

2010 IEEE Asia-Pacific Services Computing Conference

(APSCC 2010)

**Hangzhou, China
6 – 10 December 2010**



**IEEE Catalog Number: CFP10AAP-PRT
ISBN: 978-1-4244-9396-8**

2010 IEEE Asia-Pacific Services Computing Conference

APSCC 2010

Table of Contents

Message from the APSCC 2010 General Conference Chairs and Program Committee Chairs	xiv
APSCC 2010 Organizing Committee	xvi
APSCC 2010 Program Committee	xvii
APSCC 2010 Reviewers	xix
Message from the IWQSWN 2010 Workshop Chairs	xxi
IWQSWN 2010 Workshop Committee	xxii
Message from the UNC 2010 Workshop Chairs	xxiii
UNC 2010 Workshop Committee	xxiv
Message from the CmSOS 2010 Workshop Chairs	xxv
CmSOS 2010 Workshop Committee	xxvi
Keynote Addresses	xxvii

Service Mediation and Recommendation

Towards a Service Mediation Framework for Dynamic Applications	3
<i>Issac Garcia, Gabriel Pedraza, Bassem Debbabi, Philippe Lalanda, and Catherine Hamon</i>	
Service-centric Inference and Utilization of Confidence on Context	11
<i>Atif Manzoor, Hong-Linh Truong, Christoph Dorn, and Schahram Dustdar</i>	
A Linear Logic Based Approach for Generating Deadlock Adapters	19
<i>Lu Jin and Jian Wu</i>	
A Blogger Reputation Evaluation Model Based on Opinion Analysis	27
<i>Yu Weng and Liyong Zhao</i>	
Reconstruct and Evaluate of Telecom CRM for Full Service	35
<i>Xiao Long Deng, Bai Wang, and Xi Lu Zhu</i>	

Service Management

A Framework for Managing Dynamic Service-Oriented Component Architectures	43
<i>Walter Rudametkin, Lionel Touseau, Didier Donsez, and Francois Exertier</i>	
An Approach for Dynamically Building and Managing Service-Based Applications	51
<i>Jianqi Yu, Philippe Lalanda, and Pierre Bourret</i>	
Meld: A Real-Time Message Logic Debugging System for Distributed Systems	59
<i>Xuping Tu, Hai Jin, Xuepeng Fan, and Jiang Ye</i>	
Load-Balancing Dynamic Service Binding in Composition Execution Engines	67
<i>Mathias Björkqvist, Lydia Y. Chen, and Walter Binder</i>	
Managing Changes for Service Based Business Processes	75
<i>Yi Wang, Jian Yang, and Weiliang Zhao</i>	
A Multicore-Aware Runtime Architecture for Scalable Service Composition	83
<i>Daniele Bonetta, Achille Peternier, Cesare Pautasso, and Walter Binder</i>	
mBOSSS+: A Mobile Web Services Framework	91
<i>Jingyu Zhang, David Levy, Shiping Chen, and John Zic</i>	

QoS of Web Service

Automatic Monitoring of SLAs of Web Services	99
<i>Nihita Goel and R.K. Shyamasundar</i>	
Towards QoS-Based Dynamic Reconfiguration of SOA-Based Applications	107
<i>Ying Li, Yuanlei Lu, Yuyu Yin, Shuiguang Deng, and Jianwei Yin</i>	
Reputation-Driven Recommendation of Services with Uncertain QoS	115
<i>An Liu, Qing Li, Liusheng Huang, Shiting Wen, Chaogang Tang, and Mingjun Xiao</i>	
A Distributed Quality of Service Index Framework	123
<i>XiLu Zhu and Bai Wang</i>	
QoSDIST: A QoS Probability Distribution Estimation Tool for Web Service Compositions	131
<i>Huiyuan Zheng, Jian Yang, and Weiliang Zhao</i>	

Service Composition and Integration

Using Intentions and Plans of Mobile Activities to Guide Geospatial Web Service Composition	141
<i>Bo Yu and Guoray Cai</i>	
An Aspect Oriented Approach to Analyzing Fault of Service Composition	149
<i>Guisheng Fan, Huiqun Yu, Chunhua Gu, and Liqiong Chen</i>	
Process Fragment Composition Operations	157
<i>Hanna Eberle, Frank Leymann, Daniel Schleicher, David Schumm, and Tobias Unger</i>	
A Sophisticated Approach to Composing Services Based on Action Dominance Relation	164
<i>Dong-Hoon Shin, Hyun-Bae Jeon, and Kyong-Ho Lee</i>	
Towards an Automatic Integration of Heterogeneous Services and Devices	171
<i>Jonathan Bardin, Philippe Lalanda, and Clement Escoffier</i>	
Service Process Collaboration Based on Event View Model	179
<i>Jian Cao and Jie Wang</i>	

Service Discovery and Provision

Service Discovery and Recommendation in Rough Hierarchical Granular Computing	191
<i>Liang Hu, Jian Cao, and Zhiping Gu</i>	
SRMC: A Model for Web Services Registry with Multilevel Caches	199
<i>Hao-peng Chen, Shu-jian Wang, and Shao-chong Li</i>	
Tree-Based Service Discovery in Mobile Ad Hoc Networks	206
<i>Liao Mingxue, He Jing, Zhu Rongfu, Wang Xianqing, and He Xiaoxin</i>	
High-Precision Service Matching Based on Formal Semantic Description	212
<i>Jian Liang, Fenglin Bu, and Hongming Cai</i>	
LASPD: A Framework for Location-Aware Service Provision and Discovery in Mobile Environments	218
<i>Jian Zhu, Mohammad Oliya, Hung Keng Pung, and Wai Choong Wong</i>	
Future Service Provision: Towards a Flexible Hybrid Service Supporting Platform	226
<i>Zhu Da, Cheng Bo, Zhang Yang, and Chen Junliang</i>	

Publication/Subscription and Workflow

A Distributed Workflow Modeling Method Based on Users' Demand	237
<i>Mingyuan Yu, Li Jiang, Lei Ye, and Ronghua Liang</i>	
Research on Performance of Centralized Label Publication/Subscription Mechanism in Low Speed Wireless Network	245
<i>Jincheng Wu, Wendong Zhao, and Lei Zhang</i>	
Transactional Process Fragments - Recovery Strategies for Flexible Workflows with Process Fragments	250
<i>Hanna Eberle, Frank Leymann, and Tobias Unger</i>	
A Framework for Fuzzy Based Semantic Web Service Publish/Subscribe	258
<i>Mohammad Sadeghzadeh Hemayati, Mehran Mohsenzadeh, Mir Ali Seyyedi, and Amin Yousefipour</i>	

Service Formal Verification and Analysis

Towards a Formal Verification Approach for Implementation of Web Services Specifications	269
<i>Qing Yang, Dianfu Ma, Yongwang Zhao, and Zhuqing Li</i>	
A Way to Model Flow Construct and Its Three Properties Verification for BPEL Specification	277
<i>Gongyuan Zhang and Bixin Li</i>	
Formalizing 'Traceability' for Architectural Evolutions	285
<i>Liang-Jie Zhang, Vishal Dwivedi, and Nianjun Zhou</i>	
Rough Set-Based Debugging for Web Services System	293
<i>Chengying Mao</i>	
Performance Analysis of Context-Aware Composite Device Services	300
<i>Dongmin Shin, Sun Hur, and Jingyu Nam</i>	
ValySeC: A Variability Analysis Tool for Service Compositions Using VxBPEL	307
<i>Chang-ai Sun, Tieheng Xue, and Marco Aiello</i>	
Defect Analysis Respecting Dead Path Elimination in BPEL Process	315
<i>Xuehong Yang, Junfei Huang, and Yunzhan Gong</i>	

Cloud Computing and XaaS

Mobile Cloud for Assistive Healthcare (MoCAsH)	325
<i>Doan B. Hoang and Lingfeng Chen</i>	
Situation Driven Application Generation for Spatial Information Grid	333
<i>Zhen-Chun Huang, Dong Zhao, and Feng Wang</i>	

Cloudle: A Multi-criteria Cloud Service Search Engine	339
<i>Jaeyong Kang and Kwang Mong Sim</i>	
Analysis of Service-centric Cluster Supply Chain Alliance: A Case Study of JCH	347
<i>Xiao Xue, Jibiao Zhang, and Biqing Huang</i>	
Personalized Modeling for SaaS Based on Extended WSCL	355
<i>Liu Ying, Zhang Bin, Liu Guoqi, Wang Deshuai, and Gao Yan</i>	
On Evaluating and Publishing Data Concerns for Data as a Service	363
<i>Hong-Linh Truong and Schahram Dustdar</i>	
Customer-Item Category Based Knowledge Discovery Support System and Its Application to Department Store Service	371
<i>Tsukasa Ishigaki, Takeshi Takenaka, and Yoichi Motomura</i>	
Sensor Network and Ad Hoc Network	
The Improved Method of Adaptive Frequency for Multi-sink Queries in Wireless Sensor Networks	381
<i>Seyyed Yahya Nabavi and Karim Faez</i>	
Traffic Scheduling Scheme for Disjoint Multipath Routing Based Wireless Multimedia Sensor Networks	388
<i>Qian Ye, Meng Wu, and Yufei Wang</i>	
Research on Synchronous Low Power Listening for Collection Tree Protocol in WSN	394
<i>Jian Wan, Xin Luo, and Xianghua Xu</i>	
Distributed Algorithm for Maximal Rigid Region in Sparse Wireless Sensor Networks	400
<i>Saroja Kanchi and Changhua Wu</i>	
Data Collection for the Detection of Urban Traffic Congestion by VANETs	405
<i>Yuwei Xu, Ying Wu, Gongyi Wu, Jingdong Xu, Boxing Liu, and Lin Sun</i>	
SoftAccel: A Software-Only IP Network Application Accelerator	411
<i>Huiyong Zhang, Yuebin Bai, Zhi Li, Huixing Peng, Xiaoxia Liu, Likun Zhao, Wei Wu, and Lianhe Luo</i>	
Adding Alien Traffic Endurance to Wireless Token-Passing Real-Time Protocols	416
<i>Danilo Tardioli, José Luis Villarreal, and Luis Almeida</i>	

Network Security

On Sliding Window Based Change Point Detection for Hybrid SIP DoS Attack	425
<i>Wenhai Li, Wei Guo, Xiaolei Luo, and Xiang Li</i>	
Towards a Dynamic Access Control Model for E-Government Web Services	433
<i>Meriam Jemel, Nadia Ben Azzouna, and Khaled Ghedira</i>	
More Robust Anonymous Authentication with Link-Layer Privacy	441
<i>Eun-Kyung Ryu, Eun-Jun Yoon, and Kee-Young Yoo</i>	
An Efficient Signcryption Schemes Based from Bilinear Maps in the Standard Model	447
<i>Jianhong Zhang and Xiuna Su</i>	
DASR: Distributed Anonymous Secure Routing with Good Scalability for Mobile Ad Hoc Networks	454
<i>Lanjun Dang, Jie Xu, Hui Li, and Nan Dang</i>	
An Identity-Based Network Access Control Scheme for Single Authority MANETs	462
<i>Narges Aghakazem Jourabbaf and Ali Movaghar</i>	
Efficient Password-Proven Key Exchange Protocol against Relay Attack on Ad Hoc Networks	469
<i>Ang Gao, Wei Wei, and Wenbo Shi</i>	

Miscellaneous

LDAP Directory Template Model on Multi-master Replication	479
<i>Tong Cui</i>	
A Hybrid Approach to Predict Churn	485
<i>Javad Basiri, Fattaneh Taghiyareh, and Behzad Moshiri</i>	
A Stochastic Network Calculus Approach for NCS Performance Analysis	492
<i>Hua He and Shanchen Pang</i>	

2010 International Workshop on Quality of Service Management of Wireless Networks (IWQSWN 2010)

Novel OFDM Symbol Timing Recovery Method Based on ICS Correlation	503
<i>Yong Wang, Jianhua Ge, Fengkui Gong, and Jun Hu</i>	
Bandwidth Efficient Collaborative Quality of Service Routing for Real-Time Flow in Wireless Multimedia Sensor Networks	509
<i>Zhang Xia, Yu Hong-yi, and Zhou Gang</i>	

A Self-Adaption Link-Quality Detection Algorithm for Data Collecting in OSN	516
<i>Wang Xiao, Wu Yinfeng, Yu Ning, and Wan Jiangwen</i>	
Coverage Algorithm Based on Sensor Residual Energy for Sensor Network	523
<i>Weifeng Yang, Xiao Liu, and Jin Zhang</i>	
Research on Radio Frequency Assignment Mechanism of the Distributed Antenna System Based on Radio over Free Space Optics Technology	526
<i>Peng Yue, Xiang Yi, and Zeng-ji Liu</i>	
Low Complexity Decoding Algorithm of QC-LDPC Code	531
<i>Fanglong Yi and Pengjun Wang</i>	
An Efficient Analysis for Reliable Data Transmission in Wireless Sensor Network	535
<i>Ga-Won Lee, Jun-Hyung Lee, Seung-Jin Lee, and Eui-Nam Huh</i>	
MSNAP: Fault Tolerant Event Localization in Wireless Sensor Networks	541
<i>Xianghua Xu, Xueyong Gao, and Jian Wan</i>	
Low Latency Handover and Roaming Using Security Context Transfer for Heterogeneous Wireless and Cellular Networks	548
<i>Vamsi Krishna Gondi and Nazim Agoulmine</i>	
An Energy-Efficient Contention-Based Cooperative Routing for Event Detection in Wireless Sensor Networks	555
<i>Xiaofang Zhou, Peng Gao, Yinlong Huang, Xu Xu, and Ke Shao</i>	
Improve the Completeness of Passive Monitoring Trace in Wireless Sensor Network	560
<i>Xianghua Xu, Chao Tong, and Jian Wan</i>	
A Study for Sentence Ordering Based on Grey Model	567
<i>Gongfu Peng, Yanxiang He, Wei Zhang, Naixue Xiong, and Ye Tian</i>	
Wireless Mobile-Based Shopping Mall Car Parking System (WMCPS)	573
<i>Soh Chun Khang, Teoh Jie Hong, Tan Saw Chin, and Shengqiong Wang</i>	
2010 International Workshop on Ubiquitous Network Computing (UNC 2010)	
A New Priority Concerned Distributed Channel Assignment Algorithm for Multi-hop Radio Networks	581
<i>Li Li</i>	
A Synthetical Performance Evaluation of OpenVZ, Xen and KVM	587
<i>Jianhua Che, Congcong Shi, Yong Yu, and Weimin Lin</i>	
A Hierarchical Network (HRRP(k)) and Its Application	595
<i>Fang-Ai Liu and Chang-Ming Xing</i>	

Efficient Multi-objective Services Selection Algorithm Based on Particle Swarm Optimization	603
<i>Cao Jiuxin, Sun Xuesheng, Zheng Xiao, Liu Bo, and Mao Bo</i>	
Service of Searching and Ranking in a Semantic-Based Expert Information System	609
<i>Liu Yang, Zhigang Hu, and Jun Long</i>	
Optimization of AMR Speech Codec on ARMv5E Platform	615
<i>Chunlin Jiang, Lizhuo Zhang, Ke Gu, and Weijia Jia</i>	
An Approach to Privacy-Preserving Alert Correlation and Analysis	620
<i>Jin Ma, Xiu-zhen Chen, and Jian-hua Li</i>	
An Event Based GUI Programming Toolkit for Embedded System	625
<i>Xu Hu, Congfeng Jiang, Wei Zhang, Jilin Zhang, Ritai Yu, and Changping Lv</i>	
A Mutual Authentication Protocol for Low-Cost RFID System	632
<i>Xueping Ren and Xianghua Xu</i>	
Regulative Growth Codes: Enhancing Data Persistence in Sparse Sensor Networks	637
<i>Xianghua Xu, Chao Shen, and Jian Wan</i>	
 2010 International Workshop on Construction and Maintenance of Service-Oriented Software (CmSOS 2010)	
Service Composition and Optimal Selection with Trust Constraints	645
<i>Ping Sun</i>	
A New Framework for Web Service Discovery Based on Behavior	654
<i>Bensheng Yun</i>	
P2P Behavior Description with π -Calculus	659
<i>Chen Fu and Yang Jia-Hai</i>	
Web Services Composition Approach Based on Trust Computing Mode	663
<i>Chunhua Hu and Jibo Liu</i>	
Personal Cloud Computing Security Framework	671
<i>Sang-Ho Na, Jun-Young Park, and Eui-Nam Huh</i>	
Reasoning on Formalizing WS-CDL Mobility Using Process Algebra	676
<i>Philbert Nduwimfura, Dong Xu, HuaiKou Miao, Zhou Lei, and Bo Chen</i>	
An Approach to Match Semantic Web Services Based on Multidimension	683
<i>Xie Binhong, Zhang Yingjun, and Chen Lichao</i>	
MMS-SOA: A MANET Monitor System Based on Service-Oriented Architecture	690
<i>Wei Zhang and Sanli Li</i>	

Wolf-Pack Algorithm for Business Process Model Syntactic and Semantic Structure Verification in the Workflow Management Environment	694
<i>Yanming Ye, Jianwei Yin, Zhilin Feng, and Bin Cao</i>	
A Discovery Approach for Web Services Composition Flows	700
<i>Changbao Li, Bo Cheng, Junliang Chen, Pingli Gu, Na Deng, and Desheng Li</i>	
A Research of SQL-Based Web Services Automatic Generating Strategy	707
<i>Qiang Chi, Yonghua Zhu, and Huaiyang Zhu</i>	
A Control-Flow Complexity Measure of Web Service Composition Process	712
<i>Xiaodong Fu, Ping Zou, Yuqian Ma, Ying Jiang, and Kun Yue</i>	
Service Discovery in Self-Organizing Service-Oriented Environments	717
<i>Ding Ding, Lei Liu, and Hartmut Schmeck</i>	
A Web Service QoS Prediction Approach Based on Collaborative Filtering	725
<i>Zhang Li, Zhang Bin, Liu Ying, Gao Yan, and Zhu Zhi-Liang</i>	
Author Index	732