SENSE 2017

EACL 2017
Workshop on Sense, Concept and Entity Representations and their Applications

Proceedings of the Workshop

April 4, 2017
Valencia, Spain

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)
209 N. Eighth Street
Stroudsburg, PA 18360
USA
Tel: +1-570-476-8006
Fax: +1-570-476-0860
acl@aclweb.org

ISBN 978-1-945626-50-0

Preface

Welcome to the 1st Workshop on Sense, Concept and Entity Representations and their Applications (SENSE 2017). The aim of SENSE 2017 is to focus on addressing one of the most important limitations of word-based techniques in that they conflate different meanings of a word into a single representation. SENSE 2017 brings together researchers in lexical semantics, and NLP in general, to investigate and propose sense-based techniques as well as to discuss effective ways of integrating sense, concept and entity representations into downstream applications.

The workshop is targeted at covering the following topics:

- Utilizing sense/concept/entity representations in applications such as Machine Translation, Information Extraction or Retrieval, Word Sense Disambiguation, Entity Linking, Text Classification, Semantic Parsing, Knowledge Base Construction or Completion, etc.
- Exploration of the advantages/disadvantages of using sense representations over word representations.
- Proposing new evaluation benchmarks or comparison studies for sense vector representations.
- Development of new sense representation techniques (unsupervised, knowledge-based or hybrid).
- Compositionality of senses: learning representations for phrases and sentences.
- Construction and use of sense representations for languages other than English as well as multilingual representations.

We received 21 submissions, accepting 15 of them (acceptance rate: 71%).

We would like to thank the Program Committee members who reviewed the papers and helped to improve the overall quality of the workshop. We also thank Aylien for their support in funding the best paper award. Last, a word of thanks also goes to our invited speakers, Roberto Navigli (Sapienza University of Rome) and Hinrich Schütze (University of Munich).

Jose Camacho-Collados and Mohammad Taher Pilehvar
Co-Organizers of SENSE 2017

Organizers:

Jose Camacho-Collados, Sapienza University of Rome
Mohammad Taher Pilehvar, University of Cambridge

Program Committee:

Eneko Agirre, University of the Basque Country
Claudio Delli Bovi, Sapienza University of Rome
Luis Espinosa-Anke, Pompeu Fabra University
Lucie Flekova, Darmstadt University of Technology
Graeme Hirst, University of Toronto
Eduard Hovy, Carnegie Mellon University
Ignacio Iacobacci, Sapienza University of Rome
Richard Johansson, University of Gothenburg
David Jurgens, Stanford University
Omer Levy, University of Washington
Andrea Moro, Microsoft
Roberto Navigli, Sapienza University of Rome
Arvind Neelakantan, University of Massachusetts Amherst
Luis Nieto Piña, University of Gothenburg
Siva Reddy, University of Edinburgh
Horacio Saggion, Pompeu Fabra University
Hinrich Schütze, University of Munich
Piek Vossen, University of Amsterdam
Ivan Vulić, University of Cambridge
Torsten Zesch, University of Duisburg-Essen
Jianwen Zhang, Microsoft Research

Invited Speakers:

Roberto Navigli, Sapienza University of Rome
Hinrich Schütze, University of Munich

Table of Contents

Workshop Program

8:30 - 9:30 Registration

9:30 - 11:00 Session 1

- 9:30-9:40 - Opening Remarks
- 9:40-10:00 - Short paper presentations

  Improving Verb Metaphor Detection by Propagating Abstractness to Words, Phrases and Individual Senses
  Maximilian Köper and Sabine Schulte im Walde

  Using Linked Disambiguated Distributional Networks for Word Sense Disambiguation
  Alexander Panchenko, Stefano Faralli, Simone Paolo Ponzetto and Chris Biemann

- 10:00-11:00 - Invited talk by Roberto Navigli (Sapienza University)

11:00 - 11:30 Coffee break

11:30 - 13:00 Session 2

- 11:30-11:45 - Lightning talks (posters)

  Compositional Semantics using Feature-Based Models from WordNet
  Pablo Gamallo and Martín Pereira-Fariña

  Automated WordNet Construction Using Word Embeddings
  Mikhail Khodak, Andrej Risteski, Christiane Fellbaum and Sanjeev Arora

  Classifying Lexical-semantic Relationships by Exploiting Sense/Concept Representations
  Kentaro Kanada, Tetsunori Kobayashi and Yoshihiko Hayashi

  Supervised and unsupervised approaches to measuring usage similarity
  Milton King and Paul Cook

  Lexical Disambiguation of Igbo using Diacritic Restoration
  Ignatius Ezeani, Mark Hepple and Ikechukwu Onyenwe

Creating and Validating Multilingual Semantic Representations for Six Languages: Expert versus Non-Expert Crowds
Mahmoud El-Haj, Paul Rayson, Scott Piao and Stephen Wattam

Elucidating Conceptual Properties from Word Embeddings
Kyoung-Rok Jang and Sung-Hyon Myaeng

TTCSˆe: a Vectorial Resource for Computing Conceptual Similarity
Enrico Mensa, Daniele P. Radicioni and Antonio Lieto

Measuring the Italian-English lexical gap for action verbs and its impact on translation
Lorenzo Gregori and Alessandro Panunzi

Supervised and Unsupervised Word Sense Disambiguation on Word Embedding Vectors of Unambigous Synonyms
Aleksander Wawer and Agnieszka Mykowiecka

- 11:45-13:00 - Poster session

13:00 - 14:30 Lunch

14:30 - 16:00 Session 3

- 14:30-15:00 - Invited talk by Hinrich Schütze (University of Munich)
- 15:00-16:00 - Presentations of the best paper award candidates

Improving Clinical Diagnosis Inference through Integration of Structured and Unstructured Knowledge
Yuan Ling, Yuan An and Sadid Hasan

One Representation per Word - Does it make Sense for Composition?
Thomas Kober, Julie Weeds, John Wilkie, Jeremy Reffin and David Weir

Word Sense Filtering Improves Embedding-Based Lexical Substitution
Anne Cocos, Marianna Apidianaki and Chris Callison-Burch

16:00 - 16:30 Coffee break

16:30 - 17:15 Session 4

- 16:30-17:15 - Open discussion, best paper award and closing remarks