

CoNLL 2017

**The 21st Conference on
Computational Natural Language Learning**

Proceedings of the Conference

August 3 - August 4, 2017
Vancouver, Canada

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Introduction

The 2017 Conference on Computational Natural Language Learning (CoNLL) is the 21st in the series of annual meetings organized by SIGNLL, the ACL special interest group on natural language learning. CoNLL 2017 will be held on August 3–4, 2017, and is co-located with the 55th annual meeting of the Association for Computational Linguistics (ACL) in Vancouver, Canada.

As in most previous years, in order to accommodate papers with experimental material and detailed analysis/proofs, CoNLL 2017 invited only long papers, allowing eight pages of content plus unlimited pages of references and supplementary material in initial submission. Final, camera-ready submissions were allowed one additional page, so that all papers in the proceedings have a maximum of nine content pages plus unlimited pages of references and supplementary material.

CoNLL 2017 received a record number of 280 submissions in total, out of which 2 had to be rejected for formal reasons, and 12 were withdrawn by the authors during the review period. Of the remaining 271 papers, 50 papers were chosen to appear in the conference program, with an overall acceptance rate of 18.7%, the lowest ever for the conference. Seven of these were withdrawn after the notification, resulting in 43 papers for the final program: 20 selected for oral presentation, and the remaining 23 for poster presentation plus lightning oral presentation. All 43 papers appear here in the conference proceedings.

CoNLL 2017 features two invited talks, given by Chris Dyer (Google DeepMind) and Naomi Feldman (University of Maryland), and two shared tasks: one on Universal Morphological Reinflection and one on Multilingual Parsing from Raw Text to Universal Dependencies. Papers accepted for the shared tasks are published in companion volumes of the CoNLL 2017 proceedings.

We would like to thank all the authors who submitted their work to CoNLL 2017, and the program committee for helping us select the best papers out of many high-quality submissions. We are grateful to the many program committee members who answered positively to our late requests for reviewing assistance due to the unexpectedly large number of submissions. For this year's CoNLL, we allowed simultaneous submission to other conferences, and in order to ease the burden on the community of reviewers we implemented limited, partial cross-conference review sharing with EMNLP for papers submitted to both conferences. We are grateful to the EMNLP chairs, Rebecca Hwa and Sebastian Riedel, for working together with us, and to the EMNLP program committee members who participated in this process. We are also grateful to our invited speakers and to the SIGNLL board members. In particular, we are immensely thankful to Julia Hockenmaier for her valuable advice and assistance in putting together this year's program and proceedings. We also thank Ben Verhoeven, for maintaining the CoNLL 2017 website. We are grateful to the ACL organization for helping us with the program, proceedings and logistics. Finally, our gratitude goes to our sponsor, Google Inc., for supporting the best paper award at CoNLL 2017.

We hope you enjoy the conference!

Roger Levy and Lucia Specia

CoNLL 2017 conference co-chairs

Conference Chairs:

Lucia Specia, University of Sheffield (UK)
Roger Levy, MIT (USA)

Invited Speakers:

Chris Dyer, CMU (USA) and Google DeepMind (UK)
Naomi Feldman, Department of Linguistics and Institute for Advanced Computer Studies,
University of Maryland (USA)

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Hai Zhao
Muhua Zhu

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Conference Program

Thursday, August 3, 2017

8:45–9:00 *Opening Remarks*

Invited Talk by Chris Dyer

9:00–10:00 *Should Neural Network Architecture Reflect Linguistic Structure?*
Chris Dyer

Session 1

10:00–10:15 *Exploring the Syntactic Abilities of RNNs with Multi-task Learning*
Émile Enguehard, Yoav Goldberg and Tal Linzen

Session 1L: Lightning Talks for Poster Session

10:15–10:17 *The Effect of Different Writing Tasks on Linguistic Style:
A Case Study of the ROC Story Cloze Task*
Roy Schwartz, Maarten Sap, Ioannis Konstas, Leila Zilles,
Yejin Choi and Noah A. Smith

10:17–10:19 *Parsing for Grammatical Relations via Graph Merging*
Weiwei Sun, Yantao Du and Xiaojun Wan

10:19–10:21 *Leveraging Eventive Information for Better Metaphor Detection and Classification*
I-Hsuan Chen, Yunfei Long, Qin Lu and Chu-Ren Huang

10:21–10:23 *Collaborative Partitioning for Coreference Resolution*
Olga Uryupina and Alessandro Moschitti

10:23–10:25 *Named Entity Disambiguation for Noisy Text*
Yotam Eshel, Noam Cohen, Kira Radinsky, Shaul Markovitch,
Ikuya Yamada and Omer Levy

Thursday, August 3, 2017 (continued)

10:25–10:27 *Tell Me Why: Using Question Answering as Distant Supervision for Answer Justification*
Rebecca Sharp, Mihai Surdeanu, Peter Jansen, Marco A. Valenzuela-Escárcega, Peter Clark and Michael Hammond

10:27–10:29 *Learning What is Essential in Questions*
Daniel Khashabi, Tushar Khot, Ashish Sabharwal and Dan Roth

10:29–10:31 *Top-Rank Enhanced Listwise Optimization for Statistical Machine Translation*
Huadong Chen, Shujian Huang, David Chiang, Xin-Yu Dai and Jiajun Chen

10:31–11:00 *Coffee Break*

Session ST1: CoNLL-SIGMORPHON Shared Task

11:00–12:30 *Mans Hulden, Ryan Cotterell, Christo Kirov, and John Szyrak-Glassman: Universal Morphological Reinflection in 52 Languages*

12:30–2:00 *Lunch Break*

Session ST2: CoNLL Shared Task

2:00–3:30 *Dan Zeman, Jan Hajič, et al.: Multilingual Parsing from Raw Text to Universal Dependencies*

3:30–4:00 *Coffee Break*

Thursday, August 3, 2017 (continued)

Session 2

- 4:00–4:15 *Embedding Words and Senses Together via Joint Knowledge-Enhanced Training*
Massimiliano Mancini, Jose Camacho-Collados, Ignacio Iacobacci
and Roberto Navigli
- 4:15–4:30 *Automatic Selection of Context Configurations for Improved Class-Specific
Word Representations*
Ivan Vulić, Roy Schwartz, Ari Rappoport, Roi Reichart and Anna Korhonen
- 4:30–4:45 *Modeling Context Words as Regions: An Ordinal Regression Approach
to Word Embedding*
Shoaib Jameel and Steven Schockaert
- 4:45–5:00 *An Artificial Language Evaluation of Distributional Semantic Models*
Fatemeh Torabi Asr and Michael Jones
- 5:00–5:15 *Learning Word Representations with Regularization from Prior Knowledge*
Yan Song, Chia-Jung Lee and Fei Xia

Session 2L: Lightning Talks for Poster Session

- 5:15–5:17 *Attention-based Recurrent Convolutional Neural Network for Automatic
Essay Scoring*
Fei Dong, Yue Zhang and Jie Yang
- 5:17–5:19 *Feature Selection as Causal Inference: Experiments with Text Classification*
Michael J. Paul
- 5:19–5:21 *A Joint Model for Semantic Sequences: Frames, Entities, Sentiments*
Haoruo Peng, Snigdha Chaturvedi and Dan Roth
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Ed Collins, Isabelle Augenstein and Sebastian Riedel

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5:25–5:27 *An Automatic Approach for Document-level Topic Model Evaluation*
Shraey Bhatia, Jey Han Lau and Timothy Baldwin

5:27–5:29 *Robust Coreference Resolution and Entity Linking on Dialogues:
Character Identification on TV Show Transcripts*
Henry Y. Chen, Ethan Zhou and Jinho D. Choi

5:29–5:31 *Cross-language Learning with Adversarial Neural Networks*
Shafiq Joty, Preslav Nakov, Lluís Màrquez and Israa Jaradat

5:31-6:31 *Business Meeting*

Friday, August 4, 2017

Invited talk by Naomi Feldman
8:45–9:45 *Rational Distortions of Learners' Linguistic Input*
Naomi Feldman

Session 3

9:45–10:00 *Knowledge Tracing in Sequential Learning of Inflected Vocabulary*
Adithya Renduchintala, Philipp Koehn and Jason Eisner

10:00–10:15 *A Probabilistic Generative Grammar for Semantic Parsing*
Abulhair Saparov, Vijay Saraswat and Tom Mitchell

Friday, August 4, 2017 (continued)

Session 3L: Lightning Talks for Poster Session

- 10:15–10:17 *Learning Contextual Embeddings for Structural Semantic Similarity using Categorical Information*
Massimo Nicosia and Alessandro Moschitti
- 10:17–10:19 *Making Neural QA as Simple as Possible but not Simpler*
Dirk Weissenborn, Georg Wiese and Laura Seiffe
- 10:19–10:21 *Neural Domain Adaptation for Biomedical Question Answering*
Georg Wiese, Dirk Weissenborn and Mariana Neves
- 10:21–10:23 *A phoneme clustering algorithm based on the obligatory contour principle*
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- 10:25–10:27 *Learning local and global contexts using a convolutional recurrent network model for relation classification in biomedical text*
Desh Raj, Sunil Sahu and Ashish Anand
- 10:27–10:29 *Idea density for predicting Alzheimer’s disease from transcribed speech*
Kairit Sirts, Olivier Piguet and Mark Johnson
- 10:29–11:00** *Coffee Break*
- 11:00–2:00** *Poster Session and Lunch*

Friday, August 4, 2017 (continued)

Session 4

- 2:00–2:15 *Zero-Shot Relation Extraction via Reading Comprehension*
Omer Levy, Minjoon Seo, Eunsol Choi and Luke Zettlemoyer
- 2:15–2:30 *The Covert Helps Parse the Overt*
Xun Zhang, Weiwei Sun and Xiaojun Wan
- 2:30–2:45 *German in Flux: Detecting Metaphoric Change via Word Entropy*
Dominik Schlechtweg, Stefanie Eckmann, Enrico Santus,
Sabine Schulte im Walde and Daniel Hole
- 2:45–3:00 *Encoding of phonology in a recurrent neural model of grounded speech*
Afra Alishahi, Marie Barking and Grzegorz Chrupała
- 3:00–3:15 *Multilingual Semantic Parsing And Code-Switching*
Long Duong, Hadi Afshar, Dominique Estival, Glen Pink,
Philip Cohen and Mark Johnson
- 3:15–3:30 *Optimizing Differentiable Relaxations of Coreference Evaluation Metrics*
Phong Le and Ivan Titov
- 3:30–4:00** *Coffee Break*

Friday, August 4, 2017 (continued)

Session 5

- 4:00–4:15 *Neural Structural Correspondence Learning for Domain Adaptation*
Yftah Ziser and Roi Reichart
- 4:15–4:30 *A Simple and Accurate Syntax-Agnostic Neural Model for Dependency-based Semantic Role Labeling*
Diego Marcheggiani, Anton Frolov and Ivan Titov
- 4:30–4:45 *Joint Prediction of Morphosyntactic Categories for Fine-Grained Arabic Part-of-Speech Tagging Exploiting Tag Dictionary Information*
Go Inoue, Hiroyuki Shindo and Yuji Matsumoto
- 4:45–5:00 *Learning from Relatives: Unified Dialectal Arabic Segmentation*
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- 5:00–5:15 *Natural Language Generation for Spoken Dialogue System using RNN Encoder-Decoder Networks*
Van-Khanh Tran and Le-Minh Nguyen
- 5:15–5:30 *Graph-based Neural Multi-Document Summarization*
Michihiro Yasunaga, Rui Zhang, Kshitijh Meelu, Ayush Pareek, Krishnan Srinivasan and Dragomir Radev
- 5:30–5:35** *Best Paper Award*
- 5:35–5:45** *Closing Remarks*

