COLING 2020

Fourth Workshop on Universal Dependencies (UDW 2020)

Proceedings of the Workshop

December 13, 2020

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ISBN 978-1-952148-48-4

Preface

These proceedings include the program and papers that are presented at the fourth workshop on Universal Dependencies, held in conjunction with COLING online on December 13, 2020.

Universal Dependencies (UD) is a framework for cross-linguistically consistent treebank annotation that has so far been applied to over 90 languages (http://universaldependencies.org/). The framework is aiming to capture similarities as well as idiosyncrasies among typologically different languages (e.g., morphologically rich languages, pro-drop languages, and languages featuring clitic doubling). The goal in developing UD was not only to support comparative evaluation and cross-lingual learning but also to facilitate multilingual natural language processing and enable comparative linguistic studies.

After 3 successful editions of the workshop, we decided to continue to bring together researchers working on UD, to reflect on the theory and practice of UD, its use in research and development, and its future goals and challenges.

We received 33 submissions of which 24 were accepted. Submissions covered several topics: some papers describe treebank conversion or creation, while others target specific linguistic constructions and which analysis to adopt, sometimes with critiques of the choices made in UD; some papers exploit UD resources for cross-linguistic and historical analysis, or for parsing, and some develop tools using UD.

We are honored to have an invited speaker: Martha Palmer (Department of Linguistics, University of Colorado at Boulder), with a talk on "Transcending Dependencies" which talks about contextual interpretation in dialogues and the role of Abstract Meaning Representation in this context.

We are grateful to the program committee, who worked hard and on a tight schedule to review the submissions and provided authors with valuable feedback.

We thank Google, Inc. and the National Science Foundation (NSF) for grants which allowed to cover registration fees of some of the participants.

We wish all participants a productive workshop!

Marie-Catherine de Marneffe, Miryam de Lhoneux, Joakim Nivre and Sebastian Schuster

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Daniel Zeman, Charles University Prague, Czech Republic

Invited Speakers:

Martha Palmer, University of Colorado at Boulder, USA

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Invited Talk: Martha Palmer, University of Colorado Boulder

Transcending Dependencies

This talk will discuss some of the challenges arising from the Blocks World scenario in the DARPA Communicating with Computers program. The actions are very simple and concrete, such as "Add a block to the tower." However, even in this restricted world, getting the appropriate contextual interpretation of a sentence can be challenging, especially with respect to spatial relations and implicit information. The talk will review the progress we have made so far on collecting useful data that comprises complete 2 person dialogues discussing block structure constructions, and our attempts to achieve the goal of contextual interpretation in the processing of these dialogues. A main focus will be the ways in which we are expanding AMR annotation to encompass spatial relations and the recovery of implicit arguments. Both expansions play into the task of maintaining a discourse structure and producing the predicate logic sentence representations needed by the down-stream planner. The talk will conclude with our current AMR parsing results, our attempts to pass them along to the planner, and our future goals.

Bio

Martha Palmer is the Helen & Hubert Croft Endowed Professor of Engineering in the Computer Science Department, and an Arts & Sciences Professor of Distinction in the Linguistics Department, at the University of Colorado, with a split appointment. She is also an Institute of Cognitive Science Faculty Fellow, a co-Director of CLEAR, an ACL Fellow, and a AAAI Fellow. She was the Director of the 2011 Linguistics Institute in Boulder, CO. Her research is focused on capturing elements of the meanings of words that can comprise automatic representations of complex sentences and documents in English, Chinese, Arabic, Hindi, and Urdu, funded by DARPA, DTRA and NSF. A more recent focus is the application of these methods to biomedical journal articles and clinical notes, funded by NIH. She co-edits LiLT, Linguistic Issues in Language Technology, and has been a co-editor of the Journal of Natural Language Engineering and on the CLJ Editorial Board. She is a past President of ACL, past Chair of SIGLEX, was the Founding Chair of SIGHAN, and has over 300 peer-reviewed publications.