

## SemDeep-4\_NLIWOD-4 2018

# Joint Proceedings of ISWC 2018 Workshops SemDeep-4 and NLIWOD-4

- 4th Workshop on Semantic Deep Learning (SemDeep-4)
- 4th Natural Language Interfaces for the Web of Data (NLIWOD-4) workshop and 9th Question Answering over Linked Data challenge (QALD-9)

Joint proceedings of the 4th Workshop on Semantic Deep Learning (SemDeep-4) and NLIWoD4: Natural Language Interfaces for the Web of Data (NLIWOD-4) and 9th Question Answering over Linked Data challenge (QALD-9) co-located with 17th International Semantic Web Conference (ISWC 2018) (ISWC2018)

Monterey, California, United States of America, October 8th to 9th, 2018.

Edited by

**Key-Sun Choi**, KAIST, Korea  
**Luis Espinosa Anke**, Cardiff University, United Kingdom  
**Thierry Declerck**, German Research Centre for Artificial Intelligence (DFKI GmbH), Germany  
**Dagmar Gromann**, Technical University Dresden, Germany  
**Jin-Dong Kim**, Database Center for Life Science (DBCLS), Japan  
**Axel-Cyrille Ngonga Ngomo**, Paderborn University, Germany  
**Muhammad Saleem**, Leipzig University, Germany  
**Ricardo Usbeck**, Paderborn University, Germany

## Table of Contents

- Joint Preface

### Session 1: Invited talks

- Invited Talk: Connecting Industrial NL Applications to Knowledge (in Nuance)  
Peter F. Patel-Schneider (NLIWOD-4)
- Invited Talk: Learning Expressive Ontological Concept Descriptions via Neural Networks  
Marco Rospocher (SemDeep-4)

### Session 2: The 4th International Workshop on Natural Language Interfaces for Web of Data (NLIWOD-4) and 9th Question Answering over Linked Data challenge (QALD-9)

- An Extensible Natural-Language Query Interface to an Event-Based Semantic Web Triplestore  
*Richard Frost, Shane Peelar* 1-16
- Testing a Knowledge Inquiry System on Question Answering Tasks  
Kyriaki Zafeiroudi, Leah Eckman, Rebecca Passonneau (paper published in "Emerging Topics in Semantic Technologies. ISWC 2018 Satellite Events. E. Demidova, A.J. Zaveri, E. Simperl (Eds.), ISBN: 978-3-89838-736-1, 2018, AKA Verlag Berlin) 17-32
- Chatbot Who Wants to Learn the Knowledge: KB-Agent  
*Younggyun Hahm, Jiho Kim, Sangmin An, Minho Lee, Key-Sun Choi* 33-36
- Open Relation Extraction by Matrix Factorization and Universal Schemas  
*Jiho Kim, Sangha Nam, Key-Sun Choi* 37-50
- 8th Challenge on Question Answering over Linked Data (QALD-8) (invited paper)  
*Ricardo Usbeck, Axel-Cyrille Ngonga Ngomo, Felix Conrads, Michael Röder, Giulio Napolitano* 51-57
- 9th Challenge on Question Answering over Linked Data (QALD-9) (invited paper)  
*Ricardo Usbeck, Ria Hari Gusmita, Axel-Cyrille Ngonga Ngomo, Muhammad Saleem* 58-64

### Session 3: 4th Workshop on Semantic Deep Learning (SemDeep-4)

- Understanding and Representing the Semantics of Large Structured Documents  
*Muhammad Mahbubur Rahman, Tim Finin* 65-76
- Combining Text Embedding and Knowledge Graph Embedding Techniques for Academic Search Engines  
*Gengchen Mai, Krzysztof Janowicz, Bo Yank* 77-88
- Global and Local Evaluation of Link Prediction Tasks with Neural Embeddings  
*Asan Agibetov, Matthias Samwald* 89-102
- A First Experiment on Including Text Literals in KGloVe  
*Michael Cochez, Martina Garofalo, Jérôme Lenßen, Maria Angela Pellegrino* 103-106
- Semantic Image-Based Profiling of Users' Interests with Neural Networks  
Szymon Wiczorek, Dominik Filipiak and Agata Filipowska  
(best SemDeep-4 paper published in "Emerging Topics in Semantic Technologies. ISWC 2018 Satellite Events. E. Demidova, A.J. Zaveri, E. Simperl(Eds.), ISBN: 978-3-89838-736-1, 2018, AKA Verlag Berlin)

We offer a [BibTeX file](#) for citing papers of this workshop from LaTeX.