GUEST EDITORIAL PREFACE

Special Issue on New Techniques of Services Computing

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The services computing is a new cross-discipline and widely accepted paradigm that leverages both science and technology needed to bridge the gap between business services and IT/telecommunication services. With the emergency of new techniques such as Big Data, Mobile Computing, Cloud Computing, etc., new trends of services computing techniques emerge for developing new computing technology to enable larger-scale business services efficiently and effectively. This special issue includes the best papers selected from the Eighth Asia-Pacific Services Computing Conference. This year, we have received 205 submissions, and after a rigorous peer review process, a number of 15 papers with highest scores were selected by the program committee to be invited to be submitted to International Journal of Web Service Research. In this special issue, we present five high quality research articles on new topics that are promising in current emerging Services Computing solutions. We believe the designs proposed in these ten articles will help to inspire more interesting and promising solutions in this research area.

In the first paper, “Automatic Construction of Service Network based on OpenCyc”, Xiaocao Hu et al. propose Service Network as an infrastructure that allows users to discover, deploy, synthesize and compose Web Services automatically. The authors present an approach for the automatic construction of Service Network.

In the second paper, “Regularity and Variability: Growth Patterns of Online Friendships”, Lun Zhang et al. employ multinomial logistic regression to discover that network connectedness lead to the differences in the growth patterns of online friendships, while a user’s personal strategy of online friendship formation has a nil effect on explaining the differences in growth patterns of online friendships.

In the third paper, “Improving Recommendation Accuracy and Diversity via Multiple Social Factors and Social Circles”, Yong Feng et al. propose a novel recommendation model
which considers more comprehensive social factors including individual preference, interpersonal trust influence, interpersonal interest similarity and interpersonal closeness degree to improve the recommendation accuracy.

In the fourth paper, “An integrated framework for semantic service composition using answer set programming”, Yilong Yang et al. present an integrated framework for semantic service composition using answer set programming which integrates designed workflow with nested composition.

In the fifth paper, “Improve Distributed Client Lifecycle Control in ShadowStream”, Junhua Yan et al. develop a novel distributed client lifecycle control scheme, which matches the desired experimental scenario with real viewers’ behavior in physical world, to get rid of restrictions caused by the limited number of stable viewers in live-testing streaming networks.

Jia Zhang, Hanhua Chen Guest Editors IJWSR

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Jia Zhang is an Associate Research Professor at Carnegie Mellon University’s Silicon Valley campus. Her recent research interests center on service oriented computing, with a focus on collaborative scientific workflows, Internet of Things, service oriented architecture, and semantic service discovery. She has co-authored one textbook titled “Services Computing” and has published over 120 refereed journal papers, book chapters, and conference papers. She is now an Associate Editor of IEEE Transactions on Services Computing (TSC) and of International Journal of Web Services Research (JWSR), and Editor-in-Chief of International Journal of Services Computing (IJSC). Previously at the Northern Illinois University as a tenured Associate Professor of computer science, Zhang taught courses in software engineering and databases and opened two graduate-level courses based on her co-authored textbook “Services Computing.” Zhang also has nine years of architect and technical lead experience in the software industry.

Hanhua Chen received the Ph.D. degree in 2010 from School of Computer Science and Engineering, Huazhong University of Science and Technology, where he is now working as an associate professor. His research interests include distributed systems, services computing, online social networks, peer-to-peer systems and wireless sensor networks. He received the National Excellent Doctorial Dissertation Award of PR China in 2012, the Intel Early Career Faculty Honor Program Award in 2013, and the Excellent Young Scientist Award of NSFC in 2014. He is the TPC co-chair of the eighth Asia-Pacific Services Computing Conference (APSCC 2014). He is an editor board member of the International Journal of Distributed Sensor Networks (IJDSN) and a young associate editor of Frontiers of Computer Science (FCS). He is a member of the IEEE and ACM.