HUJI-KU at MRP 2020

Two Transition-based Neural Parsers

Ofir Arviv[1], **Ruixiang Cui**[2]
and **Daniel Hershcovich**[2]

[1]Hebrew University of Jerusalem
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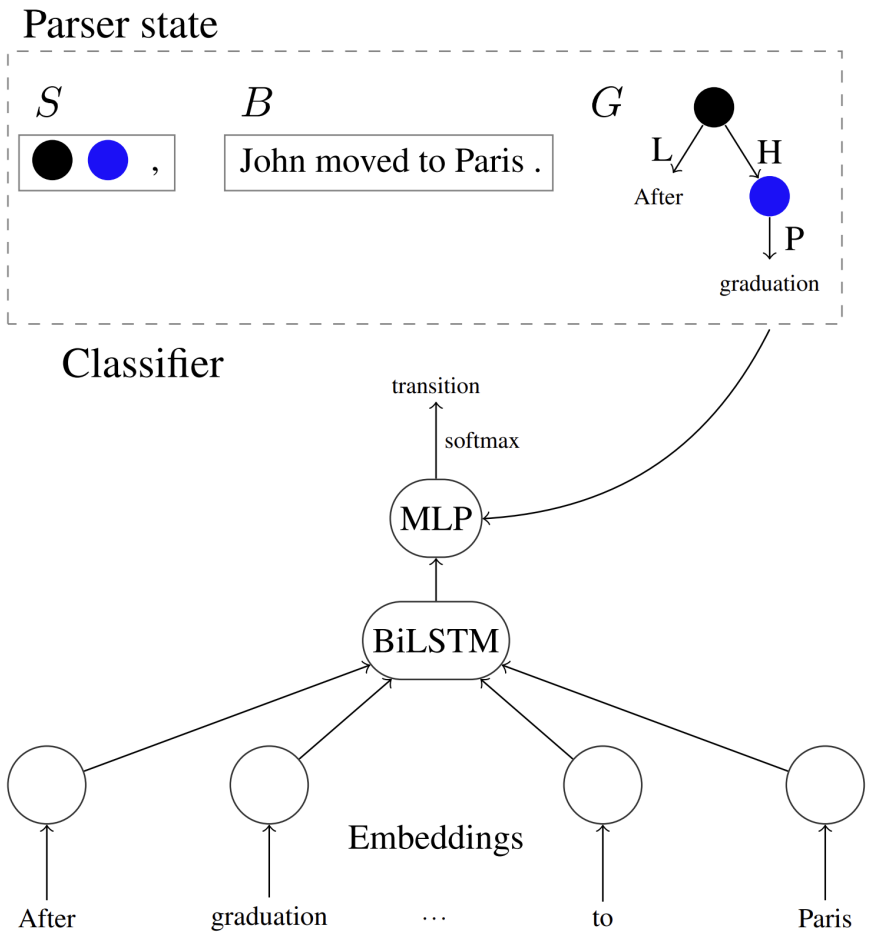
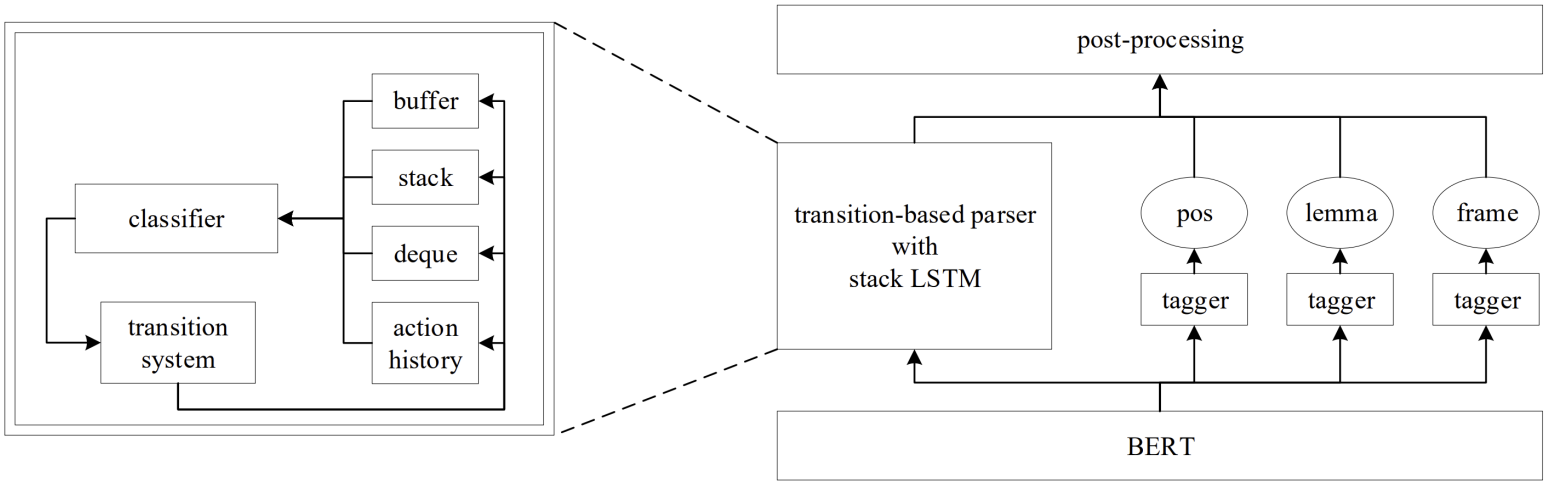
CoNLL 2020 MRP Shared Task
November 19, 2020

TUPA



(Hershcovich et al., 2017)

HIT-SCIR (Modified)



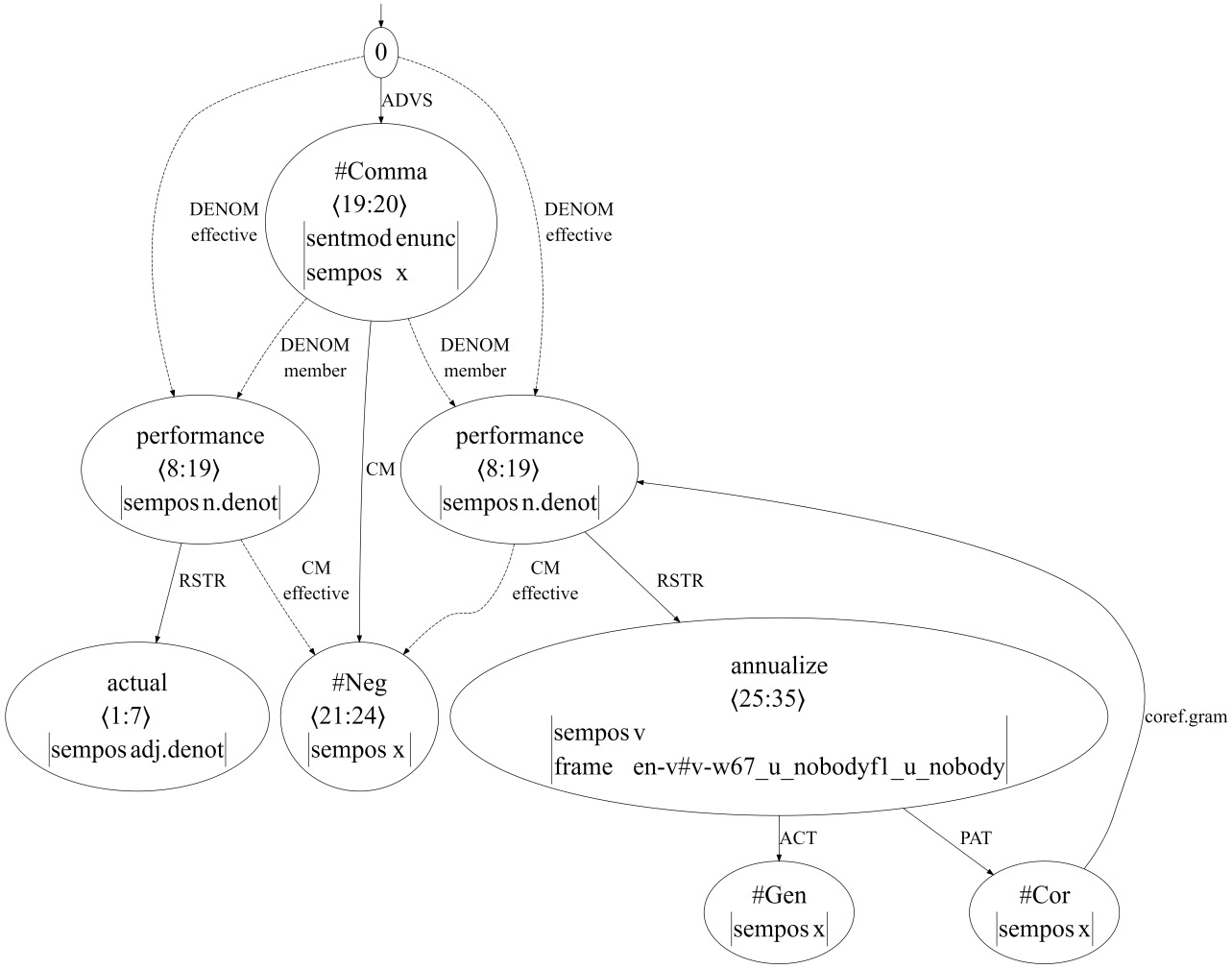
(Che et al., 2019)

Extending TUPA

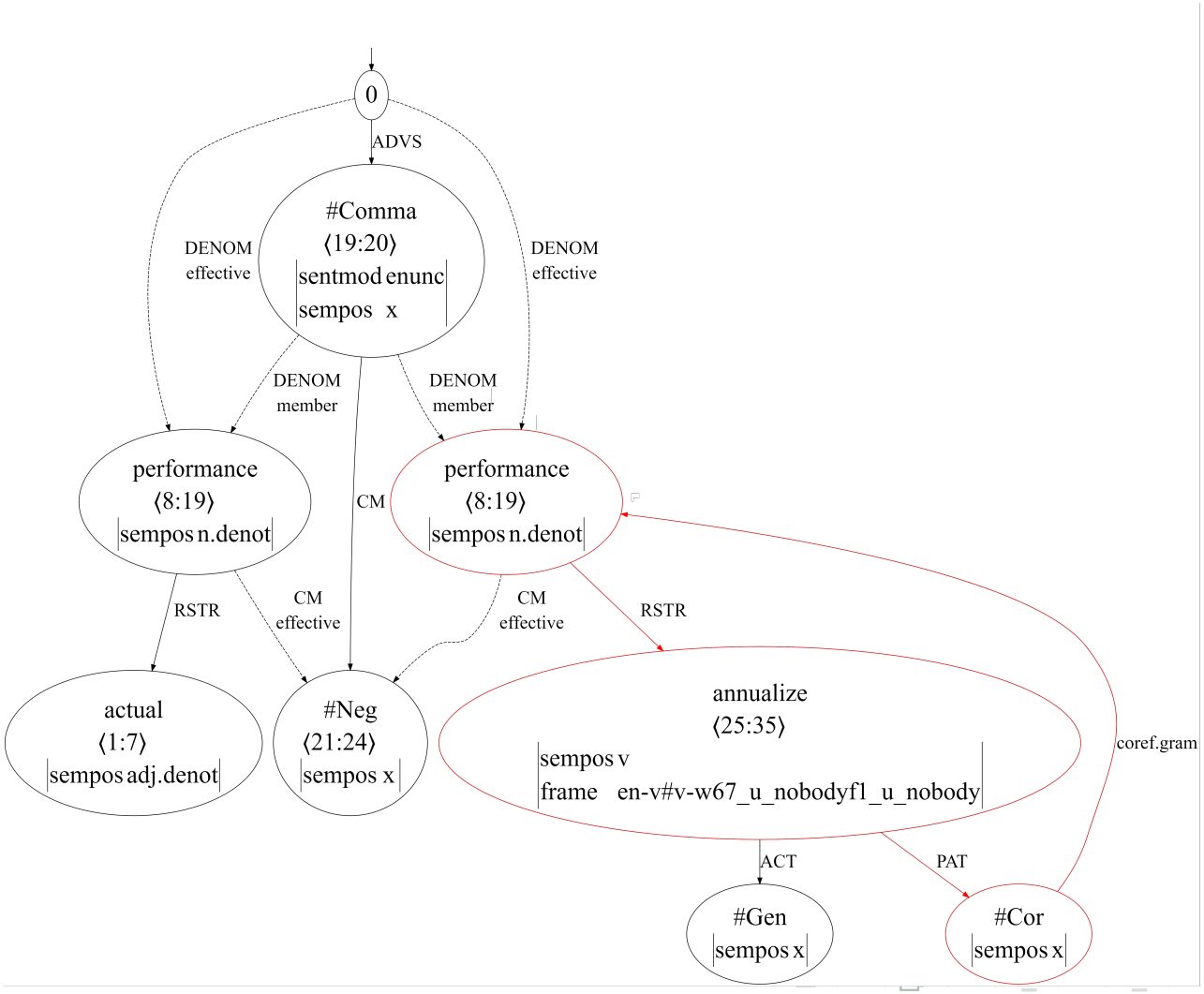
		EDS	PTG	UCCA	AMR	DRG
A	Top Nodes	✓	✓	✓	✓	✓
B	Node Labels	✓	(✓)	✗	✓	(✓)
C	Node Properties	✓	✓	✗	✓	✗
D	Node Anchoring	✓	(✓)	(✓)	✗	✗
E	Directed Edges	✓	✓	✓	✓	✓
F	Edge Labels	✓	✓	✓	✓	(✓)
G	Edge Attributes	✗	(✓)	(✓)	✗	✗

http://mrp.nlpl.eu/2020/index.php?page=15

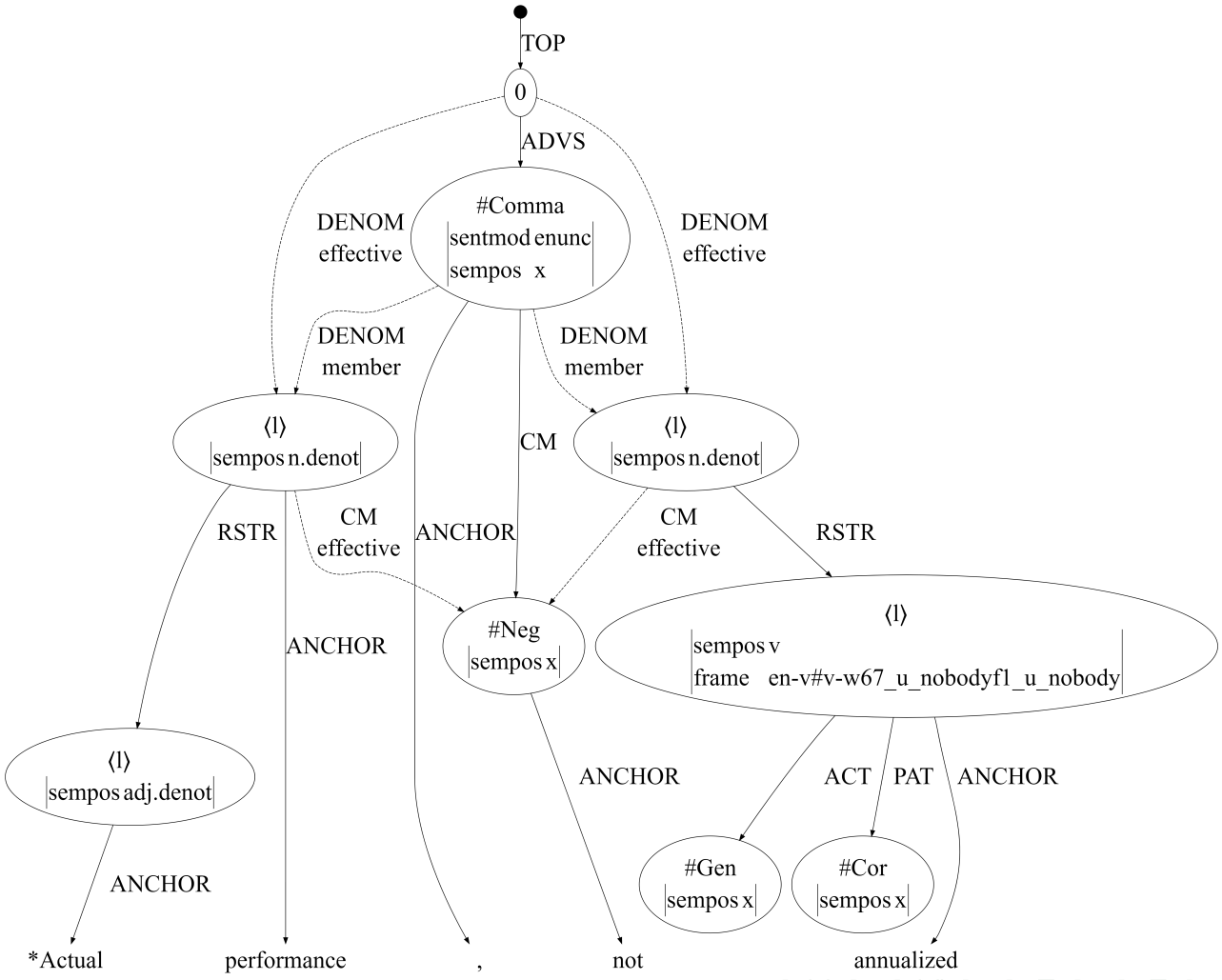
Handling Cyclic Graphs



Handling Cyclic Graphs

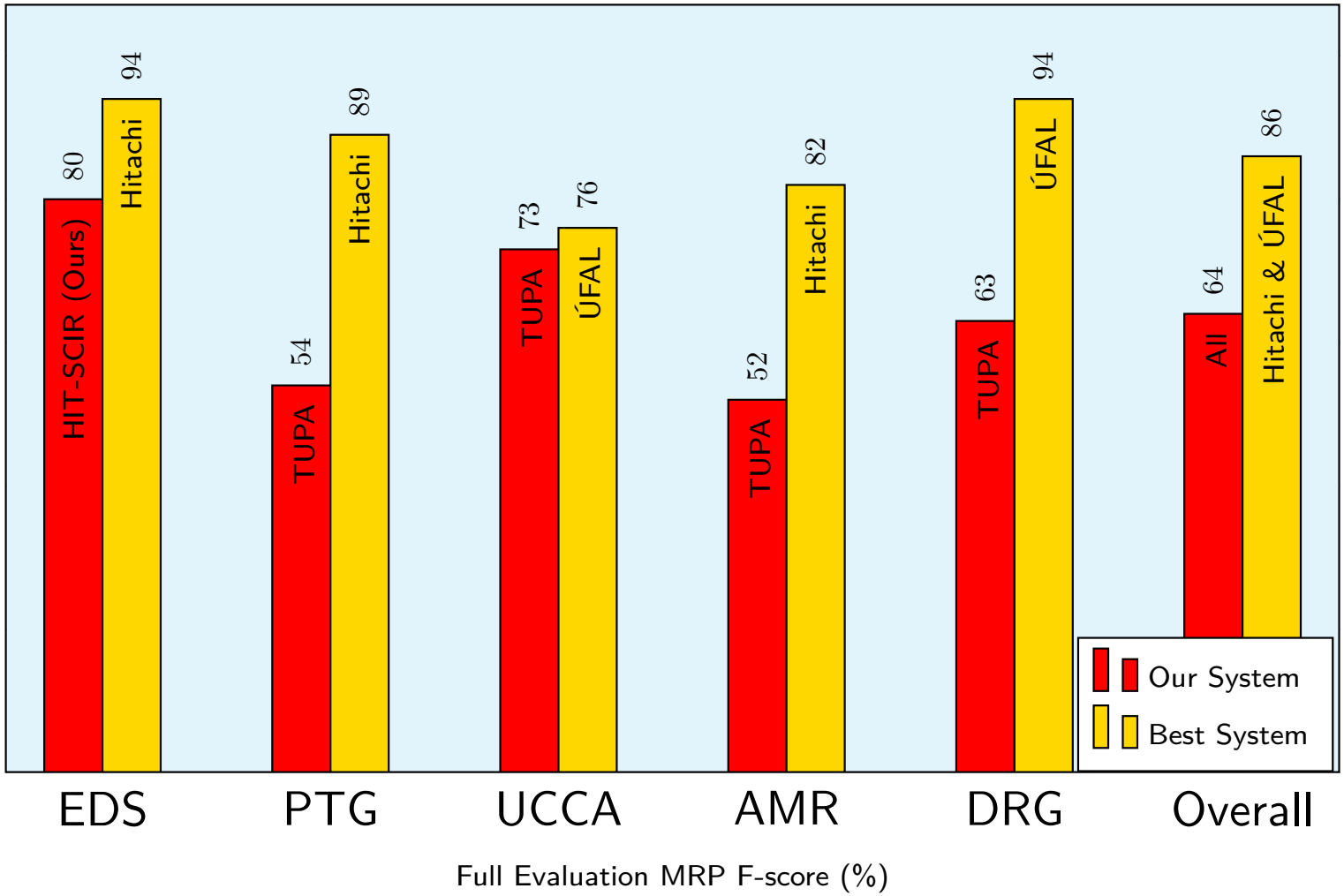


TUPA Internal Representation



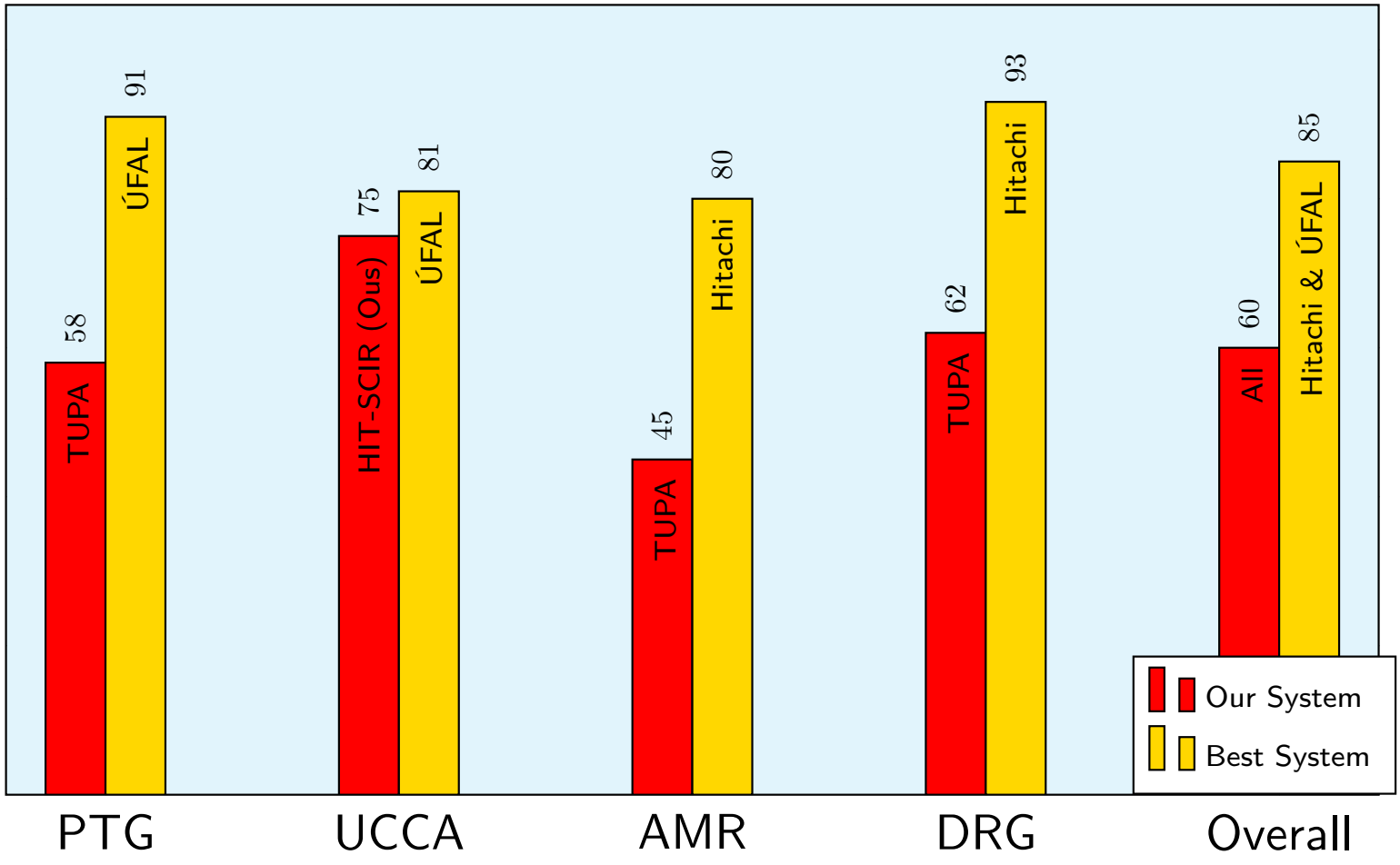
Official Evaluation

Cross Framework Track:



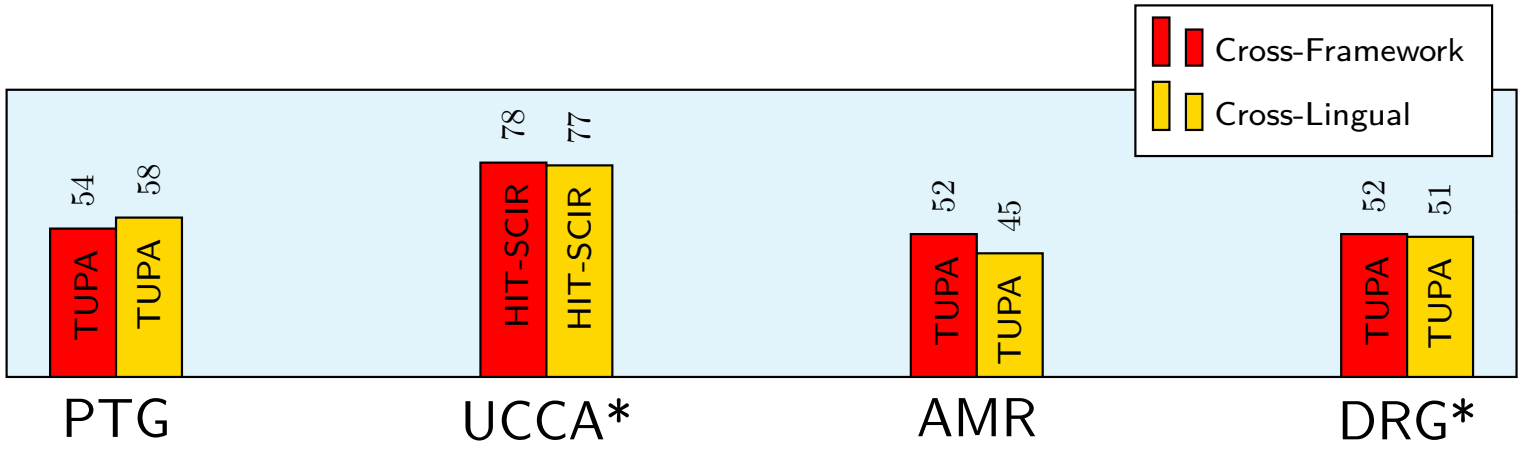
Official Evaluation

Cross Lingual Track:

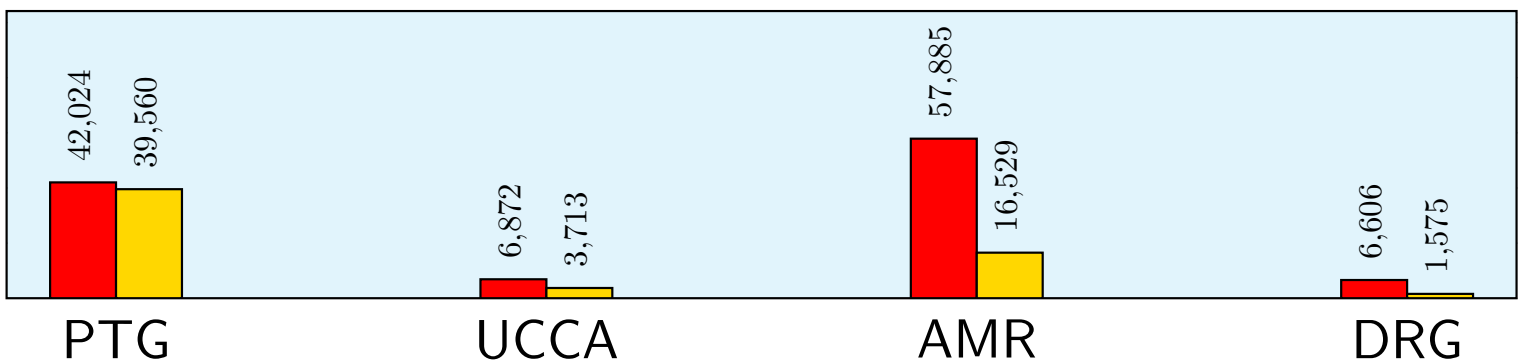


Full Evaluation MRP F-score (%)

CL vs. CF Track



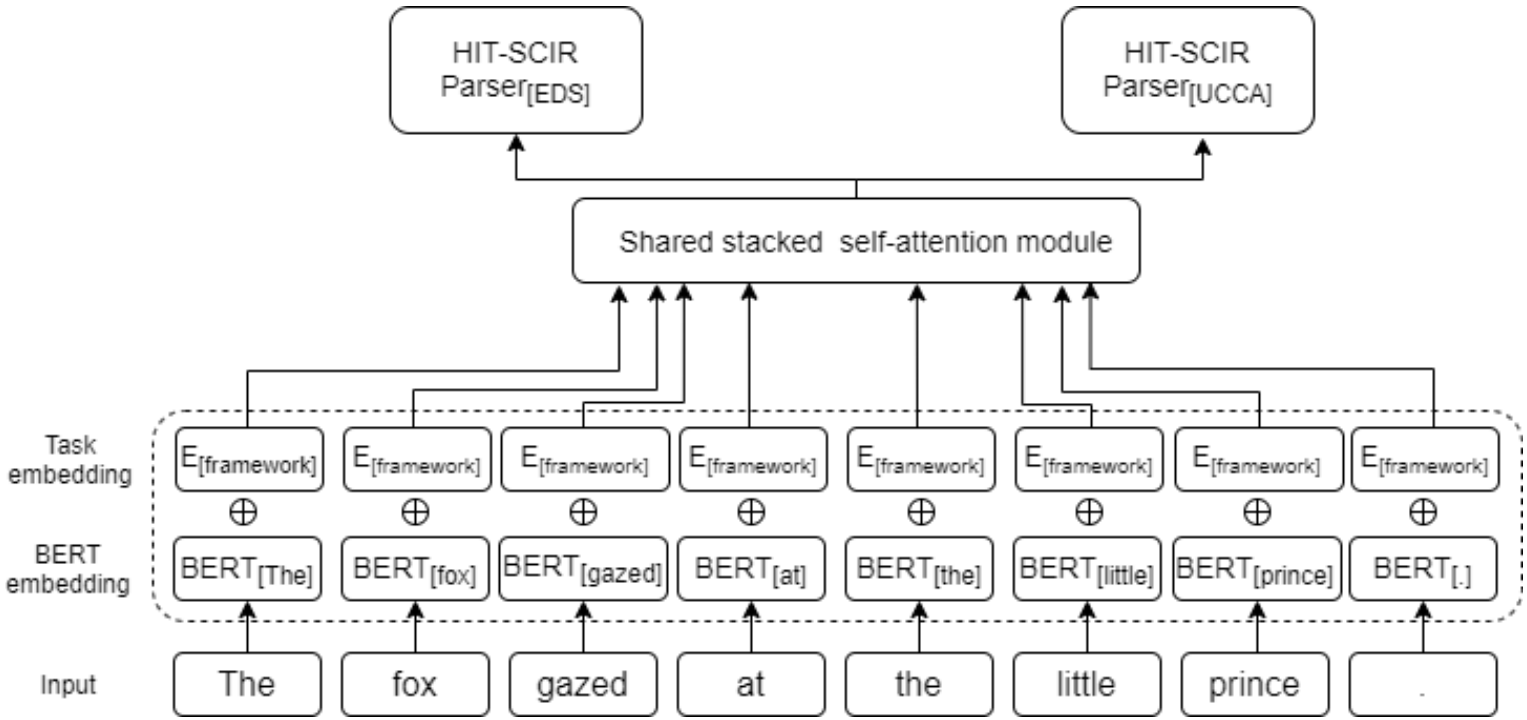
Full Evaluation (* for Validation) MRP F-score (%)



Dataset Size (# Sentences)

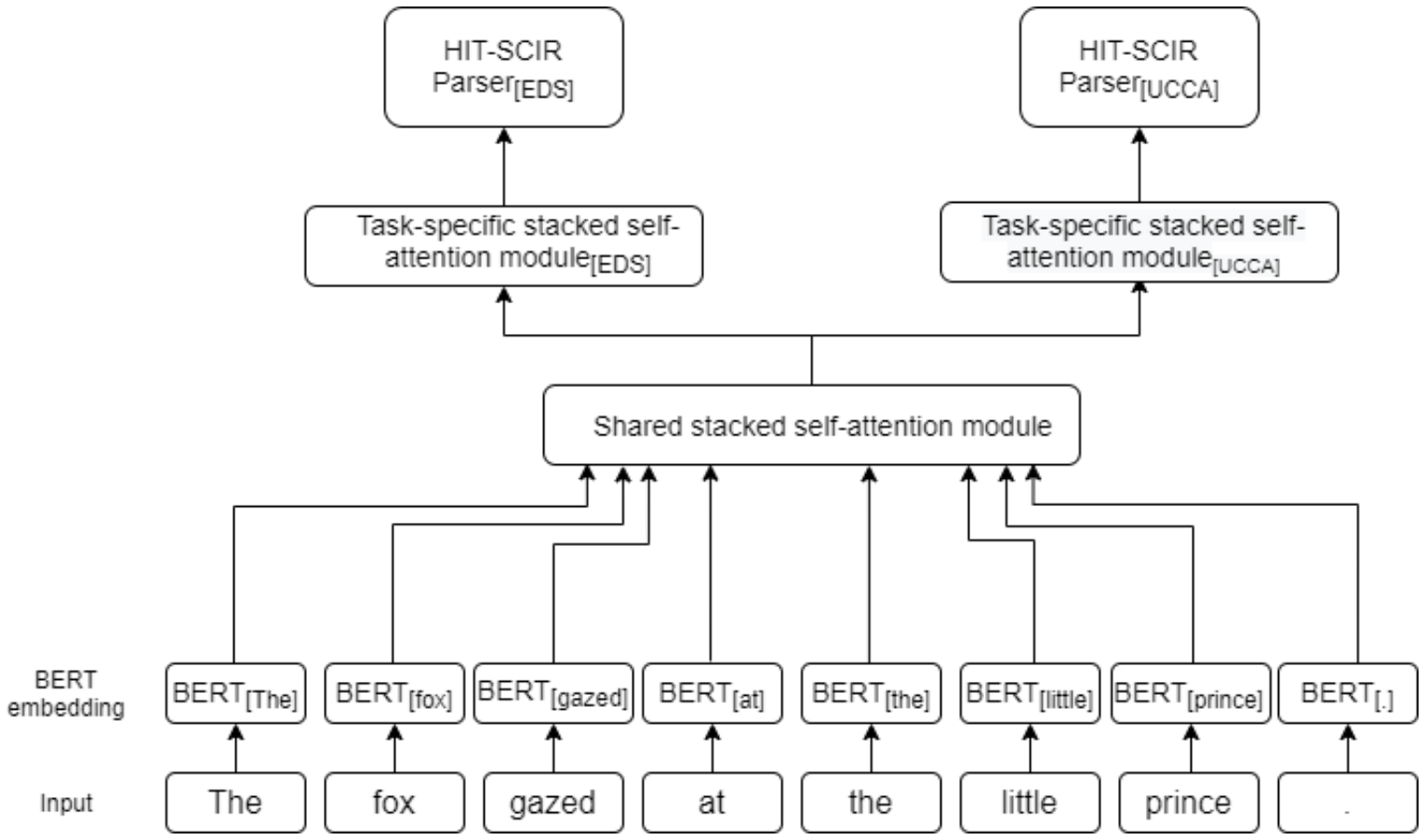
Multi-Task Model

Variant 1

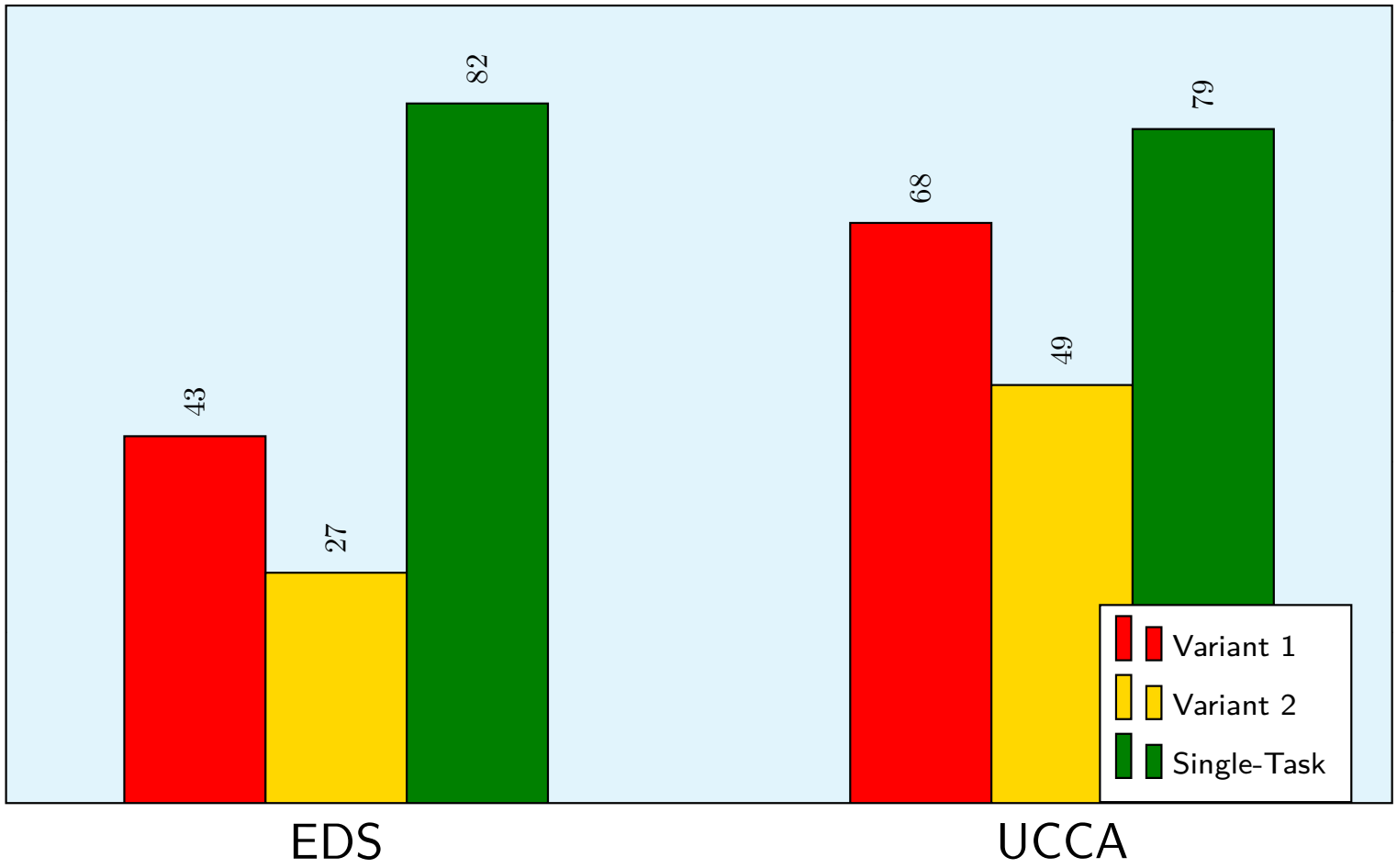


Multi-Task Model

Variant 2



Multi-Task Results



Cross-Framework Track Validation MRP F-score (%)

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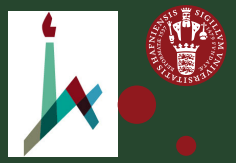

References

Wanxiang Che, Longxu Dou, Yang Xu, Yuxuan Wang, Yijia Liu, and Ting Liu. 2019. HIT-SCIR at MRP 2019: A unified pipeline for meaning representation parsing via efficient training and effective encoding. In *Proc. of CoNLL Shared Task*, pages 76–85, Hong Kong.

Daniel Hershcovich, Omri Abend, and Ari Rappoport. 2017. A transition-based directed acyclic graph parser for UCCA. In *Proc. of ACL*, pages 1127–1138.