

# **11th International Conference on Informatics and Semiotics in Organisations 2009**

## **Information Systems in the Changing Era: Theory and Practice**

**Beijing, China  
11-12 April 2009**

**Editors:**

**C. Zhang  
H. Zhang  
X. Feng**

**K. Liu  
G. Jiang**

**ISBN: 978-1-63266-388-7**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2009) by the Aussino Academic Publishing House  
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact the Aussino Academic Publishing House  
at the address below.

Aussino Academic Publishing House  
14 Union St  
Riverwood, NSW 2210

Phone: 61 29 584 8084

aaph\_sydney@hotmail.com

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

<b>Chapter One: Organisational Semiotic Theory and Techniques.....</b>	1
Lattice Particle Swarm Optimization with Applications to Clustering.....	2
Xiyu Liu and Yinghong Ma	
Using Organizational Semiotics Methods for Information Systems Architecture Design.....	10
Aimin Luo and Kecheng Liu	
On Well-formedness in Requirement Elicitation Processes.....	18
Janos J. Sarbo	
A Bottom-up Model of Computational Semiotics.....	26
Ahmet EGESOY and Yasemin TOPALOĞLU	
A Bibliometric Study on Organisational Semiotics Literatures.....	33
Yunchuan Zhang and Kecheng Liu	
Construction of Binary Relations in Presence of Multiple Attributes.....	40
Liping An and Lingyun Tong	
“Hidden” Semiosis: Trusted Security Mediators.....	47
Tim French and Kecheng Liu	
Semiotic Translation and Transformation in Source Code Development.....	56
Martin Wheatman..	
A Behavioural Approach to Study Meaning in Organisations.....	63
Ana Isabel Canhoto	
Implementing SNF-compliant software: MDA and Native Technology.....	71
Yasser Ades, Navid Karimi Sani, Manos Nistazakis, Iman Poernomo, Mohammad Yamin, and George Tsaramirisis	
<b>Chapter Two: Pragmatic Web and Semiotic Approaches.....</b>	79
A semiotic and constructivist paradigm in the Internet Information Provision.....	80
Ge Zhang and Yunchuan Zhang	
Norm Based Agent for Generating Personalized Process.....	86
Weizi Li, Kecheng Liu, Shuzhang Li, and Hongqiao Yang	
Personality based Information Management.....	94
Stephen R. Gulliver, Gheorghita Ghinea, and Hubert Grzybek	
Evaluation on Industrialization Potential of Olympic Technologies Based on D-S Theory .....	100
Haiying Ren and Shanbao Cheng	
An Approach To Context-Aware Learning Content Management System For Personalized E-Learning Systems.....	107
R.Rajamenakshi and Jiji Angel	
A Preliminary Definition of a Pragmatic and Semiotic Based Web-service Discovery Mechanism using Norm-based Computational Agent Behaviour within a SOA Context.....	116
Adrian Benfell and Kecheng Liu	
Coarse-grain Architectures from Business Requirements: an Organisational Semiotics Approach.....	124
Iman Poernomo, George Tsaramirisis, and Naibai Zhang	
A Semiotic Approach in Analysing Intrinsic Values of Information for Decision-making.....	130
Binbin Liu and Keiichi Nakata	
Toward a Research Agenda for Semi-automatic Annotation of Web Services.....	138
Mohammad Mourhaf AL Asswad, Sergio de Cesare, and Mark Lycett	
SCADA – System for Context Aware Driver Assistance: A Case Study using Semantic Approach.....	147
K. Saravanan, Arunkumar Thangavelu, M. Madhangi, R., Nivedhitha Devi, and J. Swarna	
Incorporating Pragmatic Information in Personalized Recommendation Systems.....	156

Min Gao, Zhongfu Wu, and Jianjun Du

<b>Chapter Three: Methodologies for System Design and Implementation.....</b>	<b>165</b>
An Analysis of the Process of Information Realization in Information Systems based on Hermeneutics and Semiotics.....	166
Sufen Wang, Xiaohong Hu, and Junkang Feng	
Research on the Evaluation Model for Selection of the Argument's Type and Content in Argumentation-based Negotiation of Agent.....	173
Guorui Jiang and Xiaoyu Hu	
Satisfaction Model of Multi-agent System.....	181
Fengling Xie, Guorui Jiang, and Tiyun Huang	
A Personalized Recommendation Algorithm Based on Associative Sets.....	190
Guorui Jiang, Hai Qing, and Tiyun Huang	
CPN-based Performance Simulation Research on Architecture Designs of Information Systems.....	196
Hui Du, Renchu Gan, and Yuanxun Gu	
Dissemination Theory and Expression Model in Safety Organization.....	207
Zhenhong Yang, Tian Pan, and Wen Yang	
Schema Instance Recoverability: An Approach Centred on the Notion of ‘Information Carrying’.....	214
Kaibo Xu and Junkang Feng	
The Implementation of Electronic Records Management in Facilitating Knowledge Sharing at Software Development Projects.....	222
Hui Chen, Miguel Baptista Nunes, and Lihong Zhou	
<b>Chapter Four: Ontology Engineering.....</b>	<b>232</b>
A Study on Education Informatization of the Community-based University Education.....	233
Jingshu Ji and Ziyou Shen	
Semiotic-based Prototypicality Gradient.....	239
X. AIME, F. FURST, P. KUNTZ, and F. TRICHET	
Towards a Socially-constructed Meaning for Inclusive Social Network Systems.....	247
Vânia Paula de Almeida Neris, Leonelo Dell Anhol Almeida, Leonardo Cunha de Miranda, Elaine Cristina Saito Hayashi, and M. Cecília C. Baranauskas	
A Document Recommendation System Based on Collaborative Filtering and Personal Ontology.....	255
Deng-Neng Chen and Yao-Chun Chiang	
Health Informatics: Improving Patient-Centered Healthcare Pathway.....	263
Khadidjatou Ousmanou, Fabian Chen, and Lily Sun	
A Study of One-to-Many Multi-Attribute Automated Negotiation.....	270
Yuying Wu, Lixing Zhang, and Feng Yan	
An Improvement of Service Scheduling Based on Market Mechanism and Semantic.....	277
Wang Gang, FengXia YIN, and Shenghai ZHONG	
An Ontology-based Approach for Data Integration in Regionally Interoperable Healthcare Systems.....	284
Hongqiao Yang and Weizi Li	
The Research of a Role-Based Project Knowledge Management System.....	291
Lieli Liu and Qinghong Liu	

<b>Chapter Five: Enterprises Information Sharing and Management.....</b>	298
Semiotic Modelling for Complex Enterprise Systems.....	299
Kecheng Liu, Lily Sunb, and Wenge Rong	
Performance Modeling and Simulation for Enterprise Application Based on Queuing Theory....	310
Zhibin Tian, Wei Sun, and Naishuo Tian	
Information Flow based Semantic Integration: Analyzing the Relationship between the Initial Knowledge and the Final Result.....	319
Yang Wang and Junkang Feng	
Research on the Influential Factors on the Success of Commercialization of New Technology Based on the Environment.....	326
Lucheng Huang and Ji Wang	
Research on Synergy in Diversified Corporation Based on Synergistic Model——A Case Study on Midea Household Appliance.....	332
Weiguo Lan, Yong-an Zhang, and Li Yang	
Research on the Niche Model of the Virtual Cluster Enterprises.....	340
Chuanchen Wang	
Research on Programming of Enterprise Intelligence Management.....	346
Yongfang Yang, Daoping Wang, and Xiuqin Xia	
The Role of Deputy in Successful ERP Implementation in China.....	352
Xiuzhen Feng, Michel L. Ehrenhard, and Jeff N. Hicks	
Adaptive Service Oriented Architecture of nterprise Content Management System.....	361
Huiying Gao, Wolffried Stucky, Jinghua Zhao, and Zhijun Yan	
IT Capability and Firm Performance Based on Dynamic Capability View.....	367
zhijun Kuang	
Strategic Approach for the Implementation of Enterprise Architecture: A Case Study of Two Organizations in South Africa.....	375
Tiko Iyamu	
<b>Chapter Six: IT in Supply Chain Management and CRM.....</b>	382
The Strategy for Suppliers Coping with Retailers: An Applied Research on Drop-shipping Model .....	383
Jianyuan Yan, Xia Cheng, and Chunjuan Zhai	
Delivery Credit Based Decision Model and Algorithm for Agile Supply Chain Scheduling.....	390
Hanlin Zhang, Guorui Jiang, and Tiyun Huang	
Conceptual Data Model for Data Interchange between HR Information Systems.....	397
Roman Povalej, Wolffried Stucky, and Peter Weiß	
A FCM-Based Trust Model for Supply Chain.....	404
Luowen Lv, Hong Pan, and Dongsheng Zhai	
Study on the Supplier Selection Method based on Genetic Algorithm.....	410
Daoping Wang, Zhiru Xu, and Xin Yu	
Value Chain Model of Knowledge Innovation in Service Supply Chain.....	416
Bing Wu and Zhong-ying Liu	
Development of the Internet-based Fresh Produce Supply Chain in the UK SMEs.....	423
Xiaoxiao Xu, Yanqing Duan, and Brian Mathews	
The Study of Customer Relationship Management Based on Data-Mining.....	432
Yongke Yuan, Wei Wang, and Feng Shi	
Modelling Requirements of Supplier Selection for Benchmarking Service Provision.....	440
Lily Sun and Cleopa Mushi	
Ubiquitous Monitoring and Behavioural Change: A Semiotic Perspective.....	449

Stuart Moran and Keiichi Nakata

<b>Chapter Seven: Business Process and Workflow Modeling.....</b>	<b>457</b>
The Business Process Maturity Model – A tool to assess capability of business process.....	458
Mahesh Jadhav and Gauri Sapre	
A Case Study on Modelling the Communication Structure of Critical Systems.....	465
Marcos Salenko Guimarães and M. Cecilia C. Baranauskas	
Study on the R&D Industry Technology Roadmap.....	473
Lucheng Huang and Weihong Ren	
An Agent-Based Scheduling Method for Flexible Job Shops.....	478
Haiying Ren and Hongling Sun	
A Fuzzy Real Option Model for Information Technology Investment Evaluation.....	485
Weimin Ma and Xiujuan Ma	
IT-Enabled Change: A Lifecycle Approach.....	492
Sharm Manwani	
A Comprehensive Data Management Mechanism for Workflow Systems.....	501
Shengli Wu and Yaxin Bi	
<b>Chapter Eight: E-government and E-commerce Solution.....</b>	<b>508</b>
The Simulation Model of E-government Performance on the Basis of System Dynamics.....	509
Yan Dan.	
Consumer Privacy Protection in Mobile Commerce by Third-Party Mechanism: an Analysis based on Game Theory.....	516
Hao Huang, Lu Liu, and Weijia You	
Norm-based negotiation and coordination in E-government systems.....	521
Jingxia Wang, Renchu Gan, and Yanbing Ju	
A Method to Government Performance Appraisal in E-government .....	529
Lin Ke, Yongke Yuan, and Yunfeng Liu	
The Simulation Analysis of the C2C e-business Model based on e3-value.....	535
Zhiyuan GE and Lili SUN	
Research on the Quantitative Evaluation of Government Website.....	543
Changling Li and Xinjin Fu	