DMR 2023

The 4th International Workshop on Designing Meaning Representations

Proceedings of the Workshop

June 20 - 23, 2023 Nancy, France

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Preface

While deep learning methods have led to many breakthroughs in practical natural language applications, most notably in Machine Translation, Machine Reading, Question Answering, Recognizing Textual Entailment, and so on, there is still a sense among many NLP researchers that we have a long way to go before we can develop systems that can actually "understand" human language and explain the decisions they make. Indeed, "understanding" natural language entails many different human-like capabilities, and they include but are not limited to the ability to track entities in a text, understand the relations between these entities, track events and their participants, understand how events unfold in time, and distinguish events that have actually happened from events that are planned or intended, are uncertain, or did not happen at all. "Understanding" also entails human-like ability to perform qualitative and quantitative reasoning, possibly with knowledge acquired about the real world. We believe a critical step in achieving natural language understanding is to design meaning representations for text that have the necessary meaning "ingredients" that help us achieve these capabilities.

This workshop intends to bring together researchers who are producers and consumers of meaning representations and through their interaction gain a deeper understanding of the key elements of meaning representations that are the most valuable to the NLP community. The workshop will also provide an opportunity for meaning representation researchers to critically examine existing frameworks with the goal of using their findings to inform the design of next-generation meaning representations. A third goal of the workshop is to explore opportunities and identify challenges in the design and use of meaning representations in multilingual settings. A final goal of the workshop is to understand the relationship between distributed meaning representations trained on large data sets using network models and the symbolic meaning representations that are carefully designed and annotated by CL researchers and gain a deeper understanding of areas where each type of meaning representation is the most effective, and how they can be linked.

These proceedings include papers presented at the 4th Designing Meaning Representation workshop on June 20, 2023, held in conjunction with the15th International Conference on Computational Semantics (IWCS 2023) in Nancy, France. DMR4 received 20 submissions, out of which 13 papers have been accepted to be presented at the workshop as talks. The papers address topics ranging from meaning representation methodologies to issues in meaning representation parsing, to the adaptation of meaning representations to specific applications and domains, to cross-linguistic issues in meaning representation. In addition to oral paper presentations, DMR4 also featured invited talks by Alain Polguère (Université de Lorraine) and Juri Opitz (Heidelberg University), entitled "A graph approach to representing lexical semantics" and "Metrics of Graph-Based Meaning Representations with Applications from Parsing Evaluation to Explainable NLG Evaluation and Semantic Search", respectively.

We thank our organizing committee for its continuing organization of the DMR workshops, and the IWCS 2023 workshop chairs for their support. We are grateful to all of the authors for submitting their papers to the workshop and our program committee members for their dedication and their thoughtful reviews. Finally, we thank our invited speakers for making the workshop a uniquely valuable discussion of linguistic annotation research.

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Invited Speakers

Alain Polguère, University of Lorraine
Juri Opitz, Heidelberg University

Publicity Chairs

Kristine Stenzel, University of Colorado Boulder
Haibo Sun, Brandeis University

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