

2011 IEEE 8th International Conference on e-Business Engineering

(ICEBE 2011)

**Beijing, China
19 – 21 October 2011**



**IEEE Catalog Number: CFP11EBE-PRT
ISBN: 978-1-4577-1404-7**

2011 Eighth IEEE International Conference on e-Business Engineering

ICEBE 2011

Table of Contents

Message from ICEBE 2011 Chairs.....	xii
Message from ICEBE 2011 Program Chairs.....	xiii
ICEBE 2011 Organizing Committee.....	xv
ICEBE 2011 Program Committee.....	xvii
Message from ASOC 2011 Workshop Chairs.....	xxi
ASOC 2011 Workshop Chairs and Program Committee.....	xxii
Message from EM2I 2011 Workshop Co-chairs.....	xxiii
EM2I 2011 Workshop Co-chairs and Program Committee.....	xxiv
Message from IWCS 2011 Workshop Co-chairs.....	xxv
IWCS 2011 Workshop Co-chairs and Program Committee.....	xxvi
Message from SOAIC 2011 Workshop Co-chairs.....	xxvii
SOAIC 2011 Workshop Co-chairs and Program Committee.....	xxviii
Message from SOKMBI 2011 Workshop Co-chairs.....	xxix
SOKMBI 2011 Workshop Co-chairs and Program Committee.....	xxx
Keynote Abstracts.....	xxxii

Session D1: Data and Knowledge Management for e-Business I

Exploring the Relationships between Annual Earnings and Subjective Expressions in US Financial Statements	1
<i>Chien-Liang Chen, Chao-Lin Liu, Yuan-Chen Chang, and Hsiang-Ping Tsai</i>	
A Neural Network Based Forecasting Method for the Unemployment Rate Prediction Using the Search Engine Query Data	9
<i>Wei Xu, Tingting Zheng, and Ziang Li</i>	
A Collaborative Learning System Based on Cloud and E-commerce	16
<i>Jian Liao and Minhong Wang</i>	
Instance-Driven Ontology Evolution Mechanism towards Enterprise Data Management	24
<i>Cheng Xie, Lihong Jiang, and Hongming Cai</i>	

Session D2: Data and Knowledge Management for e-Business II

A Method of Building Virtual Datacenter Based on Semantic Views	31
<i>Huayu Li and Chunping Ouyang</i>	
A Dominance-Based Approach for Selection in Service Composition	36
<i>Chaogang Tang, Qing Li, Yan Xiong, An Liu, and Shiting Wen</i>	
REA-XML: An Unambiguous Language for REA Business Models	44
<i>Dieter Mayrhofer, Christian Huemer, Birgit Hofreiter, and Christian Sonnenberg</i>	
Reputation Distribution Based on Structure-Related Importance in Services Composition	52
<i>Shiting Wen, Qing Li, Lihua Yue, An Liu, and Chaogang Tang</i>	
Using E-learning and Situated Learning Theory: Practical Lessons from the Vocational Special Education Students	60
<i>Yoau-Chau Jeng, Shu-Chuan Lu, and Hong-Min Lin</i>	

Session D3: Data and Knowledge Management for e-Business III

A New Data Warehouse Approach Using Graph	65
<i>Manel Zekri, Imen Marsit, and Abdelaziz Adellatif</i>	
Research on Web-of-Trust-Based Personalized Seller Recommendation Algorithm for E-Commerce	71
<i>Chunhui Piao, Shuzhen Wang, Xiao Pan, and Xufang Han</i>	
QoS Aggregation in Service Orchestrations Based on the Choquet Integral	77
<i>Nabil Fakhfakh, Hervé Verjus, and Frédéric Pourraz</i>	

Automatic Web Content Extraction for Generating Tag Clouds from Thai Web Sites	85
<i>Wigrai Thanadechteemapat and Chun Che Fung</i>	
Integration of Opinion into Customer Analysis Model	90
<i>Mohd Ridzwan Yaakub, Yuefeng Li, and Yanming Feng</i>	

Session I: Integration and Collaboration

Efficient and Flexible Emergency Communications in Next Generation Mobile Network	96
<i>Meng-Hsun Tsai, Rebecca Chen, Jui-Feng Sung, Elizabeth Wu, Edward Wei, Zheng-Han Wu, and Jui-Shan Liang</i>	
A Study on Multi-agent Based Supply Chain Collaboration Operation Model Facing Time of Delivery	102
<i>Rongfen Cheng</i>	
A Refined Canonical Data Model for Multi-schema Integration and Mapping	105
<i>Michael Dietrich and Jens Lemcke</i>	

Session C: Cloud Computing

A Reusability Evaluation Suite for Cloud Services	111
<i>Sang Hun Oh, Hyun Jung La, and Soo Dong Kim</i>	
Understanding the Complexity Surrounding Multitenancy in Cloud Computing	119
<i>Katie Wood and Mark Anderson</i>	
Dynamic Resource Allocation via Distributed Decisions in Cloud Environment	125
<i>Trieu C. Chieu and Hoi Chan</i>	

Session B: Business Analytics and Optimization

Learning Domain-Specific Sentiment Lexicons for Predicting Product Sales	131
<i>Raymond Y.K. Lau, Wenping Zhang, Peter D. Bruza, and K.F. Wong</i>	
Managing Procurement Spend Using Advanced Compliance Analytics	139
<i>Pawan Chowdhary, Markus Ettl, Amit Dhurandhar, Soumyadip Ghosh, Gopikrishna Maniachari, Bruce Graves, Bill Schaefer, and Yu Tang</i>	
Transactional Risk Assessment-Based Approach for Service Degradability Management	145
<i>Adil M. Hammadi and Omar Hussain</i>	

Session S: Security, Privacy and Open Source

Web Service Selection in Trustworthy Collaboration Network	153
<i>Shanguang Wang, Xilu Zhu, and Hongke Zhang</i>	
Information Sharing over Collaborative Social Networks Using XACML	161
<i>Cheng Man Ma, Yan Zhuang, and Simon Fong</i>	
User Centric Security Model for Tamper-Resistant Devices	168
<i>Raja Naeem Akram, Konstantinos Markantonakis, and Keith Mayes</i>	

Session M: Mobile and Pervasive Commerce

A RFID-based Intelligent Warehouse Management System Design and Implementation	178
<i>Minbo Li, Shengxi Gu, Guangyu Chen, and Zhu Zhu</i>	
Community Situational Awareness and Resilience through Mobile Applications	185
<i>Yuan-Chi Chang, Chang-Tien Lu, Huong Morris, Pam Murray-Tuite, and Quoc-Bao Nguyen</i>	
Self-Stabilizing Ecosystem for Service-Based Mobile Computing	193
<i>Hyun Jung La, Jeong Ran Jang, and Soo Dong Kim</i>	
A Practical Framework for Comprehensive Mobile Context Visualization	201
<i>Du Wan Cheun, Moon Kwon Kim, Hyun Jung La, Hyun Joo Bae, Chang Sup Keum, and Soo Dong Kim</i>	

Session V1: Service Engineering I

Diagnosing Web Services System Based on Execution Traces Pattern Analysis	207
<i>Chengying Mao, Ilkka Tervonen, and Jinfu Chen</i>	
A Flexible Service Reservation Scheme for Real-Time SOA	215
<i>Sen Zhou and Kwei-Jay Lin</i>	
QoS-aware, Optimal and Automated Service Composition with Users' Constraints	223
<i>Chaocan Xiang, Wendong Zhao, Chang Tian, Jingnan Nie, and Jin Zhang</i>	
Dynamic Deployment of Services for Service-Based Mobile Ecosystem	229
<i>Jae Yoo Lee, Ho Joong Lee, Duc Vinh Tien Tran, Hyun Jung La, and Soo Dong Kim</i>	

Session V2: Service Engineering II and Software Engineering for e-Business II

Service Change Analyzer: An Enabling Tool for Change Management in Service-Based Business Processes	237
<i>Yi Wang, Jian Yang, and Weiliang Zhao</i>	
A Multi-agent Based Architecture for Web Service Selection in E-business	245
<i>Chunxia Yu, Gong Wang, and Yu Liu</i>	
A Consumer Trust-Based Approach in Web Services Selection	251
<i>Ping Wang, Kuo-Ming Chao, Chi-Chun Lo, Wen-Hui Lin, and Tzu Chia Wang</i>	
Automatic Construction of Deployment Descriptors for Web Applications	257
<i>Wei Chen, Shanshan Liu, Jun Wei, and Lianhua Wang</i>	

Session G: Green Supply Chain, Business and RFID

A Warehousing Approach to Distribution and Retailing Efficiency Improvement: A China Targeted Analysis	265
<i>Zongwei Luo</i>	
A Binary Logit Estimation of Controllable Factors Affecting Adoption of RFID by Agro-food Firms	273
<i>Jian Yang, Yongbing Jiao, and Chunxia Zhang</i>	

Session X: Industrial Experiences and Applications

iWeb: A Service-Oriented Web Application Framework with Service Selection over QoS and Context	278
<i>Sen Luo, Bin Xu, Kewu Sun, Yin Bai, Peng Zhang, JiuHong Hu, and Zonghui Li</i>	
An Evidence Based Analytical Approach for Process Automation: Case Study in Finance and Administration Process Delivery Services	286
<i>Sai Zeng, Jim A. Laredo, Sameep Mehta, Himanshu Chauhan, Ashish Verma, Douglas Williams, and Beth Browne</i>	
Feature Selection of Non-intrusive Load Monitoring System Using STFT and Wavelet Transform	293
<i>Yi-Ching Su, Kuo-Lung Lian, and Hsueh-Hsien Chang</i>	

Sesison EM2I: e-Marketplace Integration and Interoperability

Feature Extraction of Non-intrusive Load-Monitoring System Using Genetic Algorithm in Smart Meters	299
<i>Hsueh-Hsien Chang, Po-Ching Chien, Lung-Shu Lin, and Nanming Chen</i>	
Cross-Context Transfer of Electronic Title Documents	305
<i>Wai Lin Wong and Jingzhi Guo</i>	

Session ASOC: Applications and Services on Cloud

CREST: Towards Fast Speculation of Straggler Tasks in MapReduce	311
<i>Lei Lei, Tianyu Wo, and Chunming Hu</i>	
Scalability and Performance of Web Applications in a Compute Cloud	317
<i>Trieu C. Chieu, Ajay Mohindra, and Alexei A. Karve</i>	

Session IWCS: Cloud Services

A Non-intrusive Multi-tenant Database Software for Large Scale SaaS Application	324
<i>Bo Gao, Wen Hao An, Xi Sun, Zhi Hu Wang, Liya Fan, Chang Jie Guo, and Wei Sun</i>	
Application Centric Lifecycle Framework in Cloud	329
<i>Kai Tang, Jian Ming Zhang, and Chen Hua Feng</i>	
DB2MMT: A Massive Multi-tenant Database Platform for Cloud Computing	335
<i>Ying Hua Zhou, Qi Rong Wang, Zhi Hu Wang, and Ning Wang</i>	
Towards Business Integration as a Service 2.0 (BlaaS 2.0)	341
<i>Victor Chang, Gary Wills, and Robert John Walters</i>	
Towards Delivering Analytical Solutions in Cloud: Business Models and Technical Challenges	347
<i>Xi Sun, Bo Gao, Yuzhou Zhang, Wenhao An, Heng Cao, Changjie Guo, and Wei Sun</i>	
Deliver Bioinformatics Services in Public Cloud: Challenges and Research Framework	352
<i>Xi Sun, Liya Fan, Linlin Yan, Lei Kong, Yang Ding, Changjie Guo, and Wei Sun</i>	

Session SOAIC: Service-Oriented Applications, Integration and Collaboration

Managing and Delivering Trustworthy Context-Dependent Services	358
<i>Naseem Ibrahim, Vangalur Alagar, and Mubarak Mohammad</i>	
Decision Support in Library Book Acquisition: A Social Computing-Based Approach	364
<i>Fan Wu, Ya-Han Hu, Ping-Rong Wang, Feng-I Chung, and Chia-Lun Lo</i>	
A Privacy Reinforcement Approach against De-identified Dataset	370
<i>Ci-Wei Lan, Yi-Hui Chen, Tyrone Grandison, Angus F.M. Huang, Jen-Yao Chung, and Li-Feng Tseng</i>	
Defining a Basic Framework for the Deployment/Adaptation of Pervasive Applications	376
<i>Nureddine Belkhatir and Abdelkrim Benamar</i>	

Cloud Service Platform - Hospital Information Exchange (HIX)380
Fang Zhou, Fang Cheng, Li Wei, and Zhiyuan Fang

Session SOKMBI: Service-Oriented Knowledge Management and Business Intelligence

Information Recommendation Method Research Based on Trust Network
and Collaborative Filtering386
Yuanliang Gao, Boyi Xu, and Hongming Cai

A Multi-agent Infrastructure for Healthcare Process Improvement Using
Ontology392
*Derek F.M. Sun, Dickson K.W. Chiu, Nan Jiang, Haiyang Hu, Yi Zhuang,
and Hua Hu*

Author Index397