2010 International Conference on Service Sciences

(ICSS 2010)

Hangzhou, China
13-14 May 2010
# 2010 International Conference on Service Sciences

## ICSS 2010

## Table of Contents

**Welcome Message from the General Chair** ................................................................. x

**Conference Committee** ............................................................................................. xi

**Organizing Committee** ............................................................................................... xii

**Program Committee** ................................................................................................. xiii

**Steering Committee** .................................................................................................. xv

**List of Reviewers** ....................................................................................................... xvi

## 2010 International Conference on Service Science

**PDUS: P2P-Based Distributed UDDI Service Discovery Approach** .......................... 3

*Ni Yulin, Si Huayou, Li Weiping, and Chen Zhong*

**Dynamic Service Selection with Reputation Management** .................................... 9

*Surong Yan, Xiaolin Zheng, and Deren Chen*

**Comprehensive Practice on Service Engineering: An Experimental Solution** .......... 17

*Zhongjie Wang, Xiaofei Xu, Dianhui Chu, Lianshun Nie, Tianyi Zang, and Xiaofeng Liu*

**A Browser-Based Middleware for Service-Oriented Rich Client** ............................. 22

*Qi Zhao, Xuanzhe Liu, Gang Huang, Jiyu Huang, and Hong Mei*

**Experiences from the Launch of a New International Master’s Program in Service Design and Engineering** ................................................................. 28

*Juho Heiskari and Mika Helenius*

**A Measure Approach for Trustworthy QoS of Web Service** .................................... 34

*Qibo Sun, Shangguang Wang, and Fangchun Yang*

**The Design and Implementation of a SOA-Based Data Exchange Middleware** ........ 39

*Lishuan Hu, Ping Li, and Yuping Wang*

**Warehouse Financing Risk Analysis for SMEs in China** ...................................... 43

*Zongwei Luo, Edward Wong, C.J. Tan, Frank Tong, and Yin Ying*

**Automatic Verification of Web Service Protocols for Epistemic Specifications under Dolev-Yao Model** ................................................................. 49

*Qingliang Chen, Kaile Su, Chanjuan Liu, and Yinyin Xiao*
A Case Study on the Value Models of Ocean Transportation Service ........................................55
  Xu Shao, Zhongjie Wang, Xiaofei Xu, and Chao Ma
Making Service Logic Explicit: Findings from Business-to-Business Case Study .................................................................61
  Harri Töhönen, Mikko Heiskala, and Esko Hannula
Dynamic Enterprise (as a Composite Service System) ........................................................................................................66
  Marco Link and Erich Ortner
Study on Structure of Dimensions of Perceived Justice in Service Recovery .................................................................71
  Song Zongjun and Jia Shenghua
A Model-Based Framework for Adapting Interaction Mismatches of Time-Aware Web Services .................................................................76
  Guangquan Zhang, Sheng Wang, Mei Rong, and Qingchun Li
Multi-attribute Group Decision Making-Based Decentralized Web Service Selection .................................................................82
  Longchang Zhang, Hua Zou, and Fangchun Yang
Moving Forward the Limits for Service Operations Optimization ................................................................................................88
  V. Cesarotti, C. Spada, A. Giuusa, and S. Biagiotti
Home Appliance Mashup System Based on Web Service ........................................................................................................94
  Ke Xu, Meina Song, and Xiaoqi Zhang
QoS-Driven Dynamic Reconfiguration of the SOA Based Software .................................................................................................99
  Ying Li, Xiaorong Zhang, YuYu Yin, and Jian Wu
Testing of New Services ........................................................................................................................................................................105
  Walter Ganz and Thomas Meiren
Aligning Product-Service Systems with Market Forces: A Theoretical Framework ........................................................................110
  Xiucheng Fan and Hui Zhang
Identity Federation Broker for Service Cloud ........................................................................................................................................115
  He Yuan Huang, Bin Wang, Xiao Xi Liu, and Jing Min Xu
An Architectural Design for E-Commerce Service Composition ........................................................................................................121
  Xiaohui Wang, Xiaoxiang Luo, Bing Li, and Junde Song
Research on the Structure of the Service Industry under Duopoly Market ........................................................................................127
  Yue Xin, Xie Jianhui, and Xin Zhanhong
The Discovery of Agile Service Networks through the Use of Social Network Analysis ................................................................131
  Noel Carroll, Eoin Whelan, and Ita Richardson
The Effects of Unconsciousness and Emotional Labor on Service Quality: A Case of Flight Attendants ........................................138
  Yongyu Chen, Xiucheng Fan, and Tingting Zhao
Two-Stage Adaptation for Dependable Service-Oriented System .................................................................................................143
  Jun Na, Bin Zhang, Xiangyu Zhang, Zhiliang Zhu, and Dancheng Li
How do Consumer Personality Traits Affect their Perceptions and Evaluations of Service Quality? .......................................................... 148

Xiucheng Fan and Yanyan Du

The Implementation of XPDL Workflow Verification Service Based on SaaS .......................................................... 154

Ding Xiao and Qianqian Zhang

Implementing Service-Correlation Aware Service Selection .......................................................... 159

Dongyao Wu, Shiyang Ye, Xiaoquan Wu, and Jun Wei

Rough Sets Based Context-Aware Service Discovery Framework .......................................................... 167

Lian Yu, Shan Luo, and Arne Glenstrup

Using QFD to Link ISO 9001 QMS and PZB Gap Model—An Integrated Approach for Customer Satisfaction .......................................................... 173

Ren-Chieh Liao

A Novel End-User Oriented Service Composition Model Based on Quotient Space Theory .......................................................... 180

Lin-feng Shen and Yong Qi

A Model Transformation for Increasing Value in Service Networks through Intangible Value Exchanges .......................................................... 185

Daniele Joseph Dubois, Christos Nikolaou, and Manolis Voskakis

An Application Framework for Business Developers to Create Service Based Business Applications .......................................................... 190

Jie Cui and Jing Min Xu

An Analytic Model of Atomic Service for Services Descriptions .......................................................... 197

D. Chen, S. Han, M. Munro, A. Soomro, and W. Song

The Research of Service Network Based on Complex Network .......................................................... 203

Hai-hong E., Mei-na Song, Jun-de Song, Yan Li, and Zhi-jun Ren

The SME Oriented Service Delivery Mechanism and an Implementation .......................................................... 208

Zhen Lin, Zongwei Luo, Francis Lau, Qiong Xiao, Honghua Gan, and Deren Chen

Refactoring from Object-Oriented Systems to Service-Oriented Systems: A Categorical Approach .......................................................... 214

Haifeng Ling, Xianzhong Zhou, and Yujun Zheng

Value Annotation for Service Model Analysis .......................................................... 219

Zhongjie Wang, Xiaofei Xu, Dianhui Chu, Chao Ma, and Xu Shao

Automatic Composition of Semantic Web Services—An Enhanced State Space Search Approach .......................................................... 226

Bin Wu, Jian Wu, Shuiguang Deng, Ying Li, and Jianwei Yin

A Model-Driven Approach for Business-Oriented Monitoring of Service Operation .......................................................... 231

Zhuohao Wang, Zhuofeng Zhao, and Kaiyuan Qi

Games for Service Science Education .......................................................... 237

Zhaozhi Wei, Luo Li, Jinmao Zhu, and Zhou Chi
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Significance of the Comparative Advantages in Factor Endowment to the Industrial Structure</td>
<td>242</td>
</tr>
<tr>
<td>Xiaomeng Li, Zhanhong Xin, and Jun Wu</td>
<td></td>
</tr>
<tr>
<td>A Brief Study on the Research of Service Science Theory</td>
<td>248</td>
</tr>
<tr>
<td>Xuejun Wang, Guoxian Bao, and Xudong Jia</td>
<td></td>
</tr>
<tr>
<td>Empirical Analysis of the Impact of Services Development on Industrial Upgrading</td>
<td>253</td>
</tr>
<tr>
<td>Ming-dou Zhang and Deng-yao Xu</td>
<td></td>
</tr>
<tr>
<td>LBVS: A Load Balancing Strategy for Virtual Storage</td>
<td>257</td>
</tr>
<tr>
<td>Hao Liu, Shijun Liu, Xiangxu Meng, Chengwei Yang, and Yong Zhang</td>
<td></td>
</tr>
<tr>
<td>Trustworthiness Calculation Based on Delegation Relationship in E-service</td>
<td>263</td>
</tr>
<tr>
<td>Jie Jiang, Dongxian Shi, and Deren Chen</td>
<td></td>
</tr>
<tr>
<td>An Approach to Construct IT Service Automatically</td>
<td>268</td>
</tr>
<tr>
<td>Wen Jun</td>
<td></td>
</tr>
<tr>
<td>Service Science Knowledge System Bottom-up Constructed Closely</td>
<td>272</td>
</tr>
<tr>
<td>Yu Liu, Xiujuan Xu, and Ruixin Ma</td>
<td></td>
</tr>
<tr>
<td>A Service Based Lightweight Desktop Virtualization System</td>
<td>277</td>
</tr>
<tr>
<td>Guangda Lai, Hua Song, and Xiaola Lin</td>
<td></td>
</tr>
<tr>
<td>An Implementation of the SaaS Level-3 Maturity Model for an Educational Credit Bank Information System</td>
<td>283</td>
</tr>
<tr>
<td>Weiping Li, Zhichao Zhang, Si Wu, and Zhonghai Wu</td>
<td></td>
</tr>
<tr>
<td>Modeling Structure of Customer Satisfaction with Service Recovery</td>
<td>288</td>
</tr>
<tr>
<td>Hua Yuan, Yu Qian, and Feng Zhu</td>
<td></td>
</tr>
<tr>
<td>Macml: A Domain-Specific Language for Machinery Service Management</td>
<td>293</td>
</tr>
<tr>
<td>Junwei Yang, Zhongxiang Hu, and Yujun Zheng</td>
<td></td>
</tr>
<tr>
<td>Study on Marine Shipping Contract Allocation and Pricing Policy</td>
<td>298</td>
</tr>
<tr>
<td>Lei Xu, Xiang-zhi Bu, and Long-wei Tian</td>
<td></td>
</tr>
<tr>
<td>The Risk Analysis on IT Service Outsourcing of Enterprise with System Dynamics</td>
<td>304</td>
</tr>
<tr>
<td>Gui-sen Wang and Xiang-yang Li</td>
<td></td>
</tr>
<tr>
<td>Implementation of Post-Trauma Mobile Psychology Service Based on MSNS Platform</td>
<td>309</td>
</tr>
<tr>
<td>Zhen Zhou, Yang Ji, Chunhong Zhang, Zhuohong Zhu, Wenzhong Wang, and Hao Wang</td>
<td></td>
</tr>
<tr>
<td>QoS Oriented Cross-Layer Design for Supporting Multimedia Services in Cooperative Networks</td>
<td>314</td>
</tr>
<tr>
<td>Lin Qiu and Meina Song</td>
<td></td>
</tr>
<tr>
<td>Interaction Simulate Method in Business Process Simulation</td>
<td>319</td>
</tr>
<tr>
<td>Ding Xiao and Qin Luo</td>
<td></td>
</tr>
</tbody>
</table>
An Approach for Web Service QoS Prediction Based on Service Using Information .............................................................. 324
   Li Zhang, Bin Zhang, Jun Na, Liping Huang, and Mingwei Zhang

A Generalized Service Resource Management Framework ................................................................. 329
   Yanqiu Meng, Zhongjie Wang, Xiaofei Xu, and Xianzhi Wang

A Dynamic Representation Model for Service Systems ........................................................................ 335
   Yong Peng, Youakim Badr, and Frédérique Biennier

The Mediative Effect of Relationship Trust in the Influence of Switching Barriers on Customer Loyalty .............................................................................................................. 341
   Yan-cai Zhang

A Mobile P2P Community System ........................................................................................................ 346
   Xiaoqi Zhang, Meina Song, and Ke Xu

Boom Index Construction of Real Estate Based on State-Space Model ............................................. 352
   Dongmei Han and Jieqiong Wu

An SOA Architecture with ebXML ....................................................................................................... 358
   Liangjuan Qin and Bin Li

A RUP-Based Process Pattern for Software Development Outsourcing ........................................... 363
   Yanbing Jiang, Xin Zhou, Ying Liu, Qi Zeng, and Junfang Zhong

Research on Production-Oriented Virtual Enterprise Quality Information Management ..................... 370
   Haitao Su, Xiaowei Ma, and Junxia Ma

Development and Evaluation of an Experiential Learning Service in 3D Virtual World ......................... 374
   Pingjun Dong, Biao Ma, and Fengchun Wang

A Study of Project-Oriented Company in Knowledge-Intensive Business Services ............................... 379
   Xueling Zhao

Web Service Publication and Discovery Architecture Based on JXTA .................................................. 383
   Jingqi Wei, Dancheng Li, Jun Na, Jing Bi, Zhiliang Zhu, and Ying Chen

Design and Implementation of Service Commitment ........................................................................... 388
   Wang Mingming and Huang Youbei

Customer-Driven SMEs Co-operation: A Service Dominant Logic Perspective .................................. 392
   Pei-Hung Hsieh, Shih-Ming Hsu, and Soe-Tsyrr Yuan

Optimal Decisions and Performance of a Supply Chain under the Strategic Consumer Behavior ........ 398
   Chenglin Shen and Xinxin Zhang

A C_net-based Verification of Web Service Compositions ....................................................................... 404
   Hui Zhu, Jian Wu, and Ying Li

Author Index ................................................................................................................................................. 409