Ontology Matching

OM-2025

Proceedings of the 20th International Workshop on Ontology Matching

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 interlinking, query answering or navigation over knowledge graphs. Thus, matching ontologies enables the knowledge and data expressed with the matched ontologies to interoperate.

The workshop had three goals:

- To bring together leaders from *academia*, *industry* and *user institutions* to assess how research 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 investigates how the ontology matching technology is going to evolve.
- To conduct an extensive and rigorous evaluation of ontology matching, instance matching (link discovery), and tablular data to knowledge graph matching approaches through the OAEI (Ontology Alignment Evaluation Initiative) 2025 campaign[2] and the SemTab 2025 Challenge[3].
- To examine similarities and differences from other, old, new and emerging, techniques and usages, such as process matching, web table and knowledge graph matching tasks or knowledge embeddings.

The program committee selected 9 submissions (5 long papers, 3 short papers, and 1 poster paper) for the presentation during the workshop. 20 matching systems participated in this year's OAEI campaign. There are 12 papers presenting system results from participating in the OAEI, and 1 paper presenting the synthesis of the evaluation results of all the tracks organized within the OAEI campaign. This year's proceedings also include the SemTab 2025 results and three system papers, underscoring the growing interest in how large language model (LLM)–driven reasoning, retrieval, and disambiguation can complement traditional matching techniques.

Further information about the Ontology Matching workshop can be found at: om.ontologymatching.org/2025.

[1] ontologymatching.org
[2] oaei.ontologymatching.org/2025/
[3] sem-tab-challenge.github.io/2025/

CEUR Workshop Proceedings ceur-ws.org ISSN 1613-0073
published 2025-12-22

Acknowledgments. We thank all members of the program committee, authors and local organizers for their efforts. We appreciate the support received in the past from Trentino Digitale[4], the EU SEALS (Semantic Evaluation at Large Scale) project, the EU HOBBIT (Holistic Benchmarking of Big Linked Data) project, the MELT (Matching EvaLuation Toolkit) project[5], the Pistoia Alliance Ontologies Mapping project[6] and SIRIUS Centre for Scalable Data Access[7].

Ernesto Jiménez-Ruiz
Oktie Hassanzadeh
Cássia Trojahn
Sven Hertling
Huanyu Li
Pavel Shvaiko
Jérôme Euzenat

December 2025

[4] trentinodigitale.it
[5] dwslab.github.io/melt
[6] pistoiaalliance.org/projects/current-projects/ontologies-mapping
[7] mn.uio.no/sirius

Organization

Organizing Committee

Ernesto Jiménez-Ruiz,
City St George's, University of London, UK

Oktie Hassanzadeh,
IBM Research, USA

Cássia Trojahn,
University of Grenoble Alpes, France

Sven Hertling,
University of Mannheim, Germany

Huanyu Li,
Linköping University, Sweden

Pavel Shvaiko,
Trentino Digitale SpA, Italy

Jérôme Euzenat,
INRIA & University of Grenoble Alpes, France

Program Committee

Alsayed Algergawy, *University of Passau, Germany*
Manuel Atencia, *Universidad de Málaga, Spain*
Jiaoyan Chen, *The University of Manchester, UK*
Jérôme David, *University Grenoble Alpes & INRIA, France*
Gayo Diallo, *University of Bordeaux, France*
Daniel Faria, *INESC-ID & IST, University of Lisbon, Portugal*
Alfio Ferrara, *University of Milan, Italy*
Marko Gulić, *University of Rijeka, Croatia*
Wei Hu, *Nanjing University, China*
Ryutaro Ichise, *National Institute of Informatics, Japan*
Antoine Isaac, *Vrije Universiteit Amsterdam & Europeana, Netherlands*
Naouel Karam, *Fraunhofer, Germany*
Prodromos Kolyvakis, *EPFL, Switzerland*
Patrick Lambrix, *Linköpings Universitet, Sweden*
Oliver Lehmberg, *University of Mannheim, Germany*
Fiona McNeill, *University of Edinburgh, UK*
Hoa Ngo, *CSIRO, Australia*
George Papadakis, *University of Athens, Greece*
Catia Pesquita, *University of Lisbon, Portugal*

Table of Contents

Long Papers

Short Papers

Poster Paper

OAEI Papers

SemTab Papers