NAACL HLT 2018

**Computational Semantics
Beyond Events and Roles
(SemBEaR 2018)**

Proceedings of the Workshop

June 5, 2018
New Orleans, Louisiana

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Introduction

During the last decade, semantic representation of text has focused on extracting propositional meaning, i.e., capturing who does what to whom, how, when and where. Several corpora are available, and existing tools extract this kind of knowledge, e.g., role labelers trained on PropBank or NomBank. Nevertheless, most current representations tend to disregard significant meaning encoded in human language. For example, sentences 1-2 below share the same argument structure regarding verb contracted, but do not convey the same overall meaning. While in the first example John contracting the disease is factual, in the second it is not:

1. John likely contracted the disease when a mouse bit him in the Adirondacks.
2. John never contracted the disease although a mouse bit him in the Adirondacks.

In order to truly capture what these sentences mean, aspects of meaning that go beyond identifying events and their roles (e.g., uncertainty, negation and attribution) must be taken into account. The Workshop on Computational Semantics Beyond Events and Roles focuses on a broad range of semantic phenomena that lays beyond the identification and linking of eventualities and their semantic arguments with relations such as *agent* (who), *theme* (what) and *location* (where), here so called SemBEaR.

SemBEaR is pervasive in human language and, while studied from a theoretical perspective, computational models are still scarce. Humans use language to describe events that do not correlate with a real situation in the world. They express desires, intentions and plans, and also discuss events that did not happen or are unlikely to happen. Events are often described hypothetically, and speculation can be used to explain why something is a certain way without a strong commitment. Humans do not always (want to) tell the (whole) truth: they may use deception to hide lies. Devices such as irony and sarcasm are employed to play with words so that what is said is not what is meant. Finally, humans not only describe their personal views or experiences, but also attribute statements to others. These phenomena are not exclusive of opinionated texts, but they are ubiquitous in language, even in scientific works and news as exemplified in the sentences below:

- Female leaders might have avoided world wars.
- Political experts speculate that Donald Trump's meltdown is beginning.
- Infected people typically don't become contagious until they develop symptoms.
- Medical personnel can be infected if they don't use protective gear, such as surgical masks and gloves.
- You can only catch Ebola from coming into direct contact with the bodily fluids of someone who has the disease and is showing symptoms.
- We have never seen a human virus change the way it is transmitted.
- The government did not release the files until 1998.

In its 2018 edition, the Workshop on Computational Semantics Beyond Events and Roles (SemBEaR) brought together scientists working on these kind of semantic phenomena within computational semantics. The workshop was collocated with the 16th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL 2018) in New Orleans, Louisiana, and took place on June 5, 2018. The program included papers SemBEaR 2018 is a follow-up of five previous events: the 2010 Negation and Speculation in Natural Language Processing Workshop (NeSp-NLP 2010), the Extra-Propositional Aspects of Meaning (ExProM) in Computational Linguistics Workshops held in 2012, 2015 and 2016, and SemBEaR 2017.

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Erik Velldal - University of Oslo
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Invited Speaker:

Ivan Habernal - UKP Lab, Technische Universität Darmstadt

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Workshop Program

Tuesday June 5, 2018

9:00–9:10   Opening Remarks

9:10–9:30   *Using Hedge Detection to Improve Committed Belief Tagging*
Morgan Ulinski, Seth Benjamin and Julia Hirschberg

9:30–10:00   *Paths for Uncertainty: Exploring the Intricacies of Uncertainty Identification for News*
Chrysoula Zerva and Sophia Ananiadou

10:00–10:20   *Detecting Sarcasm is Extremely Easy ;-)*
Natalie Parde and Rodney Nielsen

10:20–10:30   Discussion Session 1

10:30–11:00   Coffee Break

11:00–11:30   *GKR: the Graphical Knowledge Representation for semantic parsing*
Aikaterini-Lida Kalouli and Richard Crouch

              Invited talk
11:30–12:20   *Computational Argumentation: A Journey Beyond Semantics, Logic, Opinions, and Easy Tasks*
Ivan Habernal

12:20–12:30   Discussion Session 2