

Ontology Matching

OM-2013

Proceedings of the ISWC Workshop

Introduction

Ontology matching¹ 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 the 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 will strive to improve academic awareness of industrial and final user needs, and therefore direct research towards those needs. Simultaneously, the workshop will serve to inform industry and user representatives about existing research efforts that may meet their requirements. The workshop will also investigate how the ontology matching technology is going to evolve.
- To conduct an extensive and rigorous evaluation of ontology matching approaches through the OAEI (Ontology Alignment Evaluation Initiative) 2013 campaign². The particular focus of this year's OAEI campaign is on real-world specific matching tasks as well as on evaluation of interactive matchers. Therefore, the ontology matching evaluation initiative itself will provide a solid ground for discussion of how well the current approaches are meeting business needs.
- To examine 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 5 submissions for oral presentation and 11 submissions for poster presentation. 23 matching systems participated in this year's OAEI campaign.

Further information about the Ontology Matching workshop can be found at: <http://om2013.ontologymatching.org/>.

¹<http://www.ontologymatching.org/>

²<http://oaei.ontologymatching.org/2013>

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 (TasLab)³ initiative of the European Network of the Living Labs⁴ at Informatica Trentina SpA⁵, the EU SEALS (Semantic Evaluation at Large Scale)⁶ project and the Semantic Valley⁷ initiative.



Pavel Shvaiko
Jérôme Euzenat
Kavitha Srinivas
Ming Mao
Ernesto Jiménez-Ruiz

October 2013

³<http://www.taslab.eu>

⁴<http://www.openlivinglabs.eu>

⁵<http://www.infotn.it>

⁶<http://www.seals-project.eu>

⁷http://www.semanticvalley.org/index_eng.htm

Organization

Organizing Committee

Pavel Shvaiko, TasLab, Informatica Trentina SpA, Italy
Jérôme Euzenat, INRIA & LIG, France
Kavitha Srinivas, IBM, USA
Ming Mao, eBay, USA
Ernesto Jiménez-Ruiz, University of Oxford, UK

Program Committee

Manuel Atencia, INRIA & LIG, France
Michele Barbera, SpazioDati, Italy
Zohra Bellahsene, LRIMM, France
Chris Bizer, University of Mannheim, Germany
Olivier Bodenreider, National Library of Medicine, USA
Marco Combetto, Informatica Trentina, Italy
Gianluca Correndo, University of Southampton, UK
Isabel Cruz, The University of Illinois at Chicago, USA
Jérôme David, INRIA & LIG, France
AnHai Doan, University of Wisconsin, USA
Alfio Ferrara, University of Milan, Italy
Bin He, IBM, USA
Wei Hu, Nanjing University, China
Ryutaro Ichise, National Institute of Informatics, Japan
Antoine Isaac, Vrije Universiteit Amsterdam & Europeana, Netherlands
Krzysztof Janowicz, University of California, USA
Anja Jentzsch, Wikimedia Deutschland, Germany
Yannis Kalfoglou, Ricoh Europe plc, UK
Anastasios Kementsietsidis, IBM, USA
Patrick Lambrix, Linköpings Universitet, Sweden
Monika Lanzemberger, Vienna University of Technology, Austria
Vincenzo Maltese, University of Trento, Italy
Fiona McNeill, University of Edinburgh, UK
Christian Meilicke, University of Mannheim, Germany
Peter Mork, Noblis, USA
Axel-Cyrille Ngonga Ngomo, University of Leipzig, Germany
Andriy Nikolov, Open University, UK
Leo Obrst, The MITRE Corporation, USA
Heiko Paulheim, University of Mannheim, Germany
Yefei Peng, Google, USA
Andrea Perego, European Commission - Joint Research Centre, Italy
François Scharffe, LIRMM & University of Montpellier, France

Juan Sequeda, University of Texas at Austin, USA
Luciano Serafini, Fondazione Bruno Kessler - IRST, Italy
Umberto Straccia, ISTI-C.N.R., Italy
Ondřej Zamazal, Prague University of Economics, Czech Republic
Cássia Trojahn, IRIT, France
Raphaël Troncy, EURECOM, France
Giovanni Tummarello, Fondazione Bruno Kessler - IRST, Italy
Lorenzino Vaccari, Autonomous Province of Trento, Italy
Ludger van Elst, DFKI, Germany
Shenghui Wang, Vrije Universiteit Amsterdam, Netherlands
Baoshi Yan, LinkedIn, USA
Songmao Zhang, Chinese Academy of Sciences, China

Table of Contents

PART 1 - Technical Papers

Rapid execution of weighted edit distances <i>Tommaso Soru, Axel-Cyrille Ngonga Ngomo</i>	1
To repair or not to repair: reconciling correctness and coherence in ontology reference alignments <i>Catia Pesquita, Daniel Faria, Emanuel Santos, Francisco M. Couto</i>	13
Unsupervised learning of link specifications: deterministic vs. non-deterministic <i>Axel-Cyrille Ngonga Ngomo, Klaus Lyko</i>	25
IncMap: pay as you go matching of relational schemata to OWL ontologies <i>Christoph Pinkel, Carsten Binnig, Evgeny Kharlamov, Peter Haase</i>	37
Complex correspondences for query patterns rewriting <i>Pascal Gillet, Cássia Trojahn, Olivier Haemmerlé, Camille Pradel</i>	49

PART 2 - OAEI Papers

Results of the Ontology Alignment Evaluation Initiative 2013 <i>Bernardo Cuenca Grau, Zlatan Dragisic, Kai Eckert, Jérôme Euzenat, Alfio Ferrara, Roger Granada, Valentina Ivanova, Ernesto Jiménez-Ruiz, Andreas Oskar Kempf, Patrick Lambrix, Andriy Nikolov, Heiko Paulheim, Dominique Ritzke, François Scharffe, Pavel Shvaiko, Cássia Trojahn, Ondřej Zamazal</i>	61
AgreementMakerLight results for OAEI 2013 <i>Daniel Faria, Catia Pesquita, Emanuel Santos, Isabel F. Cruz, Francisco M. Couto</i>	101
Monolingual and cross-lingual ontology matching with CIDER-CL: evaluation report for OAEI 2013 <i>Jorge Gracia, Kartik Asooja</i>	109
CroMatcher - results for OAEI 2013 <i>Marko Gulić, Boris Vrdoljak</i>	117
IAMA results for OAEI 2013 <i>Yuanzhe Zhang, Xuepeng Wang, Shizhu He, Kang Liu, Jun Zhao, Xueqiang Lv</i>	123
LogMap and LogMapLt results for OAEI 2013 <i>Ernesto Jiménez-Ruiz, Bernardo Cuenca Grau, Ian Horrocks</i>	131
Summary of the MaasMatch participation in the OAEI-2013 campaign <i>Frederik C. Schadd, Nico Roos</i>	139
StringsAuto and MapSSS results for OAEI 2013 <i>Michelle Cheatham, Pascal Hitzler</i>	146
ODGOMS - results for OAEI 2013 <i>I-Hong Kuo, Tai-Ting Wu</i>	153
RiMOM2013 results for OAEI 2013 <i>Qian Zheng, Chao Shao, Juanzi Li, Zhichun Wang, Linmei Hu</i>	161
ServOMap results for OAEI 2013 <i>Amal Kammoun, Gayo Diallo</i>	169
SLINT+ results for OAEI 2013 instance matching <i>Khai Nguyen, Ryutaro Ichise</i>	177

System for Parallel Heterogeneity Resolution (SPHeRe) results for OAEI 2013 <i>Wajahat Ali Khan, Muhammad Bilal Amin, Asad Masood Khattak, Maqbool Hussain, Sungyoung Lee</i>	184
SYNTHESIS: results for the Ontology Alignment Evaluation Initiative (OAEI) 2013 <i>Antonis Koukourikos, George Vouros, Vangelis Karkaletsis</i>	190
WeSeE-Match results for OAEI 2013 <i>Heiko Paulheim, Sven Hertling</i>	197
XMapGen and XMapSiG results for OAEI 2013 <i>Warith Eddine Djeddi, Mohamed Tarek Khadir</i>	203
YAM++ results for OAEI 2013 <i>DuyHoa Ngo, Zohra Bellahsene</i>	211

PART 3 - Posters

Collective ontology alignment <i>Jason B. Ellis, Oktie Hassanzadeh, Kavitha Srinivas, Michael J. Ward</i> ...	219
Uncertainty in crowdsourcing ontology matching <i>Jérôme Euzenat</i>	221
Mix'n'Match: iteratively combining ontology matchers in an anytime fashion <i>Simon Steyskal, Axel Polleres</i>	223
An ontology mapping method based on support vector machine <i>Jie Liu, Linlin Qin, Hanshi Wang</i>	225
PLATAL - a tool for web hierarchies extraction and alignment <i>Bernardo Severo, Cássia Trojahn, Renata Vieira</i>	227
Is my ontology matching system similar to yours? <i>Ernesto Jiménez-Ruiz, Bernardo Cuenca Grau, Ian Horrocks</i>	229
Ontological quality control in large-scale, applied ontology matching <i>Catherine Legg, Samuel Sarjant</i>	231
Variations on aligning linked open data ontologies <i>Valerie Cross, Chen Gu, Xi Chen, Weiguo Xia, Peter Simon</i>	233
LOD4STAT: a scenario and requirements <i>Pavel Shvaiko, Michele Mostarda, Marco Amadori, Claudio Giuliano</i>	235
Interlinking and visualizing linked open data with geospatial reference data <i>Abdelfettah Feliachi, Nathalie Abadie, Fayçal Hamdi, Ghislain Auguste Ateazing</i>	237
Matching geospatial instances <i>Heshan Du, Natasha Alechina, Michael Jackson, Glen Hart</i>	239

