

CoNLL 2019

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

**Proceedings of the Shared Task on
Cross-Framework Meaning Representation Parsing
at the 2019 Conference on Natural Language Learning**

November 3, 2019
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209 N. Eighth Street
Stroudsburg, PA 18360
USA
Tel: +1-570-476-8006
Fax: +1-570-476-0860
acl@aclweb.org

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Preface

We are excited (and a little relieved) to present the proceedings from the 2019 Shared Task on *Cross-Framework Meaning Representation Parsing* (MRP) at the Conference for Computational Language Learning (CoNLL). 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 eighteen teams, of which two involved task co-organizers and do not participate in the official ranking of submissions. Three 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 ‘system descriptions’ by task co-organizers, and thirteen system descriptions by task participants. All system descriptions 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 in person at CoNLL in early November 2019. The conference has allocated a 90-minute slot for oral presentations from the shared task, where all teams will have the opportunity to present a ‘blitz’ overview of their work. Following this plenary session, there will be poster presentations by all teams, allowing for more detailed technical discussions.

The 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 March and October 2019. 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 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 competition, we will continue to work on facilitating cross-framework meaning representation parsing and enabling participants to further build on their work. We are delighted (and a little scared) to confirm that there will be a follow-up shared task MRP 2020 at the next CoNLL meeting a year from now.

Many colleagues have made essential contributions to the task organization along the way. We gratefully acknowledge assistance by Emily M. Bender, Jayeol Chun, Dan Flickinger, Andrey Kutuzov, Sebastian Schuster, Milan Straka, and Zdeňka Urešová.

Oslo, Jerusalem, Prague, Copenhagen,
Linköping, Boulder, and Brandeis;
October 2019

Stephan Oepen, Omri Abend, Jan Hajič, Daniel Hershcovich,
Marco Kuhlmann, Tim O’Gorman, and Nianwen Xue

Organizers:

Stephan Oepen, University of Oslo
Omri Abend, The Hebrew University of Jerusalem
Jan Hajic, Charles University, Prague
Daniel Hershcovich, University of Copenhagen
Marco Kuhlmann, Linköping University
Tim O’Gorman, University of Colorado in Boulder
Nianwen Xue, Brandeis University

Program Committee:

Omri Abend
Hongxiao Bai
Miguel Ballesteros
Bernd Bohnet
Jan Buys
Jie Cao
Yufei Chen
Shay B. Cohen
Timothy Dozat
Daniel Hershcovich
Zixia Jia
Wei Jiang
Alexander Koller
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Sunny Lai
Zuchao Li
Matthias Lindemann
Gaku Morio
Seung-Hoon Na
Tim O’Gorman
Stephan Oepen
Hiroaki Ozaki
Hao Peng
Nathan Schneider
Djamé Seddah
Gabriel Stanovsky
Jana Straková
Weiwei Sun
Rik van Noord
Xinyu Wang
Nianwen Xue
Daniel Zeman
Sheng Zhang
Yi Zhang

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Conference Program

Sunday, November 3, 2019

Meaning Representation Parsing (MRP) Shared Task at CoNLL 2019

- 14:00–14:30 *MRP 2019: Cross-Framework Meaning Representation Parsing*
Stephan Oepen, Omri Abend, Jan Hajic, Daniel Hershcovich, Marco Kuhlmann, Tim O’Gorman, Nianwen Xue, Jayeol Chun, Milan Straka and Zdenka Uresova
- 14:30–14:33 *TUPA at MRP 2019: A Multi-Task Baseline System*
Daniel Hershcovich and Ofir Arviv
- 14:33–14:36 *The ERG at MRP 2019: Radically Compositional Semantic Dependencies*
Stephan Oepen and Dan Flickinger
- 14:36–14:39 *SJTU-NICT at MRP 2019: Multi-Task Learning for End-to-End Uniform Semantic Graph Parsing*
Zuchao Li, Hai Zhao, Zhuosheng Zhang, Rui Wang, Masao Utiyama and Eiichiro Sumita
- 14:39–14:42 *ShanghaiTech at MRP 2019: Sequence-to-Graph Transduction with Second-Order Edge Inference for Cross-Framework Meaning Representation Parsing*
Xinyu Wang, Yixian Liu, Zixia Jia, Chengyue Jiang and Kewei Tu
- 14:42–14:45 *Saarland at MRP 2019: Compositional parsing across all graphbanks*
Lucia Donatelli, Meaghan Fowlie, Jonas Groschwitz, Alexander Koller, Matthias Lindemann, Mario Mina and Pia Weißenhorn
- 14:45–14:48 *HIT-SCIR at MRP 2019: A Unified Pipeline for Meaning Representation Parsing via Efficient Training and Effective Encoding*
Wanxiang Che, Longxu Dou, Yang Xu, Yuxuan Wang, Yijia Liu and Ting Liu
- 14:48–14:51 *SJTU at MRP 2019: A Transition-Based Multi-Task Parser for Cross-Framework Meaning Representation Parsing*
Hongxiao Bai and Hai Zhao
- 14:51–14:54 *JBNU at MRP 2019: Multi-level Biaffine Attention for Semantic Dependency Parsing*
Seung-Hoon Na, Jinwoon Min, Kwanghyeon Park, Jong-Hun Shin and Young-Kil Kim
- 14:54–14:57 *CUHK at MRP 2019: Transition-Based Parser with Cross-Framework Variable-Arity Resolve Action*
Sunny Lai, Chun Hei Lo, Kwong Sak Leung and Yee Leung

Sunday, November 3, 2019 (continued)

- 14:57–15:00 *Hitachi at MRP 2019: Unified Encoder-to-Biaffine Network for Cross-Framework Meaning Representation Parsing*
Yuta Koreeda, Gaku Morio, Terufumi Morishita, Hiroaki Ozaki and Kohsuke Yanai
- 15:00–15:03 *ÚFAL MRPipe at MRP 2019: UDPipe Goes Semantic in the Meaning Representation Parsing Shared Task*
Milan Straka and Jana Straková
- 15:03–15:06 *Amazon at MRP 2019: Parsing Meaning Representations with Lexical and Phrasal Anchoring*
Jie Cao, Yi Zhang, Adel Youssef and Vivek Srikumar
- 15:06–15:09 *SUDA-Alibaba at MRP 2019: Graph-Based Models with BERT*
Yue Zhang, Wei Jiang, Qingrong Xia, Junjie Cao, Rui Wang, Zhenghua Li and Min Zhang
- 15:09–15:12 *ÚFAL-Oslo at MRP 2019: Garage Sale Semantic Parsing*
Kira Droганova, Andrey Kutuzov, Nikita Mediankin and Daniel Zeman
- 15:12–15:15 *Peking at MRP 2019: Factorization- and Composition-Based Parsing for Elementary Dependency Structures*
Yufei Chen, Yajie Ye and Weiwei Sun

Final Discussion (15:15-15:30)

Poster Session

Please note that due to the travel restrictions caused by the Hongkong situation the program might change at a short notice.