*SEM 2016: The Fifth Joint Conference on Lexical and Computational Semantics

Proceedings of the Conference

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Introduction

*SEM, the Joint Conference on Lexical and Computational Semantics, has been organized yearly since 2012 under the auspices of ACL SIGLEX and SIGSEM. Its long term goal is to become a stable forum for the growing number of NLP researchers working on all aspects of semantics. To this end, each year it brings together researchers interested in the semantics of natural languages and its computational modeling. The conference embraces symbolic and probabilistic approaches, and everything in between. Theoretical contributions as well as practical applications are welcome.

The 2016 edition of *SEM takes place in Berlin on August 11 and 12 and is collocated with ACL. We accepted 27 papers (16 long and 11 short papers) for publication at the conference, out of 66 paper submissions (resulting in an overall acceptance rate of 40

The *SEM 2016 program consists of oral presentations for long papers, a poster session for short papers and three keynote talks by Yoav Artzi, Alexander Koller and Bonnie Webber.

Following the tradition initiated at *SEM 2015, *SEM 2016 will award two Adam Kilgarriff *SEM Best Paper Awards for Lexical Semantics.

We thank EACL and SIGLEX for sponsoring the three keynotes and Google and Lexical Computing for sponsoring the Adam Kilgarriff *SEM Best Paper Award. We would also like to thank Phong Le, *SEM 2016 Publication Chair, for his valuable work in editing these proceedings and the area chairs for their efforts in recruiting reviewers, stimulating discussion among them and for their dedication to carefully select the papers that make *SEM 2016 the high quality event we will all enjoy in Berlin. Last but not least, we thank the reviewers without whom *SEM could not be.

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Ivan Titov, Program Co-Chair (University of Amsterdam, the Netherlands)

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Invited Talk: Context and Non-compositional Phenomena in Language Understanding

Yoav Artzi

Cornell University

Abstract

Sentence meaning can be recovered by composing the meaning of words following the syntactic structure. However, robust understanding requires considering non-compositional and contextual cues as well. For example, a robot following instructions must consider its observations to accurately complete its task. Similarly, to correctly map temporal expressions within a document to standard time values, a system must consider previously mentioned events. In this talk, I will address such phenomena within compositional approaches, and focus on the non-compositional parts of the reasoning process.

Joint work with Kenton Lee and Luke Zettlemoyer.

Invited Talk: Top-down and bottom-up views on success in semantics

Alexander Koller

University of Potsdam

Abstract

As participants of *SEM, all of us are excited about the resurgence of research in computational semantics over the past few years. There is a general feeling that modern data-driven approaches to semantics, especially distributional ones, are great success stories. This is in contrast to classical knowledge-based approaches, which are widely accepted as respectable and pretty, but not useful in practice.

In my talk, I will challenge this perception by asking what the measure of success of research in semantics should be. I will distinguish between bottom-up and top-down views on linguistic theories, and argue that we count (computational) truth-conditional semantics as failed for top-down reasons, but data-driven semantics as a success for bottom-up reasons. I will argue that identifying top-down goals for modern computational semantics would help us understand the relationship between classical and modern approaches to semantics, and distinguish research directions in modern semantics that are useful from those that are merely fun.

In the second part of the talk, I will focus on one candidate for a top-down goal that is mentioned frequently, namely similarity of arbitrary phrases based on distributional methods. I will ask whether our evaluation methods for similarity are appropriate, and whether similarity is even a meaningful concept if the task and context are left unspecified. I will conclude with some thoughts on how we might obtain top-down goals by taking a more task-based perspective.

Invited Talk: Exploring for Concurrent Discourse Relations

Bonnie Webber

University of Edinburgh

Abstract

Discourse relations are an element of discourse coherence, indicating how the meaning and/or function of clauses in a text make sense together. Evidence for discourse relations can come from a range of sources, including explicit discourse connectives such as coordinating and subordinating conjunctions and discourse adverbials. While some clauses may require an explicit connective to provide evidence for a discourse relation, other clauses don't.

This talk starts from the observation that there may be more than one piece of explicit evidence for how a clause relates to the rest of the discourse. I first consider why this may be so, before considering the related questions of why there may only be one piece of explicit evidence or none at all. The amount of explicit evidence, however, does not constrain the possibility that a clause bears more than one relation to the previous discourse, what we have called "Concurrent Discourse Relations".

Since we don't fully understand concurrent discourse relations, I present work we have been doing on exploring for evidence from corpora and on getting evidence from crowdsourcing experiments. The goal is to be able to use such evidence to help automatically annotate concurrent relations in corpora and improve the ability of systems to extract information from text by recognizing more of the relations underlying text coherence.

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