Ontology Matching
OM-2013

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 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 campaign\(^2\). 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 system 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 Labs\(^4\) at Informatica Trentina SpA\(^5\), the EU SEALS (Semantic Evaluation at Large Scale)\(^6\) project and the Semantic Valley\(^7\) 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
\(^7\)http://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 Lenznerberger, 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 Obst, 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
Tommaso Soru, Axel-Cyrille Ngonga Ngomo ................................1

To repair or not to repair: reconciling correctness and coherence in ontology reference alignments
Catia Pesquita, Daniel Faria, Emanuel Santos, Francisco M. Couto .... 13

Unsupervised learning of link specifications: deterministic vs. non-deterministic
Axel-Cyrille Ngonga Ngomo, Klaus Lyko ................................. 25

IncMap: pay as you go matching of relational schemata to OWL ontologies
Christoph Pinkel, Carsten Binnig, Evgeny Khramov, Peter Haase .... 37

Complex correspondences for query patterns rewriting
Pascal Gillet, Cissia Trojahn, Olivier Haemmerlé, Camille Prudel ........ 49
PART 2 - OAEI Papers

Results of the Ontology Alignment Evaluation Initiative 2013
Bernardo Cuenca Grau, Zlatan Dragošic, Kai Eckert,
Jérôme Euzenat, Alfio Ferrara, Roger Grunau, Valentina Ivanova,
Ernesto Jiménez-Ruiz, Andreas Oskar Kempf, Patrick Lambrix,
Andriy Nikolov, Heiko Paulheim, Dominique Ritze,
François Schafffe, Pavel Švaiko, Cássia Trojahn, Ondřej Zamazal ....... 61

AgreementMakerLight results for OAEI 2013
Daniel Faria, Catia Pesoita, Emanuel Santos,
Isabel F. Cruz, Francisco M. Couto ............................................ 101

Monolingual and cross-lingual ontology matching with CIDER-CL:
evaluation report for OAEI 2013
Jorge Gracia, Kartik Assoja ......................................................... 109

CroMatcher - results for OAEI 2013
Marko Galić, Boris Vrdoljak ....................................................... 117

IAMA results for OAEI 2013
Yuanzhe Zhang, Xuepeng Wang, Shizhu He, Kang Liu,
Jun Zhao, Xueqiang Lv ............................................................ 123

LogMap and LogMapLt results for OAEI 2013
Ernesto Jiménez-Ruiz, Bernardo Cuenca Grau, Ian Horrocks ............ 131

Summary of the MaasMatch participation in the OAEI-2013 campaign
Frederik C. Schudd, Nico Roos .................................................. 139

StringsAuto and MapSSS results for OAEI 2013
Michelle Cheatham, Pascal Hitzler .............................................. 146

ODGOMS - results for OAEI 2013
I-Hong Kuo, Tai-Ting Wu ...................................................... 153

RiMOM2013 results for OAEI 2013
Qian Zheng, Chao Shao, Juanzi Li, Zhichun Wang, Limmei Hu ........... 161

ServOMap results for OAEI 2013
Amal Kammoun, Gayo Diallo .................................................. 169

SLINT+ results for OAEI 2013 instance matching
Khai Nguyen, Ryutarō Ichise .................................................. 177
System for Parallel Heterogeneity Resolution (SPHeRe)
results for OAEI 2013
Wajahat Ali Khan, Muhammad Bilal Amin,
Asad Masood Khattak, Maqbool Hussain, Sungyoung Lee ............... 184

SYNTHESIS: results for the Ontology Alignment Evaluation Initiative (OAEI) 2013
Antonis Koukorikos, George Vouros, Vangelis Karkaletsis ............... 190

WeSeE-Match results for OAEI 2013
Heiko Paulheim, Sven Hertling ........................................ 197

XMapGen and XMapSiG results for OAEI 2013
Warith Eddine Djeddi, Mohamed Tarek Khadir ......................... 203

YAM++ results for OAEI 2013
DuyHoa Ngo, Zohra Bellahsene ....................................... 211
PART 3 - Posters

Collective ontology alignment
Jason B. Ellis, Oktie Hassanzadeh, Kavitha Srinivas, Michael J. Ward ... 219

Uncertainty in crowdsourcing ontology matching
Jérôme Euzenat ................................................................. 221

Mix’n’Match: iteratively combining ontology matchers
in an anytime fashion
Simon Steyskal, Axel Polleres ........................................... 223

An ontology mapping method based on support vector machine
Jie Liu, Linlin Qin, Hanshi Wang ......................................... 225

PLATAL - a tool for web hierarchies extraction and alignment
Bernardo Severo, Cássia Trojahn, Renata Vieira ................. 227

Is my ontology matching system similar to yours?
Ernesto Jiménez-Ruiz, Bernardo Cuenca Grau, Ian Horrocks .... 229

Ontological quality control in large-scale, applied ontology matching
Catherine Legg, Samuel Sarjant ........................................ 231

Variations on aligning linked open data ontologies
Valerie Cross, Chen Gu, Xi Chen, Weiguo Xia, Peter Simon .... 233

LOD4STAT: a scenario and requirements
Pavel Shvaiko, Michele Mostarda, Marco Amadori, Claudio Giuliano ... 235

Interlinking and visualizing linked open data
with geospatial reference data
Abdelfettah Felachi, Nathalie Abadie,
Fayçal Hamdi, Ghislain Auguste Atemezing .......................... 237

Matching geographic instances
Heshan Du, Natalia Alechina, Michael Jackson, Glen Hart ....... 239