsuhiko Shirai, and Makoto Murakami

Healing Effects of Pet Robots at an Elderly-Care Facility

Toyoshiro Nakashima, Goro Fukutome, and Naohiro Ishii

Knowledge Creation and Kansei Information

A Study about the Process of Knowledge-Creation through Observation Photographs and Reproduction Experiment

Yuta Watanabe, Issei Kodama, Hidehiko Hayashi, and Akinori Minazuki

A Study of the Support System for Displaying Food Products in Convenience Stores

Yusuke Itakura and Akinori Minazuki

A Study on Knowledge-Creation of "Moshiokuri" among Nurses

Mitsuru Sakiyama, Kazuki Hasegawa, Yuya Sato, Kazuhiro Watanabe, Naoki Ogawa, Mayumi Matsushita, Hidehiko Hayashi, and Akinori Minazuki
A Consideration Concerning Continued Difference in Learning Process of Programming Language ..........................................................433

Koichi Nishimura, Hikaru Oki, Dai Sawanobori, and Akinori Minazuki

Study for Management of Research Organizations and the Effect on Presentations of Information Processing at an Academic Meeting, by Students in the Humanity Course .........................................................................................................................................438

Ayumu Toriyabe and Akinori Minazuki

Consideration of the Organized Knowledge Sharing in the Emergency Team of the Emergency Medical Service Helicopter .................................................................443

Natsuko Sano, Haruka Matsumoto, Hidehiko Hayashi, and Akinori Minazuki

Middleware Architectures and Techniques

Synchronization E-Learning Model for Harmonizing Presentation ........................................................451

Svetlana Kim and YongIk Yoon

Mobile/Wireless Computing

HMM-Based Predictive Power Saving Mechanism in WiMAX ..................................................................................459

Jia Liu, Chuang Lin, and Fengyuan Ren

A Dual-Threshold Power Saving Mechanism in WiMAX ..................................................................................465

Jia Liu, Fengyuan Ren, and Chuang Lin

Solving Multicast QoS Routing Problem in the Context V2I Communication Services Using DCA ..................................................................................471

Ta Anh Son, Le Thi Hoai An, Djamel Khadraoui, and Pham Dinh Tao

Testing the Computational Capabilities of Mobile Device Processors: Some Interesting Benchmark Results ..................................................................................................477

Ngozi V. Uti and Richard Fox

Smart Gesture Sticker: Smart Hand Gestures Profiles for Daily Objects Interaction .................................................................................................482

Ayman Atia, Shin Takahashi, and Jiro Tanaka

New Trends in Computer Science

Ontology-Based Conflict Analysis Method in Non-functional Requirements .................................................................................491

Chi-Lun Liu

Fundamental Abilities of Rotor Associative Memory ..................................................................................497

Michimasa Kitahara and Masaki Kobayashi

Design and Implementation of a Language for Web Exploring and Mashup ..................................................................................503

Mao Ito and Mitsugu Suzuki

Human Fine Motion Analysis Using Biological Signals ..........................................................................................509

Masashi Iemoto, Masashi Toda, Shigeru Sakurazawa, Jyunichi Akita, Kazuaki Kondo, and Yuichi Nakamura
Ecological Sectorization Process Improvement through Neural Networks:
Synthesis of Vegetation Data from Satellite Images Using RBFs ..........................................................513
  Manuel Cruz, Moisés Espinola, Luis Iribarne, Rosa Ayala, Mercedes Peralta,
  and José Antonio Torres
Improving User Interface of Spreadsheet Functions by Object-Oriented Design ............................................517
  Jiro Suzuki and Seiji Matsumoto
The Development of the Tool for Understanding Contents of a Large Amount
of Text by Means of User-Generated Word Network ..................................................................................522
  Takaichi Ito and Masaki Suwa
Adaptive Interface Model for Lecture Allocation System .............................................................................526
  Yuji Hashiura, Tokuro Matsuo, and Takanori Terashima
Web and Document Databases: An Effective Way to Explore the Internet ..................................................529
  Yanjuang Chen
Recent Developments in the Russian Speech Recognition Technology ..........................................................535
  Daria Vazhenina and Konstantin Markov
User-Model-Based Evaluation for Interactive Image Retrieval ..................................................................538
  Masashi Inoue and Manh Hong Nguyen
Examination of the Podcasting System in Second Language Acquisition ..................................................540
  Yuichi Ono and Manabu Ishihara
Enhancements for a Simple Authenticated SIP Request Management .....................................................546
  Hisashi Takahara and Motonori Nakamura
Analysis of Bid Structures in GSP ...............................................................................................................548
  Yosuke Motoki and Tokuro Matsuo
An Improvement of Instructional Methods for Nutrition Education ................................................................550
  Masaaki Tanaka, Azusa Kanda, Tokuro Matsuo, and Takanori Terashima

**Parallel and Distributed Computing and Systems**

Improving NoC Performance by Non-contention Ejection Architecture ....................................................555
  Shijun Lin and Jiaogheong Shi

**Personalization**

Effect of Latent Semantic Indexing for Clustering Clinical Documents ..........................................................561
  Choonghyun Han and Jinwook Choi
Building Concept Network-Based User Profile for Personalized Web Search .............................................567
  Han-joon Kim, Sungjick Lee, Byungjeong Lee, and Sooyong Kang
Temporal Dynamics in Music Listening Behavior: A Case Study of Online Music Service ..........................573
  Chan Ho Park and Minsuk Kahng
Practice with Agents and Multi-agent Systems

Filtering Harmful Sentences Based on Multiple Word Co-occurrence ................................................................. 581
   Satoshi Ando, Yutaro Fujii, and Takayuki Ito
An Efficient Real-Time Search Algorithm with Forecasting in Uncertain
Problem Spaces .......................................................................................................................................................... 587
   Yuya Takahashi and Takayuki Ito
Issue Clustering and Distributed Genetic Algorithms for Multi-issue
Negotiations .......................................................................................................................................................... 593
   Nobuyasu Mizutani, Katsuhide Fujita, and Takayuki Ito
A Mobile Agent Approach for Flexible Peer-to-Peer File Retrieval ................................................................. 599
   Naoki Fukuta
Agent-Aided 3D Symbiotic Space .......................................................................................................................... 605
   Akira Sakatoku, Toshiaki Osada, Gen Kitagata, Norio Shiratori, and Tetsuo Kinoshita
Design of an Assisting Agent Using a Dynamic Ontology ................................................................................. 611
   Alexis Koutero, Shigeru Fujita, and Kenji Sugawara
An Architecture of Extended Network Management System: Autonomous
Cooperation between Knowledge Resource and Network Equipments .......................................................... 617
   Kazuto Sasai, Naoyuki Tanji, Yusuke Takahashi, Gen Kitagata, and Tetsuo Kinoshita

Programming Languages, Compilers, and Operating Systems

Mapping of Dynamic Language Constructs into Static Abstract Syntax Trees ................................................. 625
   Jakub Mišek and Filip Zavoral

Semantic, Social, and Collaborative Intelligence

Automatic Mining of Human Activity Attributes from Weblogs ........................................................................ 633
   Nguyen Minh The, Takahiro Kawamura, Hiroyuki Nakagawa, Yasuyuki Takara, and Akihiko Ohsuga
Preventing Fake Web Pages Using Push Delivery - Defending against Theft
Crawlers ......................................................................................................................................................... 639
   Tadachika Ozono, Shun Shiramatsu, and Toramatsu Shintani
A Corpus-Based Analysis of Coreferential Recency Effect in Japanese
Discourse for Tracking Dynamic Topic ............................................................................................................... 645
   Shun Shiramatsu, Tadachika Ozono, Toramatsu Shintani, and Hiroshi G. Okuno
Proposal of Spatiotemporal Data Extraction and Visualization System Based
on Wikipedia for Application to Earth Science ................................................................................................. 651
   Akihiro Okamoto, Showei Yokoyama, Naoki Fukuta, and Hiroshi Ishikawa
Software Architecture Design Patterns and Frameworks

A Cooperative Service Architecture for Digital Library Federation Based on Grid ................................................................. 659
   Mengxing Huang and Wencai Du
A Scheme for Systematically Selecting an Enterprise Architecture Framework ......................................................... 665
   Agnes Owuato Odongo, Sungwon Kang, and In-Young Ko

Software Engineering and Information Engineering

An Ontology-Based Approach for Multiperspective Requirements Traceability between Analysis Models ................................................. 673
   Namfon Assawamekin
A Study on Defect Density of Open Source Software ........................................................................................................ 679
   Cobra Rahmani and Deepak Khazanchi
A Study on Crosscutting Refactoring Using Program Dependency Relation ................................................................. 684
   Seung-Hyung Lee, Byoung-Hyun Cho, and Young-Jae Song
An Approach to Defining a Value-Based Software Development Process ......................................................................... 690
   Atabek Murtazaev, Sungwon Kang, Jongmoon Baik, and Jihyun Lee
Development of the IT Convergence Using Power Line Communication ........................................................................... 696
   Jung-Sook Kim
WSIM: Detecting Clone Pages Based on 3-Levels of Similarity Clues .................................................................................. 702
   Woosung Jung, Chisu Wu, and Eunjoo Lee
Identifying the Process Capability of the Ontology Development Processes ........................................................................ 708
   Jeong Ah Kim and Seung Young Choi
Calculating the Order Relations of Workflow Net with Invariant Method ........................................................................ 714
   Jidong Ge, Haiyang Hu, and Hao Hu

Software Measurement

Modeling Software Project Monitoring with Stakeholders ...................................................................................................... 723
   Masateru Tsunoda, Tomoko Matsumura, and Ken-ichi Matsumoto
Early Functional Size Estimation with IFPUG Unit Modified ............................................................................................... 729
   Juan J. Cuadrado-Gallego, Pablo Rodriguez-Soria, Alfonso González, Dáculo Castelo, and Saahil Hakimuddin

Software Metrics and Project Management

Evaluating Software Maintainability Using Fuzzy Entropy Theory .................................................................................. 737
   Lizhi Cai, Zhenyu Liu, Juan Zhang, Weiqin Tong, and Genxing Yang
Model-Based Dynamic Cost Estimation and Tracking Method for Agile Software Development .................................................. 743
   Sungjoo Kang, Okjoo Choi, and Jongmoon Baik
A Structured Framework for Software Metrics Based on Three Primary Metrics ........................................................................................................................................................................... 749
Kiumi Akingbehin

Software Reuse and Design Patterns

Bridging Software Product Lines and Service-Oriented Architectures for Service Identification Using BPM and FM ........................................................................................................................................................................... 755
Dongsu Kang and Doo-Kweon Baik

Software Testing and Tools

Axiomatic Assessment of FSM-Based Test Adequacy Criteria for Web Application ................................................................................................................................................................................................................................................................................................. 763
Xiaokang Zhou and Huaikou Miao

The Pushdown Automaton and Its Coverage Criterion for Testing Undo/Redo Functions of Software ........................................................................................................................................................................................................................................................................... 770
Tomohiko Takagi and Zengo Furukawa

A Generalization of Boundary Value Analysis for Input Parameters with Functional Dependency ................................................................................................................................................................................................................................................................................................. 776
Wenying Feng

Concurrent N-Switch Coverage Criterion for Generating Test Cases from Place/Transition Nets ................................................................................................................................................................................................................................................................................................. 782
Tomohiko Takagi, Naoya Oyaizu, and Zengo Furukawa

Technology for Specification, Verification, and Validation

Modeling and Verifying Web Service Applications with Time Constraints ................................................................................................................................................................................................................................................................................................. 791
Jia Mei, Huaikou Miao, Qingguo Xu, and Pan Liu

Technology Education and Training

Quantitative Comparison by the Function Point of Beginner’s Programming Ability in the Animation Creation ................................................................................................................................................................................................................................................................................................. 799
Chieko Matsuyama, Toyoshiro Nakashima, and Naohiro Ishii

Evaluation of Student’s Physiological Response Towards E-Learning Courses Material by Using GSR Sensor ................................................................................................................................................................................................................................................................................................. 805
Santoso Handri, Kuniaki Yajima, Shusaku Nomura, Nobuyuki Ogawa,
Yoshimasu Kurosawa, and Yoshimi Fukumura

An Active Learning System for Auction Agent Programming with Competitions ................................................................................................................................................................................................................................................................................................. 811
Ronnie Cheung, Calvin Wan, and Calvin Cheng
Visual and Multimedia Computing

New Interface Using Palm and Fingertip without Marker for Ubiquitous Environment ................................................................. 819
  Seokhwan Kim, Shin Takahashi, and Jiro Tanaka

Visualization

Image Type Computer-Generated Hologram of Shaded Object ............................................................... 827
  Hiroshi Yoshikawa, Takeshi Yamaguchi, and Tadashi Miyahara

3D Holo TV System Based on Multi-view Images .................................................................................. 831
  Yuji Sakamoto, Noriyuki Hayashi, Atsushi Kato, and Masao Kinoshita

Three-Dimensional TV Using Holographic Stereogram ........................................................................ 836
  Koki Sato, Masataka Tzuka, Makoto Ohki, and Kunihiko Takano

Examination about Expansion of Displaying Volume in Projection Type Electro-holography (II) .................................................................................................................. 840
  Kunihiko Takano, Hideto Ishii, Asuka Watanabe, Tomoyuki Seino, Koki Sato,
  Makoto Ohki, and Kikuo Asai

Wave-Field Rendering in Computational Holography: The Polygon-Based Method for Full-Parallax High-Definition CGHs ......................................................................................................................... 846
  Kyoji Matsushima

High Performance Computing of Digital-Holographic PTV ........................................................................... 852
  Shin-ichi Satake, Tomoaki Kunugi, Katsuho Sato, Nobuyuki Masuda, and Tomoyoshi Ito

WEACR Workshop

On Applying the Theory of Structuration in Enterprise Architecture Design .................................................. 859
  Dominic M. Mezzanotte Sr., Josh Dehlinger, and Suranjan Chakraborty

Synchronization Enterprise Model for Harmonizing Presentation .................................................................. 864
  Svetlana Kim and YongIk Yoon

Enterprise Architecture Institutionalization and Assessment .......................................................................... 870
  Hyunkyung Song and Yeong-Tae Song

A Mechanism to Prevent RP Phishing in OpenID System ........................................................................... 876
  Jae-Hwe You and Moon-Seog Jun

Enterprise Architecture in the Supply Chain .......................................................................................... 881
  Torben Tambo and Christian Koch

Security Protocol Design for Electronic-Cash Transactions in a Mobile-PKI Environment ................................................. 887
  Joo-Kwan Lee and Moon-Seog Jun
### Web Engineering and Applications

A Service-Based Approach to Designing Cyber Physical Systems ................................................................. 895
  
  *Hyun Jung La and Soo Dong Kim*

An Engineering Process for Autonomous Fault Management in Service-Oriented Systems ................................................................. 901
  
  *Du Wan Cheun and Soo Dong Kim*

A Method to Enhancing Fault Tolerance in Run-Time ............................................................................................... 907
  
  *Hyun Min Lee and Soo Dong Kim*

Development of Retrieval Methods for RESTful Web Services Using Semantic Technologies ................................................................. 912
  
  *Seung-Jun Cha, Yun-Jeong Choi, and Kyu-Chul Lee*

### SERA 2010

A Type System for Higher-Order Intensional Logic Support for Variable Bindings in Hybrid Intensional-Imperative Programs in GIPSY ........................................................................................................ 921
  
  *Serguei A. Mokhov and Joey Paquet*

### Author Index

....................................................................................................................................................... 929