22nd International Conference on Software Engineering and Data Engineering

(SEDE-2013)

Los Angeles, California, USA 25-27 September 2013

Editors:

Yan Shi

Xiaofeng Gao

ISBN: 978-1-62993-311-5

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by the International Society for Computers and Their Applications All rights reserved. Reproduction in any form without the written consent of ISCA is prohibited.

Original ISBN: 978-1-880843-92-5 (Out of Print)

Reprint ISBN: 978-1-62993-311-5

Printed by Curran Associates, Inc. (2013)

For permission requests, please contact the International Society for Computers and Their Applications at the address below.

International Society for Computers and Their Applications 975 Walnut Street, Suite 132 Cary, NC 27511-4216

Phone: (919) 467-5559 Fax: (919) 467-3430

isca@ipass.net

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA

Phone: 845-758-0400 Fax: 845-758-2634

Email: curran@proceedings.com Web: www.proceedings.com

Table of Contents

KEYNOTE	1
AppScale: ÂăBringing Portability and Simplicity to Cloud-based Application Development and Deployment Chandra Krintz	1
Chanara Kraaz	1
SOFTWARE ENGINEERING 1	3
Topic-Based Service Integration in Software Systems Kenneth M'Balé, Sharad Sharma, Darsana Josyula	. 3
Assertion-Based Software Testing Metrics Approach based on Fuzzy Logic Ali Alakeel	9
Experimenting Static Analysis on Proprietary Code: An Industrial Perspective Galoh Rashidah Haron, Khairul Azmi Abu Bakar	13
Analysing Software Architecture of FLOSS Projects for Evolution and Reusability *Lerina Aversano, Maria Tortorella**	19
DATA ENGINEERING 1	25
Using Genetic Algorithm and Neural Networks in a Goal Finding Application for Evacuation Sharad Sharma, Kolawole Ogunlana	25
Insight Into The X86-64 Bare Pc Application Boot/Load/Run Methodology Hojin Chang, Ramesh Karne, Alexander Wijesinha	31
Design and Implementation of a Graphical Visualization Tool for NCS Justin Cardoza, Alexander Jones, Denver Liu, Devyani Tanna, Laurence Bray, Sergiu Dascalu, Frederick Harris	37
Comparison and Improvement for RGB and YUV Color Space Based on K-means in Image Segmentation Ailian Wang, Weili Wu	43
DATA ENGINEERING 2	49
An Efficient Scheme for Non-Clustered Data Broadcasting Kai Xing, Weili Wu, Yan Shi, Jiaofei Zhong, Lidong Wu, Zheng Gao	49
A Database-Oriented Approach For XACML Implementation On Role-Based Access Control Ying Jin, Travis Sorley, Jose Reyes	55
Modeling Hierarchical Data In SQL Databases: Introduction To An Efficient Development Framework Ken Clement, Raj Singh	61
An Integrated Multi-asset, Multi-strategy Algorithmic Trading System Tarek Abdunabi, Abdurhman Albasir, Otman Basir	67
APPLICATIONS IN SOFTWARE AND DATA ENGINEERING	73
Architectural Framework for Web Service Dynamics: A Layered Approach Faisal Ahmad, Suvamoy Changder, Anirban Sarkar	. 73
Graph Semantic based Approach for Quering Semi-structured Database System Rita Ganguly, Rajib Kumar Chatterjee, Anirban Sarkar	7 9
Building a Pluggable Sharding Subsystem For MySQL Narayanan Venkateswaran, Suvamoy Changder	85

Modeling Business Rules for Cloud Applications: a Graph Semantic Based Approach	
Amit Kr Mandal, Suvamoy Changder, Anirban Sarkar, Narayan Debnath	91
SOFTWARE ENGINEERING 2	97
Frequent Pattern Mining in Software Engineering Saleh Almugrin, Waleed Albattah, Austin Melton	97
Integrated Infrastructures For Knowledge-Guided Software Evolution And Adaptation Thomas Marlowe, Norbert Jastroch, Vassilka Kirova, Cyril Ku	105
Architectural Considerations for Multi-asset, Multi-strategy Algorithmic Trading Systems Tarek Abdunabi, Abdurhman Albasir, Otman Basir	111
A Non-orthogonal Space Distance Measuring Method in Analogy-based Software Cost Estimation Xiaoyuan Chu, Qin Liu, Ruibo Guan	117
Author Index	125