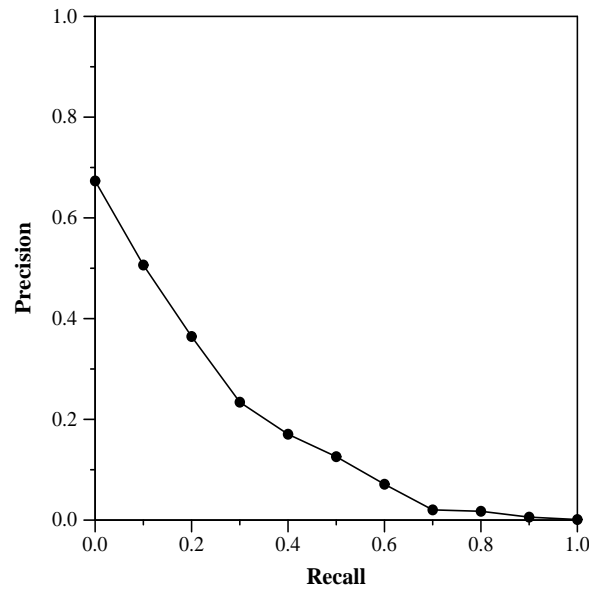
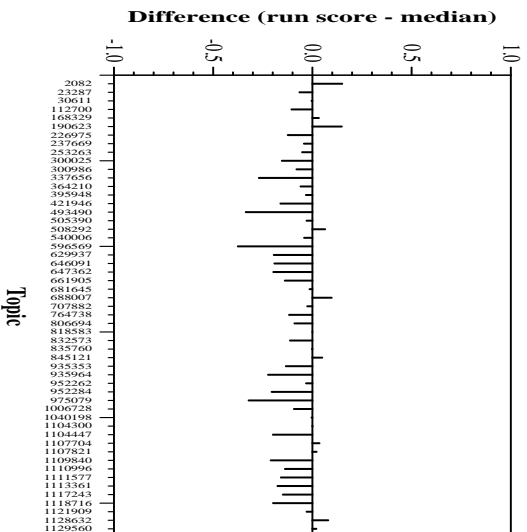


Deep Learning Track results — (L3S) L3S Research Center, Leibniz University Hannover, Germany

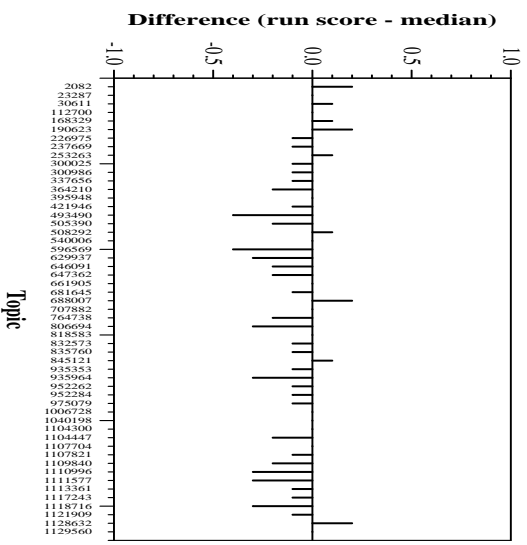
Run Description	
Run ID:	Fast_ForwardP_5
Task:	Passage Ranking
Subtask:	Full ranking from the collection
Topic type:	Automatic
Single-stage retrieval?	No
Dense retrieval?	No
Used deep nn model?	Pre-trained model
Type of training:	Previous year's MS MARCO training data
Pre-processing/indexing cost:	The dense indexing cost would be roughly 1-2 weeks on 4 V100. Sparse indexing takes an hour on the CPU.
Query processing cost:	We have used the CPU for query processing. The approximate processing cost is 349ms per query (174ms sparse retrieval, 167ms dense query encoding, and lookups, 8ms for interpolation). These times depend on the system load factor.

Overall measures		Document Level Averages	
Number of topics	53	Precision	
Total number retrieved	5300	At 5 docs	0.4566
Total relevant	3427	At 10 docs	0.4226
Total relevant retrieved	1013	At 15 docs	0.3937
MAP	0.1728	At 20 docs	0.3613
Mean NDCG@10	0.5132	At 30 docs	0.3157
Mean Reciprocal Rank	0.6034	R-Precision	
		Exact	0.2528

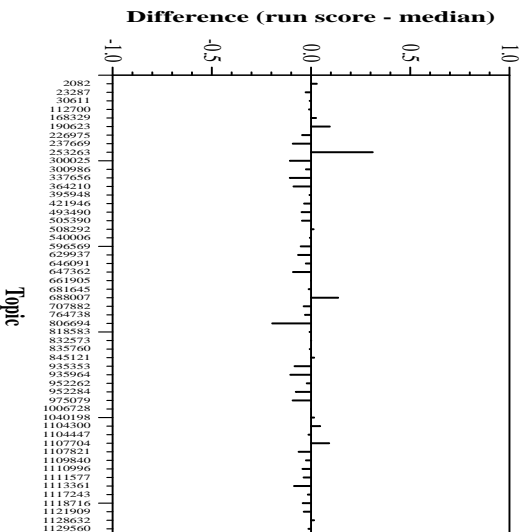




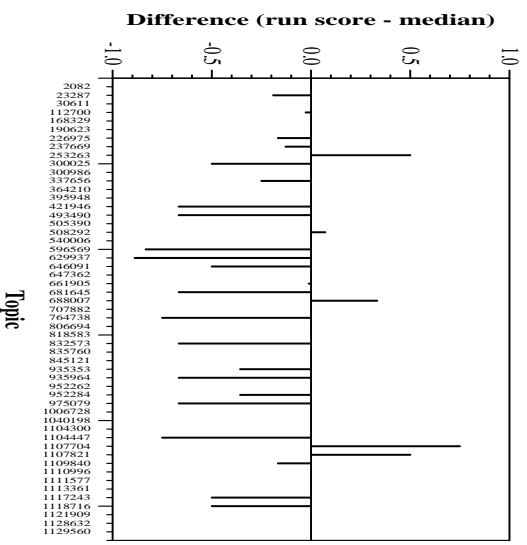
Per-topic difference from median for NDCG@10 for Passage Ranking runs



Per-topic difference from median for Precision for Passage Ranking runs



Per-topic difference from median for Average Reciprocal Rank for Passage Ranking runs



Per-topic difference from median for Precision for Passage Ranking runs