Guest Editorial Preface

Special Issue on Semantic Technology:
5th and 6th Joint International Semantic Technology Conference (JIST 2015 and JIST 2016)

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INTRODUCTION

Semantic technology leverages a diverse family of techniques to help process information and understand meanings from it. Semantic technology has shown great impact on the computer science as well as in many other scientific fields. The main research topics of semantic technology include Ontology and Reasoning, Linked Data, Knowledge Graph and Semantic Search, among others. We are honoured that the selected papers provide a variety of complementary aspects of semantic technology and promote a rich picture to the readers of the International Journal on Semantic Web and Information Systems.

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The first paper of the special issue, entitled "Predicting Reasoner Performance on ABox Intensive OWL 2 EL Ontologies", is an excellent contribution to the area of ontology reasoning, which introduces the notion of ABox intensity in the context of predicting reasoner performance and proposes new metrics for ABox features of OWL 2 EL.

The second research paper of the special issue entitled "Property Clustering in Linked Data: An Empirical Study and Its Application to Entity Browsing" is an excellent investigation on property relatedness measures and automated clustering algorithms. We believe that many diverse application areas will gain benefits from the novel methods and empirical results.

The third research paper entitled "Multi-Target Search on Semantic Associations in Linked Data" is an excellent contribution to the area of semantic search, which proposes a novel keyword-based search model on semantic associations in Linked Data. We believe that semantic search is a representative paradigm for semantic technology.

The fourth research paper of the special issue entitled "On Evaluating Web-Scale Extracted Knowledge Bases in a Comparative Way" provides two metric sets considering Richness and Correctness based on a quasi-formal conceptual representation. This work is significant for comparing web-scale knowledge bases extracted from encyclopedic Web sites.

The fifth research paper of the special issue entitled "PROSE: A Plugin-based Framework for Paraconsistent Reasoning on Semantic Web" provides a a plugin- based framework called prose to provide rich paraconsistent reasoning services for OWL ontologies. This work will be very useful for dealing with inconsistent ontologies.

The final research paper of the special issue, entitled "RIKEN MetaDatabase: A Database Platform as a Microcosm of Linked Open Data Cloud for Life Sciences", describes an excellent application of Linked Data for the Life Sciences. We do believe that semantic technology developers and enthusiasts will obtain valuable experience from the proposed workflow, the released platform and the comprehensive datasets.

CONCLUSION

In the past ten years, we have all witnessed the rapid development of semantic technology. The next five years will be critical for the evolution of semantic technology research, and it is time to envision a new era of maturity for the domain. We do believe that this special issue is an excellent opportunity to bring together researchers in the semantic technology community and other related areas for innovative thinking towards sustainable information systems and the Semantic Web.

We are looking forward for your reflection to the published research of this issue.

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