

# Conference Program

**Monday, August 2, 2021 (all times UTC+0)**

**08:15–08:35**    *Opening Session*

**08:40–09:00**    *Presidential Address*

**09:00–10:00**    *Keynote 1. Helen Meng: Advancing Technological Equity in Speech and Language Processing*

## **Session 1A: Computational Social Science and Cultural Analytics 1**

**10:00–10:10**    *Investigating label suggestions for opinion mining in German Covid-19 social media*

Tilman Beck, Ji-Ung Lee, Christina Viehmann, Marcus Maurer, Oliver Quiring and Iryna Gurevych

**10:10–10:20**    *How Did This Get Funded?! Automatically Identifying Quirky Scientific Achievements*

Chen Shani, Nadav Borenstein and Dafna Shahaf

**10:20–10:30**    *Engage the Public: Poll Question Generation for Social Media Posts*

Zexin Lu, Keyang Ding, Yuji Zhang, Jing Li, Baolin Peng and Lemao Liu

**10:30–10:40**    *HateCheck: Functional Tests for Hate Speech Detection Models*

Paul Röttger, Bertie Vidgen, Dong Nguyen, Zeerak Waseem, Helen Margetts and Janet Pierrehumbert

**10:40–10:50**    *Unified Dual-view Cognitive Model for Interpretable Claim Verification*

Lianwei Wu, Yuan Rao, Yuqian Lan, Ling Sun and Zhaoyin Qi

**10:50–10:57**    *Catchphrase: Automatic Detection of Cultural References*

Nir Sweed and Dafna Shahaf

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 1B: Language Generation 1**

- 10:00–10:10 *DeepRapper: Neural Rap Generation with Rhyme and Rhythm Modeling*  
Lanqing Xue, Kaitao Song, Duocai Wu, Xu Tan, Nevin L. Zhang, Tao Qin, Wei-Qiang Zhang and Tie-Yan Liu
- 10:10–10:20 *PENS: A Dataset and Generic Framework for Personalized News Headline Generation*  
Xiang Ao, Xiting Wang, Ling Luo, Ying Qiao, Qing He and Xing Xie
- 10:20–10:30 *Enhancing Content Preservation in Text Style Transfer Using Reverse Attention and Conditional Layer Normalization*  
Dongkyu Lee, Zhiliang Tian, Lanqing Xue and Nevin L. Zhang
- 10:30–10:40 *Mention Flags (MF): Constraining Transformer-based Text Generators*  
Yufei Wang, Ian Wood, Stephen Wan, Mark Dras and Mark Johnson
- 10:40–10:50 *Generalising Multilingual Concept-to-Text NLG with Language Agnostic Delexicalisation*  
Giulio Zhou and Gerasimos Lampouras
- 10:50–10:57 *On Training Instance Selection for Few-Shot Neural Text Generation*  
Ernie Chang, Xiaoyu Shen, Hui-Syuan Yeh and Vera Demberg

**Session 1C: Dialog and Interactive Systems 1**

- 10:00–10:10 *Conversations Are Not Flat: Modeling the Dynamic Information Flow across Dialogue Utterances*  
Zekang Li, Jinchao Zhang, Zhengcong Fei, Yang Feng and Jie Zhou
- 10:10–10:20 *Dual Slot Selector via Local Reliability Verification for Dialogue State Tracking*  
Jinyu Guo, Kai Shuang, Jijie Li and Zihan Wang
- 10:20–10:30 *Transferable Dialogue Systems and User Simulators*  
Bo-Hsiang Tseng, Yinpei Dai, Florian Kreyssig and Bill Byrne
- 10:30–10:40 *BoB: BERT Over BERT for Training Persona-based Dialogue Models from Limited Personalized Data*  
Haoyu Song, Yan Wang, Kaiyan Zhang, Wei-Nan Zhang and Ting Liu

**Monday, August 2, 2021 (all times UTC+0) (continued)**

10:40–10:50 *GL-GIN: Fast and Accurate Non-Autoregressive Model for Joint Multiple Intent Detection and Slot Filling*

Libo Qin, Fuxuan Wei, Tianbao Xie, Xiao Xu, Wanxiang Che and Ting Liu

10:50–10:57 *Coreference Resolution without Span Representations*

Yuval Kirstain, Ori Ram and Omer Levy

**Session 1D: Information Extraction 1**

10:00–10:10 *Accelerating BERT Inference for Sequence Labeling via Early-Exit*

Xiaonan Li, Yunfan Shao, Tianxiang Sun, Hang Yan, Xipeng Qiu and Xuanjing Huang

10:10–10:20 *Modularized Interaction Network for Named Entity Recognition*

Fei Li, Zheng Wang, Siu Cheung Hui, Lejian Liao, Dandan Song, Jing Xu, Guoxiu He and meihuizi jia

10:20–10:30 *Capturing Event Argument Interaction via A Bi-Directional Entity-Level Recurrent Decoder*

Xi Xiangyu, Wei Ye, Shikun Zhang, Quanxiu Wang, Huixing Jiang and Wei Wu

10:30–10:40 *UniRE: A Unified Label Space for Entity Relation Extraction*

Yijun Wang, Changzhi Sun, Yuanbin Wu, Hao Zhou, Lei Li and Junchi Yan

10:40–10:50 *Refining Sample Embeddings with Relation Prototypes to Enhance Continual Relation Extraction*

Li Cui, Deqing Yang, Jiaxin Yu, Chengwei Hu, Jiayang Cheng, Jingjie Yi and Yanghua Xiao

10:50–10:57 *Enhancing Entity Boundary Detection for Better Chinese Named Entity Recognition*

Chun Chen and Fang Kong

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 1E: Machine Translation and Multilinguality 1**

- 10:00–10:10 *Contrastive Learning for Many-to-many Multilingual Neural Machine Translation*  
Xiao Pan, Mingxuan Wang, Liwei Wu and Lei Li
- 10:10–10:20 *Understanding the Properties of Minimum Bayes Risk Decoding in Neural Machine Translation*  
Mathias Müller and Rico Sennrich
- 10:20–10:30 *Multi-Head Highly Parallelized LSTM Decoder for Neural Machine Translation*  
Hongfei Xu, Qiuhui Liu, Josef van Genabith, Deyi Xiong and Meng Zhang
- 10:30–10:40 *A Bidirectional Transformer Based Alignment Model for Unsupervised Word Alignment*  
Jingyi Zhang and Josef van Genabith
- 10:40–10:50 *Learning Language Specific Sub-network for Multilingual Machine Translation*  
Zehui Lin, Liwei Wu, Mingxuan Wang and Lei Li
- 10:50–10:57 *Difficulty-Aware Machine Translation Evaluation*  
Runzhe Zhan, Xuebo Liu, Derek F. Wong and Lidia S. Chao

**Session 2A: Sentiment Analysis, Stylistic Analysis, and Argument Mining 1**

- 11:00–11:10 *Exploring the Efficacy of Automatically Generated Counterfactuals for Sentiment Analysis*  
Linyi Yang, Jiazheng Li, Padraig Cunningham, Yue Zhang, Barry Smyth and Ruihai Dong
- 11:10–11:20 *Bridge-Based Active Domain Adaptation for Aspect Term Extraction*  
Zhuang Chen and Tieyun Qian
- 11:20–11:30 *Multimodal Sentiment Detection Based on Multi-channel Graph Neural Networks*  
Xiaocui Yang, Shi Feng, Yifei Zhang and Daling Wang
- 11:30–11:40 *Aspect-Category-Opinion-Sentiment Quadruple Extraction with Implicit Aspects and Opinions*  
Hongjie Cai, Rui Xia and Jianfei Yu

**Monday, August 2, 2021 (all times UTC+0) (continued)**

- 11:40–11:47 *Uncertainty and Surprisal Jointly Deliver the Punchline: Exploiting Incongruity-Based Features for Humor Recognition*  
Yubo Xie, Junze Li and Pearl Pu
- 11:47–11:54 *Counterfactuals to Control Latent Disentangled Text Representations for Style Transfer*  
Sharmila Reddy Nangi, Niyati Chhaya, Sopan Khosla, Nikhil Kaushik and Harshit Nyati

**Session 2B: Summarization 1**

- 11:00–11:10 *PASS: Perturb-and-Select Summarizer for Product Reviews*  
Nadav Oved and Ran Levy
- 11:10–11:20 *Deep Differential Amplifier for Extractive Summarization*  
Ruipeng Jia, Yanan Cao, Fang Fang, Yuchen Zhou, Zheng Fang, Yanbing Liu and Shi Wang
- 11:20–11:30 *Multi-TimeLine Summarization (MTLS): Improving Timeline Summarization by Generating Multiple Summaries*  
Yi Yu, Adam Jatowt, Antoine Doucet, Kazunari Sugiyama and Masatoshi Yoshikawa
- 11:30–11:40 *Self-Supervised Multimodal Opinion Summarization*  
Jinbae Im, Moonki Kim, Hoyeop Lee, Hyunsouk Cho and Sehee Chung
- 11:40–11:50 *A Training-free and Reference-free Summarization Evaluation Metric via Centrality-weighted Relevance and Self-referenced Redundancy*  
Wang Chen, Piji Li and Irwin King
- 11:50–12:00 *DESCGEN: A Distantly Supervised Dataset for Generating Entity Descriptions*  
Weijia Shi, Mandar Joshi and Luke Zettlemoyer

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 2C: Interpretability and Analysis of Models for NLP 1**

- 11:00–11:10 *Introducing Orthogonal Constraint in Structural Probes*  
Tomasz Limisiewicz and David Mareček
- 11:10–11:20 *Hidden Killer: Invisible Textual Backdoor Attacks with Syntactic Trigger*  
Fanchao Qi, Mukai Li, Yangyi Chen, Zhengyan Zhang, Zhiyuan Liu, Yasheng Wang and Maosong Sun
- 11:20–11:30 *Examining the Inductive Bias of Neural Language Models with Artificial Languages*  
Jennifer C. White and Ryan Cotterell
- 11:30–11:40 *Explaining Contextualization in Language Models using Visual Analytics*  
Rita Sevastjanova, Aikaterini-Lida Kalouli, Christin Beck, Hanna Schäfer and Menatallah El-Assady
- 11:40–11:50 *Improving the Faithfulness of Attention-based Explanations with Task-specific Information for Text Classification*  
George Chrysostomou and Nikolaos Aletras
- 11:50–11:57 *Attention Flows are Shapley Value Explanations*  
Kawin Ethayarajh and Dan Jurafsky

**Session 2D: Language Grounding to Vision, Robotics and Beyond 1**

- 11:00–11:10 *Generating Landmark Navigation Instructions from Maps as a Graph-to-Text Problem*  
Raphael Schumann and Stefan Riezler
- 11:10–11:20 *E2E-VLP: End-to-End Vision-Language Pre-training Enhanced by Visual Learning*  
Haiyang Xu, Ming Yan, Chenliang Li, Bin Bi, Songfang Huang, Wenming Xiao and Fei Huang
- 11:20–11:30 *Learning Relation Alignment for Calibrated Cross-modal Retrieval*  
Shuhuai Ren, Junyang Lin, Guangxiang Zhao, Rui Men, An Yang, Jingren Zhou, Xu Sun and Hongxia Yang
- 11:30–11:40 *KM-BART: Knowledge Enhanced Multimodal BART for Visual Commonsense Generation*  
Yiran Xing, Zai Shi, Zhao Meng, Gerhard Lakemeyer, Yunpu Ma and Roger Wattenhofer

**Monday, August 2, 2021 (all times UTC+0) (continued)**

- 11:40–11:47 *Video Paragraph Captioning as a Text Summarization Task*  
Hui Liu and Xiaojun Wan
- 11:47–11:54 *Are VQA Systems RAD? Measuring Robustness to Augmented Data with Focused Interventions*  
Daniel Rosenberg, Itai Gat, Amir Feder and Roi Reichart

**Session 2E: Machine Learning for NLP 1**

- 11:00–11:10 *Cascaded Head-colliding Attention*  
Lin Zheng, Zhiyong Wu and Lingpeng Kong
- 11:10–11:20 *Structural Knowledge Distillation: Tractably Distilling Information for Structured Predictor*  
Xinyu Wang, Yong Jiang, Zhaohui Yan, Zixia Jia, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu
- 11:20–11:30 *Parameter-efficient Multi-task Fine-tuning for Transformers via Shared Hypernetworks*  
Rabeeh Karimi Mahabadi, Sebastian Ruder, Mostafa Dehghani and James Henderson
- 11:30–11:40 *COSY: COUNTERFACTUAL SYNTAX FOR CROSS-LINGUAL UNDERSTANDING*  
SICHENG YU, Hao Zhang, Yulei Niu, Qianru Sun and Jing Jiang
- 11:40–11:50 *OoMMix: Out-of-manifold Regularization in Contextual Embedding Space for Text Classification*  
Seonghyeon Lee, Dongha Lee and Hwanjo Yu
- 11:50–11:57 *How Helpful is Inverse Reinforcement Learning for Table-to-Text Generation?*  
Sayan Ghosh, Zheng Qi, Snigdha Chaturvedi and Shashank Srivastava

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 3A: Computational Social Science and Cultural Analytics 2**

- 14:00–14:10 *Understanding and Countering Stereotypes: A Computational Approach to the Stereotype Content Model*  
Kathleen C. Fraser, Isar Nejadgholi and Svetlana Kiritchenko
- 14:10–14:20 *Structurizing Misinformation Stories via Rationalizing Fact-Checks*  
Shan Jiang and Christo Wilson
- 14:20–14:30 *Modeling Language Usage and Listener Engagement in Podcasts*  
Sravana Reddy, Mariya Lazarova, Yongze Yu and Rosie Jones
- 14:30–14:40 *Breaking Down the Invisible Wall of Informal Fallacies in Online Discussions*  
Saumya Sahai, Oana Balalau and Roxana Horincar
- 14:40–14:50 *SocAoG: Incremental Graph Parsing for Social Relation Inference in Dialogues*  
Liang Qiu, Yuan Liang, Yizhou Zhao, Pan Lu, Baolin Peng, Zhou Yu, Ying Nian Wu and Song-Chun Zhu
- 14:50–14:57 *Automatic Fake News Detection: Are Models Learning to Reason?*  
Casper Hansen, Christian Hansen and Lucas Chaves Lima

**Session 3B: Dialog and Interactive Systems 2**

- 14:00–14:10 *TicketTalk: Toward human-level performance with end-to-end, transaction-based dialog systems*  
Bill Byrne, Karthik Krishnamoorthi, Saravanan Ganesh and Mihir Kale
- 14:10–14:20 *Improving Dialog Systems for Negotiation with Personality Modeling*  
Runzhe Yang, Jingxiao Chen and Karthik Narasimhan
- 14:20–14:30 *Learning from Perturbations: Diverse and Informative Dialogue Generation with Inverse Adversarial Training*  
Wangchunshu Zhou, Qifei LI and Chenle Li
- 14:30–14:40 *Increasing Faithfulness in Knowledge-Grounded Dialogue with Controllable Features*  
Hannah Rashkin, David Reitter, Gaurav Singh Tomar and Dipanjan Das



**Monday, August 2, 2021 (all times UTC+0) (continued)**

- 14:40–14:47 *Saying No is An Art: Contextualized Fallback Responses for Unanswerable Dialogue Queries*  
Ashish Shrivastava, Kaustubh Dhole, Abhinav Bhatt and Sharvani Raghunath
- 14:47–14:54 *N-Best ASR Transformer: Enhancing SLU Performance using Multiple ASR Hypotheses*  
Karthik Ganesan, Pakhi Bamdev, Jaivarsan B, Amresh Venugopal and Abhinav Tushar

**Session 3C: Information Extraction 2**

- 14:00–14:10 *CitationIE: Leveraging the Citation Graph for Scientific Information Extraction*  
Vijay Viswanathan, Graham Neubig and Pengfei Liu
- 14:10–14:20 *From Discourse to Narrative: Knowledge Projection for Event Relation Extraction*  
Jialong Tang, Hongyu Lin, Meng Liao, Yaojie Lu, Xianpei Han, Le Sun, Weijian Xie and Jin Xu
- 14:20–14:30 *AdvPicker: Effectively Leveraging Unlabeled Data via Adversarial Discriminator for Cross-Lingual NER*  
Weile Chen, Huiqiang Jiang, Qianhui Wu, Börje Karlsson and Yi Guan
- 14:30–14:40 *Compare to The Knowledge: Graph Neural Fake News Detection with External Knowledge*  
Linmei Hu, Tianchi Yang, Luhao Zhang, Wanjun Zhong, Duyu Tang, Chuan Shi, Nan Duan and Ming Zhou
- 14:40–14:50 *Discontinuous Named Entity Recognition as Maximal Clique Discovery*  
Yucheng Wang, Bowen Yu, Hongsong Zhu, Tingwen Liu, Nan Yu and Limin Sun
- 14:50–15:00 *LNN-EL: A Neuro-Symbolic Approach to Short-text Entity Linking*  
Hang Jiang, Sairam Gurajada, Qiuhaio Lu, Sumit Neelam, Lucian Popa, Prithviraj Sen, Yunyao Li and Alexander Gray

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 3D: Machine Translation and Multilinguality 2**

- 14:00–14:10 *Do Context-Aware Translation Models Pay the Right Attention?*  
Kayo Yin, Patrick Fernandes, Danish Pruthi, Aditi Chaudhary, André F. T. Martins and Graham Neubig
- 14:10–14:20 *Adapting High-resource NMT Models to Translate Low-resource Related Languages without Parallel Data*  
Wei-Jen Ko, Ahmed El-Kishky, Adithya Renduchintala, Vishrav Chaudhary, Naman Goyal, Francisco Guzmán, Pascale Fung, Philipp Koehn and Mona Diab
- 14:20–14:30 *Bilingual Lexicon Induction via Unsupervised Bitext Construction and Word Alignment*  
Haoyue Shi, Luke Zettlemoyer and Sida I. Wang
- 14:30–14:40 *Multilingual Speech Translation from Efficient Finetuning of Pretrained Models*  
Xian Li, Changhan Wang, Yun Tang, Chau Tran, Yuqing Tang, Juan Pino, Alexei Baevski, Alexis Conneau and Michael Auli
- 14:40–14:47 *Gender bias amplification during Speed-Quality optimization in Neural Machine Translation*  
Adithya Renduchintala, Denise Diaz, Kenneth Heafield, Xian Li and Mona Diab
- 14:47–14:54 *Machine Translation into Low-resource Language Varieties*  
Sachin Kumar, Antonios Anastasopoulos, Shuly Wintner and Yulia Tsvetkov

**Session 3E: Interpretability and Analysis of Models for NLP 2**

- 14:00–14:10 *Learning Faithful Representations of Causal Graphs*  
Ananth Balashankar and Lakshminarayanan Subramanian
- 14:10–14:20 *What Context Features Can Transformer Language Models Use?*  
Joe O'Connor and Jacob Andreas
- 14:20–14:30 *Integrated Directional Gradients: Feature Interaction Attribution for Neural NLP Models*  
Sandipan Sikdar, Parantapa Bhattacharya and Kieran Heese
- 14:30–14:37 *Is Sparse Attention more Interpretable?*  
Clara Meister, Stefan Lazov, Isabelle Augenstein and Ryan Cotterell

**Monday, August 2, 2021 (all times UTC+0) (continued)**

14:37–14:44 *The Case for Translation-Invariant Self-Attention in Transformer-Based Language Models*  
Ulme Wennberg and Gustav Eje Henter

14:44–14:51 *Relative Importance in Sentence Processing*  
Nora Hollenstein and Lisa Beinborn

**Poster 1A: Semantics: Sentence-level Semantics, Textual Inference and Other areas**

15:00–17:00 *DeCLUTR: Deep Contrastive Learning for Unsupervised Textual Representations*  
John Giorgi, Osvald Nitski, Bo Wang and Gary Bader

15:00–17:00 *Doing Good or Doing Right? Exploring the Weakness of Commonsense Causal Reasoning Models*  
Mingyue Han and Yinglin Wang

15:00–17:00 *XLPT-AMR: Cross-Lingual Pre-Training via Multi-Task Learning for Zero-Shot AMR Parsing and Text Generation*  
Dongqin Xu, Junhui Li, Muhua Zhu, Min Zhang and Guodong Zhou

15:00–17:00 *Span-based Semantic Parsing for Compositional Generalization*  
Jonathan Herzig and Jonathan Berant

15:00–17:00 *AND does not mean OR: Using Formal Languages to Study Language Models' Representations*  
Aaron Traylor, Roman Feiman and Ellie Pavlick

15:00–17:00 *Enforcing Consistency in Weakly Supervised Semantic Parsing*  
Nitish Gupta, Sameer Singh and Matt Gardner

15:00–17:00 *Compositional Generalization and Natural Language Variation: Can a Semantic Parsing Approach Handle Both?*  
Peter Shaw, Ming-Wei Chang, Panupong Pasupat and Kristina Toutanova

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1B: Linguistic Theories, Cognitive Modeling and Psycholinguistics**

- 15:00–17:00 *A Targeted Assessment of Incremental Processing in Neural Language Models and Humans*  
Ethan Wilcox, Pranali Vani and Roger Levy

**Poster 1C: Semantics: Lexical Semantics**

- 15:00–17:00 *The Possible, the Plausible, and the Desirable: Event-Based Modality Detection for Language Processing*  
Valentina Pyatkin, Shoval Sadde, Aynat Rubinstein, Paul Portner and Reut Tsarfaty

**Poster 1D: Phonology, Morphology and Word Segmentation**

- 15:00–17:00 *To POS Tag or Not to POS Tag: The Impact of POS Tags on Morphological Learning in Low-Resource Settings*  
Sarah Moeller, Ling Liu and Mans Hulden

**Poster 1E: Speech and Multimodality**

- 15:00–17:00 *Prosodic segmentation for parsing spoken dialogue*  
Elizabeth Nielsen, Mark Steedman and Sharon Goldwater
- 15:00–17:00 *VoxPopuli: A Large-Scale Multilingual Speech Corpus for Representation Learning, Semi-Supervised Learning and Interpretation*  
Changhan Wang, Morgane Riviere, Ann Lee, Anne Wu, Chaitanya Talnikar, Daniel Haziza, Mary Williamson, Juan Pino and Emmanuel Dupoux
- 15:00–17:00 *An Improved Model for Voicing Silent Speech*  
David Gaddy and Dan Klein

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1F: Ethics in NLP**

- 15:00–17:00 *What’s in the Box? An Analysis of Undesirable Content in the Common Crawl Corpus*  
Alexandra Luccioni and Joseph Viviano
- 15:00–17:00 *Stereotyping Norwegian Salmon: An Inventory of Pitfalls in Fairness Benchmark Datasets*  
Su Lin Blodgett, Gilsinia Lopez, Alexandra Olteanu, Robert Sim and Hanna Wallach

**Poster 1G: Information Retrieval and Text Mining**

- 15:00–17:00 *Robust Knowledge Graph Completion with Stacked Convolutions and a Student Re-Ranking Network*  
Justin Lovelace, Denis Newman-Griffis, Shikhar Vashishth, Jill Fain Lehman and Carolyn Rosé
- 15:00–17:00 *A DQN-based Approach to Finding Precise Evidences for Fact Verification*  
Hai Wan, Haicheng Chen, Jianfeng Du, Weilin Luo and Rongzhen Ye

**Poster 1H: Machine Learning for NLP**

- 15:00–17:00 *The Art of Abstention: Selective Prediction and Error Regularization for Natural Language Processing*  
Ji Xin, Raphael Tang, Yaoliang Yu and Jimmy Lin
- 15:00–17:00 *Unsupervised Out-of-Domain Detection via Pre-trained Transformers*  
Keyang Xu, Tongzheng Ren, Shikun Zhang, Yihao Feng and Caiming Xiong
- 15:00–17:00 *Continual Quality Estimation with Online Bayesian Meta-Learning*  
Abiola Obamuyide, Marina Fomicheva and Lucia Specia
- 15:00–17:00 *MATE-KD: Masked Adversarial TExt, a Companion to Knowledge Distillation*  
Ahmad Rashid, Vasileios Lioutas and Mehdi Rezagholizadeh
- 15:00–17:00 *Selecting Informative Contexts Improves Language Model Fine-tuning*  
Richard Antonello, Nicole Beckage, Javier Turek and Alexander Huth

**Monday, August 2, 2021 (all times UTC+0) (continued)**

- 15:00–17:00 *Explainable Prediction of Text Complexity: The Missing Preliminaries for Text Simplification*  
Cristina Garbacea, Mengtian Guo, Samuel Carton and Qiaozhu Mei
- 15:00–17:00 *Multi-Task Retrieval for Knowledge-Intensive Tasks*  
Jean Maillard, Vladimir Karpukhin, Fabio Petroni, Wen-tau Yih, Barlas Oguz, Veselin Stoyanov and Gargi Ghosh

**Poster 1I: Interpretability and Analysis of Models for NLP**

- 15:00–17:00 *When Do You Need Billions of Words of Pretraining Data?*  
Yian Zhang, Alex Warstadt, Xiaocheng Li and Samuel R. Bowman
- 15:00–17:00 *Analyzing the Source and Target Contributions to Predictions in Neural Machine Translation*  
Elena Voita, Rico Sennrich and Ivan Titov
- 15:00–17:00 *Comparing Test Sets with Item Response Theory*  
Clara Vania, Phu Mon Htut, William Huang, Dhara Mungra, Richard Yuanzhe Pang, Jason Phang, Haokun Liu, Kyunghyun Cho and Samuel R. Bowman
- 15:00–17:00 *Uncovering Constraint-Based Behavior in Neural Models via Targeted Fine-Tuning*  
Forrest Davis and Marten van Schijndel
- 15:00–17:00 *More Identifiable yet Equally Performant Transformers for Text Classification*  
Rishabh Bhardwaj, Navonil Majumder, Soujanya Poria and Eduard Hovy

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1J: Dialog and Interactive Systems**

- 15:00–17:00 *AugNLG: Few-shot Natural Language Generation using Self-trained Data Augmentation*  
Xinnuo Xu, Guoyin Wang, Young-Bum Kim and Sungjin Lee
- 15:00–17:00 *A Span-based Dynamic Local Attention Model for Sequential Sentence Classification*  
Xichen Shang, Qianli Ma, Zhenxi Lin, Jiangyue Yan and Zipeng Chen

**Poster 1K: Resources and Evaluation**

- 15:00–17:00 *How effective is BERT without word ordering? Implications for language understanding and data privacy*  
Jack Hessel and Alexandra Schofield
- 15:00–17:00 *Can vectors read minds better than experts? Comparing data augmentation strategies for the automated scoring of children’s mindreading ability*  
Venelin Kovatchev, Phillip Smith, Mark Lee and Rory Devine
- 15:00–17:00 *A Dataset and Baselines for Multilingual Reply Suggestion*  
Mozhi Zhang, Wei Wang, Budhaditya Deb, Guoqing Zheng, Milad Shokouhi and Ahmed Hassan Awadallah
- 15:00–17:00 *WikiSum: Coherent Summarization Dataset for Efficient Human-Evaluation*  
Nachshon Cohen, Oren Kalinsky, Yftah Ziser and Alessandro Moschitti
- 15:00–17:00 *What Ingredients Make for an Effective Crowdsourcing Protocol for Difficult NLU Data Collection Tasks?*  
Nikita Nangia, Saku Sugawara, Harsh Trivedi, Alex Warstadt, Clara Vania and Samuel R. Bowman
- 15:00–17:00 *UMIC: An Unreferenced Metric for Image Captioning via Contrastive Learning*  
Hwanhee Lee, Seunghyun Yoon, Franck Dernoncourt, Trung Bui and Kyomin Jung
- 15:00–17:00 *Neural OCR Post-Hoc Correction of Historical Corpora*  
Lijun Lyu, Maria Koutraki, Martin Krikl and Besnik Fetahu

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1L: Computational Social Science and Cultural Analytics**

- 15:00–17:00 *Align Voting Behavior with Public Statements for Legislator Representation Learning*  
Xinyi Mou, Zhongyu Wei, Lei Chen, Shangyi Ning, Yancheng He, Changjian Jiang and Xuanjing Huang
- 15:00–17:00 *Measure and Evaluation of Semantic Divergence across Two Languages*  
Syrielle Montariol and Alexandre Allauzen

**Poster 1M: Machine Translation and Multilinguality**

- 15:00–17:00 *Improving Zero-Shot Translation by Disentangling Positional Information*  
Danni Liu, Jan Niehues, James Cross, Francisco Guzmán and Xian Li
- 15:00–17:00 *Common Sense Beyond English: Evaluating and Improving Multilingual Language Models for Commonsense Reasoning*  
Bill Yuchen Lin, Seyeon Lee, Xiaoyang Qiao and Xiang Ren
- 15:00–17:00 *Attention Calibration for Transformer in Neural Machine Translation*  
Yu Lu, Jiali Zeng, Jiajun Zhang, Shuangzhi Wu and Mu Li
- 15:00–17:00 *Anchor-based Bilingual Word Embeddings for Low-Resource Languages*  
Tobias Eder, Viktor Hangya and Alexander Fraser
- 15:00–17:00 *Diverse Pretrained Context Encodings Improve Document Translation*  
Domenic Donato, Lei Yu and Chris Dyer
- 15:00–17:00 *Multilingual Agreement for Multilingual Neural Machine Translation*  
Jian Yang, Yuwei Yin, Shuming Ma, Haoyang Huang, Dongdong Zhang, Zhoujun Li and Furu Wei
- 15:00–17:00 *Exploiting Language Relatedness for Low Web-Resource Language Model Adaptation: An Indic Languages Study*  
Yash Khemchandani, Sarvesh Mehtani, Vaidehi Patil, Abhijeet Awasthi, Partha Talukdar and Sunita Sarawagi



**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1N: Syntax: Tagging, Chunking, and Parsing**

15:00–17:00 *On Finding the K-best Non-projective Dependency Trees*

Ran Zmigrod, Tim Vieira and Ryan Cotterell

15:00–17:00 *Higher-order Derivatives of Weighted Finite-state Machines*

Ran Zmigrod, Tim Vieira and Ryan Cotterell

**Poster 1O: Theme**

15:00–17:00 *Towards Argument Mining for Social Good: A Survey*

Eva Maria Vecchi, Neele Falk, Iman Jundi and Gabriella Lapesa

15:00–17:00 *Automated Generation of Storytelling Vocabulary from Photographs for use in AAC*

Mauricio Fontana de Vargas and Karyn Moffatt

**Poster 1P: NLP Applications**

15:00–17:00 *CLIP: A Dataset for Extracting Action Items for Physicians from Hospital Discharge Notes*

James Mullenbach, Yada Pruksachatkun, Sean Adler, Jennifer Seale, Jordan Swartz, Greg McKelvey, Hui Dai, Yi Yang and David Sontag

15:00–17:00 *Assessing Emoji Use in Modern Text Processing Tools*

Abu Awal Md Shoeb and Gerard de Melo

15:00–17:00 *Select, Extract and Generate: Neural Keyphrase Generation with Layer-wise Coverage Attention*

Wasi Ahmad, Xiao Bai, Soomin Lee and Kai-Wei Chang

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1Q: Language Generation**

- 15:00–17:00 *Factorising Meaning and Form for Intent-Preserving Paraphrasing*  
Tom Hosking and Mirella Lapata
- 15:00–17:00 *AggGen: Ordering and Aggregating while Generating*  
Xinnuo Xu, Ondřej Dušek, Verena Rieser and Ioannis Konstas
- 15:00–17:00 *Reflective Decoding: Beyond Unidirectional Generation with Off-the-Shelf Language Models*  
Peter West, Ximing Lu, Ari Holtzman, Chandra Bhagavatula, Jena D. Hwang and Yejin Choi
- 15:00–17:00 *Towards Table-to-Text Generation with Numerical Reasoning*  
Lya Hulliyyatus Suadaa, Hidetaka Kamigaito, Kotaro Funakoshi, Manabu Okumura and Hiroya Takamura
- 15:00–17:00 *Data-to-text Generation with Macro Planning*  
Ratish Puduppully and Mirella Lapata

**Poster 1R: Summarization**

- 15:00–17:00 *BACO: A Background Knowledge- and Content-Based Framework for Citing Sentence Generation*  
Yubin Ge, Ly Dinh, Xiaofeng Liu, Jinsong Su, Ziyao Lu, Ante Wang and Jana Diesner
- 15:00–17:00 *Language Model as an Annotator: Exploring DialoGPT for Dialogue Summarization*  
Xiachong Feng, Xiaocheng Feng, Libo Qin, Bing Qin and Ting Liu
- 15:00–17:00 *Reinforcement Learning for Abstractive Question Summarization with Question-aware Semantic Rewards*  
Shweta Yadav, Deepak Gupta, Asma Ben Abacha and Dina Demner-Fushman

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1S: Question Answering**

- 15:00–17:00 *Challenges in Information-Seeking QA: Unanswerable Questions and Paragraph Retrieval*  
Akari Asai and Eunsol Choi
- 15:00–17:00 *A Semantics-aware Transformer Model of Relation Linking for Knowledge Base Question Answering*  
Tahira Naseem, Srinivas Ravishankar, Nandana Mihindukulasooriya, Ibrahim Abdelaziz, Young-Suk Lee, Pavan Kapanipathi, Salim Roukos, Alfio Gliozzo and Alexander Gray
- 15:00–17:00 *A Gradually Soft Multi-Task and Data-Augmented Approach to Medical Question Understanding*  
Khalil Mrini, Franck Dernoncourt, Seunghyun Yoon, Trung Bui, Walter Chang, Emilia Farcas and Ndapa Nakashole
- 15:00–17:00 *Neural Retrieval for Question Answering with Cross-Attention Supervised Data Augmentation*  
Yinfei Yang, Ning Jin, Kuo Lin, Mandy Guo and Daniel Cer

**Poster 1T: Language Grounding to Vision, Robotics and Beyond**

- 15:00–17:00 *Enhancing Descriptive Image Captioning with Natural Language Inference*  
Zhan Shi, Hui Liu and Xiaodan Zhu

**Poster 1U: Information Extraction**

- 15:00–17:00 *Leveraging Type Descriptions for Zero-shot Named Entity Recognition and Classification*  
Rami Aly, Andreas Vlachos and Ryan McDonald
- 15:00–17:00 *MECT: Multi-Metadata Embedding based Cross-Transformer for Chinese Named Entity Recognition*  
Shuang Wu, Xiaoning Song and Zhenhua Feng
- 15:00–17:00 *MOLEMAN: Mention-Only Linking of Entities with a Mention Annotation Network*  
Nicholas FitzGerald, Dan Bikel, Jan Botha, Daniel Gillick, Tom Kwiatkowski and Andrew McCallum
- 15:00–17:00 *Factuality Assessment as Modal Dependency Parsing*  
Jiarui Yao, Haoling Qiu, Jin Zhao, Bonan Min and Nianwen Xue

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Poster 1V: Sentiment Analysis, Stylistic Analysis, and Argument Mining**

- 15:00–17:00 *Directed Acyclic Graph Network for Conversational Emotion Recognition*  
Weizhou Shen, Siyue Wu, Yunyi Yang and Xiaojun Quan
- 15:00–17:00 *Improving Formality Style Transfer with Context-Aware Rule Injection*  
Zonghai Yao and hong yu
- 15:00–17:00 *Topic-Driven and Knowledge-Aware Transformer for Dialogue Emotion Detection*  
Lixing Zhu, Gabriele Pergola, Lin Gui, Deyu Zhou and Yulan He
- 15:00–17:00 *Syntopical Graphs for Computational Argumentation Tasks*  
Joe Barrow, Rajiv Jain, Nedim Lipka, Franck Dernoncourt, Vlad Morariu, Varun Manjunatha, Douglas Oard, Philip Resnik and Henning Wachsmuth
- 15:00–17:00 *Stance Detection in COVID-19 Tweets*  
Kyle Glandt, Sarthak Khanal, Yingjie Li, Doina Caragea and Cornelia Caragea
- 15:00–17:00 *eMLM: A New Pre-training Objective for Emotion Related Tasks*  
Tiberiu Sosea and Cornelia Caragea
- 15:00–17:00 *Topic-Aware Evidence Reasoning and Stance-Aware Aggregation for Fact Verification*  
Jiasheng Si, Deyu Zhou, Tongzhe Li, Xingyu Shi and Yulan He
- 17:00—18:00 Keynote 2. Alejandrina Cristia: Learning and Processing Language from Wearables: Opportunities and Challenges**

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 4A: Computational Social Science and Cultural Analytics 3**

- 23:00–23:10 *Changes in European Solidarity Before and During COVID-19: Evidence from a Large Crowd- and Expert-Annotated Twitter Dataset*  
Alexandra Ils, Dan Liu, Daniela Grunow and Steffen Eger
- 23:10–23:20 *Measuring Conversational Uptake: A Case Study on Student-Teacher Interactions*  
Dorottya Demszky, Jing Liu, Zid Mancenido, Julie Cohen, Heather Hill, Dan Jurafsky and Tatsunori Hashimoto
- 23:20–23:30 *A Survey of Code-switching: Linguistic and Social Perspectives for Language Technologies*  
A. Seza Doğruöz, Sunayana Sitaram, Barbara E. Bullock and Almedia Jacqueline Toribio
- 23:30–23:40 *Learning from the Worst: Dynamically Generated Datasets to Improve Online Hate Detection*  
Bertie Vidgen, Tristan Thrush, Zeerak Waseem and Douwe Kiela
- 23:40–23:50 *InfoSurgeon: Cross-Media Fine-grained Information Consistency Checking for Fake News Detection*  
Yi Fung, Christopher Thomas, Revanth Gangi Reddy, Sandeep Polisetty, Heng Ji, Shih-Fu Chang, Kathleen McKeown, Mohit Bansal and Avi Sil
- 23:50–23:57 *On Positivity Bias in Negative Reviews*  
Madhusudhan Aithal and Chenhao Tan

**Session 4B: Dialog and Interactive Systems 3**

- 23:00–23:10 *I like fish, especially dolphins: Addressing Contradictions in Dialogue Modeling*  
Yixin Nie, Mary Williamson, Mohit Bansal, Douwe Kiela and Jason Weston
- 23:10–23:20 *A Sequence-to-Sequence Approach to Dialogue State Tracking*  
Yue Feng, Yang Wang and Hang Li
- 23:20–23:30 *Discovering Dialog Structure Graph for Coherent Dialog Generation*  
Jun Xu, Zeyang Lei, Haifeng Wang, Zheng-Yu Niu, Hua Wu and Wanxiang Che
- 23:30–23:40 *Dialogue Response Selection with Hierarchical Curriculum Learning*  
Yixuan Su, Deng Cai, Qingyu Zhou, Zibo Lin, Simon Baker, Yunbo Cao, Shuming Shi, Nigel Collier and Yan Wang

**Monday, August 2, 2021 (all times UTC+0) (continued)**

23:40–23:50 *A Joint Model for Dropped Pronoun Recovery and Conversational Discourse Parsing in Chinese Conversational Speech*  
Jingxuan Yang, Kerui Xu, Jun Xu, Si Li, Sheng Gao, Jun Guo, Nianwen Xue and Ji-Rong Wen

23:50–23:57 *PRAL: A Tailored Pre-Training Model for Task-Oriented Dialog Generation*  
Jing Gu, Qingyang Wu, Chongruo Wu, Weiyang Shi and Zhou Yu

**Session 4C: Information Extraction 3**

23:00–23:10 *A Systematic Investigation of KB-Text Embedding Alignment at Scale*  
Vardaan Pahuja, Yu Gu, Wenhui Chen, Mehdi Bahrami, Lei Liu, Wei-Peng Chen and Yu Su

23:10–23:20 *Named Entity Recognition with Small Strongly Labeled and Large Weakly Labeled Data*  
Haoming Jiang, Danqing Zhang, Tianyu Cao, Bing Yin and Tuo Zhao

23:20–23:30 *Ultra-Fine Entity Typing with Weak Supervision from a Masked Language Model*  
Hongliang Dai, Yangqiu Song and Haixun Wang

23:30–23:40 *Improving Named Entity Recognition by External Context Retrieving and Cooperative Learning*  
Xinyu Wang, Yong Jiang, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu

23:40–23:47 *ROPE: Reading Order Equivariant Positional Encoding for Graph-based Document Information Extraction*  
Chen-Yu Lee, Chun-Liang Li, Chu Wang, Renshen Wang, Yasuhisa Fujii, Siyang Qin, Ashok Popat and Tomas Pfister

23:47–23:54 *Zero-shot Event Extraction via Transfer Learning: Challenges and Insights*  
Qing Lyu, Hongming Zhang, Elmor Sulem and Dan Roth

**Monday, August 2, 2021 (all times UTC+0) (continued)**

**Session 4D: Interpretability and Analysis of Models for NLP 3**

- 23:00–23:10 *Implicit Representations of Meaning in Neural Language Models*  
Belinda Z. Li, Maxwell Nye and Jacob Andreas
- 23:10–23:20 *Causal Analysis of Syntactic Agreement Mechanisms in Neural Language Models*  
Matthew Finlayson, Aaron Mueller, Sebastian Gehrmann, Stuart Shieber, Tal Linzen and Yonatan Belinkov
- 23:20–23:30 *Bird’s Eye: Probing for Linguistic Graph Structures with a Simple Information-Theoretic Approach*  
Yifan Hou and Mrinmaya Sachan
- 23:30–23:40 *Knowledgeable or Educated Guess? Revisiting Language Models as Knowledge Bases*  
Boxi Cao, Hongyu Lin, Xianpei Han, Le Sun, Lingyong Yan, Meng Liao, Tong Xue and Jin Xu
- 23:40–23:50 *Poisoning Knowledge Graph Embeddings via Relation Inference Patterns*  
Peru Bhardwaj, John Kelleher, Luca Costabello and Declan O’Sullivan
- 23:50–23:57 *Using Adversarial Attacks to Reveal the Statistical Bias in Machine Reading Comprehension Models*  
Jieyu Lin, Jiajie Zou and Nai Ding

**Session 4E: Ethics in NLP 1**

- 23:00–23:10 *Bad Seeds: Evaluating Lexical Methods for Bias Measurement*  
Maria Antoniak and David Mimno
- 23:10–23:20 *A Survey of Race, Racism, and Anti-Racism in NLP*  
Anjalie Field, Su Lin Blodgett, Zeerak Waseem and Yulia Tsvetkov
- 23:20–23:30 *Intrinsic Bias Metrics Do Not Correlate with Application Bias*  
Seraphina Goldfarb-Tarrant, Rebecca Marchant, Ricardo Muñoz Sánchez, Mugdha Pandya and Adam Lopez
- 23:30–23:40 *RedditBias: A Real-World Resource for Bias Evaluation and Debiasing of Conversational Language Models*  
Soumya Barikeri, Anne Lauscher, Ivan Vulić and Goran Glavaš

**Monday, August 2, 2021 (all times UTC+0) (continued)**

- 23:40–23:47 *Quantifying and Avoiding Unfair Qualification Labour in Crowdsourcing*  
Jonathan K. Kummerfeld
- 23:47–23:54 *Men Are Elected, Women Are Married: Events Gender Bias on Wikipedia*  
Jiao Sun and Nanyun Peng

**Tuesday, August 3, 2021 (all times UTC+0)**

**Session 5A: Machine Translation and Multilinguality 3**

- 00:00–00:10 *Contributions of Transformer Attention Heads in Multi- and Cross-lingual Tasks*  
Weicheng Ma, Kai Zhang, Renze Lou, Lili Wang and Soroush Vosoughi
- 00:10–00:20 *Crafting Adversarial Examples for Neural Machine Translation*  
Xinze Zhang, Junzhe Zhang, Zhenhua Chen and Kun He
- 00:20–00:30 *UXLA: A Robust Unsupervised Data Augmentation Framework for Zero-Resource Cross-Lingual NLP*  
M Saiful Bari, Tasnim Mohiuddin and Shafiq Joty
- 00:30–00:40 *Glancing Transformer for Non-Autoregressive Neural Machine Translation*  
Lihua Qian, Hao Zhou, Yu Bao, Mingxuan Wang, Lin Qiu, Weinan Zhang, Yong Yu and Lei Li
- 00:40–00:47 *Modeling Task-Aware MIMO Cardinality for Efficient Multilingual Neural Machine Translation*  
Hongfei Xu, Qiuhui Liu, Josef van Genabith and Deyi Xiong
- 00:47–00:54 *Adaptive Nearest Neighbor Machine Translation*  
Xin Zheng, Zhirui Zhang, Junliang Guo, Shujian Huang, Boxing Chen, Weihua Luo and Jiajun CHEN



**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 5B: Language Grounding to Vision, Robotics and Beyond 2**

- 00:00–00:10 *Hierarchical Context-aware Network for Dense Video Event Captioning*  
Lei Ji, Xianglin Guo, Haoyang Huang and Xilin Chen
- 00:10–00:20 *Control Image Captioning Spatially and Temporally*  
Kun Yan, Lei Ji, Huaishao Luo, Ming Zhou, Nan Duan and Shuai Ma
- 00:20–00:30 *Edited Media Understanding Frames: Reasoning About the Intent and Implications of Visual Misinformation*  
Jeff Da, Maxwell Forbes, Rowan Zellers, Anthony Zheng, Jena D. Hwang, Antoine Bosselut and Yejin Choi
- 00:30–00:40 *PIGLeT: Language Grounding Through Neuro-Symbolic Interaction in a 3D World*  
Rowan Zellers, Ari Holtzman, Matthew Peters, Roozbeh Mottaghi, Aniruddha Kembhavi, Ali Farhadi and Yejin Choi
- 00:40–00:50 *Neural Event Semantics for Grounded Language Understanding*  
Shyamal Buch, Li Fei-Fei and Noah Goodman

**Session 5C: Machine Learning for NLP 2**

- 00:00–00:10 *Modeling Fine-Grained Entity Types with Box Embeddings*  
Yasumasa Onoe, Michael Boratko, Andrew McCallum and Greg Durrett
- 00:10–00:20 *ChineseBERT: Chinese Pretraining Enhanced by Glyph and Pinyin Information*  
zijun sun, Xiaoya Li, Xiaofei Sun, Yuxian Meng, Xiang Ao, Qing He, Fei Wu and Jiwei Li
- 00:20–00:30 *Weight Distillation: Transferring the Knowledge in Neural Network Parameters*  
Ye Lin, Yanyang Li, Ziyang Wang, Bei Li, Quan Du, Tong Xiao and Jingbo Zhu
- 00:30–00:40 *Optimizing Deeper Transformers on Small Datasets*  
Peng Xu, Dhruv Kumar, Wei Yang, Wenjie Zi, Keyi Tang, Chenyang Huang, Jackie Chi Kit Cheung, Simon J.D. Prince and Yanshuai Cao
- 00:40–00:50 *BERTAC: Enhancing Transformer-based Language Models with Adversarially Pre-trained Convolutional Neural Networks*  
Jong-Hoon Oh, Ryu Iida, Julien Kloetzer and Kentaro Torisawa

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

00:50–00:57 *On Orthogonality Constraints for Transformers*  
Aston Zhang, Alvin Chan, Yi Tay, Jie Fu, Shuohang Wang, Shuai Zhang, Huajie Shao, Shuochao Yao and Roy Ka-Wei Lee

**Session 5D: NLP Applications 1 and Ethics**

00:00–00:10 *COVID-Fact: Fact Extraction and Verification of Real-World Claims on COVID-19 Pandemic*

Arkadiy Saakyan, Tuhin Chakrabarty and Smaranda Muresan

00:10–00:20 *Explaining Relationships Between Scientific Documents*

Kelvin Luu, Xinyi Wu, Rik Koncel-Kedziorski, Kyle Lo, Isabel Cachola and Noah A. Smith

00:20–00:30 *IrEne: Interpretable Energy Prediction for Transformers*

Qingqing Cao, Yash Kumar Lal, Harsh Trivedi, Aruna Balasubramanian and Niranjana Balasubramanian

00:30–00:40 *Mitigating Bias in Session-based Cyberbullying Detection: A Non-Compromising Approach*

Lu Cheng, Ahmadreza Mosallanezhad, Yasin Silva, Deborah Hall and Huan Liu

00:40–00:50 *PlotCoder: Hierarchical Decoding for Synthesizing Visualization Code in Programmatic Context*

Xinyun Chen, Linyuan Gong, Alvin Cheung and Dawn Song

00:50–01:00 *Changing the World by Changing the Data*

Anna Rogers

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 6A: Machine Learning for NLP 3**

- 01:00–01:10 *EarlyBERT: Efficient BERT Training via Early-bird Lottery Tickets*  
Xiaohan Chen, Yu Cheng, Shuohang Wang, Zhe Gan, Zhangyang Wang and Jingjing Liu
- 01:10–01:20 *On the Effectiveness of Adapter-based Tuning for Pretrained Language Model Adaptation*  
Ruidan He, Linlin Liu, Hai Ye, Qingyu Tan, BOSHENG DING, Liying Cheng, Jiawei Low, Lidong Bing and Luo Si
- 01:20–01:30 *Data Augmentation for Text Generation Without Any Augmented Data*  
Wei Bi, Huayang Li and Jiacheng Huang
- 01:30–01:40 *KEPLER: A Unified Model for Knowledge Embedding and Pre-trained Language Representation*  
Xiaozhi Wang, Tianyu Gao, Zhaocheng Zhu, Zhengyan Zhang, Zhiyuan Liu, Juanzi Li and Jian Tang
- 01:40–01:50 *Integrating Semantics and Neighborhood Information with Graph-Driven Generative Models for Document Retrieval*  
Zijing Ou, Qinliang Su, Jianxing Yu, Bang Liu, Jingwen Wang, Ruihui Zhao, Changyou Chen and Yefeng Zheng
- 01:50–01:57 *Measuring and Improving BERT's Mathematical Abilities by Predicting the Order of Reasoning.*  
Piotr Piękos, Mateusz Malinowski and Henryk Michalewski

**Session 6B: Resources and Evaluation 1**

- 01:00–01:10 *SMURF: SeMantic and linguistic UndeRstanding Fusion for Caption Evaluation via Typicality Analysis*  
Joshua Feinglass and Yezhou Yang
- 01:10–01:20 *KaggleDBQA: Realistic Evaluation of Text-to-SQL Parsers*  
Chia-Hsuan Lee, Oleksandr Polozov and Matthew Richardson
- 01:20–01:30 *QASR: QCRI Aljazeera Speech Resource A Large Scale Annotated Arabic Speech Corpus*  
Hamdy Mubarak, Amir Hussein, Shammur Absar Chowdhury and Ahmed Ali
- 01:30–01:40 *An Empirical Study on Hyperparameter Optimization for Fine-Tuning Pre-trained Language Models*  
Xueqing Liu and Chi Wang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

01:40–01:50 *Better than Average: Paired Evaluation of NLP systems*  
Maxime Peyrard, Wei Zhao, Steffen Eger and Robert West

01:50–01:57 *Happy Dance, Slow Clap: Using Reaction GIFs to Predict Induced Affect on Twitter*  
Boaz Shmueli, Soumya Ray and Lun-Wei Ku

**Session 6C: Semantics: Sentence-level Semantics, Textual Inference and Other areas 1**

01:00–01:10 *Chase: A Large-Scale and Pragmatic Chinese Dataset for Cross-Database Context-Dependent Text-to-SQL*  
Jiaqi Guo, Ziliang Si, Yu Wang, Qian Liu, Ming Fan, Jian-Guang LOU, Zijiang Yang and Ting Liu

01:10–01:20 *CLINE: Contrastive Learning with Semantic Negative Examples for Natural Language Understanding*  
Dong Wang, Ning Ding, Piji Li and Haitao Zheng

01:20–01:30 *Tree-Structured Topic Modeling with Nonparametric Neural Variational Inference*  
Ziye Chen, Cheng Ding, Zusheng Zhang, Yanghui Rao and Haoran Xie

01:30–01:40 *ExCAR: Event Graph Knowledge Enhanced Explainable Causal Reasoning*  
Li Du, Xiao Ding, Kai Xiong, Ting Liu and Bing Qin

01:40–01:50 *Infusing Finetuning with Semantic Dependencies*  
Zhao Feng Wu, Hao Peng and Noah Smith

01:50–01:57 *Exploring Listwise Evidence Reasoning with T5 for Fact Verification*  
Kelvin Jiang, Ronak Pradeep and Jimmy Lin

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 6D: Sentiment Analysis, Stylistic Analysis, and Argument Mining 2**

- 01:00–01:10 *Distributed Representations of Emotion Categories in Emotion Space*  
Xiangyu Wang and Chengqing Zong
- 01:10–01:20 *Style is NOT a single variable: Case Studies for Cross-Stylistic Language Understanding*  
Dongyeop Kang and Eduard Hovy
- 01:20–01:30 *DynaSent: A Dynamic Benchmark for Sentiment Analysis*  
Christopher Potts, Zhengxuan Wu, Atticus Geiger and Douwe Kiela
- 01:30–01:40 *A Hierarchical VAE for Calibrating Attributes while Generating Text using Normalizing Flow*  
Bidisha Samanta, Mohit Agrawal and Niloy Ganguly
- 01:40–01:50 *A Unified Generative Framework for Aspect-based Sentiment Analysis*  
Hang Yan, Junqi Dai, Tuo Ji, Xipeng Qiu and Zheng Zhang
- 01:50–02:00 *Classifying Argumentative Relations Using Logical Mechanisms and Argumentation Schemes*  
Yohan Jo, Seojin Bang, Chris Reed and Eduard Hovy

**Session 7A: Dialog and Interactive Systems 4**

- 08:00–08:10 *Discovering Dialogue Slots with Weak Supervision*  
Vojtěch Hudeček, Ondřej Dušek and Zhou Yu
- 08:10–08:20 *Enhancing the generalization for Intent Classification and Out-of-Domain Detection in SLU*  
Yilin Shen, Yen-Chang Hsu, Avik Ray and Hongxia Jin
- 08:20–08:30 *ProtAugment: Intent Detection Meta-Learning through Unsupervised Diverse Paraphrasing*  
Thomas Dopierre, Christophe Gravier and Wilfried Logerais
- 08:30–08:40 *Robustness Testing of Language Understanding in Task-Oriented Dialog*  
Jiexi Liu, Ryuichi Takanobu, Jiaxin Wen, Dazhen Wan, hongguang li, weiran nie, Cheng LI, Wei Peng and Minlie Huang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

08:40–08:50 *Comprehensive Study: How the Context Information of Different Granularity Affects Dialogue State Tracking?*

Puhai Yang, Heyan Huang and Xian-Ling Mao

08:50–09:00 *OTTers: One-turn Topic Transitions for Open-Domain Dialogue*

Karin Sevegnani, David M. Howcroft, Ioannis Konstas and Verena Rieser

**Session 7B: Semantics: Sentence-level Semantics, Textual Inference and Other areas 2**

08:00–08:10 *Towards Robustness of Text-to-SQL Models against Synonym Substitution*

Yujian Gan, Xinyun Chen, Qiuping Huang, Matthew Purver, John R. Woodward, Jinxia Xie and Pengsheng Huang

08:10–08:20 *KACE: Generating Knowledge Aware Contrastive Explanations for Natural Language Inference*

Qianglong Chen, Feng Ji, Xiangji Zeng, Feng-Lin Li, Ji Zhang, Haiqing Chen and Yin Zhang

08:20–08:30 *Self-Guided Contrastive Learning for BERT Sentence Representations*

Taeuk Kim, Kang Min Yoo and Sang-goo Lee

08:30–08:40 *LGESQL: Line Graph Enhanced Text-to-SQL Model with Mixed Local and Non-Local Relations*

Ruisheng Cao, Lu Chen, Zhi Chen, Yanbin Zhao, Su Zhu and Kai Yu

08:40–08:47 *DefSent: Sentence Embeddings using Definition Sentences*

Hayato Tsukagoshi, Ryohei Sasano and Koichi Takeda

08:47–08:54 *Discrete Cosine Transform as Universal Sentence Encoder*

Nada Almarwani and Mona Diab

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 7C: Speech and Multimodality 1**

- 08:00–08:10 *Multi-stage Pre-training over Simplified Multimodal Pre-training Models*  
Tongtong Liu, Fangxiang Feng and Xiaojie WANG
- 08:10–08:20 *Beyond Sentence-Level End-to-End Speech Translation: Context Helps*  
Biao Zhang, Ivan Titov, Barry Haddow and Rico Sennrich
- 08:20–08:30 *LayoutLMv2: Multi-modal Pre-training for Visually-rich Document Understanding*  
Yang Xu, Yiheng Xu, Tengchao Lv, Lei Cui, Furu Wei, Guoxin Wang, Yijuan Lu, Dinei Florencio, Cha Zhang, Wanxiang Che, Min Zhang and Lidong Zhou
- 08:30–08:40 *UNIMO: Towards Unified-Modal Understanding and Generation via Cross-Modal Contrastive Learning*  
Wei Li, Can Gao, Guocheng Niu, Xinyan Xiao, Hao Liu, Jiachen Liu, Hua Wu and Haifeng Wang
- 08:40–08:50 *Missing Modality Imagination Network for Emotion Recognition with Uncertain Missing Modalities*  
Jinming Zhao, Ruichen Li and Qin Jin
- 08:50–09:00 *Stacked Acoustic-and-Textual Encoding: Integrating the Pre-trained Models into Speech Translation Encoders*  
Chen Xu, Bojie Hu, Yanyang Li, Yuhao Zhang, shen huang, Qi Ju, Tong Xiao and Jingbo Zhu

**Session 7D: Syntax: Tagging, Chunking, and Parsing 1**

- 08:00–08:10 *N-ary Constituent Tree Parsing with Recursive Semi-Markov Model*  
Xin Xin, Jinlong Li and Zeqi Tan
- 08:10–08:20 *Automated Concatenation of Embeddings for Structured Prediction*  
Xinyu Wang, Yong Jiang, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu
- 08:20–08:30 *Multi-View Cross-Lingual Structured Prediction with Minimum Supervision*  
Zechuan Hu, Yong Jiang, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu
- 08:30–08:40 *The Limitations of Limited Context for Constituency Parsing*  
Yuchen Li and Andrej Risteski

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

08:40–08:50 *Neural Bi-Lexicalized PCFG Induction*  
Songlin Yang, Yanpeng Zhao and Kewei Tu

**Session 7E: Resources and Evaluation 2**

08:00–08:10 *Ruddit: Norms of Offensiveness for English Reddit Comments*  
Rishav Hada, Sohi Sudhir, Pushkar Mishra, Helen Yannakoudakis, Saif M. Moham-  
mad and Ekaterina Shutova

08:10–08:20 *Towards Quantifiable Dialogue Coherence Evaluation*  
Zheng Ye, Liucun Lu, Lishan Huang, Liang Lin and Xiaodan Liang

08:20–08:30 *Assessing the Representations of Idiomaticity in Vector Models with a Noun Com-  
pound Dataset Labeled at Type and Token Levels*  
Marcos Garcia, Tiago Kramer Vieira, Carolina Scarton, Marco Idiart and Aline  
Villavicencio

08:30–08:40 *Factoring Statutory Reasoning as Language Understanding Challenges*  
Nils Holzenberger and Benjamin Van Durme

08:40–08:50 *Evaluating Evaluation Measures for Ordinal Classification and Ordinal Quantifi-  
cation*  
Tetsuya Sakai

08:50–08:57 *AligNarr: Aligning Narratives on Movies*  
Paramita Mirza, Mostafa Abouhamra and Gerhard Weikum



**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 8A: Information Extraction 4**

- 09:00–09:10 *Interpretable and Low-Resource Entity Matching via Decoupling Feature Learning from Decision Making*  
Zijun Yao, Chengjiang Li, Tiansi Dong, Xin Lv, Jifan Yu, Lei Hou, Juanzi Li, YICHI ZHANG and zelin Dai
- 09:10–09:20 *Locate and Label: A Two-stage Identifier for Nested Named Entity Recognition*  
Yongliang Shen, Xinyin Ma, Zeqi Tan, Shuai Zhang, Wen Wang and Weiming Lu
- 09:20–09:30 *Text2Event: Controllable Sequence-to-Structure Generation for End-to-end Event Extraction*  
Yaojie Lu, Hongyu Lin, Jin Xu, Xianpei Han, Jialong Tang, Annan Li, Le Sun, Meng Liao and Shaoyi Chen
- 09:30–09:40 *A Large-Scale Chinese Multimodal NER Dataset with Speech Clues*  
Dianbo Sui, Zhengkun Tian, Yubo Chen, Kang Liu and Jun Zhao
- 09:40–09:50 *A Neural Transition-based Joint Model for Disease Named Entity Recognition and Normalization*  
Zongcheng Ji, Tian Xia, Mei Han and Jing Xiao
- 09:50–10:00 *OntoED: Low-resource Event Detection with Ontology Embedding*  
Shumin Deng, Ningyu Zhang, Luoqi Li, Chen Hui, tou huaixiao, Mosha Chen, Fei Huang and Huajun Chen

**Session 8B: Machine Translation and Multilinguality 4**

- 09:00–09:10 *Self-Training Sampling with Monolingual Data Uncertainty for Neural Machine Translation*  
Wenxiang Jiao, Xing Wang, Zhaopeng Tu, Shuming Shi, Michael Lyu and Irwin King
- 09:10–09:20 *Breaking the Corpus Bottleneck for Context-Aware Neural Machine Translation with Cross-Task Pre-training*  
Linqing Chen, Junhui Li, Zhengxian Gong, Boxing Chen, Weihua Luo, Min Zhang and Guodong Zhou
- 09:20–09:30 *Guiding Teacher Forcing with Seer Forcing for Neural Machine Translation*  
Yang Feng, Shuhao Gu, Dengji Guo, Zhengxin Yang and Chenze Shao
- 09:30–09:40 *Cascade versus Direct Speech Translation: Do the Differences Still Make a Difference?*  
Luisa Bentivogli, Mauro Cettolo, Marco Gaido, Alina Karakanta, Alberto Martinelli, Matteo Negri and Marco Turchi

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

09:40–09:50 *Unsupervised Neural Machine Translation for Low-Resource Domains via Meta-Learning*

Cheonbok Park, Yunwon Tae, TaeHee Kim, Soyoung Yang, Mohammad Azam Khan, Lucy Park and Jaegul Choo

09:50–09:57 *An Exploratory Analysis of Multilingual Word-Level Quality Estimation with Cross-Lingual Transformers*

Tharindu Ranasinghe, Constantin Orasan and Ruslan Mitkov

#### **Session 8C: Machine Learning for NLP 4**

09:00–09:10 *Lightweight Cross-Lingual Sentence Representation Learning*

Zhuoyuan Mao, Prakhar Gupta, Chenhui Chu, Martin Jaggi and Sadao Kurohashi

09:10–09:20 *ERNIE-Doc: A Retrospective Long-Document Modeling Transformer*

SiYu Ding, Junyuan Shang, Shuohuan Wang, Yu Sun, Hao Tian, Hua Wu and Haifeng Wang

09:20–09:30 *Marginal Utility Diminishes: Exploring the Minimum Knowledge for BERT Knowledge Distillation*

Yuanxin LIU, Fandong Meng, Zheng Lin, Weiping Wang and Jie Zhou

09:30–09:40 *Rational LAMOL: A Rationale-based Lifelong Learning Framework*

Kasidis Kanwatchara, Thanapapas Horsuwan, Piyawat Lertvittayakumjorn, Boonserm Kijirikul and Peerapon Vateekul

09:40–09:50 *EnsLM: Ensemble Language Model for Data Diversity by Semantic Clustering*

Zhibin Duan, Hao Zhang, Chaojie Wang, Zhengjue Wang, Bo Chen and Mingyuan Zhou

09:50–10:00 *LeeBERT: Learned Early Exit for BERT with cross-level optimization*

Wei Zhu

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 8D: NLP Applications 2**

- 09:00–09:10 *Unsupervised Extractive Summarization-Based Representations for Accurate and Explainable Collaborative Filtering*  
Reinald Adrian Pugoy and Hung-Yu Kao
- 09:10–09:20 *PLOME: Pre-training with Misspelled Knowledge for Chinese Spelling Correction*  
Shulin Liu, Tao Yang, Tianchi Yue, Feng Zhang and Di Wang
- 09:20–09:30 *Competence-based Multimodal Curriculum Learning for Medical Report Generation*  
Fenglin Liu, Shen Ge and Xian Wu
- 09:30–09:40 *Learning Syntactic Dense Embedding with Correlation Graph for Automatic Readability Assessment*  
Xinying Qiu, Yuan Chen, Hanwu Chen, Jian-Yun Nie, Yuming Shen and Dawei Lu
- 09:40–09:50 *Meta-KD: A Meta Knowledge Distillation Framework for Language Model Compression across Domains*  
Haojie Pan, Chengyu Wang, Minghui Qiu, Yichang Zhang, Yaliang Li and jun huang
- 09:50–09:57 *Exploration and Exploitation: Two Ways to Improve Chinese Spelling Correction Models*  
Chong Li, Cenyuan Zhang, Xiaoqing Zheng and Xuanjing Huang

**Session 8E: Question Answering 1**

- 09:00–09:10 *A Semantic-based Method for Unsupervised Commonsense Question Answering*  
Yilin Niu, Fei Huang, Jiaming Liang, Wenkai Chen, Xiaoyan Zhu and Minlie Huang
- 09:10–09:20 *Explanations for CommonsenseQA: New Dataset and Models*  
Shourya Aggarwal, Divyanshu Mandowara, Vishwajeet Agrawal, Dinesh Khandelwal, Parag Singla and Dinesh Garg
- 09:20–09:30 *Few-Shot Question Answering by Pretraining Span Selection*  
Ori Ram, Yuval Kirstain, Jonathan Berant, Amir Globerson and Omer Levy
- 09:30–09:40 *UnitedQA: A Hybrid Approach for Open Domain Question Answering*  
Hao Cheng, Yelong Shen, Xiaodong Liu, Pengcheng He, Weizhu Chen and Jianfeng Gao

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

09:40–09:50 *Database reasoning over text*  
James Thorne, Majid Yazdani, Marzieh Saeidi, Fabrizio Silvestri, Sebastian Riedel and Alon Halevy

09:50–09:57 *Training Adaptive Computation for Open-Domain Question Answering with Computational Constraints*  
Yuxiang Wu, Pasquale Minervini, Pontus Stenetorp and Sebastian Riedel

**Session 9A: Machine Translation and Multilinguality 5**

10:00–10:10 *Online Learning Meets Machine Translation Evaluation: Finding the Best Systems with the Least Human Effort*  
Vânia Mendonça, Ricardo Rei, Luisa Coheur, Alberto Sardinha and Ana Lúcia Santos

10:10–10:20 *How Good is Your Tokenizer? On the Monolingual Performance of Multilingual Language Models*  
Phillip Rust, Jonas Pfeiffer, Ivan Vulić, Sebastian Ruder and Iryna Gurevych

10:20–10:30 *Evaluating morphological typology in zero-shot cross-lingual transfer*  
Antonio Martínez-García, Toni Badia and Jeremy Barnes

10:30–10:40 *From Machine Translation to Code-Switching: Generating High-Quality Code-Switched Text*  
Ishan Tarunesh, Syamantak Kumar and Preethi Jyothi

10:40–10:50 *Fast and Accurate Neural Machine Translation with Translation Memory*  
Qiuxiang He, Guoping Huang, Qu Cui, Li Li and Lemao Liu

10:50–10:57 *An Empirical Study on Adversarial Attack on NMT: Languages and Positions Matter*  
Zhiyuan Zeng and Deyi Xiong

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 9B: Resources and Evaluation 3**

- 10:00–10:10 *Annotating Online Misogyny*  
Philine Zeinert, Nanna Inie and Leon Derczynski
- 10:10–10:20 *Few-NERD: A Few-shot Named Entity Recognition Dataset*  
Ning Ding, Guangwei Xu, Yulin Chen, Xiaobin Wang, Xu Han, Pengjun Xie, Haitao Zheng and Zhiyuan Liu
- 10:20–10:30 *MultiMET: A Multimodal Dataset for Metaphor Understanding*  
Dongyu Zhang, Minghao Zhang, Heting Zhang, Liang Yang and Hongfei LIN
- 10:30–10:40 *Human-in-the-Loop for Data Collection: a Multi-Target Counter Narrative Dataset to Fight Online Hate Speech*  
Margherita Fanton, Helena Bonaldi, Serra Sinem Tekiroğlu and Marco Guerini
- 10:40–10:47 *OntoGUM: Evaluating Contextualized SOTA Coreference Resolution on 12 More Genres*  
Yilun Zhu, Sameer Pradhan and Amir Zeldes

**Session 9C: Question Answering 2**

- 10:00–10:10 *Can Generative Pre-trained Language Models Serve As Knowledge Bases for Closed-book QA?*  
Cunxiang Wang, Pai Liu and Yue Zhang
- 10:10–10:20 *Joint Models for Answer Verification in Question Answering Systems*  
Zeyu Zhang, Thuy Vu and Alessandro Moschitti
- 10:20–10:30 *Answering Ambiguous Questions through Generative Evidence Fusion and Round-Trip Prediction*  
Yifan Gao, Henghui Zhu, Patrick Ng, Cicero Nogueira dos Santos, Zhiguo Wang, Feng Nan, Dejiao Zhang, Ramesh Nallapati, Andrew O. Arnold and Bing Xiang
- 10:30–10:40 *TAT-QA: A Question Answering Benchmark on a Hybrid of Tabular and Textual Content in Finance*  
Fengbin Zhu, Wenqiang Lei, Youcheng Huang, Chao Wang, Shuo Zhang, Jiancheng Lv, Fuli Feng and Tat-Seng Chua
- 10:40–10:50 *Modeling Transitions of Focal Entities for Conversational Knowledge Base Question Answering*  
Yunshi Lan and Jing Jiang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

10:50–10:57 *In Factuality: Efficient Integration of Relevant Facts for Visual Question Answering*  
Peter Vickers, Nikolaos Aletras, Emilio Monti and Loïc Barrault

**Session 9D: Semantics: Sentence-level Semantics, Textual Inference and Other areas 3**

10:00–10:10 *Evidence-based Factual Error Correction*  
James Thorne and Andreas Vlachos

10:10–10:20 *Probabilistic, Structure-Aware Algorithms for Improved Variety, Accuracy, and Coverage of AMR Alignments*  
Austin Blodgett and Nathan Schneider

10:20–10:30 *Meta-Learning to Compositionally Generalize*  
Henry Conklin, Bailin Wang, Kenny Smith and Ivan Titov

10:30–10:40 *Taming Pre-trained Language Models with N-gram Representations for Low-Resource Domain Adaptation*  
Shizhe Diao, Ruijia Xu, Hongjin Su, Yilei Jiang, Yan Song and Tong Zhang

10:40–10:50 *ERICA: Improving Entity and Relation Understanding for Pre-trained Language Models via Contrastive Learning*  
Yujia Qin, Yankai Lin, Ryuichi Takanobu, Zhiyuan Liu, Peng Li, Heng Ji, Minlie Huang, Maosong Sun and Jie Zhou

10:50–10:57 *Zero-shot Fact Verification by Claim Generation*  
Liangming Pan, Wenhua Chen, Wenhan Xiong, Min-Yen Kan and William Yang Wang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 9E: Sentiment Analysis, Stylistic Analysis, and Argument Mining 3**

- 10:00–10:10 *Position Bias Mitigation: A Knowledge-Aware Graph Model for Emotion Cause Extraction*  
Hanqi Yan, Lin Gui, Gabriele Pergola and Yulan He
- 10:10–10:20 *Every Bite Is an Experience: Key Point Analysis of Business Reviews*  
Roy Bar-Haim, Lilach Eden, Yoav Kantor, Roni Friedman and Noam Slonim
- 10:20–10:30 *Structured Sentiment Analysis as Dependency Graph Parsing*  
Jeremy Barnes, Robin Kurtz, Stephan Oepen, Lilja Øvrelid and Erik Velldal
- 10:30–10:37 *Thank you BART! Rewarding Pre-Trained Models Improves Formality Style Transfer*  
Huiyuan Lai, Antonio Toral and Malvina Nissim
- 10:37–10:44 *Deep Context- and Relation-Aware Learning for Aspect-based Sentiment Analysis*  
Shinhyeok Oh, Dongyub Lee, Taesun Whang, IlNam Park, Seo Gaeun, EungGyun Kim and Harksoo Kim
- 10:44–10:51 *Towards Generative Aspect-Based Sentiment Analysis*  
Wenxuan Zhang, Xin Li, Yang Deng, Lidong Bing and Wai Lam

**Session 10A: Machine Translation and Multilinguality 6**

- 11:00–11:10 *Consistency Regularization for Cross-Lingual Fine-Tuning*  
Bo Zheng, Li Dong, Shaohan Huang, Wenhui Wang, Zewen Chi, Saksham Singhal, Wanxiang Che, Ting Liu, Xia Song and Furu Wei
- 11:10–11:20 *Improving Pretrained Cross-Lingual Language Models via Self-Labeled Word Alignment*  
Zewen Chi, Li Dong, Bo Zheng, Shaohan Huang, Xian-Ling Mao, Heyan Huang and Furu Wei
- 11:20–11:30 *Rejuvenating Low-Frequency Words: Making the Most of Parallel Data in Non-Autoregressive Translation*  
Liang Ding, Longyue Wang, Xuebo Liu, Derek F. Wong, Dacheng Tao and Zhaopeng Tu
- 11:30–11:40 *G-Transformer for Document-Level Machine Translation*  
Guangsheng Bao, Yue Zhang, Zhiyang Teng, Boxing Chen and Weihua Luo

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

11:40–11:50 *Prevent the Language Model from being Overconfident in Neural Machine Translation*

Mengqi Miao, Fandong Meng, Yijin Liu, Xiao-Hua Zhou and Jie Zhou

11:50–11:57 *Bilingual Mutual Information Based Adaptive Training for Neural Machine Translation*

Yangyifan Xu, Yijin Liu, Fandong Meng, Jiajun Zhang, Jinan Xu and Jie Zhou

**Session 10B: Dialog and Interactive Systems 5**

11:00–11:10 *Towards Emotional Support Dialog Systems*

Siyang Liu, Chujie Zheng, Orianna Demasi, Sahand Sabour, Yu Li, Zhou Yu, Yong Jiang and Minlie Huang

11:10–11:20 *Novel Slot Detection: A Benchmark for Discovering Unknown Slot Types in the Task-Oriented Dialogue System*

Yanan Wu, Zhiyuan Zeng, Keqing He, Hong Xu, Yuanmeng Yan, Huixing Jiang and Weiran Xu

11:20–11:30 *GTM: A Generative Triple-wise Model for Conversational Question Generation*

Lei Shen, Fandong Meng, Jinchao Zhang, Yang Feng and Jie Zhou

11:30–11:40 *Diversifying Dialog Generation via Adaptive Label Smoothing*

Yida Wang, Yinhe Zheng, Yong Jiang and Minlie Huang

11:40–11:50 *Out-of-Scope Intent Detection with Self-Supervision and Discriminative Training*

Li-Ming Zhan, Haowen Liang, Bo LIU, Lu Fan, Xiao-Ming Wu and Albert Y.S. Lam

11:50–11:57 *Continual Learning for Task-oriented Dialogue System with Iterative Network Pruning, Expanding and Masking*

Binzong Geng, Fajie Yuan, Qiancheng Xu, Ying Shen, Ruifeng Xu and Min Yang



**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 10C: Information Extraction 5**

- 11:00–11:10 *Document-level Event Extraction via Heterogeneous Graph-based Interaction Model with a Tracker*  
Runxin Xu, Tianyu Liu, Lei Li and Baobao Chang
- 11:10–11:20 *Nested Named Entity Recognition via Explicitly Excluding the Influence of the Best Path*  
Yiran Wang, Hiroyuki Shindo, Yuji Matsumoto and Taro Watanabe
- 11:20–11:30 *LearnDA: Learnable Knowledge-Guided Data Augmentation for Event Causality Identification*  
Xinyu Zuo, Pengfei Cao, Yubo Chen, Kang Liu, Jun Zhao, Weihua Peng and Yuguang Chen
- 11:30–11:40 *Revisiting the Negative Data of Distantly Supervised Relation Extraction*  
Chenhao Xie, Jiaqing Liang, Jingping Liu, Chengsong Huang, Wenhao Huang and Yanghua Xiao
- 11:40–11:50 *Knowing the No-match: Entity Alignment with Dangling Cases*  
Zequn Sun, Muhao Chen and Wei Hu
- 11:50–11:57 *TIMERS: Document-level Temporal Relation Extraction*  
Puneet Mathur, Rajiv Jain, Franck Dernoncourt, Vlad Morariu, Quan Hung Tran and Dinesh Manocha

**Session 10D: Phonology, Morphology and Word Segmentation 1**

- 11:00–11:10 *Superbizarre Is Not Superb: Derivational Morphology Improves BERT's Interpretation of Complex Words*  
Valentin Hofmann, Janet Pierrehumbert and Hinrich Schütze
- 11:10–11:20 *Optimizing over Subsequences Generates Context-Sensitive Languages*  
Andrew Lamont
- 11:20–11:30 *Morphology Matters: A Multilingual Language Modeling Analysis*  
Hyunji Hayley Park, Katherine J. Zhang, Coleman Haley, Kenneth Steimel, Han Liu and Lane Schwartz
- 11:30–11:37 *Improving Arabic Diacritization with Regularized Decoding and Adversarial Training*  
Han Qin, Guimin Chen, Yuanhe Tian and Yan Song

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

11:37–11:44 *When is Char Better Than Subword: A Systematic Study of Segmentation Algorithms for Neural Machine Translation*  
Jiahuan Li, Yutong Shen, Shujian Huang, Xinyu Dai and Jiajun CHEN

11:44–11:51 *More than Text: Multi-modal Chinese Word Segmentation*  
Dong Zhang, Zheng Hu, Shoushan Li, Hanqian Wu, Qiaoming Zhu and Guodong Zhou

**Session 10E: Semantics: Lexical Semantics 1**

11:00–11:10 *BERT is to NLP what AlexNet is to CV: Can Pre-Trained Language Models Identify Analogies?*  
Asahi Ushio, Luis Espinosa Anke, Steven Schockaert and Jose Camacho-Collados

11:10–11:20 *Exploring the Representation of Word Meanings in Context: A Case Study on Homonymy and Synonymy*  
Marcos Garcia

11:20–11:30 *Measuring Fine-Grained Domain Relevance of Terms: A Hierarchical Core-Fringe Approach*  
Jie Huang, Kevin Chang, JinJun Xiong and Wen-mei Hwu

11:30–11:37 *A Mixture-of-Experts Model for Antonym-Synonym Discrimination*  
Zhipeng Xie and Nan Zeng

11:37–11:44 *Learning Domain-Specialised Representations for Cross-Lingual Biomedical Entity Linking*  
Fangyu Liu, Ivan Vulić, Anna Korhonen and Nigel Collier

11:44–11:51 *A Cluster-based Approach for Improving Isotropy in Contextual Embedding Space*  
Sara Rajaei and Mohammad Taher Pilehvar

**14:00–15:30 *Business meeting and Green NLP panel***

**15:30–16:30 *Keynote 3. Christopher Potts: Reliable Characterizations of NLP Systems as a Social Responsibility***

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 11A: Dialog and Interactive Systems 6**

- 16:30–16:40 *HERALD: An Annotation Efficient Method to Detect User Disengagement in Social Conversations*  
Weixin Liang, Kai-Hui Liang and Zhou Yu
- 16:40–16:50 *Value-Agnostic Conversational Semantic Parsing*  
Emmanouil Antonios Platanios, Adam Pauls, Subhro Roy, Yuchen Zhang, Alexander Kyte, Alan Guo, Sam Thomson, Jayant Krishnamurthy, Jason Wolfe, Jacob Andreas and Dan Klein
- 16:50–17:00 *MPC-BERT: A Pre-Trained Language Model for Multi-Party Conversation Understanding*  
Jia-Chen Gu, Chongyang Tao, Zhenhua Ling, Can Xu, Xiubo Geng and Daxin Jiang
- 17:00–17:10 *Best of Both Worlds: Making High Accuracy Non-incremental Transformer-based Disfluency Detection Incremental*  
Morteza Rohanian and Julian Hough
- 17:10–17:20 *NeuralWOZ: Learning to Collect Task-Oriented Dialogue via Model-Based Simulation*  
Sungdong Kim, Minsuk Chang and Sang-Woo Lee
- 17:20–17:27 *Unsupervised Enrichment of Persona-grounded Dialog with Background Stories*  
Bodhisattwa Prasad Majumder, Taylor Berg-Kirkpatrick, Julian McAuley and Harsh Jhamtani

**Session 11B: Linguistic Theories, Cognitive Modeling and Psycholinguistics 1**

- 16:30–16:40 *CDRNN: Discovering Complex Dynamics in Human Language Processing*  
Cory Shain
- 16:40–16:50 *Structural Guidance for Transformer Language Models*  
Peng Qian, Tahira Naseem, Roger Levy and Ramón Fernandez Astudillo
- 16:50–17:00 *Surprisal Estimators for Human Reading Times Need Character Models*  
Byung-Doh Oh, Christian Clark and William Schuler
- 17:00–17:10 *CogAlign: Learning to Align Textual Neural Representations to Cognitive Language Processing Signals*  
Yuqi Ren and Deyi Xiong

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

- 17:10–17:20 *Formal Basis of a Language Universal*  
Milos Stanojevic and Mark Steedman
- 17:20–17:27 *Beyond Laurel/Yanny: An Autoencoder-Enabled Search for Polyperceivable Audio*  
Kartik Chandra, Chuma Kabaghe and Gregory Valiant

**Session 11C: Machine Learning for NLP 5**

- 16:30–16:40 *Self-Attention Networks Can Process Bounded Hierarchical Languages*  
Shunyu Yao, Binghui Peng, Christos Papadimitriou and Karthik Narasimhan
- 16:40–16:50 *TextSETTR: Few-Shot Text Style Extraction and Tunable Targeted Restyling*  
Parker Riley, Noah Constant, Mandy Guo, Girish Kumar, David Uthus and Zarana Parekh
- 16:50–17:00 *H-Transformer-1D: Fast One-Dimensional Hierarchical Attention for Sequences*  
Zhenhai Zhu and Radu Soricut
- 17:00–17:10 *Making Pre-trained Language Models Better Few-shot Learners*  
Tianyu Gao, Adam Fisch and Danqi Chen
- 17:10–17:20 *A Sweet Rabbit Hole by DARCYN: Using Honeypots to Detect Universal Trigger’s Adversarial Attacks*  
Thai Le, Noseong Park and Dongwon Lee
- 17:20–17:27 *Don’t Let Discourse Confine Your Model: Sequence Perturbations for Improved Event Language Models*  
Mahnaz Koupaee, Greg Durrett, Nathanael Chambers and Niranjan Balasubramanian

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 11D: Information Retrieval and Text Mining 1**

- 16:30–16:40 *Towards Propagation Uncertainty: Edge-enhanced Bayesian Graph Convolutional Networks for Rumor Detection*  
Lingwei Wei, Dou Hu, Wei Zhou, Zhaojuan Yue and Songlin Hu
- 16:40–16:50 *Label-Specific Dual Graph Neural Network for Multi-Label Text Classification*  
Qianwen Ma, Chunyuan Yuan, Wei Zhou and Songlin Hu
- 16:50–17:00 *TAN-NTM: Topic Attention Networks for Neural Topic Modeling*  
Madhur Panwar, Shashank Shailabh, Milan Aggarwal and Balaji Krishnamurthy
- 17:00–17:10 *Cross-language Sentence Selection via Data Augmentation and Rationale Training*  
Yanda Chen, Chris Kedzie, Suraj Nair, Petra Galuscakova, Rui Zhang, Douglas Oard and Kathleen McKeown
- 17:10–17:20 *A Neural Model for Joint Document and Snippet Ranking in Question Answering for Large Document Collections*  
Dimitris Pappas and Ion Androutsopoulos
- 17:20–17:27 *The Curse of Dense Low-Dimensional Information Retrieval for Large Index Sizes*  
Nils Reimers and Iryna Gurevych

**Session 11E: Discourse and Pragmatics 1**

- 16:30–16:40 *W-RST: Towards a Weighted RST-style Discourse Framework*  
Patrick Huber, Wen Xiao and Giuseppe Carenini
- 16:40–16:50 *ABCD: A Graph Framework to Convert Complex Sentences to a Covering Set of Simple Sentences*  
YanJun Gao, Ting-Hao Huang and Rebecca J. Passonneau
- 16:50–17:00 *Which Linguist Invented the Lightbulb? Presupposition Verification for Question-Answering*  
Najoung Kim, Ellie Pavlick, Burcu Karagol Ayan and Deepak Ramachandran
- 17:00–17:10 *Adversarial Learning for Discourse Rhetorical Structure Parsing*  
Longyin Zhang, Fang Kong and Guodong Zhou

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

17:10–17:20 *Exploring Discourse Structures for Argument Impact Classification*  
Xin Liu, Jiefu Ou, Yangqiu Song and Xin Jiang

**Session 12A: Machine Translation and Multilinguality 7**

23:00–23:10 *Point, Disambiguate and Copy: Incorporating Bilingual Dictionaries for Neural Machine Translation*  
Tong Zhang, Long Zhang, Wei Ye, Bo Li, Jinan Sun, Xiaoyu Zhu, Wen Zhao and Shikun Zhang

23:10–23:20 *VECO: Variable and Flexible Cross-lingual Pre-training for Language Understanding and Generation*  
Fuli Luo, Wei Wang, Jiahao Liu, Yijia Liu, Bin Bi, Songfang Huang, Fei Huang and Luo Si

23:20–23:30 *A unified approach to sentence segmentation of punctuated text in many languages*  
Rachel Wicks and Matt Post

23:30–23:40 *Towards User-Driven Neural Machine Translation*  
Huan Lin, Liang Yao, Baosong Yang, Dayiheng Liu, Haibo Zhang, Weihua Luo, Degen Huang and Jinsong Su

23:40–23:50 *End-to-End Lexically Constrained Machine Translation for Morphologically Rich Languages*  
Josef Jon, João Paulo Aires, Dusan Varis and Ondřej Bojar

23:50–23:57 *Cross-lingual Text Classification with Heterogeneous Graph Neural Network*  
Ziyun Wang, Xuan Liu, Peiji Yang, Shixing Liu and zhisheng wang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

**Session 12B: Resources and Evaluation 4**

- 23:00–23:10 *Handling Extreme Class Imbalance in Technical Logbook Datasets*  
Farhad Akhbardeh, Cecilia Ovesdotter Alm, Marcos Zampieri and Travis Desell
- 23:10–23:20 *ILDC for CJPE: Indian Legal Documents Corpus for Court Judgment Prediction and Explanation*  
Vijit Malik, Rishabh Sanjay, Shubham Kumar Nigam, Kripabandhu Ghosh, Shouvik Kumar Guha, Arnab Bhattacharya and Ashutosh Modi
- 23:20–23:30 *Supporting Cognitive and Emotional Empathic Writing of Students*  
Thiemo Wambsganss, Christina Niklaus, Matthias Söllner, Siegfried Handschuh and Jan Marco Leimeister
- 23:30–23:40 *Context-aware Adversarial Training for Name Regularity Bias in Named Entity Recognition*  
Abbas Ghaddar, Philippe Langlais, Ahmad Rashid and Mehdi Rezagholizadeh
- 23:40–23:50 *SummEval: Re-evaluating Summarization Evaluation*  
Alex Fabbri, Wojciech Kryscinski, Bryan McCann, Caiming Xiong and Richard Socher
- 23:50–24:00 *Towards Question-Answering as an Automatic Metric for Evaluating the Content Quality of a Summary*  
Daniel Deutsch, Tania Bedrax-Weiss and Dan Roth

**Session 12C: Question Answering 3**

- 23:00–23:10 *Dual Reader-Parser on Hybrid Textual and Tabular Evidence for Open Domain Question Answering*  
Alexander Hanbo Li, Patrick Ng, Peng Xu, Henghui Zhu, Zhiguo Wang and Bing Xiang
- 23:10–23:20 *Generation-Augmented Retrieval for Open-Domain Question Answering*  
Yuning Mao, Pengcheng He, Xiaodong Liu, Yelong Shen, Jianfeng Gao, Jiawei Han and Weizhu Chen
- 23:20–23:30 *Check It Again: Progressive Visual Question Answering via Visual Entailment*  
Qingyi Si, Zheng Lin, Ming yu Zheng, Peng Fu and Weiping Wang
- 23:30–23:40 *A Mutual Information Maximization Approach for the Spurious Solution Problem in Weakly Supervised Question Answering*  
Zhihong Shao, Lifeng Shang, Qun Liu and Minlie Huang

**Tuesday, August 3, 2021 (all times UTC+0) (continued)**

- 23:40–23:50 *Relevance-guided Supervision for OpenQA with ColBERT*  
Omar Khattab, Christopher Potts and Matei Zaharia
- 23:50–23:57 *Towards more equitable question answering systems: How much more data do you need?*  
Arnab Debnath, Navid Rajabi, Fardina Fathmiul Alam and Antonios Anastasopoulos

**Session 12D: Theme 1**

- 23:00–23:10 *Breaking Down Walls of Text: How Can NLP Benefit Consumer Privacy?*  
Abhilasha Ravichander, Alan W Black, Thomas Norton, Shomir Wilson and Norman Sadeh
- 23:10–23:20 *Supporting Land Reuse of Former Open Pit Mining Sites using Text Classification and Active Learning*  
Christopher Schröder, Kim Bürgl, Yves Annanias, Andreas Niekler, Lydia Müller, Daniel Wiegrefe, Christian Bender, Christoph Mengs, Gerek Scheuermann and Gerhard Heyer
- 23:20–23:30 *Reliability Testing for Natural Language Processing Systems*  
Samson Tan, Shafiq Joty, Kathy Baxter, Araz Taeihagh, Gregory A. Bennett and Min-Yen Kan
- 23:30–23:40 *Learning Language and Multimodal Privacy-Preserving Markers of Mood from Mobile Data*  
Paul Pu Liang, Terrance Liu, Anna Cai, Michal Muszynski, Ryo Ishii, Nick Allen, Randy Auerbach, David Brent, Ruslan Salakhutdinov and Louis-Philippe Morency
- 23:40–23:50 *Anonymisation Models for Text Data: State of the art, Challenges and Future Directions*  
Pierre Lison, Ildikó Pilán, David Sanchez, Montserrat Batet and Lilja Øvrelid



Wednesday, August 4, 2021 (all times UTC+0)

**Poster 2A: Semantics: Sentence-level Semantics, Textual Inference and Other areas**

0:00–2:00 *End-to-End AMR Coreference Resolution*  
Qiankun Fu, Linfeng Song, Wenyu Du and Yue Zhang

**Poster 2B: Linguistic Theories, Cognitive Modeling and Psycholinguistics**

0:00–2:00 *How is BERT surprised? Layerwise detection of linguistic anomalies*  
Bai Li, Zining Zhu, Guillaume Thomas, Yang Xu and Frank Rudzicz

0:00–2:00 *Psycholinguistic Tripartite Graph Network for Personality Detection*  
Tao Yang, Feifan Yang, Haolan Ouyang and Xiaojun Quan

**Poster 2C: Semantics: Lexical Semantics**

0:00–2:00 *Verb Metaphor Detection via Contextual Relation Learning*  
Wei Song, Shuhui Zhou, Ruiji Fu, Ting Liu and Lizhen Liu

**Poster 2D: Speech and Multimodality**

0:00–2:00 *Improving Speech Translation by Understanding and Learning from the Auxiliary Text Translation Task*  
Yun Tang, Juan Pino, Xian Li, Changhan Wang and Dmitriy Genzel

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2E: Ethics in NLP**

- 0:00–2:00 *Probing Toxic Content in Large Pre-Trained Language Models*  
Nedjma Ousidhoum, Xinran Zhao, Tianqing Fang, Yangqiu Song and Dit-Yan Yeung
- 0:00–2:00 *Societal Biases in Language Generation: Progress and Challenges*  
Emily Sheng, Kai-Wei Chang, Prem Natarajan and Nanyun Peng

**Poster 2F: Interpretability and Analysis of Models for NLP**

- 0:00–2:00 *Reservoir Transformers*  
Sheng Shen, Alexei Baevski, Ari Morcos, Kurt Keutzer, Michael Auli and Douwe Kiela

**Poster 2G: Machine Learning for NLP**

- 0:00–2:00 *Subsequence Based Deep Active Learning for Named Entity Recognition*  
Puria Radmard, Yassir Fathullah and Aldo Lipani
- 0:00–2:00 *Convolutions and Self-Attention: Re-interpreting Relative Positions in Pre-trained Language Models*  
Tyler Chang, Yifan Xu, Weijian Xu and Zhuowen Tu
- 0:00–2:00 *BinaryBERT: Pushing the Limit of BERT Quantization*  
Haoli Bai, Wei Zhang, Lu Hou, Lifeng Shang, Jin JIN, Xin Jiang, Qun Liu, Michael Lyu and Irwin King
- 0:00–2:00 *Embedding Time Differences in Context-sensitive Neural Networks for Learning Time to Event*  
Nazanin Dehghani, Hassan Hajipoor and Hadi Amiri
- 0:00–2:00 *Are Pretrained Convolutions Better than Pretrained Transformers?*  
Yi Tay, Mostafa Dehghani, Jai Prakash Gupta, Vamsi Aribandi, Dara Bahri, Zhen Qin and Donald Metzler
- 0:00–2:00 *PairRE: Knowledge Graph Embeddings via Paired Relation Vectors*  
Linlin Chao, Jianshan He, Taifeng Wang and Wei Chu

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 0:00–2:00 *Improving Compositional Generalization in Classification Tasks via Structure Annotations*  
Juyong Kim, Pradeep Ravikumar, Joshua Ainslie and Santiago Ontanon
- 0:00–2:00 *Learning to Generate Task-Specific Adapters from Task Description*  
Qinyuan Ye and Xiang Ren
- 0:00–2:00 *Hierarchy-aware Label Semantics Matching Network for Hierarchical Text Classification*  
Haibin Chen, Qianli Ma, Zhenxi Lin and Jiangyue Yan
- 0:00–2:00 *HiddenCut: Simple Data Augmentation for Natural Language Understanding with Better Generalizability*  
Jiaao Chen, Dinghan Shen, Weizhu Chen and Diyi Yang
- 0:00–2:00 *Efficient Content-Based Sparse Attention with Routing Transformers*  
Aurko Roy, Mohammad Saffar, Ashish Vaswani and David Grangier

**Poster 2H: Dialog and Interactive Systems**

- 0:00–2:00 *Neural Stylistic Response Generation with Disentangled Latent Variables*  
Qingfu Zhu, Wei-Nan Zhang, Ting Liu and William Yang Wang
- 0:00–2:00 *Intent Classification and Slot Filling for Privacy Policies*  
Wasi Ahmad, Jianfeng Chi, Tu Le, Thomas Norton, Yuan Tian and Kai-Wei Chang
- 0:00–2:00 *RADDLE: An Evaluation Benchmark and Analysis Platform for Robust Task-oriented Dialog Systems*  
Baolin Peng, Chunyuan Li, Zhu Zhang, Chenguang Zhu, Jinchao Li and Jianfeng Gao
- 0:00–2:00 *QA-Driven Zero-shot Slot Filling with Weak Supervision Pretraining*  
Xinya Du, Luheng He, Qi Li, Dian Yu, Panupong Pasupat and Yuan Zhang
- 0:00–2:00 *Domain-Adaptive Pretraining Methods for Dialogue Understanding*  
Han Wu, Kun Xu, Linfeng Song, Lifeng Jin, Haisong Zhang and Linqi Song
- 0:00–2:00 *Semantic Representation for Dialogue Modeling*  
Xuefeng Bai, Yulong Chen, Linfeng Song and Yue Zhang

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

0:00–2:00 *A Pre-training Strategy for Zero-Resource Response Selection in Knowledge-Grounded Conversations*

Chongyang Tao, Changyu Chen, Jiazhan Feng, Ji-Rong Wen and Rui Yan

0:00–2:00 *SOLOIST: Building Task Bots at Scale with Transfer Learning and Machine Teaching*

Baolin Peng, Chunyuan Li, Jinchao Li, Shahin Shayandeh, Lars Liden and Jianfeng Gao

#### **Poster 2I: Information Retrieval and Text Mining**

0:00–2:00 *Dependency-driven Relation Extraction with Attentive Graph Convolutional Networks*

Yuanhe Tian, Guimin Chen, Yan Song and Xiang Wan

0:00–2:00 *Evaluating Entity Disambiguation and the Role of Popularity in Retrieval-Based NLP*

Anthony Chen, Pallavi Gudipati, Shayne Longpre, Xiao Ling and Sameer Singh

#### **Poster 2J: Resources and Evaluation**

0:00–2:00 *Targeting the Benchmark: On Methodology in Current Natural Language Processing Research*

David Schlangen

0:00–2:00 *Evaluation Examples are not Equally Informative: How should that change NLP Leaderboards?*

Pedro Rodriguez, Joe Barrow, Alexander Miserlis Hoyle, John P. Lalor, Robin Jia and Jordan Boyd-Graber

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2K: Computational Social Science and Cultural Analytics**

- 0:00–2:00 *Claim Matching Beyond English to Scale Global Fact-Checking*  
Ashkan Kazemi, Kiran Garimella, Devin Gaffney and Scott Hale
- 0:00–2:00 *X-Fact: A New Benchmark Dataset for Multilingual Fact Checking*  
Ashim Gupta and Vivek Srikumar

**Poster 2L: Machine Translation and Multilinguality**

- 0:00–2:00 *SemFace: Pre-training Encoder and Decoder with a Semantic Interface for Neural Machine Translation*  
Shuo Ren, Long Zhou, Shujie Liu, Furu Wei, Ming Zhou and Shuai Ma
- 0:00–2:00 *Energy-Based Reranking: Improving Neural Machine Translation Using Energy-Based Models*  
Sumanta Bhattacharyya, Amirmohammad Rooshenas, Subhajit Naskar, Simeng Sun, Mohit Iyyer and Andrew McCallum
- 0:00–2:00 *nmT5 - Is parallel data still relevant for pre-training massively multilingual language models?*  
Mihir Kale, Aditya Siddhant, Rami Al-Rfou, Linting Xue, Noah Constant and Melvin Johnson
- 0:00–2:00 *Syntax-augmented Multilingual BERT for Cross-lingual Transfer*  
Wasi Ahmad, Haoran Li, Kai-Wei Chang and Yashar Mehdad
- 0:00–2:00 *How to Adapt Your Pretrained Multilingual Model to 1600 Languages*  
Abteen Ebrahimi and Katharina Kann
- 0:00–2:00 *Synthesizing Parallel Data of User-Generated Texts with Zero-Shot Neural Machine Translation*  
Benjamin Marie and Atsushi Fujita

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2M: Syntax: Tagging, Chunking, and Parsing**

0:00–2:00 *Weakly Supervised Named Entity Tagging with Learnable Logical Rules*  
Jiacheng Li, Haibo Ding, Jingbo Shang, Julian McAuley and Zhe Feng

**Poster 2N: NLP Applications**

0:00–2:00 *Question Generation for Adaptive Education*  
Megha Srivastava and Noah Goodman

**Poster 2O: Language Generation**

0:00–2:00 *Prefix-Tuning: Optimizing Continuous Prompts for Generation*  
Xiang Lisa Li and Percy Liang

0:00–2:00 *One2Set: Generating Diverse Keyphrases as a Set*  
Jiacheng Ye, Tao Gui, Yichao Luo, Yige Xu and Qi Zhang

0:00–2:00 *A Simple Recipe for Multilingual Grammatical Error Correction*  
Sascha Rothe, Jonathan Mallinson, Eric Malmi, Sebastian Krause and Aliaksei Severyn

0:00–2:00 *Continuous Language Generative Flow*  
Zineng Tang, Shiyue Zhang, Hyounghun Kim and Mohit Bansal

0:00–2:00 *RYANSQL: Recursively Applying Sketch-based Slot Fillings for Complex Text-to-SQL in Cross-Domain Databases*  
DongHyun Choi, Myeong Cheol Shin, EungGyun Kim and Dong Ryeol Shin

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2P: Summarization**

0:00–2:00 *TWAG: A Topic-Guided Wikipedia Abstract Generator*  
Fangwei Zhu, Shangqing Tu, Jiaxin Shi, Juanzi Li, Lei Hou and Tong Cui

**Poster 2Q: Question Answering**

0:00–2:00 *Towards Visual Question Answering on Pathology Images*  
Xuehai He, Zhuo Cai, Wenlan Wei, Yichen Zhang, Luntian Mou, Eric Xing and Pengtao Xie

0:00–2:00 *ForecastQA: A Question Answering Challenge for Event Forecasting with Temporal Text Data*  
Woojeong Jin, Rahul Khanna, Suji Kim, Dong-Ho Lee, Fred Morstatter, Aram Galstyan and Xiang Ren

0:00–2:00 *Recursive Tree-Structured Self-Attention for Answer Sentence Selection*  
Khalil Mrini, Emilia Farcas and Ndapa Nakashole

**Poster 2R: Language Grounding to Vision, Robotics and Beyond**

0:00–2:00 *Efficient Text-based Reinforcement Learning by Jointly Leveraging State and Commonsense Graph Representations*  
Keerthiram Murugesan, Mattia Atzeni, Pavan Kapanipathi, Kartik Talamadupula, Mrinmaya Sachan and Murray Campbell

0:00–2:00 *mTVR: Multilingual Moment Retrieval in Videos*  
Jie Lei, Tamara Berg and Mohit Bansal

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2S: Information Extraction**

- 0:00–2:00 *How Knowledge Graph and Attention Help? A Qualitative Analysis into Bag-level Relation Extraction*  
Zikun Hu, Yixin Cao, Lifu Huang and Tat-Seng Chua
- 0:00–2:00 *Trigger is Not Sufficient: Exploiting Frame-aware Knowledge for Implicit Event Argument Extraction*  
Kaiwen Wei, Xian Sun, Zequn Zhang, Jingyuan Zhang, Guo Zhi and li jin
- 0:00–2:00 *Element Intervention for Open Relation Extraction*  
Fangchao Liu, Lingyong Yan, Hongyu Lin, Xianpei Han and Le Sun
- 0:00–2:00 *Explicitly Capturing Relations between Entity Mentions via Graph Neural Networks for Domain-specific Named Entity Recognition*  
Pei Chen, Haibo Ding, Jun Araki and Ruihong Huang
- 0:00–2:00 *AdaTag: Multi-Attribute Value Extraction from Product Profiles with Adaptive Decoding*  
Jun Yan, Nasser Zalmout, Yan Liang, Christan Grant, Xiang Ren and Xin Luna Dong
- 0:00–2:00 *CoRI: Collective Relation Integration with Data Augmentation for Open Information Extraction*  
Zhengbao Jiang, Jialong Han, BUNYAMIN SISMAN and Xin Luna Dong
- 0:00–2:00 *Benchmarking Scalable Methods for Streaming Cross Document Entity Coreference*  
Robert L Logan IV, Andrew McCallum, Sameer Singh and Dan Bikel
- 0:00–2:00 *Search from History and Reason for Future: Two-stage Reasoning on Temporal Knowledge Graphs*  
Zixuan Li, Xiaolong Jin, Saiping Guan, Wei Li, Jiafeng Guo, Yuanzhuo Wang and Xueqi Cheng



Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 2T: Sentiment Analysis, Stylistic Analysis, and Argument Mining**

- 0:00–2:00 *Employing Argumentation Knowledge Graphs for Neural Argument Generation*  
Khalid Al Khatib, Lukas Trautner, Henning Wachsmuth, Yufang Hou and Benno Stein
- 0:00–2:00 *Learning Span-Level Interactions for Aspect Sentiment Triplet Extraction*  
Lu Xu, Yew Ken Chia and Lidong Bing

**Session 13A: Machine Translation and Multilinguality 8**

- 08:00–08:10 *On Compositional Generalization of Neural Machine Translation*  
Yafu Li, Yongjing Yin, Yulong Chen and Yue Zhang
- 08:10–08:20 *Mask-Align: Self-Supervised Neural Word Alignment*  
Chi Chen, Maosong Sun and Yang Liu
- 08:20–08:30 *GWLAN: General Word-Level AutocompletiON for Computer-Aided Translation*  
Huayang Li, Lemao Liu, Guoping Huang and Shuming Shi
- 08:30–08:37 *Improving Lexically Constrained Neural Machine Translation with Source-Conditioned Masked Span Prediction*  
Gyubok Lee, Seongjun Yang and Edward Choi

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 13B: Information Extraction 6**

- 08:00–08:10 *De-biasing Distantly Supervised Named Entity Recognition via Causal Intervention*  
Wenkai Zhang, Hongyu Lin, Xianpei Han and Le Sun
- 08:10–08:20 *A Span-Based Model for Joint Overlapped and Discontinuous Named Entity Recognition*  
Fei Li, ZhiChao Lin, Meishan Zhang and Donghong Ji
- 08:20–08:30 *MLBiNet: A Cross-Sentence Collective Event Detection Network*  
Dongfang Lou, Zhilin Liao, Shumin Deng, Ningyu Zhang and Huajun Chen
- 08:30–08:40 *Exploiting Document Structures and Cluster Consistencies for Event Coreference Resolution*  
Hieu Minh Tran, Duy Phung and Thien Huu Nguyen
- 08:40–08:50 *StereoRel: Relational Triple Extraction from a Stereoscopic Perspective*  
Xuetao Tian, Liping Jing, Lu He and Feng Liu
- 08:50–09:00 *Knowledge-Enriched Event Causality Identification via Latent Structure Induction Networks*  
Pengfei Cao, Xinyu Zuo, Yubo Chen, Kang Liu, Jun Zhao, Yuguang Chen and Weihua Peng

**Session 13C: Machine Learning for NLP 6**

- 08:00–08:10 *Turn the Combination Lock: Learnable Textual Backdoor Attacks via Word Substitution*  
Fanchao Qi, Yuan Yao, Sophia Xu, Zhiyuan Liu and Maosong Sun
- 08:10–08:20 *Parameter-Efficient Transfer Learning with Diff Pruning*  
Demi Guo, Alexander Rush and Yoon Kim
- 08:20–08:30 *R2D2: Recursive Transformer based on Differentiable Tree for Interpretable Hierarchical Language Modeling*  
Xiang Hu, Haitao Mi, Zujie Wen, Yafang Wang, Yi Su, Jing Zheng and Gerard de Melo
- 08:30–08:40 *Risk Minimization for Zero-shot Sequence Labeling*  
Zechuan Hu, Yong Jiang, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 08:40–08:50 *WARP: Word-level Adversarial ReProgramming*  
Karen Hambardzumyan, Hrant Khachatrian and Jonathan May
- 08:50–09:00 *Lexicon Learning for Few Shot Sequence Modeling*  
Ekin Akyurek and Jacob Andreas

**Session 13D: NLP Applications 3**

- 08:00–08:10 *Personalized Transformer for Explainable Recommendation*  
Lei Li, Yongfeng Zhang and Li Chen
- 08:10–08:20 *Generating SOAP Notes from Doctor-Patient Conversations Using Modular Summarization Techniques*  
Kundan Krishna, Sopan Khosla, Jeffrey Bigham and Zachary C. Lipton
- 08:20–08:30 *Tail-to-Tail Non-Autoregressive Sequence Prediction for Chinese Grammatical Error Correction*  
Piji Li and Shuming Shi
- 08:30–08:40 *Early Detection of Sexual Predators in Chats*  
Matthias Vogt, Ulf Leser and Alan Akbik
- 08:40–08:50 *Writing by Memorizing: Hierarchical Retrieval-based Medical Report Generation*  
Xingyi Yang, Muchao Ye, Quanzeng You and Fenglong Ma
- 08:50–08:57 *Quotation Recommendation and Interpretation Based on Transformation from Queries to Quotations*  
Lingzhi Wang, Xingshan Zeng and Kam-Fai Wong

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 13E: Information Retrieval and Text Mining 2**

- 08:00–08:10 *Concept-Based Label Embedding via Dynamic Routing for Hierarchical Text Classification*  
Xuepeng Wang, Li Zhao, Bing Liu, Tao Chen, Feng Zhang and Di Wang
- 08:10–08:20 *VisualSparta: An Embarrassingly Simple Approach to Large-scale Text-to-Image Search with Weighted Bag-of-words*  
Xiaopeng Lu, Tiancheng Zhao and Kyusong Lee
- 08:20–08:30 *Few-Shot Text Ranking with Meta Adapted Synthetic Weak Supervision*  
Si Sun, Yingzhuo Qian, Zhenghao Liu, Chenyan Xiong, Kaitao Zhang, Jie Bao, Zhiyuan Liu and Paul Bennett
- 08:30–08:40 *Semi-Supervised Text Classification with Balanced Deep Representation Distributions*  
Changchun Li, Ximing Li and Jihong Ouyang
- 08:40–08:50 *Improving Document Representations by Generating Pseudo Query Embeddings for Dense Retrieval*  
Hongyin Tang, Xingwu Sun, Beihong Jin, Jingang Wang, Fuzheng Zhang and Wei Wu
- 08:50–08:57 *Pre-training is a Hot Topic: Contextualized Document Embeddings Improve Topic Coherence*  
Federico Bianchi, Silvia Terragni and Dirk Hovy

**Poster 3A: Semantics: Sentence-level Semantics, Textual Inference and Other areas**

- 9:00–11:00 *ConSERT: A Contrastive Framework for Self-Supervised Sentence Representation Transfer*  
Yuanmeng Yan, Rumei Li, Sirui Wang, Fuzheng Zhang, Wei Wu and Weiran Xu
- 9:00–11:00 *Exploring Dynamic Selection of Branch Expansion Orders for Code Generation*  
Hui Jiang, Chulun Zhou, Fandong Meng, Biao Zhang, Jie Zhou, Degen Huang, Qingqiang Wu and Jinsong Su
- 9:00–11:00 *COINS: Dynamically Generating COntextualized Inference Rules for Narrative Story Completion*  
Debjit Paul and Anette Frank
- 9:00–11:00 *Reasoning over Entity-Action-Location Graph for Procedural Text Understanding*  
Hao Huang, Xiubo Geng, Jian Pei, Guodong Long and Daxin Jiang

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 9:00–11:00     *From Paraphrasing to Semantic Parsing: Unsupervised Semantic Parsing via Synchronous Semantic Decoding*  
Shan Wu, Bo Chen, Chunlei Xin, Xianpei Han, Le Sun, Weipeng Zhang, Jiansong Chen, Fan Yang and Xunliang Cai
- 9:00–11:00     *Pre-training Universal Language Representation*  
Yian Li and Hai Zhao
- 9:00–11:00     *Structural Pre-training for Dialogue Comprehension*  
Zhuosheng Zhang and Hai Zhao
- 9:00–11:00     *AutoTinyBERT: Automatic Hyper-parameter Optimization for Efficient Pre-trained Language Models*  
Yichun Yin, Cheng Chen, Lifeng Shang, Xin Jiang, Xiao Chen and Qun Liu
- 9:00–11:00     *Data Augmentation with Adversarial Training for Cross-Lingual NLI*  
Xin Dong, Yaxin Zhu, Zuohui Fu, Dongkuan Xu and Gerard de Melo
- 9:00–11:00     *Input Representations for Parsing Discourse Representation Structures: Comparing English with Chinese*  
Chunliu Wang, Rik van Noord, Arianna Bisazza and Johan Bos
- 9:00–11:00     *Code Generation from Natural Language with Less Prior Knowledge and More Monolingual Data*  
Sajad Norouzi, Keyi Tang and Yanshuai Cao
- 9:00–11:00     *Bootstrapped Unsupervised Sentence Representation Learning*  
Yan Zhang, Ruidan He, ZUOZHU LIU, Lidong Bing and Haizhou Li
- 9:00–11:00     *Learning Event Graph Knowledge for Abductive Reasoning*  
Li Du, Xiao Ding, Ting Liu and Bing Qin
- 9:00–11:00     *Issues with Entailment-based Zero-shot Text Classification*  
Tingting Ma, Jin-Ge Yao, Chin-Yew Lin and Tiejun Zhao
- 9:00–11:00     *Neural-Symbolic Commonsense Reasoner with Relation Predictors*  
Farhad Moghimifar, Lizhen Qu, Terry Yue Zhuo, Gholamreza Haffari and Mahsa Baktashmotlagh

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3B: Linguistic Theories, Cognitive Modeling and Psycholinguistics**

- 9:00–11:00 *A Cognitive Regularizer for Language Modeling*  
Jason Wei, Clara Meister and Ryan Cotterell
- 9:00–11:00 *What Motivates You? Benchmarking Automatic Detection of Basic Needs from Short Posts*  
Sanja Stajner, Seren Yenikent, Bilal Ghanem and Marc Franco-Salvador
- 9:00–11:00 *Lower Perplexity is Not Always Human-Like*  
Tatsuki Kuribayashi, Yohei Oseki, Takumi Ito, Ryo Yoshida, Masayuki Asahara and Kentaro Inui

**Poster 3C: Semantics: Lexical Semantics**

- 9:00–11:00 *Word Sense Disambiguation: Towards Interactive Context Exploitation from Both Word and Sense Perspectives*  
Ming Wang and Yinglin Wang
- 9:00–11:00 *A Knowledge-Guided Framework for Frame Identification*  
Xuefeng Su, Ru Li, Xiaoli Li, Jeff Z. Pan, Hu Zhang, Qinghua Chai and Xiaoqi Han
- 9:00–11:00 *Obtaining Better Static Word Embeddings Using Contextual Embedding Models*  
Prakhar Gupta and Martin Jaggi
- 9:00–11:00 *Meta-Learning with Variational Semantic Memory for Word Sense Disambiguation*  
Yingjun Du, Nithin Holla, Xiantong Zhen, Cees Snoek and Ekaterina Shutova
- 9:00–11:00 *LexFit: Lexical Fine-Tuning of Pretrained Language Models*  
Ivan Vulić, Edoardo Maria Ponti, Anna Korhonen and Goran Glavaš
- 9:00–11:00 *Semantic Frame Induction using Masked Word Embeddings and Two-Step Clustering*  
Kosuke Yamada, Ryohei Sasano and Koichi Takeda
- 9:00–11:00 *Multi-SimLex: A Large-Scale Evaluation of Multilingual and Cross-Lingual Lexical Semantic Similarity*  
Ivan Vulic, Simon Baker, Edoardo Maria Ponti, Ulla Petti, Ira Leviant, Kelly Wing, Olga Majewska, Eden Bar, Matt Malone, Thierry Poibeau, Roi Reichart and Anna Korhonen

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3D: Speech and Multimodality**

- 9:00–11:00 *Text-Free Image-to-Speech Synthesis Using Learned Segmental Units*  
Wei-Ning Hsu, David Harwath, Tyler Miller, Christopher Song and James Glass
- 9:00–11:00 *CTFN: Hierarchical Learning for Multimodal Sentiment Analysis Using Coupled-Translation Fusion Network*  
Jiajia Tang, Kang Li, Xuanyu Jin, Andrzej Cichocki, Qibin Zhao and Wanzeng Kong
- 9:00–11:00 *Lightweight Adapter Tuning for Multilingual Speech Translation*  
Hang Le, Juan Pino, Changan Wang, Jiatao Gu, Didier Schwab and Laurent Besacier

**Poster 3E: Interpretability and Analysis of Models for NLP**

- 9:00–11:00 *Parameter Selection: Why We Should Pay More Attention to It*  
Jie-Jyun Liu, Tsung-Han Yang, Si-An Chen and Chih-Jen Lin
- 9:00–11:00 *Positional Artefacts Propagate Through Masked Language Model Embeddings*  
Ziyang Luo, Artur Kulmizev and Xiaoxi Mao
- 9:00–11:00 *Language Model Evaluation Beyond Perplexity*  
Clara Meister and Ryan Cotterell
- 9:00–11:00 *Learning to Explain: Generating Stable Explanations Fast*  
Xuelin Situ, Ingrid Zukerman, Cecile Paris, Sameen Maruf and Gholamreza Haffari
- 9:00–11:00 *StereoSet: Measuring stereotypical bias in pretrained language models*  
Moin Nadeem, Anna Bethke and Siva Reddy
- 9:00–11:00 *Alignment Rationale for Natural Language Inference*  
Zhongtao Jiang, Yuanzhe Zhang, Zhao Yang, Jun Zhao and Kang Liu
- 9:00–11:00 *Enabling Lightweight Fine-tuning for Pre-trained Language Model Compression based on Matrix Product Operators*  
Peiyu Liu, Ze-Feng Gao, Wayne Xin Zhao, Zhi-Yuan Xie, Zhong-Yi Lu and Ji-Rong Wen

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 9:00–11:00 *On Sample Based Explanation Methods for NLP: Faithfulness, Efficiency and Semantic Evaluation*  
Wei Zhang, Ziming Huang, Yada Zhu, Guangnan Ye, Xiaodong Cui and Fan Zhang
- 9:00–11:00 *CausaLM: Causal Model Explanation Through Counterfactual Language Models*  
Amir Feder, Nadav Oved, Uri Shalit and Roi Reichart
- 9:00–11:00 *Amnesic Probing: Behavioral Explanation With Amnesic Counterfactuals*  
Yanai Elazar, Shauli Ravfogel, Alon Jacovi and Yoav Goldberg

**Poster 3F: Information Retrieval and Text Mining**

- 9:00–11:00 *Syntax-Enhanced Pre-trained Model*  
Zenán Xu, Daya Guo, Duyu Tang, Qinliang Su, Linjun Shou, Ming Gong, Wanjun Zhong, Xiaojun Quan, Daxin Jiang and Nan Duan
- 9:00–11:00 *Matching Distributions between Model and Data: Cross-domain Knowledge Distillation for Unsupervised Domain Adaptation*  
Bo Zhang, Xiaoming Zhang, Yun Liu, Lei Cheng and Zhoujun Li
- 9:00–11:00 *Counterfactual Inference for Text Classification Debiasing*  
Chen Qian, Fuli Feng, Lijie Wen, Chunping Ma and Pengjun Xie
- 9:00–11:00 *HieRec: Hierarchical User Interest Modeling for Personalized News Recommendation*  
Tao Qi, Fangzhao Wu, Chuhan Wu, Peiru Yang, Yang Yu, Xing Xie and Yongfeng Huang
- 9:00–11:00 *Distinct Label Representations for Few-Shot Text Classification*  
Sora Ohashi, Junya Takayama, Tomoyuki Kajiwara and Yuki Arase
- 9:00–11:00 *PP-Rec: News Recommendation with Personalized User Interest and Time-aware News Popularity*  
Tao Qi, Fangzhao Wu, Chuhan Wu and Yongfeng Huang
- 9:00–11:00 *Article Reranking by Memory-Enhanced Key Sentence Matching for Detecting Previously Fact-Checked Claims*  
Qiang Sheng, Juan Cao, Xueyao Zhang, Xirong Li and Lei Zhong
- 9:00–11:00 *Learning to Solve NLP Tasks in an Incremental Number of Languages*  
Giuseppe Castellucci, Simone Filice, Danilo Croce and Roberto Basili



Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3G: Machine Learning for NLP**

- 9:00–11:00 *Defense against Synonym Substitution-based Adversarial Attacks via Dirichlet Neighborhood Ensemble*  
Yi Zhou, Xiaoqing Zheng, Cho-Jui Hsieh, Kai-Wei Chang and Xuanjing Huang
- 9:00–11:00 *Shortformer: Better Language Modeling using Shorter Inputs*  
Ofir Press, Noah A. Smith and Mike Lewis
- 9:00–11:00 *BanditMTL: Bandit-based Multi-task Learning for Text Classification*  
Yuren Mao, Zekai Wang, Weiwei Liu, Xuemin Lin and Wenbin Hu
- 9:00–11:00 *Unified Interpretation of Softmax Cross-Entropy and Negative Sampling: With Case Study for Knowledge Graph Embedding*  
Hidetaka Kamigaito and Katsuhiko Hayashi
- 9:00–11:00 *Hi-Transformer: Hierarchical Interactive Transformer for Efficient and Effective Long Document Modeling*  
Chuhan Wu, Fangzhao Wu, Tao Qi and Yongfeng Huang
- 9:00–11:00 *De-Confounded Variational Encoder-Decoder for Logical Table-to-Text Generation*  
Wenqing Chen, Jidong Tian, Yitian Li, Hao He and Yaohui Jin
- 9:00–11:00 *Rethinking Stealthiness of Backdoor Attack against NLP Models*  
Wenkai Yang, Yankai Lin, Peng Li, Jie Zhou and Xu Sun
- 9:00–11:00 *Crowdsourcing Learning as Domain Adaptation: A Case Study on Named Entity Recognition*  
Xin Zhang, Guangwei Xu, Yueheng Sun, Meishan Zhang and Pengjun Xie
- 9:00–11:00 *Robust Transfer Learning with Pretrained Language Models through Adapters*  
Wenjuan Han, Bo Pang and Ying Nian Wu
- 9:00–11:00 *Embracing Ambiguity: Shifting the Training Target of NLI Models*  
Johannes Mario Meissner, Napat Thumwanit, Saku Sugawara and Akiko Aizawa
- 9:00–11:00 *Exploring Distantly-Labeled Rationales in Neural Network Models*  
Quzhe Huang, Shengqi Zhu, Yansong Feng and Dongyan Zhao

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

9:00–11:00 *Learning to Perturb Word Embeddings for Out-of-distribution QA*  
Seanie Lee, Minki Kang, Juho Lee and Sung Ju Hwang

**Poster 3H: Dialog and Interactive Systems**

9:00–11:00 *Maria: A Visual Experience Powered Conversational Agent*  
Zujie Liang, Huang Hu, Can Xu, Chongyang Tao, Xiubo Geng, yining Chen, Fan Liang and Daxin Jiang

9:00–11:00 *A Human-machine Collaborative Framework for Evaluating Malevolence in Dialogues*  
Yangjun Zhang, Pengjie Ren and Maarten de Rijke

9:00–11:00 *Generating Relevant and Coherent Dialogue Responses using Self-Separated Conditional Variational AutoEncoders*  
Bin Sun, Shaoxiong Feng, Yiwei Li, Jiamou Liu and Kan Li

9:00–11:00 *Modeling Discriminative Representations for Out-of-Domain Detection with Supervised Contrastive Learning*  
Zhiyuan Zeng, Keqing He, Yuanmeng Yan, Zijun Liu, Yanan Wu, Hong Xu, Huixing Jiang and Weiran Xu

9:00–11:00 *Learning to Ask Conversational Questions by Optimizing Levenshtein Distance*  
Zhongkun Liu, Pengjie Ren, Zhumin CHEN, Zhaochun Ren, Maarten de Rijke and Ming Zhou

9:00–11:00 *DVD: A Diagnostic Dataset for Multi-step Reasoning in Video Grounded Dialogue*  
Hung Le, Chinnadhurai Sankar, Seungwhan Moon, Ahmad Beirami, Alborz Geramifard and Satwik Kottur

9:00–11:00 *Preview, Attend and Review: Schema-Aware Curriculum Learning for Multi-Domain Dialogue State Tracking*  
Yinpei Dai, Hangyu Li, Yongbin Li, Jian Sun, Fei Huang, Luo Si and Xiaodan Zhu

9:00–11:00 *On the Generation of Medical Dialogs for COVID-19*  
Meng Zhou, Zechen Li, Bowen Tan, Guangtao Zeng, Wenmian Yang, Xuehai He, Zeqian Ju, Subrato Chakravorty, Shu Chen, Xingyi Yang, Yichen Zhang, Qingyang Wu, Zhou Yu, Kun Xu, Eric Xing and Pengtao Xie

9:00–11:00 *Constructing Multi-Modal Dialogue Dataset by Replacing Text with Semantically Relevant Images*  
Nyoungwoo Lee, Suwon Shin, Jaegul Choo, Ho-Jin Choi and Sung-Hyon Myaeng

9:00–11:00 *MMGCN: Multimodal Fusion via Deep Graph Convolution Network for Emotion Recognition in Conversation*  
Jingwen Hu, Yuchen Liu, Jinming Zhao and Qin Jin

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

9:00–11:00     *DynaEval: Unifying Turn and Dialogue Level Evaluation*  
Chen Zhang, Yiming Chen, Luis Fernando D’Haro, Yan Zhang, Thomas Friedrichs,  
Grandee Lee and Haizhou Li

9:00–11:00     *Unsupervised Learning of KB Queries in Task-Oriented Dialogs*  
Dinesh Raghu, Nikhil Gupta and Mausam

**Poster 3I: Ethics in NLP**

9:00–11:00     *Exposing the limits of Zero-shot Cross-lingual Hate Speech Detection*  
Debora Nozza

**Poster 3J: Resources and Evaluation**

9:00–11:00     *CoSQA: 20,000+ Web Queries for Code Search and Question Answering*  
Junjie Huang, Duyu Tang, Linjun Shou, Ming Gong, Ke Xu, Daxin Jiang, Ming  
Zhou and Nan Duan

9:00–11:00     *QED: A Framework and Dataset for Explanations in Question Answering*  
Matthew Lamm, Jennimaria Palomaki, Chris Alberti, Daniel Andor, Eunsol Choi,  
Livio Baldini Soares and Michael Collins

**Poster 3K: Machine Translation and Multilinguality**

9:00–11:00     *Rewriter-Evaluator Architecture for Neural Machine Translation*  
Yangming Li and Kaisheng Yao

9:00–11:00     *BERTTune: Fine-Tuning Neural Machine Translation with BERTScore*  
Inigo Jauregi Unanue, Jacob Parnell and Massimo Piccardi

9:00–11:00     *Modeling Bilingual Conversational Characteristics for Neural Chat Translation*  
Yunlong Liang, Fandong Meng, Yufeng Chen, Jinan Xu and Jie Zhou

9:00–11:00     *Importance-based Neuron Allocation for Multilingual Neural Machine Translation*  
Wanying Xie, Yang Feng, Shuhao Gu and Dong Yu

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 9:00–11:00     *Transfer Learning for Sequence Generation: from Single-source to Multi-source*  
Xuancheng Huang, jingfang xu, Maosong Sun and Yang Liu
- 9:00–11:00     *A Closer Look at Few-Shot Crosslingual Transfer: The Choice of Shots Matters*  
Mengjie Zhao, Yi Zhu, Ehsan Shareghi, Ivan Vulić, Roi Reichart, Anna Korhonen and Hinrich Schütze

**Poster 3L: Discourse and Pragmatics**

- 9:00–11:00     *Coreference Reasoning in Machine Reading Comprehension*  
Mingzhu Wu, Nafise Sadat Moosavi, Dan Roth and Iryna Gurevych
- 9:00–11:00     *Entity Enhancement for Implicit Discourse Relation Classification in the Biomedical Domain*  
Wei Shi and Vera Demberg
- 9:00–11:00     *Adapting Unsupervised Syntactic Parsing Methodology for Discourse Dependency Parsing*  
Liwen Zhang, Ge Wang, Wenjuan Han and Kewei Tu
- 9:00–11:00     *Unsupervised Pronoun Resolution via Masked Noun-Phrase Prediction*  
Ming Shen, Pratyay Banerjee and Chitta Baral

**Poster 3M: Syntax: Tagging, Chunking, and Parsing**

- 9:00–11:00     *A Conditional Splitting Framework for Efficient Constituency Parsing*  
Thanh-Tung Nguyen, Xuan-Phi Nguyen, Shafiq Joty and Xiaoli Li
- 9:00–11:00     *A Unified Generative Framework for Various NER Subtasks*  
Hang Yan, Tao Gui, Junqi Dai, Qipeng Guo, Zheng Zhang and Xipeng Qiu
- 9:00–11:00     *An In-depth Study on Internal Structure of Chinese Words*  
Chen Gong, Saihao Huang, Houquan Zhou, Zhenghua Li, Min Zhang, Zhefeng Wang, baoxing Huai and Nicholas Jing Yuan
- 9:00–11:00     *MulDA: A Multilingual Data Augmentation Framework for Low-Resource Cross-Lingual NER*  
Linlin Liu, BOSHENG DING, Lidong Bing, Shafiq Joty, Luo Si and Chunyan Miao

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

9:00–11:00 *Lexicon Enhanced Chinese Sequence Labeling Using BERT Adapter*  
Wei Liu, Xiyan Fu, Yue Zhang and Wenming Xiao

**Poster 3N: NLP Applications**

9:00–11:00 *Math Word Problem Solving with Explicit Numerical Values*  
Qinzhuo Wu, Qi Zhang, Zhongyu Wei and Xuanjing Huang

9:00–11:00 *Neural-Symbolic Solver for Math Word Problems with Auxiliary Tasks*  
Jinghui Qin, Xiaodan Liang, Yining Hong, Jianheng Tang and Liang Lin

9:00–11:00 *SMedBERT: A Knowledge-Enhanced Pre-trained Language Model with Structured Semantics for Medical Text Mining*  
Taolin Zhang, Zerui Cai, Chengyu Wang, Minghui Qiu, Bite Yang and XIAOFENG HE

9:00–11:00 *What is Your Article Based On? Inferring Fine-grained Provenance*  
Yi Zhang, Zachary Ives and Dan Roth

9:00–11:00 *Cross-modal Memory Networks for Radiology Report Generation*  
Zhihong Chen, Yaling Shen, Yan Song and Xiang Wan

9:00–11:00 *Controversy and Conformity: from Generalized to Personalized Aggressiveness Detection*  
Kamil Kanclerz, Alicja Figas, Marcin Gruza, Tomasz Kajdanowicz, Jan Kocon, Daria Puchalska and Przemyslaw Kazienko

9:00–11:00 *Multi-perspective Coherent Reasoning for Helpfulness Prediction of Multimodal Reviews*  
Junhao Liu, Zhen Hai, Min Yang and Lidong Bing

9:00–11:00 *Instantaneous Grammatical Error Correction with Shallow Aggressive Decoding*  
Xin Sun, Tao Ge, Furu Wei and Houfeng Wang

9:00–11:00 *Automatic ICD Coding via Interactive Shared Representation Networks with Self-distillation Mechanism*  
Tong Zhou, Pengfei Cao, Yubo Chen, Kang Liu, Jun Zhao, Kun Niu, Weifeng Chong and Shengping Liu

9:00–11:00 *PHMOSpell: Phonological and Morphological Knowledge Guided Chinese Spelling Check*  
Li Huang, Junjie Li, Weiwei Jiang, Zhiyu Zhang, Minchuan Chen, Shaojun Wang and Jing Xiao

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3O: Language Generation**

- 9:00–11:00 *Guiding the Growth: Difficulty-Controllable Question Generation through Step-by-Step Rewriting*  
Yi Cheng, Siyao Li, Bang Liu, Ruihui Zhao, Sujian Li, Chenghua Lin and Yefeng Zheng
- 9:00–11:00 *Improving Encoder by Auxiliary Supervision Tasks for Table-to-Text Generation*  
Liang Li, Can Ma, Yinliang Yue and Dayong Hu
- 9:00–11:00 *POS-Constrained Parallel Decoding for Non-autoregressive Generation*  
Kexin Yang, Wenqiang Lei, Dayiheng Liu, Weizhen Qi and Jiancheng Lv
- 9:00–11:00 *Bridging Subword Gaps in Pretrain-Finetune Paradigm for Natural Language Generation*  
Xin Liu, Baosong Yang, Dayiheng Liu, Haibo Zhang, Weihua Luo, Min Zhang, Haiying Zhang and Jinsong Su
- 9:00–11:00 *TGEA: An Error-Annotated Dataset and Benchmark Tasks for Text Generation from Pretrained Language Models*  
Jie He, Bo Peng, Yi Liao, Qun Liu and Deyi Xiong
- 9:00–11:00 *Addressing Semantic Drift in Generative Question Answering with Auxiliary Extraction*  
Chenliang Li, Bin Bi, Ming Yan, Wei Wang and Songfang Huang

**Poster 3P: Summarization**

- 9:00–11:00 *Long-Span Summarization via Local Attention and Content Selection*  
Potsawee Manakul and Mark Gales
- 9:00–11:00 *RepSum: Unsupervised Dialogue Summarization based on Replacement Strategy*  
Xiyang Fu, Yating Zhang, Tianyi Wang, Xiaozhong Liu, Changlong Sun and Zhenglu Yang
- 9:00–11:00 *BASS: Boosting Abstractive Summarization with Unified Semantic Graph*  
Wenhao Wu, Wei Li, Xinyan Xiao, Jiachen Liu, Ziqiang Cao, Sujian Li, Hua Wu and Haifeng Wang
- 9:00–11:00 *Capturing Relations between Scientific Papers: An Abstractive Model for Related Work Section Generation*  
Xiuying Chen, Hind Alamro, Mingzhe Li, Shen Gao, Xiangliang Zhang, Dongyan Zhao and Rui Yan

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 9:00–11:00     *Focus Attention: Promoting Faithfulness and Diversity in Summarization*  
Rahul Aralikkatte, Shashi Narayan, Joshua Maynez, Sascha Rothe and Ryan McDonald
- 9:00–11:00     *Generating Query Focused Summaries from Query-Free Resources*  
Yumo Xu and Mirella Lapata
- 9:00–11:00     *Demoting the Lead Bias in News Summarization via Alternating Adversarial Learning*  
Linzi Xing, Wen Xiao and Giuseppe Carenini

**Poster 3Q: Question Answering**

- 9:00–11:00     *DuReader\_robust: A Chinese Dataset Towards Evaluating Robustness and Generalization of Machine Reading Comprehension in Real-World Applications*  
Hongxuan Tang, Hongyu Li, Jing Liu, Yu Hong, Hua Wu and Haifeng Wang
- 9:00–11:00     *Sequence to General Tree: Knowledge-Guided Geometry Word Problem Solving*  
Shih-hung Tsai, Chao-Chun Liang, Hsin-Min Wang and Keh-Yih Su
- 9:00–11:00     *Robustifying Multi-hop QA through Pseudo-Evidentiality Training*  
Kyungjae Lee, Seung-won Hwang, Sang-eun Han and Dohyeon Lee
- 9:00–11:00     *Multi-Scale Progressive Attention Network for Video Question Answering*  
Zhicheng Guo, Jiaxuan Zhao, Licheng Jiao, Xu Liu and Lingling Li
- 9:00–11:00     *Efficient Passage Retrieval with Hashing for Open-domain Question Answering*  
Ikuya Yamada, Akari Asai and Hannaneh Hajishirzi
- 9:00–11:00     *xMoCo: Cross Momentum Contrastive Learning for Open-Domain Question Answering*  
Nan Yang, Furu Wei, Binxing Jiao, Daxing Jiang and Linjun Yang
- 9:00–11:00     *Learn to Resolve Conversational Dependency: A Consistency Training Framework for Conversational Question Answering*  
Gangwoo Kim, Hyunjae Kim, Jungsoo Park and Jaewoo Kang

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3R: Language Grounding to Vision, Robotics and Beyond**

- 9:00–11:00 *PhotoChat: A Human-Human Dialogue Dataset With Photo Sharing Behavior For Joint Image-Text Modeling*  
Xiaoxue Zang, Lijuan Liu, Maria Wang, Yang Song, Hao Zhang and Jindong Chen
- 9:00–11:00 *Good for Misconceived Reasons: An Empirical Revisiting on the Need for Visual Context in Multimodal Machine Translation*  
Zhiyong Wu, Lingpeng Kong, Wei Bi, Xiang Li and Ben Kao
- 9:00–11:00 *Attend What You Need: Motion-Appearance Synergistic Networks for Video Question Answering*  
Ahjeong Seo, Gi-Cheon Kang, Joonhan Park and Byoung-Tak Zhang
- 9:00–11:00 *Decoupling the Role of Data, Attention, and Losses in Multimodal Transformers*  
Lisa Anne Hendricks, John Mellor, Rosalia Schneider, Jean-Baptiste Alayrac and Aida Nematzadeh

**Poster 3S: Information Extraction**

- 9:00–11:00 *BERTifying the Hidden Markov Model for Multi-Source Weakly Supervised Named Entity Recognition*  
Yinghao Li, Pranav Shetty, Lucas Liu, Chao Zhang and Le Song
- 9:00–11:00 *CIL: Contrastive Instance Learning Framework for Distantly Supervised Relation Extraction*  
Tao Chen, Haizhou Shi, Siliang Tang, Zhigang Chen, Fei Wu and Yueting Zhuang
- 9:00–11:00 *SENT: Sentence-level Distant Relation Extraction via Negative Training*  
Ruotian Ma, Tao Gui, Linyang Li, Qi Zhang, Xuanjing Huang and Yaqian Zhou
- 9:00–11:00 *An End-to-End Progressive Multi-Task Learning Framework for Medical Named Entity Recognition and Normalization*  
Baohang Zhou, Xiangrui Cai, Ying Zhang and Xiaojie Yuan
- 9:00–11:00 *PRGC: Potential Relation and Global Correspondence Based Joint Relational Triple Extraction*  
Hengyi Zheng, rui wen, Xi Chen, Yifan Yang, Yunyan Zhang, Ziheng Zhang, Ningyu Zhang, Bin Qin, Xu Ming and Yefeng Zheng
- 9:00–11:00 *Learning from Miscellaneous Other-Class Words for Few-shot Named Entity Recognition*  
Meihan Tong, Shuai Wang, Bin Xu, Yixin Cao, Minghui Liu, Lei Hou and Juanzi Li



**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 9:00–11:00     *Joint Biomedical Entity and Relation Extraction with Knowledge-Enhanced Collective Inference*  
Tuan Lai, Heng Ji, ChengXiang Zhai and Quan Hung Tran
- 9:00–11:00     *Entity Concept-enhanced Few-shot Relation Extraction*  
Shan Yang, Yongfei Zhang, Guanglin Niu, Qinghua Zhao and Shiliang Pu
- 9:00–11:00     *Fine-grained Information Extraction from Biomedical Literature based on Knowledge-enriched Abstract Meaning Representation*  
Zixuan Zhang, Nikolaus Parulian, Heng Ji, Ahmed Elsayed, Skatje Myers and Martha Palmer
- 9:00–11:00     *Unleash GPT-2 Power for Event Detection*  
Amir Pouran Ben Veyseh, Viet Lai, Franck Dernoncourt and Thien Huu Nguyen
- 9:00–11:00     *Improving Model Generalization: A Chinese Named Entity Recognition Case Study*  
Guanqing Liang and Cane Wing-Ki Leung
- 9:00–11:00     *CLEVE: Contrastive Pre-training for Event Extraction*  
Ziqi Wang, Xiaozhi Wang, Xu Han, Yankai Lin, Lei Hou, Zhiyuan Liu, Peng Li, Juanzi Li and Jie Zhou
- 9:00–11:00     *Three Sentences Are All You Need: Local Path Enhanced Document Relation Extraction*  
Quzhe Huang, Shengqi Zhu, Yansong Feng, Yuan Ye, Yuxuan Lai and Dongyan Zhao
- 9:00–11:00     *Document-level Event Extraction via Parallel Prediction Networks*  
Hang Yang, Dianbo Sui, Yubo Chen, Kang Liu, Jun Zhao and Taifeng Wang
- 9:00–11:00     *StructuralLM: Structural Pre-training for Form Understanding*  
Chenliang Li, Bin Bi, Ming Yan, Wei Wang, Songfang Huang, Fei Huang and Luo Si

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Poster 3T: Sentiment Analysis, Stylistic Analysis, and Argument Mining**

- 9:00–11:00 *Dual Graph Convolutional Networks for Aspect-based Sentiment Analysis*  
Ruifan Li, Hao Chen, Fangxiang Feng, Zhanyu Ma, Xiaojie WANG and Eduard Hovy
- 9:00–11:00 *Multi-Label Few-Shot Learning for Aspect Category Detection*  
Mengting Hu, Shiwan Zhao, Honglei Guo, Chao Xue, Hang Gao, Tiegang Gao, renhong cheng and Zhong Su
- 9:00–11:00 *Argument Pair Extraction via Attention-guided Multi-Layer Multi-Cross Encoding*  
Liyang Cheng, Tianyu Wu, Lidong Bing and Luo Si
- 9:00–11:00 *A Neural Transition-based Model for Argumentation Mining*  
Jianzhu Bao, Chuang Fan, Jipeng Wu, Yixue Dang, Jiachen Du and Ruifeng Xu

**11:00–12:00** *Lifetime Award*

**Session 14A: Language Generation 2**

- 14:00–14:10 *Keep It Simple: Unsupervised Simplification of Multi-Paragraph Text*  
Philippe Laban, Tobias Schnabel, Paul Bennett and Marti A. Hearst
- 14:10–14:20 *Long Text Generation by Modeling Sentence-Level and Discourse-Level Coherence*  
Jian Guan, Xiaoxi Mao, changjie fan, Zitao Liu, Wenbiao Ding and Minlie Huang
- 14:20–14:30 *OpenMEVA: A Benchmark for Evaluating Open-ended Story Generation Metrics*  
Jian Guan, Zhexin Zhang, Zhuoer Feng, Zitao Liu, Wenbiao Ding, Xiaoxi Mao, changjie fan and Minlie Huang
- 14:30–14:40 *DYPLOC: Dynamic Planning of Content Using Mixed Language Models for Text Generation*  
Xinyu Hua, Ashwin Sreevatsa and Lu Wang
- 14:40–14:50 *Controllable Open-ended Question Generation with A New Question Type Ontology*  
Shuyang Cao and Lu Wang

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

14:50–15:00 *BERTGen: Multi-task Generation through BERT*  
Faidon Mitzalis, Ozan Caglayan, Pranava Madhyastha and Lucia Specia

**Session 14B: Machine Translation and Multilinguality 9**

14:00–14:10 *Selective Knowledge Distillation for Neural Machine Translation*  
Fusheng Wang, Jianhao Yan, Fandong Meng and Jie Zhou

14:10–14:20 *Measuring and Increasing Context Usage in Context-Aware Machine Translation*  
Patrick Fernandes, Kayo Yin, Graham Neubig and André F. T. Martins

14:20–14:30 *Beyond Offline Mapping: Learning Cross-lingual Word Embeddings through Context Anchoring*  
Aitor Ormazabal, Mikel Artetxe, Aitor Soroa, Gorka Labaka and Eneko Agirre

14:30–14:40 *CCMatrix: Mining Billions of High-Quality Parallel Sentences on the Web*  
Holger Schwenk, Guillaume Wenzek, Sergey Edunov, Edouard Grave, Armand Joulin and Angela Fan

14:40–14:50 *EDITOR: an Edit-Based Transformer with Repositioning for Neural Machine Translation with Soft Lexical Constraints*  
Weijia Xu and Marine Carpuat

14:50–15:00 *Gender Bias in Machine Translation*  
Beatrice Savoldi, Marco Gaido, Luisa Bentivogli, Matteo Negri and Marco Turchi

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 14C: Machine Learning for NLP 7**

- 14:00–14:10 *Length-Adaptive Transformer: Train Once with Length Drop, Use Anytime with Search*  
Gyuwan Kim and Kyunghyun Cho
- 14:10–14:20 *GhostBERT: Generate More Features with Cheap Operations for BERT*  
Zhiqi Huang, Lu Hou, Lifeng Shang, Xin Jiang, Xiao Chen and Qun Liu
- 14:20–14:30 *Super Tickets in Pre-Trained Language Models: From Model Compression to Improving Generalization*  
Chen Liang, Simiao Zuo, Minshuo Chen, Haoming Jiang, Xiaodong Liu, Pengcheng He, Tuo Zhao and Weizhu Chen
- 14:30–14:40 *A Novel Estimator of Mutual Information for Learning to Disentangle Textual Representations*  
Pierre Colombo, Pablo Piantanida and Chloé Clavel
- 14:40–14:50 *Determinantal Beam Search*  
Clara Meister, Martina Forster and Ryan Cotterell
- 14:50–15:00 *Multi-hop Graph Convolutional Network with High-order Chebyshev Approximation for Text Reasoning*  
Shuoran Jiang, Qingcai Chen, Xin Liu, Baotian Hu and Lisai Zhang

**Session 14D: NLP Applications 4**

- 14:00–14:10 *Accelerating Text Communication via Abbreviated Sentence Input*  
Jiban Adhikary, Jamie Berger and Keith Vertanen
- 14:10–14:20 *Regression Bugs Are In Your Model! Measuring, Reducing and Analyzing Regressions In NLP Model Updates*  
YUQING XIE, Yi-An Lai, Yuanjun Xiong, Yi Zhang and Stefano Soatto
- 14:20–14:30 *Detecting Propaganda Techniques in Memes*  
Dimitar Dimitrov, Bishr Bin Ali, Shaden Shaar, Firoj Alam, Fabrizio Silvestri, Hamed Firooz, Preslav Nakov and Giovanni Da San Martino
- 14:30–14:37 *Unsupervised Cross-Domain Prerequisite Chain Learning using Variational Graph Autoencoders*  
Irene Li, Vanessa Yan, Tianxiao Li, Rihao Qu and Dragomir Radev

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 14:37–14:44 *Attentive Multiview Text Representation for Differential Diagnosis*  
Hadi Amiri, Mitra Mohtarami and Isaac Kohane
- 14:44–14:51 *MedNLI Is Not Immune: Natural Language Inference Artifacts in the Clinical Domain*  
Christine Herlihy and Rachel Rudinger

**Session 14E: Question Answering 4**

- 14:00–14:10 *On the Efficacy of Adversarial Data Collection for Question Answering: Results from a Large-Scale Randomized Study*  
Divyansh Kaushik, Douwe Kiela, Zachary C. Lipton and Wen-tau Yih
- 14:10–14:20 *Learning Dense Representations of Phrases at Scale*  
Jinhyuk Lee, Mujeen Sung, Jaewoo Kang and Danqi Chen
- 14:20–14:30 *End-to-End Training of Neural Retrievers for Open-Domain Question Answering*  
Devendra Sachan, Mostofa Patwary, Mohammad Shoeybi, Neel Kant, Wei Ping, William L. Hamilton and Bryan Catanzaro
- 14:30–14:40 *Question Answering Over Temporal Knowledge Graphs*  
Apoorv Saxena, Soumen Chakrabarti and Partha Talukdar
- 14:40–14:47 *Towards a more Robust Evaluation for Conversational Question Answering*  
Wissam Siblini, Baris Sayil and Yacine Kessaci
- 14:47–14:54 *VAULT: VAriable Unified Long Text Representation for Machine Reading Comprehension*  
Haoyang Wen, Anthony Ferritto, Heng Ji, Radu Florian and Avi Sil

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 15A: Language Generation 3**

- 15:00–15:10 *Language Model Augmented Relevance Score*  
Ruibo Liu, Jason Wei and Soroush Vosoughi
- 15:10–15:20 *DExperts: Decoding-Time Controlled Text Generation with Experts and Anti-Experts*  
Alisa Liu, Maarten Sap, Ximing Lu, Swabha Swayamdipta, Chandra Bhagavatula, Noah A. Smith and Yejin Choi
- 15:20–15:30 *Polyjuice: Generating Counterfactuals for Explaining, Evaluating, and Improving Models*  
Tongshuang Wu, Marco Tulio Ribeiro, Jeffrey Heer and Daniel Weld
- 15:30–15:40 *Metaphor Generation with Conceptual Mappings*  
Kevin Stowe, Tuhin Chakrabarty, Nanyun Peng, Smaranda Muresan and Iryna Gurevych
- 15:40–15:50 *Computational Framework for Slang Generation*  
Zhewei Sun, Richard Zemel and Yang Xu
- 15:50–15:57 *Avoiding Overlap in Data Augmentation for AMR-to-Text Generation*  
Wenchao Du and Jeffrey Flanigan

**Session 15B: NLP Applications 5**

- 15:00–15:10 *Learning Latent Structures for Cross Action Phrase Relations in Wet Lab Protocols*  
Chaitanya Kulkarni, Jany Chan, Eric Fosler-Lussier and Raghu Machiraju
- 15:10–15:20 *Multimodal Multi-Speaker Merger & Acquisition Financial Modeling: A New Task, Dataset, and Neural Baselines*  
Ramit Sawhney, Mihir Goyal, Prakhar Goel, Puneet Mathur and Rajiv Ratn Shah
- 15:20–15:30 *Mid-Air Hand Gestures for Post-Editing of Machine Translation*  
Rashad Albo Jamara, Nico Herbig, Antonio Krüger and Josef van Genabith
- 15:30–15:40 *Inter-GPS: Interpretable Geometry Problem Solving with Formal Language and Symbolic Reasoning*  
Pan Lu, Ran Gong, Shibiao Jiang, Liang Qiu, Siyuan Huang, Xiaodan Liang and Song-Chun Zhu

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 15:40–15:50 *Joint Verification and Reranking for Open Fact Checking Over Tables*  
Michael Sejr Schlichtkrull, Vladimir Karpukhin, Barlas Oguz, Mike Lewis, Wentau Yih and Sebastian Riedel
- 15:50–15:57 *Weakly-Supervised Methods for Suicide Risk Assessment: Role of Related Domains*  
Chenghao Yang, Yudong Zhang and Smaranda Muresan

**Session 15C: Resources and Evaluation 5**

- 15:00–15:10 *Evaluation of Thematic Coherence in Microblogs*  
Iman Munire Bilal, Bo Wang, Maria Liakata, Rob Procter and Adam Tsakalidis
- 15:10–15:20 *Neural semi-Markov CRF for Monolingual Word Alignment*  
Wuwei Lan, Chao Jiang and Wei Xu
- 15:20–15:30 *Privacy at Scale: Introducing the PrivaSeer Corpus of Web Privacy Policies*  
Mukund Srinath, Shomir Wilson and C Lee Giles
- 15:30–15:40 *The statistical advantage of automatic NLG metrics at the system level*  
Johnny Wei and Robin Jia
- 15:40–15:50 *Are Missing Links Predictable? An Inferential Benchmark for Knowledge Graph Completion*  
Yixin Cao, Xiang Ji, Xin Lv, Juanzi Li, Yonggang Wen and Hanwang Zhang
- 15:50–15:57 *Can Transformer Models Measure Coherence In Text: Re-Thinking the Shuffle Test*  
Philippe Laban, Luke Dai, Lucas Bandarkar and Marti A. Hearst

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 15D: Summarization 2**

- 15:00–15:10 *ConvoSumm: Conversation Summarization Benchmark and Improved Abstractive Summarization with Argument Mining*  
Alexander Fabbri, Faiaz Rahman, Imad Rizvi, Borui Wang, Haoran Li, Yashar Mehdad and Dragomir Radev
- 15:10–15:20 *Improving Factual Consistency of Abstractive Summarization via Question Answering*  
Feng Nan, Cicero Nogueira dos Santos, Henghui Zhu, Patrick Ng, Kathleen McKeown, Ramesh Nallapati, Dejiao Zhang, Zhiguo Wang, Andrew O. Arnold and Bing Xiang
- 15:20–15:30 *EmailSum: Abstractive Email Thread Summarization*  
Shiyue Zhang, Asli Celikyilmaz, Jianfeng Gao and Mohit Bansal
- 15:30–15:40 *Cross-Lingual Abstractive Summarization with Limited Parallel Resources*  
Yu Bai, Yang Gao and Heyan Huang
- 15:40–15:50 *Dissecting Generation Modes for Abstractive Summarization Models via Ablation and Attribution*  
Jiacheng Xu and Greg Durrett
- 15:50–15:57 *SimCLS: A Simple Framework for Contrastive Learning of Abstractive Summarization*  
Yixin Liu and Pengfei Liu

**Session 15E: Semantics: Lexical Semantics 2**

- 15:00–15:10 *Learning Prototypical Functions for Physical Artifacts*  
Tianyu Jiang and Ellen Riloff
- 15:10–15:20 *Verb Knowledge Injection for Multilingual Event Processing*  
Olga Majewska, Ivan Vulić, Goran Glavaš, Edoardo Maria Ponti and Anna Korhonen
- 15:20–15:30 *Dynamic Contextualized Word Embeddings*  
Valentin Hofmann, Janet Pierrehumbert and Hinrich Schütze
- 15:30–15:40 *Lexical Semantic Change Discovery*  
Sinan Kurtayigit, Maike Park, Dominik Schlechtweg, Jonas Kuhn and Sabine Schulte im Walde



**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

15:40–15:50 *Analysis and Evaluation of Language Models for Word Sense Disambiguation*  
Daniel Loureiro, Kiamehr Rezaee, Mohammad Taher Pilehvar and Jose Camacho-Collados

15:50–16:00 *Let's Play mono-poly: BERT Can Reveal Words' Degree of Polysemy*  
Aina Garí Soler and Marianna Apidianaki

**Session 16A: Dialog and Interactive Systems 7**

16:00–16:10 *Pretraining the Noisy Channel Model for Task-Oriented Dialogue*  
Qi Liu, Lei Yu, Laura Rimell and Phil Blunsom

16:10–16:20 *The R-U-A-Robot Dataset: Helping Avoid Chatbot Deception by Detecting User Questions About Human or Non-Human Identity*  
David Gros, Yu Li and Zhou Yu

16:20–16:30 *Conversation Graph: Data Augmentation, Training and Evaluation for Non-Deterministic Dialogue Management*  
Milan Gritta, Gerasimos Lampourasm and Ignacio Iacobacci

16:30–16:40 *Using Meta-Knowledge Mined from Identifiers to Improve Intent Recognition in Conversational Systems*  
Claudio Pinhanez, Paulo Cavalin, Victor Henrique Alves Ribeiro, Ana Appel, Heloisa Candello, Julio Nogima, Mauro Pichiliani, Melina Guerra, Maira de Bayser, Gabriel Malfatti and Henrique Ferreira

16:40–16:50 *Space Efficient Context Encoding for Non-Task-Oriented Dialogue Generation with Graph Attention Transformer*  
Fabian Galetzka, Jewgeni Rose, David Schlangen and Jens Lehmann

16:50–17:00 *DialogueCRN: Contextual Reasoning Networks for Emotion Recognition in Conversations*  
Dou Hu, Lingwei Wei and Xiaoyong Huai

Wednesday, August 4, 2021 (all times UTC+0) (continued)

**Session 16B: Resources and Evaluation 6**

- 16:00–16:10 *Cross-replication Reliability - An Empirical Approach to Interpreting Inter-rater Reliability*  
Ka Wong, Praveen Paritosh and Lora Aroyo
- 16:10–16:20 *TIMEDIAL: Temporal Commonsense Reasoning in Dialog*  
Lianhui Qin, Aditya Gupta, Shyam Upadhyay, Luheng He, Yejin Choi and Manaal Faruqi
- 16:20–16:30 *RAW-C: Relatedness of Ambiguous Words in Context (A New Lexical Resource for English)*  
Sean Trott and Benjamin Bergen
- 16:30–16:40 *ARBERT & MARBERT: Deep Bidirectional Transformers for Arabic*  
Muhammad Abdul-Mageed, AbdelRahim Elmadany and El Moatez Billah Nagoudi
- 16:40–16:47 *SaRoCo: Detecting Satire in a Novel Romanian Corpus of News Articles*  
Ana-Cristina Rogoz, Gaman Mihaela and Radu Tudor Ionescu
- 16:47–16:54 *Bringing Structure into Summaries: a Faceted Summarization Dataset for Long Scientific Documents*  
Rui Meng, khushboo Thaker, Lei Zhang, Yue Dong, Xingdi Yuan, Tong Wang and Daqing He

**Session 16C: Semantics: Sentence-level Semantics, Textual Inference and Other areas 4**

- 16:00–16:10 *Improving Paraphrase Detection with the Adversarial Paraphrasing Task*  
Animesh Nigohkar and John Licato
- 16:10–16:20 *ADEPT: An Adjective-Dependent Plausibility Task*  
Ali Emami, Ian Porada, Alexandra Olteanu, Kaheer Suleman, Adam Trischler and Jackie Chi Kit Cheung
- 16:20–16:30 *ReadOnce Transformers: Reusable Representations of Text for Transformers*  
Shih-Ting Lin, Ashish Sabharwal and Tushar Khot
- 16:30–16:40 *Conditional Generation of Temporally-ordered Event Sequences*  
Shih-Ting Lin, Nathanael Chambers and Greg Durrett

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 16:40–16:50 *Hate Speech Detection Based on Sentiment Knowledge Sharing*  
Xianbing Zhou, yang yong, xiaochao fan, Ge Ren, Yunfeng Song, Yufeng Diao,  
Liang Yang and Hongfei LIN

**Session 16D: Syntax: Tagging, Chunking, and Parsing 2**

- 16:00–16:10 *Transition-based Bubble Parsing: Improvements on Coordination Structure Prediction*  
Tianze Shi and Lillian Lee
- 16:10–16:20 *SpanNER: Named Entity Re-/Recognition as Span Prediction*  
Jinlan Fu, Xuanjing Huang and Pengfei Liu
- 16:20–16:30 *Strong Equivalence of TAG and CCG*  
Lena Katharina Schiffer and Andreas Maletti
- 16:30–16:40 *StructFormer: Joint Unsupervised Induction of Dependency and Constituency Structure from Masked Language Modeling*  
Yikang Shen, Yi Tay, Che Zheng, Dara Bahri, Donald Metzler and Aaron Courville
- 16:40–16:47 *Replicating and Extending “Because Their Treebanks Leak”: Graph Isomorphism, Covariants, and Parser Performance*  
Mark Anderson, Anders Søgaard and Carlos Gómez-Rodríguez

**Session 16E: Machine Translation and Multilinguality 10**

- 16:00–16:10 *Language Embeddings for Typology and Cross-lingual Transfer Learning*  
Dian Yu, Taiqi He and Kenji Sagae
- 16:10–16:20 *Can Sequence-to-Sequence Models Crack Substitution Ciphers?*  
Nada Aldarrab and Jonathan May
- 16:20–16:30 *Beyond Noise: Mitigating the Impact of Fine-grained Semantic Divergences on Neural Machine Translation*  
Eleftheria Briakou and Marine Carpuat
- 16:30–16:40 *Revisiting Negation in Neural Machine Translation*  
Gongbo Tang, Philipp Rönchen, Rico Sennrich and Joakim Nivre

**Wednesday, August 4, 2021 (all times UTC+0) (continued)**

- 16:40–16:50 *Discriminative Reranking for Neural Machine Translation*  
Ann Lee, Michael Auli and Marc’Aurelio Ranzato
- 16:50–16:57 *Don’t Rule Out Monolingual Speakers: A Method For Crowdsourcing Machine Translation Data*  
Rajat Bhatnagar, Ananya Ganesh and Katharina Kann

**Best Paper Session**

- 23:00–23:03 *EXPLAINABOARD: An Explainable Leaderboard for NLP*  
Pengfei Liu, Jinlan Fu, Yang Xiao, Weizhe Yuan, Shuaichen Chang, Junqi Dai, Yixin Liu, Zihuiwen Ye and Graham Neubig
- 23:03–23:16 *Mind Your Outliers! Investigating the Negative Impact of Outliers on Active Learning for Visual Question Answering*  
Siddharth Karamcheti, Ranjay Krishna, Li Fei-Fei and Christopher Manning
- 23:16–23:29 *All That’s ‘Human’ Is Not Gold: Evaluating Human Evaluation of Generated Text*  
Elizabeth Clark, Tal August, Sofia Serrano, Nikita Haduong, Suchin Gururangan and Noah A. Smith
- 23:29–23:42 *Scientific Credibility of Machine Translation Research: A Meta-Evaluation of 769 Papers*  
Benjamin Marie, Atsushi Fujita and Raphael Rubino
- 23:42–23:55 *Neural Machine Translation with Monolingual Translation Memory*  
Deng Cai, Yan Wang, Huayang Li, Wai Lam and Lemao Liu
- 23:55–00:08 *Intrinsic Dimensionality Explains the Effectiveness of Language Model Fine-Tuning*  
Armen Aghajanyan, Sonal Gupta and Luke Zettlemoyer
- 00:08–00:21 *UnNatural Language Inference*  
Koustuv Sinha, Prasanna Parthasarathi, Joelle Pineau and Adina Williams
- 00:21–00:39 *Including Signed Languages in Natural Language Processing*  
Kayo Yin, Amit Moryossef, Julie Hochgesang, Yoav Goldberg and Malihe Alikhani
- 00:39–00:57 *Vocabulary Learning via Optimal Transport for Neural Machine Translation*  
Jingjing Xu, Hao Zhou, Chun Gan, Zaixiang Zheng and Lei Li