

CoNLL 2020

**The SIGNLL Conference on Computational Natural
Language Learning**

**Proceedings of the CoNLL 2020 Shared Task:
Cross-Framework Meaning Representation Parsing**

November 19-20, 2020
Online

©2020 The Association for Computational Linguistics

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 978-1-952148-64-4

Preface

We are excited (and a little relieved) to present the proceedings from the 2020 Shared Task on *Cross-Framework and Cross-Lingual Meaning Representation Parsing* (MRP 2020) at the Conference for Computational Language Learning (CoNLL), colocated with EMNLP 2020. This is the second, extended edition of the MRP Shared Task, following on from the earlier MRP task at CoNLL 2019, adding, among other things, additional languages beyond English.

This volume provides linguistic, methodological, and technical background to the target representations, mode of operation, and participating systems in a ‘system bake-off’ for *data-driven parsing* into *graph-structured* representations of *sentence meaning*.

The task received submissions from seven teams and one ‘reference’ submission by one of the task co-organizers. Two teams declined the invitation to submit a system description for publication in the proceedings, such that the volume in total comprises an in-depth task overview, two additional background pieces by task co-organizers, and five system descriptions by participating teams. All system descriptions (and the background papers) were reviewed by at least three experts, drawing from among the task participants and an external pool of colleagues working in meaning representation parsing.

We much look forward to the presentation of results and meeting with task participants, even if online, at CoNLL in late November 2020. The conference will be completely virtual, with talks prerecorded and with one live Q&A session for the shared task.

The MRP 2020 shared task has been an intensive experience for organizers and participants alike, with data preparation, definition of evaluation metrics, system development, submission of parser outputs, scoring and compilation of the task proceedings—running near-continuously between February and October 2020. We are deeply grateful to all participants (including several who in the end did not make a submission) for the time and effort they have invested in system development and documentation. With no less than five distinct linguistic frameworks for graph-based meaning representation, in several languages, combined for the first time in a uniform training and evaluation setting, this was not an easy competition to enter. As co-organizers of the MRP 2019 and 2020 competitions, we will continue to work on facilitating cross-framework meaning representation parsing and enabling participants to further build on their work. All MRP 2019 and 2020 data has been submitted for release through the Linguistic Data Consortium, and we are further preparing an open-source release of those parts of the data that are free of copyright constraints.

Oslo, Jerusalem, Utrecht, Groningen, Prague,
Copenhagen, Nanjing, Boulder, and Waltham;

October 2020

Stephan Oepen, Omri Abend, Lasha Abzianidze, Johan Bos, Jan Hajič,
Daniel Hershcovich, Bin Li, Tim O’Gorman, Nianwen Xue and Daniel Zeman

Organizers:

Stephan Oepen, University of Oslo
Omri Abend, The Hebrew University of Jerusalem
Lasha Abzianidze, Utrecht University
Johan Bos, University of Groningen
Jan Hajič, Charles University, Prague
Daniel Hershcovich, University of Copenhagen
Bin Li, Nanjing Normal University
Tim O’Gorman, University of Colorado Boulder
Nianwen Xue, Brandeis University, Waltham
Daniel Zeman, Charles University, Prague

Program Committee:

Lasha Abzianidze
Ofir Arviv
Wanxiang Che
Bo Chen
Jayeol Chun
Longxu Dou
Daniel Hershcovich
Matthias Lindemann
Gaku Morio
Stephan Oepen
Hiroaki Ozaki
David Samuel
Nathan Schneider

Table of Contents

<i>MRP 2020: The Second Shared Task on Cross-Framework and Cross-Lingual Meaning Representation Parsing</i>	
Stephan Oepen, Omri Abend, Lasha Abzianidze, Johan Bos, Jan Hajic, Daniel Hershcovich, Bin Li, Tim O’Gorman, Nianwen Xue and Daniel Zeman.....	1
<i>DRS at MRP 2020: Dressing up Discourse Representation Structures as Graphs</i>	
Lasha Abzianidze, Johan Bos and Stephan Oepen.....	23
<i>FGD at MRP 2020: Prague Tectogrammatical Graphs</i>	
Daniel Zeman and Jan Hajic.....	33
<i>Hitachi at MRP 2020: Text-to-Graph-Notation Transducer</i>	
Hiroaki Ozaki, Gaku Morio, Yuta Koreeda, Terufumi Morishita and Toshinori Miyoshi.....	40
<i>ÚFAL at MRP 2020: Permutation-invariant Semantic Parsing in PERIN</i>	
David Samuel and Milan Straka.....	53
<i>HIT-SCIR at MRP 2020: Transition-based Parser and Iterative Inference Parser</i>	
Longxu Dou, Yunlong Feng, Yuqiu Ji, Wanxiang Che and Ting Liu.....	65
<i>HUJI-KU at MRP 2020: Two Transition-based Neural Parsers</i>	
Ofir Arviv, Ruixiang Cui and Daniel Hershcovich.....	73
<i>JBNU at MRP 2020: AMR Parsing Using a Joint State Model for Graph-Sequence Iterative Inference</i>	
Seung-Hoon Na and Jinwoo Min.....	83

Conference Program

MRP 2020: The Second Shared Task on Cross-Framework and Cross-Lingual Meaning Representation Parsing

Stephan Oepen, Omri Abend, Lasha Abzianidze, Johan Bos, Jan Hajic, Daniel Hershcovich, Bin Li, Tim O’Gorman, Nianwen Xue and Daniel Zeman

DRS at MRP 2020: Dressing up Discourse Representation Structures as Graphs

Lasha Abzianidze, Johan Bos and Stephan Oepen

FGD at MRP 2020: Prague Tectogrammatical Graphs

Daniel Zeman and Jan Hajic

Hitachi at MRP 2020: Text-to-Graph-Notation Transducer

Hiroaki Ozaki, Gaku Morio, Yuta Koreeda, Terufumi Morishita and Toshinori Miyoshi

ÚFAL at MRP 2020: Permutation-invariant Semantic Parsing in PERIN

David Samuel and Milan Straka

HIT-SCIR at MRP 2020: Transition-based Parser and Iterative Inference Parser

Longxu Dou, Yunlong Feng, Yuqiu Ji, Wanxiang Che and Ting Liu

HUJI-KU at MRP 2020: Two Transition-based Neural Parsers

Ofir Arviv, Ruixiang Cui and Daniel Hershcovich

JBNU at MRP 2020: AMR Parsing Using a Joint State Model for Graph-Sequence Iterative Inference

Seung-Hoon Na and Jinwoo Min

