

# Contents

## Part I   Invited Speakers

<b>Object-Oriented Service Clouds for Transdisciplinary Computing .....</b>	<b>3</b>
Michael Sobolewski	
<b>From Service Innovation to Service Engineering .....</b>	<b>33</b>
Wil Janssen, Marc Lankhorst, Timber Haaker, and Henny de Vos	

## Part II   Cloud Computing Fundamentals

<b>Adaptive Overlay Approach on the Inter-Cloud Environment .....</b>	<b>55</b>
Sumeth Lerthirunwong, Hitoshi Sato, and Satoshi Matsuoka	
<b>Securing Virtual and Cloud Environments .....</b>	<b>73</b>
Mariana Carroll, Paula Kotzé, and Alta van der Merwe	
<b>Achieving Market Liquidity Through Autonomic Cloud Market Management .....</b>	<b>91</b>
Ivan Breskovic, Michael Maurer, Vincent C. Emeakaroha, Ivona Brandic, and Jörn Altmann	

## Part III   Services Science Foundation for Cloud Computing

<b>Cost-Performance Driven Resource Configuration for Database Applications in IaaS Cloud Environments.....</b>	<b>111</b>
Shoubin Kong, Yuanping Li, and Ling Feng	
<b>Partitioning Workflows for Decentralized Execution .....</b>	<b>131</b>
Adam Barker	
<b>An Integrated Monitoring Infrastructure for Cloud Environments .....</b>	<b>149</b>
Gregory Katsaros, Georgina Gallizo, Roland Kübert, Tinghe Wang, J. Oriol Fitó, and Daniel Espling	

<b>Service Development Abstraction: A Design Methodology and Development Toolset for Abstractive and Flexible Service-Based Software</b> .....	165
Per-Olov Östberg and Erik Elmroth	
<b>Cloud Computing Costs and Benefits</b> .....	185
Nane Kratzke	
 <b>Part IV Cloud Computing Platforms and Applications</b>	
<b>A Cloud Computing Medical Image Analysis and Collaboration Platform</b> .....	207
Louis Parsonson, Soeren Grimm, Atif Bajwa, Laurence Bourn, and Li Bai	
<b>Applicability of NoSQL Databases to Mobile Networks: Case Home Location Register</b> .....	225
Rasmus Paivarinta and Yrjö Raivio	
<b>SLA-Based Planning for Multi-Domain Infrastructure as a Service</b> .....	243
Kuan Lu, Thomas Röblitz, Peter Chronz, and Constantinos Kotsokalis	
<b>Scheduling On-demand SaaS Services on a Shared Virtual Cluster</b> .....	259
Rodrigue Chakode, Jean-François Méhaut, and Blaise-Omer Yenke	
<b>Assessing Cloud Infrastructure Costs in Communications-Intensive Applications</b> .....	277
Oleksiy Mazhelis, Pasi Tyrväinen, Kuan Eeik Tan, and Jari Hiltunen	
<b>Are Clouds Ready for Geoprocessing?</b> .....	295
Hassan A. Karimi and Duangduen Roongpiboonsopit	
 <b>Part V Cloud Computing Enabling Technology</b>	
<b>A Performance Evaluation of Block I/O Paravirtualization and Virtual Machine Images</b> .....	315
Django Armstrong and Karim Djemame	
<b>Dynamic Resource Allocation for Multi-Tiered, Cluster-Based Web Hosting Environments</b> .....	333
M. Al Ghamdi, A.P. Chester, L. He, and S.A. Jarvis	
<b>A Method for Experimental Analysis and Modeling of Virtualization Performance Overhead</b> .....	353
Nikolaus Huber, Marcel von Quast, Fabian Brosig, Michael Hauck, and Samuel Kounev	

<b>The Partition Cost Model for Load Balancing in MapReduce .....</b>	<b>371</b>
Benjamin Gufler, Nikolaus Augsten, Angelika Reiser, and Alfons Kemper	
<b>Author Index .....</b>	<b>389</b>

Cloud Computing and Services Science

Ivanov, I.; van Sinderen, M.; Shishkov, B. (Eds.)

2012, XV, 390 p. 127 illus., Hardcover

ISBN: 978-1-4614-2325-6