Ontology Matching

OM-2016

Proceedings of the ISWC Workshop

Introduction

Ontology matching[1] is a key interoperability enabler for the semantic web, as well as a useful tactic in some classical data integration tasks dealing with the semantic heterogeneity problem. It takes ontologies as input and determines as output an alignment, that is, a set of correspondences between the semantically related entities of those ontologies. These correspondences can be used for various tasks, such as ontology merging, data translation, query answering or navigation on the web of data. Thus, matching ontologies enables the knowledge and data expressed in the matched ontologies to interoperate.

The workshop has three goals:

- To bring together leaders from *academia*, *industry* and *user institutions* to assess how academic advances are addressing real-world requirements. The workshop strives to improve academic awareness of industrial and final user needs, and therefore, direct research towards those needs. Simultaneously, the workshop serves to inform industry and user representatives about existing research efforts that may meet their requirements. The workshop also investigated how the ontology matching technology is going to evolve.
- To conduct an extensive and rigorous evaluation of ontology matching and instance matching (link discovery) approaches through the OAEI (Ontology Alignment Evaluation Initiative) 2016 campaign[2]. Besides real-world specific matching tasks, involving e.g., large biomedical ontologies, OAEI 2016 introduced the process model matching track as well as a desease-phenotype track supported by the Pistoia Alliance Ontologies Mapping project within a specific matching scenario. Therefore, the ontology matching evaluation initiative itself provided a solid ground for discussion of how well the current approaches are meeting business needs.
- To examine new uses, similarities and differences from database schema matching, which has received decades of attention but is just beginning to transition to mainstream tools.

The program committee selected 6 submissions for oral presentation and 9 submissions for poster presentation. 21 matching systems participated in this year's OAEI campaign. Further information about the Ontology Matching workshop can be found at: `http://om2016.ontologymatching.org/`.

[1] `http://www.ontologymatching.org/`
[2] `http://oaei.ontologymatching.org/2016`

Acknowledgments. We thank all members of the program committee, authors and local organizers for their efforts. We appreciate support from the Trentino as a Lab[3] initiative of the European Network of the Living Labs[4] at Informatica Trentina[5], the EU SEALS (Semantic Evaluation at Large Scale)[6] project and the Pistoia Alliance Ontologies Mapping project[7].

Pavel Shvaiko
Jérôme Euzenat
Ernesto Jiménez-Ruiz
Michelle Cheatham
Oktie Hassanzadeh
Ryutaro Ichise

December 2016

[3] http://www.taslab.eu
[4] http://www.openlivinglabs.eu
[5] http://www.infotn.it
[6] http://www.development.seals-project.eu/
[7] http://www.pistoiaalliance.org/ontologies-mapping-plans-participate-oaei-2016/

Organization

Organizing Committee

Pavel Shvaiko, Informatica Trentina SpA, Italy
Jérôme Euzenat, INRIA & University Grenoble Alpes, France
Ernesto Jiménez-Ruiz, University of Oxford, UK
Michelle Cheatham, Wright State University, USA
Oktie Hassanzadeh, IBM Research, USA
Ryutaro Ichise, National Institute of Informatics, Japan

Program Committee

Alsayed Algergawy, Jena University, Germany
Zohra Bellahsene, LRIMM, France
Olivier Bodenreider, National Library of Medicine, USA
Marco Combetto, Informatica Trentina, Italy
Valerie Cross, Miami University, USA
Isabel Cruz, The University of Illinois at Chicago, USA
Warith Eddine Djeddi, LIPAH & LABGED, Tunisia
Jérôme David, University Grenoble Alpes & INRIA, France
Gayo Diallo, University of Bordeaux, France
Zlatan Dragisic, Linköpings Universitet, Sweden
Alfio Ferrara, University of Milan, Italy
Fausto Giunchiglia, University of Trento, Italy
Wei Hu, Nanjing University, China
Valentina Ivanova, Linköpings Universitet, Sweden
Antoine Isaac, Vrije Universiteit Amsterdam & Europeana, Netherlands
Daniel Faria, Instituto Gulbenkian de Ciência, Portugal
Patrick Lambrix, Linköpings Universitet, Sweden
Juanzi Li, Tsinghua University, China
Vincenzo Maltese, University of Trento, Italy
Fiona McNeill, University of Edinburgh, UK
Christian Meilicke, University of Mannheim, Germany
Andriy Nikolov, Open University, UK
Axel Ngonga, University of Leipzig, Germany
Leo Obrst, The MITRE Corporation, USA
Heiko Paulheim, University of Mannheim, Germany
Catia Pesquita, University of Lisbon, Portugal
Dominique Ritze, University of Mannheim, Germany
Umberto Straccia, ISTI-C.N.R., Italy
Ondřej Zamazal, Prague University of Economics, Czech Republic
Valentina Tamma, University of Liverpool, UK

Cássia Trojahn, IRIT, France
Ludger van Elst, DFKI, Germany
Songmao Zhang, Chinese Academy of Sciences, China

Table of Contents

Technical Papers

OAEI Papers

Posters