

NAACL HLT 2018

Figurative Language Processing

Proceedings of the Workshop

6 June 2018
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Introduction

Figurative language processing is a rapidly growing area in Natural Language Processing (NLP), including processing of metaphors, idioms, puns, irony, sarcasm, as well as other figures. Characteristic to all areas of human activity (from poetic to ordinary to scientific) and, thus, to all types of discourse, figurative language becomes an important problem for NLP systems. Its ubiquity in language has been established in a number of corpus studies and the role it plays in human reasoning has been confirmed in psychological experiments. This makes figurative language an important research area for computational and cognitive linguistics, and its automatic identification and interpretation indispensable for any semantics-oriented NLP applications.

This workshop builds upon the successful start of the Metaphor in NLP workshop series (at NAACL–HLT 2013, ACL 2014, NAACL–HLT 2015, NAACL–HLT 2016), expanding its scope to incorporate the rapidly growing body of research on various types of figurative language such as sarcasm, irony and puns, with the aim of maintaining and nourishing a community of NLP researchers interested in this topic. The workshop features both regular research papers and a shared task on metaphor detection. We received 22 research paper submissions and accepted 10 (6 oral presentations and 4 posters). The papers cover a range of aspects of figurative language processing such as metaphor identification (Bizzoni and Ghanimifard; Mykowiecka, Marciniak and Wawer; Pramanick and Mitra; Stowe and Palmer; Zayed, McCrae and Buitelaar), metaphor interpretation (Bizzoni and Lappin; Rosen), identification of idiomatic expressions in essays written by non-native speakers (Flor and Beigman Klebanov), crowdsourcing for generating figurative language (Gero and Chilton) and linguistic features for estimating metaphor and sarcasm quality (Skalicky and Crossley).

A novel feature of this workshop is the shared task on token-level metaphor detection. The shared task attracted 11 teams, of whom 8 submitted a paper describing their system; these system papers appear in the proceedings of this workshop. The best performing systems showed improvement over strong baselines from recent published work. Almost all participants experimented with deep learning architectures; some of these incorporated linguistic information as well. Analysis of the results is presented in the summary paper by Leong, Beigman Klebanov, and Shutova; consistently across participating systems performance was best for verbs, and there were large differences in performance across texts from different genres.

Two distinguished researchers working on figurative language will give the invited talks at the workshop. Tony Veale, Department of Computer Science at the University College Dublin, will talk about metaphor generation “When You Come To A Fork In The Road, Take It: Complementary Approaches to Metaphor Generation”, and Marilyn Walker, Department of Computer Science, University of California Santa Cruz, will talk about sarcasm detection “Hyperbole, Rhetorical Questions and Sarcasm: Figurative Language in Social Media”.

We wish to thank everyone who showed interest and submitted a paper, all of the authors for their contributions, the members of the Program Committee for their thoughtful reviews, the invited speakers for sharing their perspectives on the topic, and all the attendees of the workshop. All of these factors contribute to a truly enriching event!

Workshop co–chairs:

Beata Beigman Klebanov, Educational Testing Service, USA
Ekaterina Shutova, University of Amsterdam, Netherlands
Patricia Lichtenstein, University of California, Merced, USA
Smaranda Muresan, Columbia University, USA
Chee Wee (Ben) Leong, Educational Testing Service, USA

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Ekaterina Shutova, University of Cambridge, UK
Patricia Lichtenstein, University of California, Merced, USA
Smaranda Muresan, Columbia University, USA
Chee Wee (Ben) Leong, Educational Testing Service, USA

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Yulia Tsvetkov, Carnegie Mellon University, USA
Tony Veale, University College Dublin, Ireland
Aline Villavicencio, Federal University of Rio Grande do Sul, Brazil

Invited Speakers:

Tony Veale, University College Dublin, Ireland
Marilyn Walker, University of California, Santa Cruz, USA

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Workshop Program

Friday, June 6, 2018

9:00–9:10 *Opening remarks*

9:10–10:10 *Invited Talk: Tony Veale “When You Come To A Fork In The Road, Take It: Complementary Approaches to Metaphor Generation”*

10:10–10:30 *Challenges in Finding Metaphorical Connections*
Katy Gero and Lydia Chilton

10:30–11:00 *Coffee break*

11:00–11:20 *Linguistic Features of Sarcasm and Metaphor Production Quality*
Stephen Skalicky and Scott Crossley

11:20–11:40 *Leveraging Syntactic Constructions for Metaphor Identification*
Kevin Stowe and Martha Palmer

11:40–12:00 *Literal, Metphorical or Both? Detecting Metaphoricity in Isolated Adjective-Noun Phrases*
Agnieszka Mykowiecka, Malgorzata Marciniak and Aleksander Wawer

12:00–12:20 *Catching Idiomatic Expressions in EFL Essays*
Michael Flor and Beata Beigman Klebanov

12:20–14:00 *Lunch*

Friday, June 6, 2018 (continued)

14:00–14:20 *Predicting Human Metaphor Paraphrase Judgments with Deep Neural Networks*
Yuri Bizzoni and Shalom Lappin

14:20–14:40 *A Report on the 2018 VUA Metaphor Detection Shared Task*
Chee Wee (Ben) Leong, Beata Beigman Klebanov and Ekaterina Shutova

14:40–15:40 Poster Session

An LSTM-CRF Based Approach to Token-Level Metaphor Detection
Malay Pramanick, Ashim Gupta and Pabitra Mitra

Unsupervised Detection of Metaphorical Adjective-Noun Pairs
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Computationally Constructed Concepts: A Machine Learning Approach to Metaphor Interpretation Using Usage-Based Construction Grammatical Cues
Zachary Rosen

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Chuhan Wu, Fangzhao Wu, Yubo Chen, Sixing Wu, Zhigang Yuan and Yongfeng Huang

Di-LSTM Contrast : A Deep Neural Network for Metaphor Detection
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Conditional Random Fields for Metaphor Detection
Anna Mosolova, Ivan Bondarenko and Vadim Fomin

Friday, June 6, 2018 (continued)

Detecting Figurative Word Occurrences Using Recurrent Neural Networks

Agnieszka Mykowiecka, Aleksander Wawer and Malgorzata Marciniak

Multi-Module Recurrent Neural Networks with Transfer Learning

Filip Skurniak, Maria Janicka and Aleksander Wawer

Using Language Learner Data for Metaphor Detection

Egon Stemle and Alexander Onysko

15:40–16:00 *Coffee break*

16:00–17:00 *Invited Talk: Marilyn Walker “Hyperbole, Rhetorical Questions and Sarcasm: Figurative Language in Social Media”*

