Table of Contents

Keynote and Keynote Panel Sessions ........................................................................................................x

Tutorials .................................................................................................................................................. xvii

IEEE Computer Society Technical Committee
on Services Computing (TC-SVC) ........................................................................................................... xix

SWF Workshop

Scheduling Multiple Scientific and Engineering Workflows through Task Clustering and Best-Fit Allocation ................................................................. 1
  Ying-Lin Tsai, Kuo-Chan Huang, Hsi-Ya Chang, Jerry Ko, En Tzu Wang, and Ching-Hsien Hsu

Fault Tolerant Clustering in Scientific Workflows .................................................................................. 9
  Weiwei Chen and Ewa Deelman

UTPB: A Benchmark for Scientific Workflow Provenance Storage and Querying Systems ......................................................... 17
  Artem Chebotko, Eugenio De Hoyos, Carlos Gomez, Andrey Kashlev, Xiang Lian, and Christine Reilly

Template and Frame Based Experiment Workflows in Modeling and Simulation Software with WORMS ........................................................................... 25
  Stefan Rybacki, Stefan Leye, Jan Himmelspach, and Adelinde M. Uhrmacher

The Identification Problem: A Description .............................................................................................. 33
  Juan Amiguet-Vercher, Peter Apers, and Andreas Wombacher

Refurbishing Legacy Biological Workflows SPROUTS Case Study ......................................................... 41
  Ruben Acuña, Zoé Lacroix, and Jacques Chomilier
Discovery, Testing, and Services-Oriented Software Workshop

WS-RM: Resource Management Using Web Service ..........................................................50
  Yu Wu, Zhihui Lv, Yuan Yuan, and Chaoyang Wang

Performance of Cloud-Based Scalability and Load with an Automation Testing Tool in Virtual World ..........................................................57
  Madhvi Kamra and Ratnamala Manna

RESTful Sensor Web Enablement Services for Wireless Sensor Networks ................................65
  Mohsen Rouached, Sana Baccar, and Mohamed Abid

Context-Aware Decentralized Approach for Web Services .............................................73
  Andrei Vlad Sambra and Maryline Laurent

Massive Event Data Analysis and Processing Service Development Environment Using DFD ..........................................................80
  Yoshihide Nomura, Kosaku Kimura, Hidetoshi Kurihara, Rieko Yamamoto,
  Kouji Yamamoto, and Susumu Tokumoto

Evaluation of Key Success Factors Influencing ERP Implementation Success ..................88
  Alemayehu Hallu and Syed (Shawon) Rahman

Predicting Failures in Dynamic Composite Services with Proactive Monitoring Technique ..........................................................92
  Yuelong Zhu, Xiaobin Wu, Pengcheng Zhang, Hareton Leung, and Wenrui Li

Latencies of Service Invocation and Processing of the REST and SOAP Web Service Interfaces ..........................................................100
  Tommi Aihkisalo and Tuomas Paaso

SPE Workshop

SoaML and UPIA Model Integration for Secure Distributed SOA Clouds .........................108
  R. William Maule

Overlay Architectures Enabling Cloud Computing for Multi-level Security Environments ..........................................................116
  Christopher C. Lamb and Gregory L. Heileman

Propositional Logic-Based and Evidence-Rich Trustworthiness Evaluation for Web Services ..........................................................125
  Meng Li, Jing Jin, Junfeng Zhao, and Bing Xie

SecAgreement: Advancing Security Risk Calculations in Cloud Services .......................133
  Matthew L. Hale and Rose Gamble

TMR: Towards a Trusted MapReduce Infrastructure ......................................................141
  Anbang Ruan and Andrew Martin
Secure Private Cloud Architecture for Mobile Infrastructure as a Service ......................................................... 149

Susmita Horrow, Sanchika Gupta, Anjali Sardana, and Ajith Abraham

Recommendation-Based De-identification: A Practical Systems Approach
towards De-identification of Unstructured Text in Healthcare ................................................................. 155

Varun Bhagwan, Tyrone Grandison, and Carlos Maltzahn

Penetration Testing Tool for Web Services Security ................................................................. 163

Christian Mainka, Juraj Somorovsky, and Jörg Schwenk

Technical Analysis of Countermeasures against Attack on XML
Encryption—or—Just Another Motivation for Authenticated Encryption ................................................................. 171

Juraj Somorovsky and Jörg Schwenk

WSSecTool: A Web Service Security Analysis Tool Based on Program Slicing ................................................ 179

Wei Fu, Yingzhou Zhang, Xianting Zhu, and Junyan Qian

Constructing Secure Service Compositions with Patterns ................................................................. 184

Luca Pino and George Spanoudakis

Privacy-Preserving Mobile Accesses for Virtual Private Social Media ................................................ 192

Jong P. Yoon, Christopher M. Frenz, Zhixiong Chen, and David Wang

IDS Based Defense for Cloud Based Mobile Infrastructure as a Service ................................................ 199

Sanchika Gupta, Susmita Horrow, and Anjali Sardana

FM-S&C Workshop

A Cloud Repository and Discovery Framework Based on a Unified Business
and Cloud Service Ontology ................................................................................................................................. 203

Amirreza Tahamtan, Seyed Amir Beheshti, Amin Anjomshoae, and A. Min Tjoa

Contracting of Web Services with Constraint Handling Rules ........................................................................ 211

Ruoyu Chen, Leijian Liao, and Zhi Fang

Formalising Workflows Partitioning over Federated Clouds: Multi-level Security
and Costs ......................................................................................................................................................... 219

Leo Freitas and Paul Watson

Study of Interaction Property Testing of Distributed System Based on Petri Net ........................................ 227

Hua Li, Yi Xing, Yu Xue, and Xinming Ye

WMS-Based Flow Mapping Services ............................................................................................................ 234

Danhua Guo, Kaichao Wu, Zhenghua Zhang, and Wenting Xiang

Efficient Data Processing for Large-Scale Cloud Services ................................................................. 242

Marcel Tilly, Stephan Reiff-Marganiec, and Helge Janicke
FoSeC Workshop

SNS Based Web Caching Algorithm for PaaS SNS Hosting ......................................................251
   Budan Wu, Rongheng Lin, and Hua Zou

Cloud Based Content Fetching: Using Cloud Infrastructure to Obfuscate Phishing Scam Analysis ............................................................255
   Edward Ferguson, Joseph Weber, and Ragib Hasan

The Future of Service Marketplaces in the Cloud .................................................................262
   Rahul Akolkar, Tom Chefalas, Jim Laredo, Chang-Shing Perng, Anca Sailer,
   Frank Schaffa, Ignacio Silva-Lepe, and Tao Tao

Legacy Application Migration to the Cloud: Practicability and Methodology ...............................................270
   Quang Hieu Vu and Rasool Asal

Cloud-Oriented Platforms: Bearing on Application Architecture and Design Patterns ......................................................278
   Balwinder Sodhi and T.V. Prabhakar

CloudPerf Workshop

Just Satisfactory Resource Provisioning for Parallel Applications in the Cloud ..................285
   Chen Wang, Junliang Chen, Bing Bing Zhou, and Albert Y. Zomaya

Visual Assessment of Cloud Resource Consolidation Managers Using Convex Hulls .................................................................................293
   Yağız Onat Yazır

Resource Management of Manycores with a Hierarchical and a Hybrid Main Memory for MN-MATE Cloud Node ..............................................301
   Kyu Ho Park, Sung Kyu Park, Woomin Hwang, Hyunchul Seok, Dong-Jae Shin,
   and Ki-Woong Park

ER-SOSE Workshop

Enabling Supply Chain Collaboration in a Hybrid Cloud ..................................................309
   Shankar Babu Chebrolu

Webponder: An Innovative Cloud Service for Application Description and Provisioning ..........................................................313
   Jinsong Ouyang

E-Healthcare Web Service Broker Infrastructure in Cloud Environment .........................317
   Ching-Seh Wu and Ibrahim Khoury

Costs of Virtual Machine Live Migration: A Survey ..............................................................323
   Anja Strunk

Visualization of Real-World Web Services Based on Fuzzy Logic ...................................330
   Mohammed Almulla, Hamdi Yahyaoui, and Kawthar Almatori
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>An Enhanced Document Management System for SME</td>
<td>336</td>
</tr>
<tr>
<td>Mayur Agarker, Ajinkya Borle, Ashwini Deshmukh, and Munmun Bhagat</td>
<td></td>
</tr>
<tr>
<td>KAAS: Kernel as a Service</td>
<td>340</td>
</tr>
<tr>
<td>Vineet Rajani, Hemang Mehta, S.J. Balaji, and Dharanipragada Janakiram</td>
<td></td>
</tr>
<tr>
<td>Testing of Web Services—A Systematic Mapping</td>
<td>346</td>
</tr>
<tr>
<td>Abhishek Sharma, Theodore D. Hellmann, and Frank Maurer</td>
<td></td>
</tr>
<tr>
<td><strong>Services CUP</strong></td>
<td></td>
</tr>
<tr>
<td>Semantic IPTV Service Discovery System</td>
<td>353</td>
</tr>
<tr>
<td>Fon Lin Lai, Xu Shao, and Rajaraman Kanagasabai</td>
<td></td>
</tr>
<tr>
<td>A Web Service for Cloud Metadata</td>
<td>361</td>
</tr>
<tr>
<td>Michael Smit, Przemyslaw Pawluk, Bradley Simmons, and Marin Litou</td>
<td></td>
</tr>
<tr>
<td>Automating Reusable Workflow Development from Design to Instantiation</td>
<td>369</td>
</tr>
<tr>
<td>Yasmine Charif, Hua Liu, Andres Quiroz, and Xumin Liu</td>
<td></td>
</tr>
<tr>
<td>Validating Cloud Infrastructure Changes by Cloud Audits</td>
<td>377</td>
</tr>
<tr>
<td>Frank Doelitzscher, Christian Fischer, Denis Moskal, Christoph Reich,</td>
<td></td>
</tr>
<tr>
<td>Martin Knahl, and Nathan Clarke</td>
<td></td>
</tr>
<tr>
<td>ASTRO-CAptEvo: Dynamic Context-Aware Adaptation for Service-Based</td>
<td>385</td>
</tr>
<tr>
<td>Systems</td>
<td></td>
</tr>
<tr>
<td>Heorhi Raik, Antonio Bucchiarone, Nawaz Khurshid, Annapaola Marconi,</td>
<td></td>
</tr>
<tr>
<td>and Marco Pistore</td>
<td></td>
</tr>
<tr>
<td>An On-demand Service Discovery Approach Based on Mined Domain</td>
<td>393</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
</tr>
<tr>
<td>Zheng Li</td>
<td></td>
</tr>
<tr>
<td><strong>Industry Summit</strong></td>
<td></td>
</tr>
<tr>
<td>Application Lifecycle Kit for Mass Customization on PaaS Platforms</td>
<td>397</td>
</tr>
<tr>
<td>Shigeru Hosono and Yoshiki Shimomura</td>
<td></td>
</tr>
<tr>
<td>Reverse Logistics Predicting Model and Its Application</td>
<td>399</td>
</tr>
<tr>
<td>Li Wang, Liang-Jie Zhang, Yuejun Chen, Wei Wang, Weiwei Xiao,</td>
<td></td>
</tr>
<tr>
<td>and Susheng Wang</td>
<td></td>
</tr>
<tr>
<td><strong>Author Index</strong></td>
<td>407</td>
</tr>
</tbody>
</table>