

EMNLP-IJCNLP 2019

**2019 Conference on Empirical Methods in  
Natural Language Processing and 9th  
International Joint Conference on  
Natural Language Processing**

**Proceedings of the Conference**

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Hong Kong, China

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## Preface by the General Chair

Welcome to EMNLP-IJCNLP 2019 in Hong Kong! I hope that this will be a successful conference in the 25-year tradition of EMNLP and IJCNLP, as well as an enjoyable and enriching experience for all. Continuing recent trends, this year has seen overwhelming interest from researchers from all over the world. We received a total of 2,914 submissions, which is a 37% increase over EMNLP 2018 (2,117 submissions).

The three Program Co-Chairs, Jing Jiang, Vincent Ng, and Xiaojun Wan, oversaw the entire submission process, a truly Herculean feat. I am deeply grateful for your support. Managing such a large number of submissions would not have been possible without the hard work of a whopping 152 Area Chairs headed by 18 Senior Area Chairs as well, each responsible for overseeing a broad area. Under them, the combined effort of over 1,700 reviewers, each carefully examining submissions through the lens of their expertise, resulted in 465 long and 218 short papers to be presented at the main conference. Your efforts have been indispensable for making this conference happen.

I would like to express special thanks to Priscilla Rasmussen, the ACL Business Manager, who has been indispensable through many years of not only EMNLP but many other key NLP conferences. All of this would not have been possible without you. My deepest gratitude to David Yarowsky, Jian Su, and Noah Smith, and many others from the SIGDAT and AFNLP boards for their invaluable guidance in navigating difficult issues surrounding the daunting task I was faced with.

The hard work of our hosts, the Local Organizing Committee Chair Kam-Fai Wong and members Samuel Tam, Emmanuele Chersoni, Churen Huang, Wenjie Li, Derek F. Wong, and Ruifeng Xu, have especially been vital in bringing together EMNLP-IJCNLP 2019.

As many as 17 workshops and a co-located conference, CoNLL, have been coordinated by the Workshop Chairs Vera Demberg and Naoaki Okazaki. EMNLP-IJCNLP 2019 will also be hosting a full-day tutorial and six half-day tutorials organized by the Tutorial Chairs Timothy Baldwin and Marine Carpuat. The combined efforts of the Demonstration Chairs Ruihong Huang and Sebastian Padó have culminated in a total of 44 accepted demo papers (out of 110 submissions) in addition to the overwhelming main conference papers. I am deeply grateful for your endless labor that brought to fruition an exciting program I am proud to be a part of.

We sought to make EMNLP 2019 a venue that is as welcoming and inclusive as possible to all. In this effort, we worked on continuing and expanding the diversity and inclusion (D&I) efforts initiated in recent NLP conferences as well as the Widening NLP workshop. The D&I committee, co-chaired by Chi-Kiu (Jackie) Lo and Vivek Srikumar, joined their forces with the Childcare Policy and Grant Coordinators Olivia Kwong and Sujian Li to help remove any obstacles to participating in a key event in the NLP community. Student Volunteer Coordinator and Student Scholarship Chair Wenjie Li and Marzieh Saeidi coordinated providing scholarships to students and non-students wanting to join us, who otherwise might not have had the means to. The D&I committee focused on several initiatives involving mentoring, both for first-time conference attendees and otherwise, providing accommodations and improving accessibility for participants if necessary, and generally making the conference experience a broadly comfortable one. For those unable to travel, we hope that the efforts of our Remote Presentation Chair, Derek F. Wong, enabled you to still feel included in the conference. We hope that these efforts to make EMNLP inclusive and welcoming will help enrich the conference.

A warm thank you to Micha Elsner, the General Publication Chair, Publication Chairs Fei Liu and Pontus Stenetorp, and also to Serena Villata, the Conference Handbook Chair, Kai-Wei Chang, the Conference Handbook Advisor, Natalie Schluter, the Conference Handbook Proofreader, for their strong sense of duty resulting in excellent supporting materials, arguably the most important contribution to many! I

must also thank Publicity Chairs Sebastian Ruder and Wei Xu, and Website and Conference App Chairs Kevin Duh and Henning Wachsmuth for your excellent promotion. We owe our success to reaching all those that could be interested, which cultivated a strong interest within the NLP community.

Last but not least, I would like to express my deepest gratitude to our sponsors, whose generous support has been invaluable in building up EMNLP and IJCNLP to what it is now, and to our Local Sponsorship Chair, Dongyan Zhao, for his assistance. A special thank you to Google, Facebook, Apple, ASAPP, and Salesforce, our Diamond sponsors. Many thanks to our Platinum sponsors Huawei, Baidu, DeepMind, and Amazon. We are also profoundly grateful to our Gold level sponsors PolyAI, Naver, ByteDance, Megagon Labs, Zhuiyi Technology, Verisk Analytics, and Xiaomi, Silver level sponsors Duolingo, SAP, Babelscape, eBay, and Cisco, Bronze level sponsor Shannon.AI, and finally, our supporting organization MEHK. Thank you for your monumental support towards hosting another (hopefully!) successful year of EMNLP-IJCNLP.

Finally, I would like to once again welcome you to EMNLP-IJCNLP 2019! We hope that this will be an exciting and memorable experience for you, especially if you are joining us for the first time. The NLP community is as thriving as ever, and I am honored to have had a part in hosting one of the leading conferences in the area of Natural Language Processing.

EMNLP-IJCNLP 2019 General Chair

*Kentaro Inui*, Tohoku University, Japan

## Preface by the Program Committee Co-Chairs

Welcome to EMNLP-IJCNLP 2019, the first joint EMNLP and IJCNLP conference! While this is the first time IJCNLP is held in Hong Kong, EMNLP left its footprints here in 2000 when it was still a tiny conference. There is nothing more exciting than seeing it return to Hong Kong after 19 years as one of the largest NLP conferences.

Owing to a significant increase in the number of submissions to recent NLP conferences, we, for the first time in the history of EMNLP and IJCNLP, attempted to reduce workload for reviewers by implementing a dual submission policy, where we disallowed authors to submit papers that are under review by a journal or another conference at the time of submission. Despite this policy, EMNLP-IJCNLP received 2914 submissions (excluding those withdrawn by the authors after initial submissions). This is an increase of over 30% compared with EMNLP 2018, making EMNLP-IJCNLP 2019 the largest NLP conference ever! Out of the 2914 submissions, 38 were desk-rejected for various reasons including formatting problems, length problems and violation of the dual submission policy. In spite of the record number of submissions, we managed to maintain a similar acceptance rate as past NLP conferences given the vast amount of space available to us at the AsiaWorld-Expo. In the end, we accepted 683 submissions. Some statistics of the accepted papers can be found below.

	Long	Short	Total
Reviewed	1,813	1,063	2,876
Accepted as talk	164 (9.0%)	48 (4.5%)	212 (7.3%)
Accepted as poster	301 (16.6%)	170 (16.0%)	471 (16.4%)
Accepted (total)	465 (25.6%)	218 (20.5%)	683 (23.7%)

In addition, EMNLP-IJCNLP 2019 will feature 11 papers accepted by the Transactions of the Association for Computational Linguistics (TACL), out of which 8 will be presented orally and 3 as posters.

Handling close to 3000 submissions was a daunting task, but we were fortunate that a large team of volunteers from our community offered to help. Unlike last year's EMNLP, where a submission was reviewed in one of eight mega-areas, we organized this year's submissions into 18 areas, hoping that smaller areas would make things more manageable for our program committee. While traditionally large areas such as Information Extraction, Machine Learning for NLP, and Machine Translation and Multilinguality continued to receive a large number of submissions, areas such as Dialog and Interactive Systems and Summarization and Generation have grown significantly owing to the recent surge of interest in automated response generation.

We adopted a program committee structure similar to that of ACL 2019. For each area, we invited one Senior Area Chair, who worked with a team of Area Chairs (ranging from 4 to 18 per area) and an army of reviewers (1721 in total across all areas). Having a large number of ACs (152 in total) allowed us to assign each of them a reasonable number of papers, which in turn enabled them to better focus on evaluating each paper. Each submission was assigned to three reviewers and one AC. We allowed both the reviewers and the ACs to bid for papers, but used a combination of their bids and the TPMS (Toronto Paper Matching System) scores to assign papers. Although this lengthened the paper assignment process, we believe it allowed us to better match the submissions with reviewers. We also adopted a review form similar to what was used in ACL 2019 as we heard generally good feedback about less structured review forms. While NAACL HLT 2019 and ACL 2019 eliminated author response, we decided that it would be beneficial to keep it even though it put time pressure on our already tight reviewing schedule and resulted in additional work for our program committee members.

This year we received some submissions that raised ethical concerns from the reviewers, and we found that no existing guidelines could be applied. We decided to err on the side of acceptance, encouraging authors of otherwise acceptance-worthy papers to more deeply explore these issues in final drafts, and

encouraging the community to carry out further work.

We are extremely grateful to all the Senior Area Chairs, especially those who had a large number of submissions in their areas. The Senior Area Chairs did a fantastic job in nominating Area Chairs, recruiting reviewers and making final recommendations. We would also like to thank all the Area Chairs and reviewers for their hard work in writing meta-reviews and reviews, as well as leading and participating in the discussions. Special thanks to those emergency reviewers who offered help with short notice. Without the dedication of our program committee members, we would not be able to put together this conference program.

Award papers are an integral part of every NLP conference. Based on recommendations made by the ACs and the reviewers, we identified five candidates for the Best Paper award and another five for the Best Resource Paper award. We would like to thank Tim Baldwin, Claire Cardie, Dan Gildea, Qun Liu, Ellen Riloff, and Luke Zettlemoyer for serving in the Best Paper award committee, and Katrin Erk, Graeme Hirst, Gina-Anne Levow, Percy Liang, and Nianwen Xue for serving in the Best Resource Paper award committee. The award winners will be announced at the closing ceremony.

We are excited to have the following three keynote speakers: Noam Slonim (IBM Haifa), on automated debating technologies; Meeyoung Cha (KAIST), on research challenges in computational social science; and Kyunghyun Cho (NYU), on neural sequence modeling. We would like to thank them for traveling to Hong Kong to give the keynote speeches.

There are also many other people who contributed tremendously to the conference program, and we are very grateful for their help:

- Kentaro Inui, the General Conference Chair, who is always there to offer his help and advice;
- All the members of the Conference Coordinating Committee, who provided valuable advice on various issues that came up during the review process;
- David Chang and Julia Hockenmaier, Program Chairs of EMNLP 2018, who shared very helpful tips from their past experience;
- Rich Gerber from SoftConf, who helped us set up the conference submission site and always responded to our queries promptly;
- Other recent \*ACL chairs who offered their help when we contacted them despite their busy schedule;
- TACL editors-in-chief Mark Johnson, Lillian Lee and Brian Roark, as well as TACL editorial assistant Cindy Robinson, for coordinating the TACL presentations with us;
- Micha Elsner, Fei Liu and Pontus Stenetorp, the Publication Chairs, who worked hard to compile the conference proceedings and kindly accommodated many last minute requests from authors;
- Kevin Duh, Henning Wachsmuth, Wei Xu and Sebastian Ruder, the Website Chairs and Publicity Chairs, who helped us make numerous announcements in a timely manner;
- Serena Villata, Natalie Schluter and Kai-Wei Chang for preparing and proofreading the conference handbook;
- Members of the Local Organizing Committee for making the local arrangements;
- Derek Wong, the Remote Presentation Chair, for taking care of remote presentations;
- Priscilla Rasmussen, whom we directed many inquiries to.



Again, welcome to EMNLP-IJCNLP 2019! We hope you will have a memorable conference experience!

EMNLP-IJCNLP 2019 Program Co-Chairs

*Jing Jiang*, Singapore Management University, Singapore

*Vincent Ng*, University of Texas at Dallas, USA

*Xiaojun Wan*, Peking University, China



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## **Invited Speaker: Meeyoung Cha, KAIST**

### **Current Challenges in Computational Social Science**

**Abstract:** Artificial intelligence (AI) is reshaping business and science. Computational social science is an interdisciplinary field that solves complex societal problems by adopting AI-driven methods, processes, algorithms, and systems on data of various forms. This talk will review some of the latest advances in the research that focuses on fake news and legal liability. I will first discuss the structural, temporal, and linguistic traits of fake news propagation. One emerging challenge here is the increasing use of automated bots to generate and propagate false information. I will also discuss the current issues on the legal liability of AI and robots, particularly on how to regulate them (e.g., moral machine, punishment gap). This talk will suggest new opportunities to tackle these problems.

**Bio:** Meeyoung Cha is an associate professor at the School of Computing in KAIST. Dr. Cha's research interests are in analyzing complex network systems, including web and social media. Her research in the field of data science, artificial intelligence, and computational social science has gained more than 12,000 citations based on Google Scholar and has received the best paper awards at ACM IMC and ICWSM. Dr. Cha is currently in the editorial board member of PeerJ and ACM Transactions on Social Computing, and she has served as a program co-chair for ICWSM 2015. Dr. Cha has worked at Facebook's Data Science Team as a Visiting Professor in 2015–2016. Since 2019, she is jointly affiliated with the Institute for Basic Science (IBS) in Korea as a Chief Investigator.



## **Invited Speaker: Kyunghyun Cho, New York University**

### **Curiosity-driven Journey into Neural Sequence Models**

**Abstract:** In this talk, I take the audience on a tour of my earlier and recent experiences in building neural sequence models. I start from the earlier experience of using a recurrent net for sequence-to-sequence learning and talk about the attention mechanism. I discuss factors behind the success of these earlier approaches, and how these were embraced by the community even before they sota'd. I then move on to a more recent research direction in unconventional neural sequence models that automatically learn to decide on the order of generation.

**Bio:** Kyunghyun Cho is an associate professor of computer science and data science at New York University and a research scientist at Facebook AI Research. He was a postdoctoral fellow at University of Montreal until summer 2015 under the supervision of Prof. Yoshua Bengio, and received PhD and MSc degrees from Aalto University early 2014 under the supervision of Prof. Juha Karhunen, Dr. Tapani Raiko and Dr. Alexander Ilin. He tries his best to find a balance among machine learning, natural language processing, and life, but almost always fails to do so.

## **Invited Speaker: Noam Slonim, IBM Haifa Research Lab**

### **Project Debater - How Persuasive can a Computer be?**

**Abstract:** Project Debater is the first AI system that can meaningfully debate a human opponent. The system, an IBM Grand Challenge, is designed to build coherent, convincing speeches on its own, as well as provide rebuttals to the opponent's main arguments. In February 2019, Project Debater competed against Harish Natarajan, who holds the world record for most debate victories, in an event held in San Francisco that was broadcasted live world-wide. In this talk I will tell the story of Project Debater, from conception to a climatic final event, describe its underlying technology, and discuss how it can be leveraged for advancing decision making and critical thinking.

**Bio:** Noam Slonim is a Distinguished Engineer at IBM Research AI. He received his doctorate from the Interdisciplinary Center for Neural Computation at the Hebrew University and held a post-doc position at the Genomics Institute at Princeton University. During his PhD, Noam received the best paper award in UAI and ECIR, and the best presentation award at SIGIR. Noam joined the IBM Haifa Research Lab in 2007, and in 2011 he proposed to develop Project Debater. He has been serving as the Principal Investigator of the project since then. Noam published around 60 peer reviewed articles, focusing on the last few years on advancing the emerging field of Computational Argumentation. Finally, Noam used to have a secondary career as a TV script writer. Coincidentally, or not, in a sitcom he co-created back in 1998, the last episode was focused on competitive debates.

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# Conference Program

## Tuesday, November 5, 2019

08:45–09:00 *Opening Remarks*

09:00–10:00 *Keynote I: Noam Slonim*

10:00–10:30 *Coffee Break*

10:30–12:00 *Session I*

### Session 1A: Machine Learning I

10:30–10:48 *Attending to Future Tokens for Bidirectional Sequence Generation*  
Carolin Lawrence, Bhushan Kotnis and Mathias Niepert

10:48–11:06 *Attention is not not Explanation*  
Sarah Wiegrefe and Yuval Pinter

11:06–11:24 *Practical Obstacles to Deploying Active Learning*  
David Lowell, Zachary C. Lipton and Byron C. Wallace

11:24–11:42 *Transfer Learning Between Related Tasks Using Expected Label Proportions*  
Matan Ben Noach and Yoav Goldberg

11:42–12:00 [TACL] *Insertion-based Decoding with automatically Inferred Generation Order*  
Jiatao Gu, Qi Liu and Kyunghyun Cho

**Tuesday, November 5, 2019 (continued)**

**Session 1B: Lexical Semantics I**

- 10:30–10:48 *Knowledge Enhanced Contextual Word Representations*  
Matthew E. Peters, Mark Neumann, Robert Logan, Roy Schwartz, Vidur Joshi, Sameer Singh and Noah A. Smith
- 10:48–11:06 *How Contextual are Contextualized Word Representations? Comparing the Geometry of BERT, ELMo, and GPT-2 Embeddings*  
Kawin Ethayarajh
- 11:06–11:24 *Room to Glo: A Systematic Comparison of Semantic Change Detection Approaches with Word Embeddings*  
Philippa Shoemark, Farhana Ferdousi Liza, Dong Nguyen, Scott Hale and Barbara McGillivray
- 11:24–11:42 *Correlations between Word Vector Sets*  
Vitalii Zhelezniak, April Shen, Daniel Busbridge, Aleksandar Savkov and Nils Hammerla
- 11:42–12:00 *Game Theory Meets Embeddings: a Unified Framework for Word Sense Disambiguation*  
Rocco Tripodi and Roberto Navigli

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

- 10:30–10:48 *Guided Dialog Policy Learning: Reward Estimation for Multi-Domain Task-Oriented Dialog*  
Ryuichi Takanobu, Hanlin Zhu and Minlie Huang
- 10:48–11:06 *Multi-hop Selector Network for Multi-turn Response Selection in Retrieval-based Chatbots*  
Chunyuan Yuan, Wei Zhou, Mingming Li, Shangwen Lv, Fuqing Zhu, Jizhong Han and Songlin Hu
- 11:06–11:24 *MoEL: Mixture of Empathetic Listeners*  
Zhaojiang Lin, Andrea Madotto, Jamin Shin, Peng Xu and Pascale Fung
- 11:24–11:42 *Entity-Consistent End-to-end Task-Oriented Dialogue System with KB Retriever*  
Libo Qin, Yijia Liu, Wanxiang Che, Haoyang Wen, Yangming Li and Ting Liu
- 11:42–12:00 *Building Task-Oriented Visual Dialog Systems Through Alternative Optimization Between Dialog Policy and Language Generation*  
Mingyang Zhou, Josh Arnold and Zhou Yu

**Tuesday, November 5, 2019 (continued)**

**Session 1D: Sentiment Analysis and Argument Mining I**

- 10:30–10:48 *DialogueGCN: A Graph Convolutional Neural Network for Emotion Recognition in Conversation*  
Deepanway Ghosal, Navonil Majumder, Soujanya Poria, Niyati Chhaya and Alexander Gelbukh
- 10:48–11:06 *Knowledge-Enriched Transformer for Emotion Detection in Textual Conversations*  
Peixiang Zhong, Di Wang and Chunyan Miao
- 11:06–11:24 *Interpretable Relevant Emotion Ranking with Event-Driven Attention*  
Yang Yang, Deyu ZHOU, Yulan He and Meng Zhang
- 11:24–11:42 *Justifying Recommendations using Distantly-Labeled Reviews and Fine-Grained Aspects*  
Jianmo Ni, Jiacheng Li and Julian McAuley
- 11:42–12:00 *Using Customer Service Dialogues for Satisfaction Analysis with Context-Assisted Multiple Instance Learning*  
Kaisong Song, Lidong Bing, Wei Gao, Jun Lin, Lujun Zhao, Jiancheng Wang, Changlong Sun, Xiaozhong Liu and Qiong Zhang

**Poster and Demo Session 1: Information Extraction, Information Retrieval and Document Analysis, Linguistic Theories**

- Leveraging Dependency Forest for Neural Medical Relation Extraction*  
Linfeng Song, Yue Zhang, Daniel Gildea, Mo Yu, Zhiguo Wang and jinsong su
- Open Relation Extraction: Relational Knowledge Transfer from Supervised Data to Unsupervised Data*  
Ruidong Wu, Yuan Yao, Xu Han, Ruobing Xie, Zhiyuan Liu, Fen Lin, Leyu Lin and Maosong Sun
- Improving Relation Extraction with Knowledge-attention*  
Pengfei Li, Kezhi Mao, Xuefeng Yang and Qi Li
- Jointly Learning Entity and Relation Representations for Entity Alignment*  
Yuting Wu, Xiao Liu, Yansong Feng, Zheng Wang and Dongyan Zhao
- Tackling Long-Tailed Relations and Uncommon Entities in Knowledge Graph Completion*  
Zihao Wang, Kwunping Lai, Piji Li, Lidong Bing and Wai Lam

**Tuesday, November 5, 2019 (continued)**

*Low-Resource Name Tagging Learned with Weakly Labeled Data*

Yixin Cao, Zikun Hu, Tat-seng Chua, Zhiyuan Liu and Heng Ji

*Learning Dynamic Context Augmentation for Global Entity Linking*

Xiyuan Yang, Xiaotao Gu, Sheng Lin, Siliang Tang, Yueting Zhuang, Fei Wu, Zhigang Chen, Guoping Hu and Xiang Ren

*Open Event Extraction from Online Text using a Generative Adversarial Network*

Rui Wang, Deyu ZHOU and Yulan He

*Learning to Bootstrap for Entity Set Expansion*

Lingyong Yan, Xianpei Han, Le Sun and Ben He

*Multi-Input Multi-Output Sequence Labeling for Joint Extraction of Fact and Condition Tuples from Scientific Text*

Tianwen Jiang, Tong Zhao, Bing Qin, Ting Liu, Nitesh Chawla and Meng Jiang

*Cross-lingual Structure Transfer for Relation and Event Extraction*

Ananya Subburathinam, Di Lu, Heng Ji, Jonathan May, Shih-Fu Chang, Avirup Sil and Clare Voss

*Uncover the Ground-Truth Relations in Distant Supervision: A Neural Expectation-Maximization Framework*

Junfan Chen, Richong Zhang, Yongyi Mao, Hongyu Guo and Jie Xu

*Doc2EDAG: An End-to-End Document-level Framework for Chinese Financial Event Extraction*

Shun Zheng, Wei Cao, Wei Xu and Jiang Bian

*Event Detection with Trigger-Aware Lattice Neural Network*

Ning Ding, Ziran Li, Zhiyuan Liu, Haitao Zheng and Zibo Lin

*A Boundary-aware Neural Model for Nested Named Entity Recognition*

Changmeng Zheng, Yi Cai, Jingyun Xu, Ho-fung Leung and Guandong Xu

*Learning the Extraction Order of Multiple Relational Facts in a Sentence with Reinforcement Learning*

Xiangrong Zeng, Shizhu He, Daojian Zeng, Kang Liu, Shengping Liu and Jun Zhao

*CaRe: Open Knowledge Graph Embeddings*

Swapnil Gupta, Sreyash Kenkre and Partha Talukdar

**Tuesday, November 5, 2019 (continued)**

*Self-Attention Enhanced CNNs and Collaborative Curriculum Learning for Distantly Supervised Relation Extraction*

Yuyun Huang and Jinhua Du

*Neural Cross-Lingual Relation Extraction Based on Bilingual Word Embedding Mapping*

Jian Ni and Radu Florian

*Leveraging 2-hop Distant Supervision from Table Entity Pairs for Relation Extraction*

xiang deng and Huan Sun

*EntEval: A Holistic Evaluation Benchmark for Entity Representations*

Mingda Chen, Zewei Chu, Yang Chen, Karl Stratos and Kevin Gimpel

*Joint Event and Temporal Relation Extraction with Shared Representations and Structured Prediction*

Rujun Han, Qiang Ning and Nanyun Peng

*Hierarchical Text Classification with Reinforced Label Assignment*

Yuning Mao, Jingjing Tian, Jiawei Han and Xiang Ren

*Investigating Capsule Network and Semantic Feature on Hyperplanes for Text Classification*

Chunning Du, Haifeng Sun, Jingyu Wang, Qi Qi, Jianxin Liao, Chun Wang and Bing Ma

*Label-Specific Document Representation for Multi-Label Text Classification*

Lin Xiao, Xin Huang, Boli Chen and Liping Jing

*Hierarchical Attention Prototypical Networks for Few-Shot Text Classification*

Shengli Sun, Qingfeng Sun, Kevin Zhou and Tengchao Lv

*Many Faces of Feature Importance: Comparing Built-in and Post-hoc Feature Importance in Text Classification*

Vivian Lai, Zheng Cai and Chenhao Tan

*Enhancing Local Feature Extraction with Global Representation for Neural Text Classification*

Guocheng Niu, Hengru Xu, Bolei He, Xinyan Xiao, Hua Wu and Sheng GAO

*Latent-Variable Generative Models for Data-Efficient Text Classification*

Xiaoan Ding and Kevin Gimpel

**Tuesday, November 5, 2019 (continued)**

*PaRe: A Paper-Reviewer Matching Approach Using a Common Topic Space*

Omer Anjum, Hongyu Gong, Suma Bhat, Wen-Mei Hwu and JinJun Xiong

*Linking artificial and human neural representations of language*

Jon Gauthier and Roger Levy

[DEMO] *IFlyLegal: A Chinese Legal System for Consultation, Law Searching, and Document Analysis*

Ziyue Wang, Baoxin Wang, Xingyi Duan, Dayong Wu, Shijin Wang, Guoping Hu and Ting Liu

[DEMO] *TellMeWhy: Learning to Explain Corrective Feedback for Second Language Learners*

Yi-Huei Lai and Jason Chang

[DEMO] *Honkling: In-Browser Personalization for Ubiquitous Keyword Spotting*

Jaejun Lee, Raphael Tang and Jimmy Lin

[DEMO] *Redcoat: A Collaborative Annotation Tool for Hierarchical Entity Typing*

Michael Stewart, Wei Liu and Rachel Cardell-Oliver

[DEMO] *SEAGLE: A Platform for Comparative Evaluation of Semantic Encoders for Information Retrieval*

Fabian David Schmidt, Markus Dietsche, Simone Paolo Ponzetto and Goran Glavaš

[DEMO] *OpenNRE: An Open and Extensible Toolkit for Neural Relation Extraction*

Xu Han, Tianyu Gao, Yuan Yao, Deming Ye, Zhiyuan Liu and Maosong Sun

[DEMO] *Automatic Taxonomy Induction and Expansion*

Nicolas Rodolfo Fauceglia, Alfio Gliozzo, Sarthak Dash, Md. Faisal Mahbub Chowdhury and Nandana Mihindukulasooriya

[DEMO] *Applying BERT to Document Retrieval with Birch*

Zeynep Akkalyoncu Yilmaz, Shengjin Wang, Wei Yang, Haotian Zhang and Jimmy Lin

12:00–13:30 *Lunch*

13:30–15:00 *Session 2*



**Tuesday, November 5, 2019 (continued)**

**Session 2A: Summarization and Generation**

- 13:30–13:48 *Neural Text Summarization: A Critical Evaluation*  
Wojciech Kryscinski, Nitish Shirish Keskar, Bryan McCann, Caiming Xiong and Richard Socher
- 13:48–14:06 *Neural data-to-text generation: A comparison between pipeline and end-to-end architectures*  
Thiago Castro Ferreira, Chris van der Lee, Emiel van Miltenburg and Emiel Kraemer
- 14:06–14:24 *MoverScore: Text Generation Evaluating with Contextualized Embeddings and Earth Mover Distance*  
Wei Zhao, Maxime Peyrard, Fei Liu, Yang Gao, Christian M. Meyer and Steffen Eger
- 14:24–14:42 *Select and Attend: Towards Controllable Content Selection in Text Generation*  
Xiaoyu Shen, Jun Suzuki, Kentaro Inui, Hui Su, Dietrich Klakow and Satoshi Sekine
- 14:42–15:00 *Sentence-Level Content Planning and Style Specification for Neural Text Generation*  
Xinyu Hua and Lu Wang

**Session 2B: Sentence-level Semantics I**

- 13:30–13:48 *Translate and Label! An Encoder-Decoder Approach for Cross-lingual Semantic Role Labeling*  
Angel Daza and Anette Frank
- 13:48–14:06 *Syntax-Enhanced Self-Attention-Based Semantic Role Labeling*  
Yue Zhang, Rui Wang and Luo Si
- 14:06–14:24 *VerbAtlas: a Novel Large-Scale Verbal Semantic Resource and Its Application to Semantic Role Labeling*  
Andrea Di Fabio, Simone Conia and Roberto Navigli
- 14:24–14:42 *Parameter-free Sentence Embedding via Orthogonal Basis*  
Ziyi Yang, Chenguang Zhu and Weizhu Chen
- 14:42–15:00 *Evaluation Benchmarks and Learning Criteria for Discourse-Aware Sentence Representations*  
Mingda Chen, Zewei Chu and Kevin Gimpel

**Tuesday, November 5, 2019 (continued)**

**Session 2C: Speech, Vision, Robotics, Multimodal and Grounding I**

- 13:30–13:48 *Extracting Possessions from Social Media: Images Complement Language*  
Dhivya Chinnappa, Srikala Murugan and Eduardo Blanco
- 13:48–14:06 *Learning to Speak and Act in a Fantasy Text Adventure Game*  
Jack Urbanek, Angela Fan, Siddharth Karamcheti, Saachi Jain, Samuel Humeau, Emily Dinan, Tim Rocktäschel, Douwe Kiela, Arthur Szlam and Jason Weston
- 14:06–14:24 *Help, Anna! Visual Navigation with Natural Multimodal Assistance via Retrospective Curiosity-Encouraging Imitation Learning*  
Khanh Nguyen and Hal Daumé III
- 14:24–14:42 *Incorporating Visual Semantics into Sentence Representations within a Grounded Space*  
Patrick Bordes, Eloi Zablocki, Laure Soulier, Benjamin Piwowarski and patrick Gallinari
- 14:42–15:00 *Neural Naturalist: Generating Fine-Grained Image Comparisons*  
Maxwell Forbes, Christine Kaeser-Chen, Piyush Sharma and Serge Belongie

**Session 2D: Information Extraction I**

- 13:30–13:48 *Fine-Grained Evaluation for Entity Linking*  
Henry Rosales-Méndez, Aidan Hogan and Barbara Poblete
- 13:48–14:06 *Supervising Unsupervised Open Information Extraction Models*  
Arpita Roy, Youngja Park, Taesung Lee and Shimei Pan
- 14:06–14:24 *Neural Cross-Lingual Event Detection with Minimal Parallel Resources*  
Jian Liu, Yubo Chen, Kang Liu and Jun Zhao
- 14:24–14:42 *KnowledgeNet: A Benchmark Dataset for Knowledge Base Population*  
Filipe Mesquita, Matteo Cannavicchio, Jordan Schmidek, Paramita Mirza and Denilson Barbosa
- 14:42–15:00 *Effective Use of Transformer Networks for Entity Tracking*  
Aditya Gupta and Greg Durrett

Tuesday, November 5, 2019 (continued)

**Poster and Demo Session 2: Machine Translation and Multilinguality, Phonology, Morphology and Word Segmentation, Tagging, Chunking, Syntax and Parsing**

*Explicit Cross-lingual Pre-training for Unsupervised Machine Translation*

Shuo Ren, Yu Wu, Shujie Liu, Ming Zhou and Shuai Ma

*Latent Part-of-Speech Sequences for Neural Machine Translation*

Xuwen Yang, Yingru Liu, Dongliang Xie, Xin Wang and Niranjan Balasubramanian

*Improving Back-Translation with Uncertainty-based Confidence Estimation*

Shuo Wang, Yang Liu, Chao Wang, Huanbo Luan and Maosong Sun

*Towards Linear Time Neural Machine Translation with Capsule Networks*

Mingxuan Wang

*Modeling Multi-mapping Relations for Precise Cross-lingual Entity Alignment*

Xiaofei Shi and Yanghua Xiao

*Supervised and Nonlinear Alignment of Two Embedding Spaces for Dictionary Induction in Low Resourced Languages*

Masud Moshtaghi

*Beto, Bentz, Becas: The Surprising Cross-Lingual Effectiveness of BERT*

Shijie Wu and Mark Dredze

*Iterative Dual Domain Adaptation for Neural Machine Translation*

Jiali Zeng, Yang Liu, jinsong su, yubing Ge, Yaojie Lu, Yongjing Yin and jiebo luo

*Multi-agent Learning for Neural Machine Translation*

tianchi bi, hao xiong, Zhongjun He, Hua Wu and Haifeng Wang

*Pivot-based Transfer Learning for Neural Machine Translation between Non-English Languages*

Yunsu Kim, Petre Petrov, Pavel Petrushkov, Shahram Khadivi and Hermann Ney

*Context-Aware Monolingual Repair for Neural Machine Translation*

Elena Voita, Rico Sennrich and Ivan Titov

**Tuesday, November 5, 2019 (continued)**

*Multi-Granularity Self-Attention for Neural Machine Translation*

Jie Hao, Xing Wang, Shuming Shi, Jinfeng Zhang and Zhaopeng Tu

*Improving Deep Transformer with Depth-Scaled Initialization and Merged Attention*

Biao Zhang, Ivan Titov and Rico Sennrich

*A Discriminative Neural Model for Cross-Lingual Word Alignment*

Elias Stengel-Eskin, Tzu-ray Su, Matt Post and Benjamin Van Durme

*One Model to Learn Both: Zero Pronoun Prediction and Translation*

Longyue Wang, Zhaopeng Tu, Xing Wang and Shuming Shi

*Dynamic Past and Future for Neural Machine Translation*

Zaixiang Zheng, Shujian Huang, Zhaopeng Tu, XIN-YU DAI and Jiajun CHEN

*Revisit Automatic Error Detection for Wrong and Missing Translation – A Supervised Approach*

Wenqiang Lei, Weiwen Xu, Ai Ti Aw, Yuanxin Xiang and Tat Seng Chua

*Towards Understanding Neural Machine Translation with Word Importance*

Shilin He, Zhaopeng Tu, Xing Wang, Longyue Wang, Michael Lyu and Shuming Shi

*Multilingual Neural Machine Translation with Language Clustering*

Xu Tan, Jiale Chen, Di He, Yingce Xia, Tao QIN and Tie-Yan Liu

*Don't Forget the Long Tail! A Comprehensive Analysis of Morphological Generalization in Bilingual Lexicon Induction*

Paula Czarowska, Sebastian Ruder, Edouard Grave, Ryan Cotterell and Ann Copestake

*Pushing the Limits of Low-Resource Morphological Inflection*

Antonios Anastasopoulos and Graham Neubig

[TACL] *Morphological Analysis Using a Sequence Decoder*

Ekin Akyürek, Erenay Dayanık and Deniz Yuret

**Tuesday, November 5, 2019 (continued)**

*Cross-Lingual Dependency Parsing Using Code-Mixed TreeBank*

Meishan Zhang, Yue Zhang and Guohong Fu

*Hierarchical Pointer Net Parsing*

Linlin Liu, Xiang Lin, Shafiq Joty, Simeng Han and Lidong Bing

*Semi-Supervised Semantic Role Labeling with Cross-View Training*

Rui Cai and Mirella Lapata

*Low-Resource Sequence Labeling via Unsupervised Multilingual Contextualized Representations*

Zuyi Bao, Rui Huang, Chen Li and Kenny Zhu

*A Lexicon-Based Graph Neural Network for Chinese NER*

Tao Gui, Yicheng Zou, Qi Zhang, Minlong Peng, Jinlan Fu, Zhongyu Wei and Xu-anjing Huang

*CM-Net: A Novel Collaborative Memory Network for Spoken Language Understanding*

Yijin Liu, Fandong Meng, Jinchao Zhang, Jie Zhou, Yufeng Chen and Jinan Xu

*Tree Transformer: Integrating Tree Structures into Self-Attention*

Yaoshian Wang, Hung-Yi Lee and Yun-Nung Chen

*Semantic Role Labeling with Iterative Structure Refinement*

Chunchuan Lyu, Shay B. Cohen and Ivan Titov

*Entity Projection via Machine Translation for Cross-Lingual NER*

Alankar Jain, Bhargavi Paranjape and Zachary C. Lipton

*A Bayesian Approach for Sequence Tagging with Crowds*

Edwin D. Simpson and Iryna Gurevych

*A systematic comparison of methods for low-resource dependency parsing on genuinely low-resource languages*

Clara Vania, Yova Kementchedjieva, Anders Søgaard and Adam Lopez

*Target Language-Aware Constrained Inference for Cross-lingual Dependency Parsing*

Tao Meng, Nanyun Peng and Kai-Wei Chang

**Tuesday, November 5, 2019 (continued)**

*Look-up and Adapt: A One-shot Semantic Parser*

Zhichu Lu, Forough Arabshahi, Igor Labutov and Tom Mitchell

*Similarity Based Auxiliary Classifier for Named Entity Recognition*

Shiyuan Xiao, Yuanxin Ouyang, Wenge Rong, Jianxin Yang and Zhang Xiong

*Variable beam search for generative neural parsing and its relevance for the analysis of neuro-imaging signal*

Benoit Crabbé, Murielle Fabre and Christophe Pallier

[DEMO] *MY-AKKHARA: A Romanization-based Burmese (Myanmar) Input Method*

Chenchen Ding, Masao Utiyama and Eiichiro Sumita

[DEMO] *LINSPECTOR WEB: A Multilingual Probing Suite for Word Representations*

Max Eichler, Gözde Gül Şahin and Iryna Gurevych

[DEMO] *Joey NMT: A Minimalist NMT Toolkit for Novices*

Julia Kreutzer, Joost Bastings and Stefan Riezler

[DEMO] *Multilingual, Multi-scale and Multi-layer Visualization of Intermediate Representations*

Carlos Escolano, Marta R. Costa-jussà, Elora Lacroux and Pere-Pau Vázquez

[DEMO] *A System for Diacritizing Four Varieties of Arabic*

Hamdy Mubarak, Ahmed Abdelali, Kareem Darwish, Mohamed Eldesouki, Younes Samih and Hassan Sajjad

[DEMO] *What's Wrong with Hebrew NLP? And How to Make it Right*

Reut Tsarfaty, Shoval Sadde, Stav Klein and Amit Seker

[DEMO] *INMT: Interactive Neural Machine Translation Prediction*

Sebastin Santy, Sandipan Dandapat, Monojit Choudhury and Kalika Bali

15:00–15:30 *Coffee Break*

15:30–16:18 *Session 3*

**Tuesday, November 5, 2019 (continued)**

**Session 3A: Machine Learning II**

- 15:30–15:42 *Are We Modeling the Task or the Annotator? An Investigation of Annotator Bias in Natural Language Understanding Datasets*  
Mor Geva, Yoav Goldberg and Jonathan Berant
- 15:42–15:54 *Robust Text Classifier on Test-Time Budgets*  
Md Rizwan Parvez, Tolga Bolukbasi, Kai-Wei Chang and Venkatesh Saligrama
- 15:54–16:06 *Commonsense Knowledge Mining from Pretrained Models*  
Joe Davison, Joshua Feldman and Alexander Rush
- 16:06–16:18 *RNN Architecture Learning with Sparse Regularization*  
Jesse Dodge, Roy Schwartz, Hao Peng and Noah A. Smith

**Session 3B: Semantics**

- 15:30–15:42 *Analytical Methods for Interpretable Ultradense Word Embeddings*  
Philipp Dufter and Hinrich Schütze
- 15:42–15:54 *Investigating Meta-Learning Algorithms for Low-Resource Natural Language Understanding Tasks*  
Zi-Yi Dou, Keyi Yu and Antonios Anastasopoulos
- 15:54–16:06 *Retrofitting Contextualized Word Embeddings with Paraphrases*  
Weijia Shi, Muhao Chen, Pei Zhou and Kai-Wei Chang
- 16:06–16:18 *Incorporating Contextual and Syntactic Structures Improves Semantic Similarity Modeling*  
Linqing Liu, Wei Yang, Jinfeng Rao, Raphael Tang and Jimmy Lin

**Tuesday, November 5, 2019 (continued)**

**Session 3C: Discourse, Summarization, and Generation**

- 15:30–15:42 *Neural Linguistic Steganography*  
Zachary Ziegler, Yuntian Deng and Alexander Rush
- 15:42–15:54 *The Feasibility of Embedding Based Automatic Evaluation for Single Document Summarization*  
Simeng Sun and Ani Nenkova
- 15:54–16:06 *Attention Optimization for Abstractive Document Summarization*  
Min Gui, Junfeng Tian, Rui Wang and Zhenglu Yang
- 16:06–16:18 *Rewarding Coreference Resolvers for Being Consistent with World Knowledge*  
Rahul Aralikkatte, Heather Lent, Ana Valeria Gonzalez, Daniel Herschcovich, Chen Qiu, Anders Sandholm, Michael Ringgaard and Anders Søgaard

**Session 3D: Text Mining and NLP Applications I**

- 15:30–15:42 *An Empirical Study of Incorporating Pseudo Data into Grammatical Error Correction*  
Shun Kiyono, Jun Suzuki, Masato Mita, Tomoya Mizumoto and Kentaro Inui
- 15:42–15:54 *A Multilingual Topic Model for Learning Weighted Topic Links Across Corpora with Low Comparability*  
Weiwei Yang, Jordan Boyd-Graber and Philip Resnik
- 15:54–16:06 *Measure Country-Level Socio-Economic Indicators with Streaming News: An Empirical Study*  
Bonan Min and Xiaoxi Zhao
- 16:06–16:18 *Towards Extracting Medical Family History from Natural Language Interactions: A New Dataset and Baselines*  
Mahmoud Azab, Stephane Dadian, Vivi Nastase, Larry An and Rada Mihalcea



Tuesday, November 5, 2019 (continued)

**Poster and Demo Session 3: Dialog and Interactive Systems, Machine Translation and Multilinguality, Phonology, Morphology, and Word Segmentation, Speech, Vision, Robotics, Multimodal and Grounding, Tagging, Chunking, Syntax and Parsing**

*Multi-task Learning for Natural Language Generation in Task-Oriented Dialogue*  
Chenguang Zhu, Michael Zeng and Xuedong Huang

*Dirichlet Latent Variable Hierarchical Recurrent Encoder-Decoder in Dialogue Generation*  
Min Zeng, Yisen Wang and Yuan Luo

*Semi-Supervised Bootstrapping of Dialogue State Trackers for Task-Oriented Modelling*  
Bo-Hsiang Tseng, Marek Rei, Paweł Budzianowski, Richard Turner, Bill Byrne and Anna Korhonen

*A Progressive Model to Enable Continual Learning for Semantic Slot Filling*  
Yilin Shen, Xiangyu Zeng and Hongxia Jin

*CASA-NLU: Context-Aware Self-Attentive Natural Language Understanding for Task-Oriented Chatbots*  
Arshit Gupta, Peng Zhang, Garima Lalwani and Mona Diab

*Sampling Matters! An Empirical Study of Negative Sampling Strategies for Learning of Matching Models in Retrieval-based Dialogue Systems*  
Jia Li, Chongyang Tao, wei wu, Yansong Feng, Dongyan Zhao and Rui Yan

*Zero-shot Cross-lingual Dialogue Systems with Transferable Latent Variables*  
Zihan Liu, Jamin Shin, Yan Xu, Genta Indra Winata, Peng Xu, Andrea Madotto and Pascale Fung

*Modeling Multi-Action Policy for Task-Oriented Dialogues*  
Lei Shu, Hu Xu, Bing Liu and Piero Molino

*An Evaluation Dataset for Intent Classification and Out-of-Scope Prediction*  
Stefan Larson, Anish Mahendran, Joseph J. Peper, Christopher Clarke, Andrew Lee, Parker Hill, Jonathan K. Kummerfeld, Kevin Leach, Michael A. Laurenzano, Lingjia Tang and Jason Mars

*Automatically Learning Data Augmentation Policies for Dialogue Tasks*  
Tong Niu and Mohit Bansal

**Tuesday, November 5, 2019 (continued)**

*uniblock: Scoring and Filtering Corpus with Unicode Block Information*

Yingbo Gao, Weiyue Wang and Hermann Ney

*Multilingual word translation using auxiliary languages*

Hagai Taitelbaum, Gal Chechik and Jacob Goldberger

*Towards Better Modeling Hierarchical Structure for Self-Attention with Ordered Neurons*

Jie Hao, Xing Wang, Shuming Shi, Jinfeng Zhang and Zhaopeng Tu

*Vecalign: Improved Sentence Alignment in Linear Time and Space*

Brian Thompson and Philipp Koehn

*Simpler and Faster Learning of Adaptive Policies for Simultaneous Translation*

Baigong Zheng, Renjie Zheng, Mingbo Ma and Liang Huang

*Adversarial Learning with Contextual Embeddings for Zero-resource Cross-lingual Classification and NER*

Phillip Keung, yichao lu and Vikas Bhardwaj

*Recurrent Positional Embedding for Neural Machine Translation*

Kehai Chen, Rui Wang, Masao Utiyama and Eiichiro Sumita

*Machine Translation for Machines: the Sentiment Classification Use Case*

amirhossein tebbifakhr, Luisa Bentivogli, Matteo Negri and Marco Turchi

*Investigating the Effectiveness of BPE: The Power of Shorter Sequences*

Matthias Gallé

*HABLex: Human Annotated Bilingual Lexicons for Experiments in Machine Translation*

Brian Thompson, Rebecca Knowles, Xuan Zhang, Huda Khayrallah, Kevin Duh and Philipp Koehn

*Handling Syntactic Divergence in Low-resource Machine Translation*

Chunting Zhou, Xuezhe Ma, Junjie Hu and Graham Neubig

*Speculative Beam Search for Simultaneous Translation*

Renjie Zheng, Mingbo Ma, Baigong Zheng and Liang Huang

*Self-Attention with Structural Position Representations*

Xing Wang, Zhaopeng Tu, Longyue Wang and Shuming Shi

**Tuesday, November 5, 2019 (continued)**

*Exploiting Multilingualism through Multistage Fine-Tuning for Low-Resource Neural Machine Translation*

Raj Dabre, Atsushi Fujita and Chenhui Chu

*Unsupervised Domain Adaptation for Neural Machine Translation with Domain-Aware Feature Embeddings*

Zi-Yi Dou, Junjie Hu, Antonios Anastasopoulos and Graham Neubig

*A Regularization-based Framework for Bilingual Grammar Induction*

Yong Jiang, Wenjuan Han and Kewei Tu

*Encoders Help You Disambiguate Word Senses in Neural Machine Translation*

Gongbo Tang, Rico Sennrich and Joakim Nivre

*Korean Morphological Analysis with Tied Sequence-to-Sequence Multi-Task Model*

Hyun-Je Song and Seong-Bae Park

*Efficient Convolutional Neural Networks for Diacritic Restoration*

Sawsan Alqahtani, Ajay Mishra and Mona Diab

*Improving Generative Visual Dialog by Answering Diverse Questions*

Vishvak Murahari, Prithvijit Chattopadhyay, Dhruv Batra, Devi Parikh and Abhishek Das

*Cross-lingual Transfer Learning with Data Selection for Large-Scale Spoken Language Understanding*

Quynh Do and Judith Gaspers

*Multi-Head Attention with Diversity for Learning Grounded Multilingual Multimodal Representations*

Po-Yao Huang, Xiaojun Chang and Alexander Hauptmann

*Decoupled Box Proposal and Featurization with Ultrafine-Grained Semantic Labels Improve Image Captioning and Visual Question Answering*

Soravit Changpinyo, Bo Pang, Piyush Sharma and Radu Soricut

*REO-Relevance, Extraness, Omission: A Fine-grained Evaluation for Image Captioning*

Ming Jiang, Junjie Hu, Qiuyuan Huang, Lei Zhang, Jana Diesner and Jianfeng Gao

*WSLLN: Weakly Supervised Natural Language Localization Networks*

Mingfei Gao, Larry Davis, Richard Socher and Caiming Xiong

**Tuesday, November 5, 2019 (continued)**

*Grounding learning of modifier dynamics: An application to color naming*

Xudong Han, Philip Schulz and Trevor Cohn

*Robust Navigation with Language Pretraining and Stochastic Sampling*

Xiujun Li, Chunyuan Li, Qiaolin Xia, Yonatan Bisk, Asli Celikyilmaz, Jianfeng Gao, Noah A. Smith and Yejin Choi

*Towards Making a Dependency Parser See*

Michalina Strzyz, David Vilares and Carlos Gómez-Rodríguez

*Unsupervised Labeled Parsing with Deep Inside-Outside Recursive Autoencoders*

Andrew Drozdov, Patrick Verga, Yi-Pei Chen, Mohit Iyyer and Andrew McCallum

*Dependency Parsing for Spoken Dialog Systems*

Sam Davidson, Dian Yu and Zhou Yu

*Span-based Hierarchical Semantic Parsing for Task-Oriented Dialog*

Panupong Pasupat, Sonal Gupta, Karishma Mandyam, Rushin Shah, Mike Lewis and Luke Zettlemoyer

16:18–16:30 *Mini-Break*

16:30–18:00 *Session 4*

#### **Session 4A: Neural Machine Translation**

16:30–16:48 *Enhancing Context Modeling with a Query-Guided Capsule Network for Document-level Translation*

Zhengxin Yang, Jinchao Zhang, Fandong Meng, Shuhao Gu, Yang Feng and Jie Zhou

16:48–17:06 *Simple, Scalable Adaptation for Neural Machine Translation*

Ankur Bapna and Orhan Firat

17:06–17:24 *Controlling Text Complexity in Neural Machine Translation*

Sweta Agrawal and Marine Carpuat

**Tuesday, November 5, 2019 (continued)**

17:24–17:42 *Investigating Multilingual NMT Representations at Scale*  
Sneha Kudugunta, Ankur Bapna, Isaac Caswell and Orhan Firat

17:42–18:00 *Hierarchical Modeling of Global Context for Document-Level Neural Machine Translation*  
Xin Tan, Longyin Zhang, Deyi Xiong and Guodong Zhou

**Session 4B: Question Answering I**

16:30–16:48 *Cross-Lingual Machine Reading Comprehension*  
Yiming Cui, Wanxiang Che, Ting Liu, Bing Qin, Shijin Wang and Guoping Hu

16:48–17:06 *A Multi-Type Multi-Span Network for Reading Comprehension that Requires Discrete Reasoning*  
Minghao Hu, Yuxing Peng, Zhen Huang and Dongsheng Li

17:06–17:24 *Neural Duplicate Question Detection without Labeled Training Data*  
Andreas Rücklé, Nafise Sadat Moosavi and Iryna Gurevych

17:24–17:42 *Asking Clarification Questions in Knowledge-Based Question Answering*  
Jingjing Xu, Yuechen Wang, Duyu Tang, Nan Duan, Pengcheng Yang, Qi Zeng, Ming Zhou and Xu SUN

17:42–18:00 *Multi-View Domain Adapted Sentence Embeddings for Low-Resource Unsupervised Duplicate Question Detection*  
Nina Poerner and Hinrich Schütze

**Tuesday, November 5, 2019 (continued)**

**Session 4C: Social Media and Computational Social Science**

- 16:30–16:48 *Multi-label Categorization of Accounts of Sexism using a Neural Framework*  
Pulkit Parikh, Harika Abburi, Pinkesh Badjatiya, Radhika Krishnan, Niyati Chhaya,  
Manish Gupta and Vasudeva Varma
- 16:48–17:06 *The Trumpiest Trump? Identifying a Subject’s Most Characteristic Tweets*  
Charuta Pethe and Steve Skiena
- 17:06–17:24 *Finding Microaggressions in the Wild: A Case for Locating Elusive Phenomena in  
Social Media Posts*  
Luke Breitfeller, Emily Ahn, David Jurgens and Yulia Tsvetkov
- 17:24–17:42 *Reinforced Product Metadata Selection for Helpfulness Assessment of Customer  
Reviews*  
Miao Fan, Chao Feng, Mingming Sun and Ping Li
- 17:42–18:00 *Learning Invariant Representations of Social Media Users*  
Nicholas Andrews and Marcus Bishop

**Session 4D: Text Mining and NLP Applications II**

- 16:30–16:48 *(Male, Bachelor) and (Female, Ph.D) have different connotations: Parallely Annotated  
Stylistic Language Dataset with Multiple Personas*  
Dongyeop Kang, Varun Gangal and Eduard Hovy
- 16:48–17:06 *Movie Plot Analysis via Turning Point Identification*  
Pinelopi Papalampidi, Frank Keller and Mirella Lapata
- 17:06–17:24 *Latent Suicide Risk Detection on Microblog via Suicide-Oriented Word Embeddings  
and Layered Attention*  
Lei Cao, Huijun Zhang, Ling Feng, Zihan Wei, Xin Wang, Ningyun Li and Xiaohao  
He
- 17:24–17:42 *Deep Ordinal Regression for Pledge Specificity Prediction*  
Shivashankar Subramanian, Trevor Cohn and Timothy Baldwin
- 17:42–18:00 [TACL] *Enabling Robust Grammatical Error Correction in New Domains:  
Datasets, Metrics, and Analyses*  
Courtney Naples, Maria Nadejde and Joel Tetreault

Tuesday, November 5, 2019 (continued)

**Poster and Demo Session 4: Dialog and Interactive Systems, Speech, Vision, Robotics, Multimodal and Grounding**

*Data-Efficient Goal-Oriented Conversation with Dialogue Knowledge Transfer Networks*

Igor Shalyminov, Sungjin Lee, Arash Eshghi and Oliver Lemon

*Multi-Granularity Representations of Dialog*

Shikib Mehri and Maxine Eskenazi

*Are You for Real? Detecting Identity Fraud via Dialogue Interactions*

Weikang Wang, Jiajun Zhang, Qian Li, Chengqing Zong and Zhifei Li

*Hierarchy Response Learning for Neural Conversation Generation*

Bo Zhang and Xiaoming Zhang

*Knowledge Aware Conversation Generation with Explainable Reasoning over Augmented Graphs*

zhibin liu, Zheng-Yu Niu, Hua Wu and Haifeng Wang

*Adaptive Parameterization for Neural Dialogue Generation*

Hengyi Cai, Hongshen Chen, Cheng Zhang, Yonghao Song, Xiaofang Zhao and Dawei Yin

*Towards Knowledge-Based Recommender Dialog System*

Qibin Chen, Junyang Lin, Yichang Zhang, Ming Ding, Yukuo Cen, Hongxia Yang and Jie Tang

*Structuring Latent Spaces for Stylized Response Generation*

Xiang Gao, Yizhe Zhang, Sungjin Lee, Michel Galley, Chris Brockett, Jianfeng Gao and Bill Dolan

*Improving Open-Domain Dialogue Systems via Multi-Turn Incomplete Utterance Restoration*

Zhufeng Pan, Kun Bai, Yan Wang, Lianqiang Zhou and Xiaojiang Liu

*Unsupervised Context Rewriting for Open Domain Conversation*

Kun Zhou, Kai Zhang, Yu Wu, Shujie Liu and Jingsong Yu

*Dually Interactive Matching Network for Personalized Response Selection in Retrieval-Based Chatbots*

Jia-Chen Gu, Zhen-Hua Ling, Xiaodan Zhu and Quan Liu

**Tuesday, November 5, 2019 (continued)**

*DyKgChat: Benchmarking Dialogue Generation Grounding on Dynamic Knowledge Graphs*

Yi-Lin Tuan, Yun-Nung Chen and Hung-yi Lee

*Retrieval-guided Dialogue Response Generation via a Matching-to-Generation Framework*

Deng Cai, Yan Wang, Wei Bi, Zhaopeng Tu, Xiaojiang Liu and Shuming Shi

*Scalable and Accurate Dialogue State Tracking via Hierarchical Sequence Generation*

Lilian Ren, Jianmo Ni and Julian McAuley

*Low-Resource Response Generation with Template Prior*

Ze Yang, wei wu, Jian Yang, Can Xu and zhoujun li

*A Discrete CVAE for Response Generation on Short-Text Conversation*

Jun Gao, Wei Bi, Xiaojiang Liu, Junhui Li, Guodong Zhou and Shuming Shi

*Who Is Speaking to Whom? Learning to Identify Utterance Addressee in Multi-Party Conversations*

Ran Le, Wenpeng Hu, Mingyue Shang, Zhenjun You, Lidong Bing, Dongyan Zhao and Rui Yan

*A Semi-Supervised Stable Variational Network for Promoting Replier-Consistency in Dialogue Generation*

Jinxin Chang, Ruifang He, Longbiao Wang, Xiangyu Zhao, Ting Yang and Ruifang Wang

*Modeling Personalization in Continuous Space for Response Generation via Augmented Wasserstein Autoencoders*

Zhangming Chan, Juntao Li, Xiaopeng Yang, Xiuying Chen, Wenpeng Hu, Dongyan Zhao and Rui Yan

*Variational Hierarchical User-based Conversation Model*

JinYeong Bak and Alice Oh

*Recommendation as a Communication Game: Self-Supervised Bot-Play for Goal-oriented Dialogue*

Dongyeop Kang, Anusha Balakrishnan, Pararth Shah, Paul Crook, Y-Lan Boureau and Jason Weston



Tuesday, November 5, 2019 (continued)

*CoSQL: A Conversational Text-to-SQL Challenge Towards Cross-Domain Natural Language Interfaces to Databases*

Tao Yu, Rui Zhang, Heyang Er, Suyi Li, Eric Xue, Bo Pang, Xi Victoria Lin, Yi Chern Tan, Tianze Shi, Zihan Li, Youxuan Jiang, Michihiro Yasunaga, Sungrok Shim, Tao Chen, Alexander Fabbri, Zifan Li, Luyao Chen, Yuwen Zhang, Shreya Dixit, Vincent Zhang, Caiming Xiong, Richard Socher, Walter Lasecki and Dragomir Radev

*A Practical Dialogue-Act-Driven Conversation Model for Multi-Turn Response Selection*

Harshit Kumar, Arvind Agarwal and Sachindra Joshi

*How to Build User Simulators to Train RL-based Dialog Systems*

Weiyang Shi, Kun Qian, Xuewei Wang and Zhou Yu

[TACL] *Graph Convolutional Network with Sequential Attention for Goal-Oriented Dialogue Systems*

Suman Banerjee and Mitesh M Khapra

*Low-Rank HOCA: Efficient High-Order Cross-Modal Attention for Video Captioning*

Tao Jin, Siyu Huang, Yingming Li and Zhongfei Zhang

*Image Captioning with Very Scarce Supervised Data: Adversarial Semi-Supervised Learning Approach*

Dong-Jin Kim, Jinsoo Choi, Tae-Hyun Oh and In So Kweon

*Dual Attention Networks for Visual Reference Resolution in Visual Dialog*

Gi-Cheon Kang, Jaeseo Lim and Byoung-Tak Zhang

*Unsupervised Discovery of Multimodal Links in Multi-image, Multi-sentence Documents*

Jack Hessel, Lillian Lee and David Mimno

*UR-FUNNY: A Multimodal Language Dataset for Understanding Humor*

Md Kamrul Hasan, Wasifur Rahman, AmirAli Bagher Zadeh, Jianyuan Zhong, Md Iftekhar Tanveer, Louis-Philippe Morency and Mohammed (Ehsan) Hoque

*Partners in Crime: Multi-view Sequential Inference for Movie Understanding*

Nikos Papasantopoulos, Lea Frermann, Mirella Lapata and Shay B. Cohen

**Tuesday, November 5, 2019 (continued)**

*Guiding the Flowing of Semantics: Interpretable Video Captioning via POS Tag*

Xinyu Xiao, Lingfeng Wang, Bin Fan, Shinming Xiang and Chunhong Pan

*A Stack-Propagation Framework with Token-Level Intent Detection for Spoken Language Understanding*

Libo Qin, Wanxiang Che, Yangming Li, Haoyang Wen and Ting Liu

*Talk2Car: Taking Control of Your Self-Driving Car*

Thierry Deruyttere, Simon Vandenhende, Dusan Grujicic, Luc Van Gool and Marie-Francine Moens

*Fact-Checking Meets Fauxtography: Verifying Claims About Images*

Dimitrina Zlatkova, Preslav Nakov and Ivan Koychev

*Video Dialog via Progressive Inference and Cross-Transformer*

Weike Jin, Zhou Zhao, Mao Gu, Jun Xiao, Furu Wei and Yueting Zhuang

*Executing Instructions in Situated Collaborative Interactions*

Alane Suhr, Claudia Yan, Jack Schluger, Stanley Yu, Hadi Khader, Marwa Mouallem, Iris Zhang and Yoav Artzi

*Fusion of Detected Objects in Text for Visual Question Answering*

Chris Alberti, Jeffrey Ling, Michael Collins and David Reitter

*TIGER: Text-to-Image Grounding for Image Caption Evaluation*

Ming Jiang, Qiuyuan Huang, Lei Zhang, Xin Wang, Pengchuan Zhang, Zhe Gan, Jana Diesner and Jianfeng Gao

[DEMO] *Chameleon: A Language Model Adaptation Toolkit for Automatic Speech Recognition of Conversational Speech*

Yuanfeng Song, Di Jiang, Weiwei Zhao, Qian Xu, Raymond Chi-Wing Wong and Qiang Yang

[DEMO] *PyOpenDial: A Python-based Domain-Independent Toolkit for Developing Spoken Dialogue Systems with Probabilistic Rules*

Youngsoo Jang, Jongmin Lee, Jaeyoung Park, Kyeng-Hun Lee, Pierre Lison and Kee-Eung Kim

[DEMO] *PolyResponse: A Rank-based Approach to Task-Oriented Dialogue with Application in Restaurant Search and Booking*

Matthew Henderson, Ivan Vulić, Iñigo Casanueva, Paweł Budzianowski, Daniela Gerz, Sam Coope, Georgios Spithourakis, Tsung-Hsien Wen, Nikola Mrkšić and Pei-Hao Su

## Tuesday, November 5, 2019 (continued)

[DEMO] *LIDA: Lightweight Interactive Dialogue Annotator*  
Edward Collins, Nikolai Rozanov and Bingbing Zhang

[DEMO] *EGG: a toolkit for research on Emergence of lanGuage in Games*  
Eugene Kharitonov, Rahma Chaabouni, Diane Bouchacourt and Marco Baroni

[DEMO] *Entity resolution for noisy ASR transcripts*  
Arushi Raghuvanshi, Vijay Ramakrishnan, Varsha Embar, Lucien Carroll and Karthik Raghunathan

[DEMO] *Gunrock: A Social Bot for Complex and Engaging Long Conversations*  
Dian Yu, Michelle Cohn, Yi Mang Yang, Chun Yen Chen, Weiming Wen, Jiaping Zhang, Mingyang Zhou, Kevin Jesse, Austin Chau, Antara Bhowmick, Shreenath Iyer, Giritheja Sreenivasulu, Sam Davidson, Ashwin Bhandare and Zhou Yu

[DEMO] *HARE: a Flexible Highlighting Annotator for Ranking and Exploration*  
Denis Newman-Griffis and Eric Fosler-Lussier

## Wednesday, November 6, 2019

09:00–10:00 *Keynote II: Meeyoung Cha*

10:00–10:30 *Coffee Break*

10:30–12:00 *Session 5*

### Session 5A: Machine Learning III

10:30–10:48 *Universal Adversarial Triggers for Attacking and Analyzing NLP*  
Eric Wallace, Shi Feng, Nikhil Kandpal, Matt Gardner and Sameer Singh

10:48–11:06 *To Annotate or Not? Predicting Performance Drop under Domain Shift*  
Hady Elsahar and Matthias Gallé

11:06–11:24 *Adaptively Sparse Transformers*  
Gonçalo M. Correia, Vlad Niculae and André F. T. Martins

11:24–11:42 *Show Your Work: Improved Reporting of Experimental Results*  
Jesse Dodge, Suchin Gururangan, Dallas Card, Roy Schwartz and Noah A. Smith

11:42–12:00 *A Deep Factorization of Style and Structure in Fonts*  
Akshay Srivatsan, Jonathan Barron, Dan Klein and Taylor Berg-Kirkpatrick

Wednesday, November 6, 2019 (continued)

**Session 5B: Lexical Semantics II**

- 10:30–10:48 *Cross-lingual Semantic Specialization via Lexical Relation Induction*  
Edoardo Maria Ponti, Ivan Vulić, Goran Glavaš, Roi Reichart and Anna Korhonen
- 10:48–11:06 *Modelling the interplay of metaphor and emotion through multitask learning*  
Verna Dankers, Marek Rei, Martha Lewis and Ekaterina Shutova
- 11:06–11:24 *How well do NLI models capture verb veridicality?*  
Alexis Ross and Ellie Pavlick
- 11:24–11:42 *Modeling Color Terminology Across Thousands of Languages*  
Arya D. McCarthy, Winston Wu, Aaron Mueller, William Watson and David Yarowsky
- 11:42–12:00 *Negative Focus Detection via Contextual Attention Mechanism*  
Longxiang Shen, Bowei Zou, Yu Hong, Guodong Zhou, Qiaoming Zhu and AiTi Aw

**Session 5C: Discourse and Pragmatics**

- 10:30–10:48 *A Unified Neural Coherence Model*  
Han Cheol Moon, Tasnim Mohiuddin, Shafiq Joty and Chi Xu
- 10:48–11:06 *Topic-Guided Coherence Modeling for Sentence Ordering by Preserving Global and Local Information*  
Byungkook Oh, Seungmin Seo, Cheolheon Shin, Eunju Jo and Kyong-Ho Lee
- 11:06–11:24 *Neural Generative Rhetorical Structure Parsing*  
Amandla Mabona, Laura Rimell, Stephen Clark and Andreas Vlachos
- 11:24–11:42 *Weak Supervision for Learning Discourse Structure*  
Sonia Badene, Kate Thompson, Jean-Pierre Lorré and Nicholas Asher
- 11:42–12:00 *Predicting Discourse Structure using Distant Supervision from Sentiment*  
Patrick Huber and Giuseppe Carenini

Wednesday, November 6, 2019 (continued)

**Session 5D: Text Mining and NLP Applications III**

- 10:30–10:48 *The Myth of Double-Blind Review Revisited: ACL vs. EMNLP*  
Cornelia Caragea, Ana Uban and Liviu P. Dinu
- 10:48–11:06 *Uncover Sexual Harassment Patterns from Personal Stories by Joint Key Element Extraction and Categorization*  
Yingchi Liu, Quanzhi Li, Marika Cifor, Xiaozhong Liu, Qiong Zhang and Luo Si
- 11:06–11:24 *Identifying Predictive Causal Factors from News Streams*  
Ananth Balashankar, Sunandan Chakraborty, Samuel Fraiberger and Lakshminarayanan Subramanian
- 11:24–11:42 *Training Data Augmentation for Detecting Adverse Drug Reactions in User-Generated Content*  
Sepideh Mesbah, Jie Yang, Robert-Jan Sips, Manuel Valle Torre, Christoph Lofi, Alessandro Bozzon and Geert-Jan Houben
- 11:42–12:00 *Deep Reinforcement Learning-based Text Anonymization against Private-Attribute Inference*  
Ahmadreza Mosallanezhad, Ghazaleh Beigi and Huan Liu

**Poster and Demo Session 5: Question Answering, Textual Inference and Other Areas of Semantics**

*Tree-structured Decoding for Solving Math Word Problems*

Qianying Liu, Wenyv Guan, Sujian Li and Daisuke Kawahara

*PullNet: Open Domain Question Answering with Iterative Retrieval on Knowledge Bases and Text*

Haitian Sun, Tania Bedrax-Weiss and William Cohen

*Cosmos QA: Machine Reading Comprehension with Contextual Commonsense Reasoning*

Lifu Huang, Ronan Le Bras, Chandra Bhagavatula and Yejin Choi

*Finding Generalizable Evidence by Learning to Convince Q&A Models*

Ethan Perez, Siddharth Karamcheti, Rob Fergus, Jason Weston, Douwe Kiela and Kyunghyun Cho

*Ranking and Sampling in Open-Domain Question Answering*

Yanfu Xu, Zheng Lin, Yuanxin Liu, Rui Liu, Weiping Wang and Dan Meng

Wednesday, November 6, 2019 (continued)

*A Non-commutative Bilinear Model for Answering Path Queries in Knowledge Graphs*

Katsuhiko Hayashi and Masashi Shimbo

*Generating Questions for Knowledge Bases via Incorporating Diversified Contexts and Answer-Aware Loss*

Cao Liu, Kang Liu, Shizhu He, Zaiqing Nie and Jun Zhao

*Multi-Task Learning for Conversational Question Answering over a Large-Scale Knowledge Base*

Tao Shen, Xiubo Geng, Tao QIN, Daya Guo, Duyu Tang, Nan Duan, Guodong Long and Daxin Jiang

*BiPaR: A Bilingual Parallel Dataset for Multilingual and Cross-lingual Reading Comprehension on Novels*

Yimin Jing, Deyi Xiong and Zhen Yan

*Language Models as Knowledge Bases?*

Fabio Petroni, Tim Rocktäschel, Sebastian Riedel, Patrick Lewis, Anton Bakhtin, Yuxiang Wu and Alexander Miller

*NumNet: Machine Reading Comprehension with Numerical Reasoning*

Qiu Ran, Yankai Lin, Peng Li, Jie Zhou and Zhiyuan Liu

*Unicoder: A Universal Language Encoder by Pre-training with Multiple Cross-lingual Tasks*

Haoyang Huang, Yaobo Liang, Nan Duan, Ming Gong, Linjun Shou, Daxin Jiang and Ming Zhou

*Addressing Semantic Drift in Question Generation for Semi-Supervised Question Answering*

Shiyue Zhang and Mohit Bansal

*Adversarial Domain Adaptation for Machine Reading Comprehension*

Huazheng Wang, Zhe Gan, Xiaodong Liu, Jingjing Liu, Jianfeng Gao and Hongning Wang

*Incorporating External Knowledge into Machine Reading for Generative Question Answering*

Bin Bi, Chen Wu, Ming Yan, Wei Wang, Jiangnan Xia and Chenliang Li

*Answering questions by learning to rank - Learning to rank by answering questions*

George Sebastian Pirtoaca, Traian Rebedea and Stefan Ruseti

*Discourse-Aware Semantic Self-Attention for Narrative Reading Comprehension*

Todor Mihaylov and Anette Frank

Wednesday, November 6, 2019 (continued)

*Revealing the Importance of Semantic Retrieval for Machine Reading at Scale*

Yixin Nie, Songhe Wang and Mohit Bansal

*PubMedQA: A Dataset for Biomedical Research Question Answering*

Qiao Jin, Bhuwan Dhingra, Zhengping Liu, William Cohen and Xinghua Lu

*Quick and (not so) Dirty: Unsupervised Selection of Justification Sentences for Multi-hop Question Answering*

Vikas Yadav, Steven Bethard and Mihai Surdeanu

*Answering Complex Open-domain Questions Through Iterative Query Generation*

Peng Qi, Xiaowen Lin, Leo Mehr, Zijian Wang and Christopher D. Manning

*NL2pSQL: Generating Pseudo-SQL Queries from Under-Specified Natural Language Questions*

Fuxiang Chen, Seung-won Hwang, Jaegul Choo, Jung-Woo Ha and Sunghun Kim

*Leveraging Frequent Query Substructures to Generate Formal Queries for Complex Question Answering*

Jiwei Ding, Wei Hu, Qixin Xu and Yuzhong Qu

*Incorporating Graph Attention Mechanism into Knowledge Graph Reasoning Based on Deep Reinforcement Learning*

Heng Wang, Shuangyin Li, Rong Pan and Mingzhi Mao

*Learning to Update Knowledge Graphs by Reading News*

Jizhi Tang, Yansong Feng and Dongyan Zhao

*DIVINE: A Generative Adversarial Imitation Learning Framework for Knowledge Graph Reasoning*

Ruiping Li and Xiang Cheng

*Original Semantics-Oriented Attention and Deep Fusion Network for Sentence Matching*

Mingtong Liu, Yujie Zhang, Jinan Xu and Yufeng Chen

*Representation Learning with Ordered Relation Paths for Knowledge Graph Completion*

Yao Zhu, Hongzhi Liu, Zhonghai Wu, Yang Song and Tao Zhang

*Collaborative Policy Learning for Open Knowledge Graph Reasoning*

Cong Fu, Tong Chen, Meng Qu, Woojeong Jin and Xiang Ren

Wednesday, November 6, 2019 (continued)

*Modeling Event Background for If-Then Commonsense Reasoning Using Context-aware Variational Autoencoder*

Li Du, Xiao Ding, Ting Liu and Zhongyang Li

*Asynchronous Deep Interaction Network for Natural Language Inference*

Di Liang, Fubao Zhang, Qi Zhang and Xuanjing Huang

*Keep Calm and Switch On! Preserving Sentiment and Fluency in Semantic Text Exchange*

Steven Y. Feng, Aaron W. Li and Jesse Hoey

*Query-focused Scenario Construction*

Su Wang, Greg Durrett and Katrin Erk

*Semi-supervised Entity Alignment via Joint Knowledge Embedding Model and Cross-graph Model*

Chengjiang Li, Yixin Cao, Lei Hou, Jiaxin Shi, Juanzi Li and Tat-Seng Chua

[DEMO] *EUSP: An Easy-to-Use Semantic Parsing PlatForm*

Bo An, Chen Bo, Xianpei Han and Le Sun

[DEMO] *ParaQG: A System for Generating Questions and Answers from Paragraphs*

vishwajeet kumar, Sivaanandh Muneeswaran, Ganesh Ramakrishnan and Yuan-Fang Li

[DEMO] *CFO: A Framework for Building Production NLP Systems*

Rishav Chakravarti, Cezar Pendus, Andrzej Sakrajda, Anthony Ferritto, Lin Pan, Michael Glass, Vittorio Castelli, J William Murdock, Radu Florian, Salim Roukos and Avi Sil

[DEMO] *ABSApp: A Portable Weakly-Supervised Aspect-Based Sentiment Extraction System*

Oren Pereg, Daniel Korat, Moshe Wasserblat, Jonathan Mamou and Ido Dagan

[DEMO] *Memory Grounded Conversational Reasoning*

Seungwhan Moon, Pararth Shah, Rajen Subba and Anuj Kumar

12:00–13:30 *Lunch*

13:30–15:00 *Session 6*



Wednesday, November 6, 2019 (continued)

**Session 6A: Tagging, Chunking, Syntax and Parsing**

- 13:30–13:48 *Designing and Interpreting Probes with Control Tasks*  
John Hewitt and Percy Liang
- 13:48–14:06 *Specializing Word Embeddings (for Parsing) by Information Bottleneck*  
Xiang Lisa Li and Jason Eisner
- 14:06–14:24 *Deep Contextualized Word Embeddings in Transition-Based and Graph-Based Dependency Parsing - A Tale of Two Parsers Revisited*  
Artur Kulmizev, Miryam de Lhoneux, Johannes Gontrum, Elena Fano and Joakim Nivre
- 14:24–14:42 *Semantic graph parsing with recurrent neural network DAG grammars*  
Federico Fancellu, Sorcha Gilroy, Adam Lopez and Mirella Lapata
- 14:42–15:00 *75 Languages, 1 Model: Parsing Universal Dependencies Universally*  
Dan Kondratyuk and Milan Straka

**Session 6B: Question Answering II**

- 13:30–13:48 *Interactive Language Learning by Question Answering*  
Xingdi Yuan, Marc-Alexandre Côté, Jie Fu, Zhouhan Lin, Chris Pal, Yoshua Bengio and Adam Trischler
- 13:48–14:06 *What's Missing: A Knowledge Gap Guided Approach for Multi-hop Question Answering*  
Tushar Khot, Ashish Sabharwal and Peter Clark
- 14:06–14:24 *KagNet: Knowledge-Aware Graph Networks for Commonsense Reasoning*  
Bill Yuchen Lin, Xinyue Chen, Jamin Chen and Xiang Ren
- 14:24–14:42 *Learning with Limited Data for Multilingual Reading Comprehension*  
Kyungjae Lee, Sunghyun Park, Hojae Han, Jinyoung Yeo, Seung-won Hwang and Juho Lee
- 14:42–15:00 *A Discrete Hard EM Approach for Weakly Supervised Question Answering*  
Sewon Min, Danqi Chen, Hannaneh Hajishirzi and Luke Zettlemoyer

Wednesday, November 6, 2019 (continued)

**Session 6C: Linguistic Theories, Cognitive Modeling and Psycholinguistics**

- 13:30–13:48 *Is the Red Square Big? MAlLeViC: Modeling Adjectives Leveraging Visual Contexts*  
Sandro Pezzelle and Raquel Fernández
- 13:48–14:06 *Investigating BERT’s Knowledge of Language: Five Analysis Methods with NPIs*  
Alex Warstadt, Yu Cao, Ioana Grosu, Wei Peng, Hagen Blix, Yining Nie, Anna Alsop, Shikha Bordia, Haokun Liu, Alicia Parrish, Sheng-Fu Wang, Jason Phang, Anhad Mohananey, Phu Mon Htut, Paloma Jeretic and Samuel R. Bowman
- 14:06–14:24 *Representation of Constituents in Neural Language Models: Coordination Phrase as a Case Study*  
Aixiu AN, Peng Qian, Ethan Wilcox and Roger Levy
- 14:24–14:42 *Towards Zero-shot Language Modeling*  
Edoardo Maria Ponti, Ivan Vulić, Ryan Cotterell, Roi Reichart and Anna Korhonen
- 14:42–15:00 [TACL] *Neural Network Acceptability Judgments*  
Alex Warstadt, Amanpreet Singh and Samuel R. Bowman

**Session 6D: Sentiment Analysis and Argument Mining II**

- 13:30–13:48 *What Gets Echoed? Understanding the “Pointers” in Explanations of Persuasive Arguments*  
David Atkinson, Kumar Bhargav Srinivasan and Chenhao Tan
- 13:48–14:06 *Modeling Frames in Argumentation*  
Yamen Ajjour, Milad Alshomary, Henning Wachsmuth and Benno Stein
- 14:06–14:24 *AMPERSAND: Argument Mining for PERSuAsive oNline Discussions*  
Tuhin Chakrabarty, Christopher Hidey, Smaranda Muresan, Kathy McKeown and Alyssa Hwang
- 14:24–14:42 *Evaluating adversarial attacks against multiple fact verification systems*  
James Thorne, Andreas Vlachos, Christos Christodoulopoulos and Arpit Mittal
- 14:42–15:00 *Nonsense!: Quality Control via Two-Step Reason Selection for Annotating Local Acceptability and Related Attributes in News Editorials*  
Wonsuk Yang, seungwon yoon, Ada Carpenter and Jong Park

Wednesday, November 6, 2019 (continued)

**Poster and Demo Session 6: Discourse and Pragmatics, Summarization and Generation**

*Evaluating Pronominal Anaphora in Machine Translation: An Evaluation Measure and a Test Suite*

Prathyusha Jwalapuram, Shafiq Joty, Irina Temnikova and Preslav Nakov

*A Regularization Approach for Incorporating Event Knowledge and Coreference Relations into Neural Discourse Parsing*

Zeyu Dai and Ruihong Huang

*Weakly Supervised Multilingual Causality Extraction from Wikipedia*

Chikara Hashimoto

*Attribute-aware Sequence Network for Review Summarization*

Junjie Li, Xuepeng Wang, Dawei Yin and Chengqing Zong

*Extractive Summarization of Long Documents by Combining Global and Local Context*

Wen Xiao and Giuseppe Carenini

*Enhancing Neural Data-To-Text Generation Models with External Background Knowledge*

Shuang Chen, Jinpeng Wang, Xiaocheng Feng, Feng Jiang, Bing Qin and Chin-Yew Lin

*Reading Like HER: Human Reading Inspired Extractive Summarization*

Ling Luo, Xiang Ao, Yan Song, Feiyang Pan, Min Yang and Qing He

*Contrastive Attention Mechanism for Abstractive Sentence Summarization*

Xiangyu Duan, Hongfei Yu, Mingming Yin, Min Zhang, Weihua Luo and Yue Zhang

*NCLS: Neural Cross-Lingual Summarization*

Junnan Zhu, Qian Wang, Yining Wang, Yu Zhou, Jiajun Zhang, Shaonan Wang and Chengqing Zong

*Clickbait? Sensational Headline Generation with Auto-tuned Reinforcement Learning*

Peng Xu, Chien-Sheng Wu, Andrea Madotto and Pascale Fung

*Concept Pointer Network for Abstractive Summarization*

Wenbo Wang, Yang Gao, Heyan Huang and Yuxiang Zhou

Wednesday, November 6, 2019 (continued)

*Surface Realisation Using Full Delexicalisation*

Anastasia Shimorina and Claire Gardent

*IMaT: Unsupervised Text Attribute Transfer via Iterative Matching and Translation*

Zhijing Jin, Di Jin, Jonas Mueller, Nicholas Matthews and Enrico Santus

*Better Rewards Yield Better Summaries: Learning to Summarise Without References*

Florian Böhm, Yang Gao, Christian M. Meyer, Ori Shapira, Ido Dagan and Iryna Gurevych

*Mixture Content Selection for Diverse Sequence Generation*

Jaemin Cho, Minjoon Seo and Hannaneh Hajishirzi

*An End-to-End Generative Architecture for Paraphrase Generation*

Qian Yang, zhouyuan huo, Dinghan Shen, Yong Cheng, Wenlin Wang, Guoyin Wang and Lawrence Carin

*Table-to-Text Generation with Effective Hierarchical Encoder on Three Dimensions (Row, Column and Time)*

Heng Gong, Xiaocheng Feng, Bing Qin and Ting Liu

*Subtopic-driven Multi-Document Summarization*

Xin Zheng, Aixin Sun, Jing Li and Karthik Muthuswamy

*Referring Expression Generation Using Entity Profiles*

Meng Cao and Jackie Chi Kit Cheung

*Exploring Diverse Expressions for Paraphrase Generation*

Lihua Qian, Lin Qiu, Weinan Zhang, Xin Jiang and Yong Yu

*Enhancing AMR-to-Text Generation with Dual Graph Representations*

Leonardo F. R. Ribeiro, Claire Gardent and Iryna Gurevych

*Keeping Consistency of Sentence Generation and Document Classification with Multi-Task Learning*

Toru Nishino, Shotaro Misawa, Ryuji Kano, Tomoki Taniguchi, Yasuhide Miura and Tomoko Ohkuma

Wednesday, November 6, 2019 (continued)

*Toward a Task of Feedback Comment Generation for Writing Learning*

Ryo Nagata

*Improving Question Generation With to the Point Context*

Jingjing Li, Yifan Gao, Lidong Bing, Irwin King and Michael R. Lyu

*Deep Copycat Networks for Text-to-Text Generation*

Julia Ive, Pranava Madhyastha and Lucia Specia

*Towards Controllable and Personalized Review Generation*

Pan Li and Alexander Tuzhilin

*Answers Unite! Unsupervised Metrics for Reinforced Summarization Models*

Thomas Scialom, Sylvain Lamprier, Benjamin Piwowarski and Jacopo Staiano

*Long and Diverse Text Generation with Planning-based Hierarchical Variational Model*

Zhihong Shao, Minlie Huang, Jiangtao Wen, Wenfei Xu and xiaoyan zhu

*“Transforming” Delete, Retrieve, Generate Approach for Controlled Text Style Transfer*

Akhilesh Sudhakar, Bhargav Upadhyay and Arjun Maheswaran

*An Entity-Driven Framework for Abstractive Summarization*

Eva Sharma, Luyang Huang, Zhe Hu and Lu Wang

*Neural Extractive Text Summarization with Syntactic Compression*

Jiacheng Xu and Greg Durrett

*Domain Adaptive Text Style Transfer*

Dianqi Li, Yizhe Zhang, Zhe Gan, Yu Cheng, Chris Brockett, Bill Dolan and Ming-Ting Sun

*Let’s Ask Again: Refine Network for Automatic Question Generation*

Preksha Nema, Akash Kumar Mohankumar, Mitesh M. Khapra, Balaji Vasani Srinivasan and Balaraman Ravindran

*Earlier Isn’t Always Better: Sub-aspect Analysis on Corpus and System Biases in Summarization*

Taehee Jung, Dongyeop Kang, Lucas Mentch and Eduard Hovy

**Wednesday, November 6, 2019 (continued)**

[DEMO] *VizSeq: a visual analysis toolkit for text generation tasks*  
Changhan Wang, Anirudh Jain, Danlu Chen and Jiatao Gu

[DEMO] *FAMULUS: Interactive Annotation and Feedback Generation for Teaching Diagnostic Reasoning*  
Jonas Pfeiffer, Christian M. Meyer, Claudia Schulz, Jan Kieseewetter, Jan Zottmann, Michael Sailer, Elisabeth Bauer, Frank Fischer, Martin R. Fischer and Iryna Gurevych

[DEMO] *A Summarization System for Scientific Documents*  
Shai Erera, Michal Shmueli-Scheuer, Guy Feigenblat, Ora Peled Nakash, Odelia Boni, Haggai Roitman, Doron Cohen, Bar Weiner, Yosi Mass, Or Rivlin, Guy Lev, Achiya Jerbi, Jonathan Herzig, Yufang Hou, Charles Jochim, Martin Gleize, Francesca Bonin, Francesca Bonin and David Konopnicki

[DEMO] *EASSE: Easier Automatic Sentence Simplification Evaluation*  
Fernando Alva-Manchego, Louis Martin, Carolina Scarton and Lucia Specia

[DEMO] *ALTER: Auxiliary Text Rewriting Tool for Natural Language Generation*  
Qionikai Xu, Chenchen Xu and Lizhen Qu

15:00–15:30 *Coffee Break*

15:30–16:18 *Session 7*

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

15:30–15:42 *Lost in Evaluation: Misleading Benchmarks for Bilingual Dictionary Induction*  
Yova Kementchedjheva, Mareike Hartmann and Anders Søgaard

15:42–15:54 *Towards Realistic Practices In Low-Resource Natural Language Processing: The Development Set*  
Katharina Kann, Kyunghyun Cho and Samuel R. Bowman

15:54–16:06 *Synchronously Generating Two Languages with Interactive Decoding*  
Yining Wang, Jiajun Zhang, Long Zhou, Yuchen Liu and Chengqing Zong

16:06–16:18 *On NMT Search Errors and Model Errors: Cat Got Your Tongue?*  
Felix Stahlberg and Bill Byrne

Wednesday, November 6, 2019 (continued)

**Session 7B: Reasoning and Question Answering**

- 15:30–15:42 *“Going on a vacation” takes longer than “Going for a walk”: A Study of Temporal Commonsense Understanding*  
Ben Zhou, Daniel Khashabi, Qiang Ning and Dan Roth
- 15:42–15:54 *QAInfomax: Learning Robust Question Answering System by Mutual Information Maximization*  
Yi-Ting Yeh and Yun-Nung Chen
- 15:54–16:06 *Adapting Meta Knowledge Graph Information for Multi-Hop Reasoning over Few-Shot Relations*  
Xin Lv, Yuxian Gu, Xu Han, Lei Hou, Juanzi Li and Zhiyuan Liu
- 16:06–16:18 *How Reasonable are Common-Sense Reasoning Tasks: A Case-Study on the Winograd Schema Challenge and SWAG*  
Paul Trichelair, Ali Emami, Adam Trischler, Kaheer Suleman and Jackie Chi Kit Cheung

**Session 7C: Generation I**

- 15:30–15:42 *Pun-GAN: Generative Adversarial Network for Pun Generation*  
Fuli Luo, Shun Yao Li, Pengcheng Yang, Lei Li, Baobao Chang, Zhifang Sui and Xu SUN
- 15:42–15:54 *Multi-Task Learning with Language Modeling for Question Generation*  
Wenjie Zhou, Minghua Zhang and Yunfang Wu
- 15:54–16:06 *Autoregressive Text Generation Beyond Feedback Loops*  
Florian Schmidt, Stephan Mandt and Thomas Hofmann
- 16:06–16:18 *The Woman Worked as a Babysitter: On Biases in Language Generation*  
Emily Sheng, Kai-Wei Chang, Premkumar Natarajan and Nanyun Peng

Wednesday, November 6, 2019 (continued)

**Session 7D: Sentiment Analysis and Argument Mining III**

- 15:30–15:42 *On the Importance of Delexicalization for Fact Verification*  
Sandeep Suntwal, Mithun Paul, Rebecca Sharp and Mihai Surdeanu
- 15:42–15:54 *Towards Debiasing Fact Verification Models*  
Tal Schuster, Darsh Shah, Yun Jie Serene Yeo, Daniel Roberto Filizzola Ortiz, Enrico Santus and Regina Barzilay
- 15:54–16:06 *Recognizing Conflict Opinions in Aspect-level Sentiment Classification with Dual Attention Networks*  
Xingwei Tan, Yi Cai and Changxi Zhu
- 16:06–16:18 *Investigating Dynamic Routing in Tree-Structured LSTM for Sentiment Analysis*  
Jin Wang, Liang-Chih Yu, K. Robert Lai and Xuejie Zhang

**Poster and Demo Session 7: Information Retrieval and Document Analysis, Lexical Semantics, Sentence-level Semantics, Machine Learning**

*A Label Informative Wide & Deep Classifier for Patents and Papers*  
Muyao Niu and Jie Cai

*Text Level Graph Neural Network for Text Classification*  
Lianzhe Huang, Dehong Ma, Sujian Li, Xiaodong Zhang and Houfeng WANG

*Semantic Relatedness Based Re-ranker for Text Spotting*  
Ahmed Sabir, Francesc Moreno and Lluís Padró

*Delta-training: Simple Semi-Supervised Text Classification using Pretrained Word Embeddings*  
Hwiyeol Jo and Ceyda Cinarel

*Visual Detection with Context for Document Layout Analysis*  
Carlos Soto and Shinjae Yoo

*Evaluating Topic Quality with Posterior Variability*  
Linzi Xing, Michael J. Paul and Giuseppe Carenini



Wednesday, November 6, 2019 (continued)

*Neural Topic Model with Reinforcement Learning*

Lin Gui, Jia Leng, Gabriele Pergola, yu zhou, Ruifeng Xu and Yulan He

*Modelling Stopping Criteria for Search Results using Poisson Processes*

Alison Sneyd and Mark Stevenson

*Cross-Domain Modeling of Sentence-Level Evidence for Document Retrieval*

Zeynep Akkalyoncu Yilmaz, Wei Yang, Haotian Zhang and Jimmy Lin

*The Challenges of Optimizing Machine Translation for Low Resource Cross-Language Information Retrieval*

Constantine Lignos, Daniel Cohen, Yen-Chieh Lien, Pratik Mehta, W. Bruce Croft and Scott Miller

*Rotate King to get Queen: Word Relationships as Orthogonal Transformations in Embedding Space*

Kawin Ethayarajh

*GlossBERT: BERT for Word Sense Disambiguation with Gloss Knowledge*

Luyao Huang, Chi Sun, Xipeng Qiu and Xuanjing Huang

*Leveraging Adjective-Noun Phrasing Knowledge for Comparison Relation Prediction in Text-to-SQL*

Haoyan Liu, Lei Fang, Qian Liu, Bei Chen, Jian-Guang LOU and Zhoujun Li

*Bridging the Defined and the Defining: Exploiting Implicit Lexical Semantic Relations in Definition Modeling*

Koki Washio, Satoshi Sekine and Tsuneaki Kato

*Don't Just Scratch the Surface: Enhancing Word Representations for Korean with Hanja*

Kang Min Yoo, Taeuk Kim and Sang-goo Lee

*SyntagNet: Challenging Supervised Word Sense Disambiguation with Lexical-Semantic Combinations*

Marco Maru, Federico Scozzafava, Federico Martelli and Roberto Navigli

*Hierarchical Meta-Embeddings for Code-Switching Named Entity Recognition*

Genta Indra Winata, Zhaojiang Lin, Jamin Shin, Zihan Liu and Pascale Fung

*Fine-tune BERT with Sparse Self-Attention Mechanism*

Baiyun Cui, Yingming Li, Ming Chen and Zhongfei Zhang

Wednesday, November 6, 2019 (continued)

*Feature-Dependent Confusion Matrices for Low-Resource NER Labeling with Noisy Labels*

Lukas Lange, Michael A. Hedderich and Dietrich Klakow

*A Multi-Pairwise Extension of Procrustes Analysis for Multilingual Word Translation*

Hagai Taitelbaum, Gal Chechik and Jacob Goldberger

*Out-of-Domain Detection for Low-Resource Text Classification Tasks*

Ming Tan, Yang Yu, Haoyu Wang, Dakuo Wang, Saloni Potdar, Shiyu Chang and Mo Yu

*Harnessing Pre-Trained Neural Networks with Rules for Formality Style Transfer*

Yunli Wang, Yu Wu, Lili Mou, Zhoujun Li and Wenhan Chao

*Multiple Text Style Transfer by using Word-level Conditional Generative Adversarial Network with Two-Phase Training*

Chih-Te Lai, Yi-Te Hong, Hong-You Chen, Chi-Jen Lu and Shou-De Lin

*Improved Differentiable Architecture Search for Language Modeling and Named Entity Recognition*

Yufan Jiang, Chi Hu, Tong Xiao, Chunliang Zhang and Jingbo Zhu

*Using Pairwise Occurrence Information to Improve Knowledge Graph Completion on Large-Scale Datasets*

Esma Balkir, Masha Naslidnyk, Dave Palfrey and Arpit Mittal

*Single Training Dimension Selection for Word Embedding with PCA*

Yu Wang

*A Surprisingly Effective Fix for Deep Latent Variable Modeling of Text*

Bohan Li, Junxian He, Graham Neubig, Taylor Berg-Kirkpatrick and Yiming Yang

*SciBERT: A Pretrained Language Model for Scientific Text*

Iz Beltagy, Kyle Lo and Arman Cohan

*Humor Detection: A Transformer Gets the Last Laugh*

Orion Weller and Kevin Seppi

*Combining Global Sparse Gradients with Local Gradients in Distributed Neural Network Training*

Alham Fikri Aji, Kenneth Heafield and Nikolay Bogoychev

Wednesday, November 6, 2019 (continued)

*Small and Practical BERT Models for Sequence Labeling*

Henry Tsai, Jason Riesa, Melvin Johnson, Naveen Arivazhagan, Xin Li and Amelia Archer

*Data Augmentation with Atomic Templates for Spoken Language Understanding*

Zijian Zhao, Su Zhu and Kai Yu

*PaLM: A Hybrid Parser and Language Model*

Hao Peng, Roy Schwartz and Noah A. Smith

*A Pilot Study for Chinese SQL Semantic Parsing*

Qingkai Min, Yuefeng Shi and Yue Zhang

*Global Reasoning over Database Structures for Text-to-SQL Parsing*

Ben Bogin, Matt Gardner and Jonathan Berant

*Transductive Learning of Neural Language Models for Syntactic and Semantic Analysis*

Hiroki Ouchi, Jun Suzuki and Kentaro Inui

*Efficient Sentence Embedding using Discrete Cosine Transform*

Nada Almarwani, Hanan Aldarmaki and Mona Diab

*A Search-based Neural Model for Biomedical Nested and Overlapping Event Detection*

Kurt Junshean Espinosa, Makoto Miwa and Sophia Ananiadou

*PAWS-X: A Cross-lingual Adversarial Dataset for Paraphrase Identification*

Yinfei Yang, Yuan Zhang, Chris Tar and Jason Baldridge

*Pretrained Language Models for Sequential Sentence Classification*

Arman Cohan, Iz Beltagy, Daniel King, Bhavana Dalvi and Dan Weld

*Emergent Linguistic Phenomena in Multi-Agent Communication Games*

Laura Harding Graesser, Kyunghyun Cho and Douwe Kiela

*TalkDown: A Corpus for Condescension Detection in Context*

Zijian Wang and Christopher Potts

**Wednesday, November 6, 2019 (continued)**

16:18–16:30 *Mini-Break*

16:30–18:00 *Session 8*

**Session 8A: Summarization**

16:30–16:48 *Summary Cloze: A New Task for Content Selection in Topic-Focused Summarization*  
Daniel Deutsch and Dan Roth

16:48–17:06 *Text Summarization with Pretrained Encoders*  
Yang Liu and Mirella Lapata

17:06–17:24 *How to Write Summaries with Patterns? Learning towards Abstractive Summarization through Prototype Editing*  
Shen Gao, Xiuying Chen, Piji Li, Zhangming Chan, Dongyan Zhao and Rui Yan

17:24–17:42 *BottleSum: Unsupervised and Self-supervised Sentence Summarization using the Information Bottleneck Principle*  
Peter West, Ari Holtzman, Jan Buys and Yejin Choi

17:42–18:00 *Improving Latent Alignment in Text Summarization by Generalizing the Pointer Generator*  
Xiaoyu Shen, Yang Zhao, Hui Su and Dietrich Klakow

**Session 8B: Sentence-level Semantics II**

16:30–16:48 *Learning Semantic Parsers from Denotations with Latent Structured Alignments and Abstract Programs*  
Bailin Wang, Ivan Titov and Mirella Lapata

16:48–17:06 *Broad-Coverage Semantic Parsing as Transduction*  
Sheng Zhang, Xutai Ma, Kevin Duh and Benjamin Van Durme

17:06–17:24 *Core Semantic First: A Top-down Approach for AMR Parsing*  
Deng Cai and Wai Lam

17:24–17:42 *Don't paraphrase, detect! Rapid and Effective Data Collection for Semantic Parsing*  
Jonathan Herzig and Jonathan Berant

17:42–18:00 [TACL] *Massively Multilingual Sentence Embeddings for Zero-Shot Cross-Lingual Transfer and Beyond*  
Mikel Artetxe and Holger Schwenk

Wednesday, November 6, 2019 (continued)

**Session 8C: Information Extraction II**

- 16:30–16:48 *Improving Distantly-Supervised Relation Extraction with Joint Label Embedding*  
Linmei Hu, Luhao Zhang, Chuan Shi, Liqiang Nie, Weili Guan and Cheng Yang
- 16:48–17:06 *Leverage Lexical Knowledge for Chinese Named Entity Recognition via Collaborative Graph Network*  
Dianbo Sui, Yubo Chen, Kang Liu, Jun Zhao and Shengping Liu
- 17:06–17:24 *Looking Beyond Label Noise: Shifted Label Distribution Matters in Distantly Supervised Relation Extraction*  
Qinyuan Ye, Liyuan Liu, Maosen Zhang and Xiang Ren
- 17:24–17:42 *Easy First Relation Extraction with Information Redundancy*  
Shuai Ma, Gang Wang, Yansong Feng and Jinpeng Huai
- 17:42–18:00 *Dependency-Guided LSTM-CRF for Named Entity Recognition*  
Zhanming Jie and Wei Lu

**Session 8D: Information Retrieval and Document Analysis I**

- 16:30–16:48 *Cross-Cultural Transfer Learning for Text Classification*  
Dor Ringel, Gal Lavee, Ido Guy and Kira Radinsky
- 16:48–17:06 *Combining Unsupervised Pre-training and Annotator Rationales to Improve Low-shot Text Classification*  
Oren Melamud, Mihaela Bornea and Ken Barker
- 17:06–17:24 *ProSeqo: Projection Sequence Networks for On-Device Text Classification*  
Zornitsa Kozareva and Sujith Ravi
- 17:24–17:42 *Induction Networks for Few-Shot Text Classification*  
Ruiying Geng, Binhua Li, Yongbin Li, Xiaodan Zhu, Ping Jian and Jian Sun
- 17:42–18:00 *Benchmarking Zero-shot Text Classification: Datasets, Evaluation and Entailment Approach*  
Wenpeng Yin, Jamaal Hay and Dan Roth

Wednesday, November 6, 2019 (continued)

**Poster and Demo Session 8: Machine Learning**

*A Logic-Driven Framework for Consistency of Neural Models*

Tao Li, Vivek Gupta, Maitrey Mehta and Vivek Srikumar

*Style Transfer for Texts: Retrain, Report Errors, Compare with Rewrites*

Alexey Tikhonov, Viacheslav Shibaev, Aleksander Nagaev, Aigul Nugmanova and Ivan P. Yamshchikov

*Implicit Deep Latent Variable Models for Text Generation*

Le Fang, Chunyuan Li, Jianfeng Gao, Wen Dong and Changyou Chen

*Text Emotion Distribution Learning from Small Sample: A Meta-Learning Approach*

Zhenjie Zhao and Xiaojuan Ma

*Judge the Judges: A Large-Scale Evaluation Study of Neural Language Models for Online Review Generation*

Cristina Garbacea, Samuel Carton, Shiyang Yan and Qiaozhu Mei

*Sentence-BERT: Sentence Embeddings using Siamese BERT-Networks*

Nils Reimers and Iryna Gurevych

*Learning Only from Relevant Keywords and Unlabeled Documents*

Nontawat Charoenphakdee, Jongyeong Lee, Yiping Jin, Dittaya Wanvarie and Masashi Sugiyama

*Denoising based Sequence-to-Sequence Pre-training for Text Generation*

Liang Wang, Wei Zhao, Ruoyu Jia, Sujian Li and Jingming Liu

*Dialog Intent Induction with Deep Multi-View Clustering*

Hugh Perkins and Yi Yang

*Nearly-Unsupervised Hashcode Representations for Biomedical Relation Extraction*

Sahil Garg, Aram Galstyan, Greg Ver Steeg and Guillermo Cecchi

*Auditing Deep Learning processes through Kernel-based Explanatory Models*

Danilo Croce, Daniele Rossini and Roberto Basili

Wednesday, November 6, 2019 (continued)

*Enhancing Variational Autoencoders with Mutual Information Neural Estimation for Text Generation*

Dong Qian and William K. Cheung

*Sampling Bias in Deep Active Classification: An Empirical Study*

Ameya Prabhu, Charles Dognin and Maneesh Singh

*Don't Take the Easy Way Out: Ensemble Based Methods for Avoiding Known Dataset Biases*

Christopher Clark, Mark Yatskar and Luke Zettlemoyer

*Achieving Verified Robustness to Symbol Substitutions via Interval Bound Propagation*

Po-Sen Huang, Robert Stanforth, Johannes Welbl, Chris Dyer, Dani Yogatama, Sven Gowal, Krishnamurthy Dvijotham and Pushmeet Kohli

*Rethinking Cooperative Rationalization: Introspective Extraction and Complement Control*

Mo Yu, Shiyu Chang, Yang Zhang and Tommi Jaakkola

*Experimenting with Power Divergences for Language Modeling*

Matthieu Labeau and Shay B. Cohen

*Hierarchically-Refined Label Attention Network for Sequence Labeling*

Leyang Cui and Yue Zhang

*Certified Robustness to Adversarial Word Substitutions*

Robin Jia, Aditi Raghunathan, Kerem Göksel and Percy Liang

*Visualizing and Understanding the Effectiveness of BERT*

Yaru Hao, Li Dong, Furu Wei and Ke Xu

*Topics to Avoid: Demoting Latent Confounds in Text Classification*

Sachin Kumar, Shuly Wintner, Noah A. Smith and Yulia Tsvetkov

*Learning to Ask for Conversational Machine Learning*

Shashank Srivastava, Igor Labutov and Tom Mitchell

*Language Modeling for Code-Switching: Evaluation, Integration of Monolingual Data, and Discriminative Training*

Hila Gonen and Yoav Goldberg

Wednesday, November 6, 2019 (continued)

*Using Local Knowledge Graph Construction to Scale Seq2Seq Models to Multi-Document Inputs*

Angela Fan, Claire Gardent, Chloé Braud and Antoine Bordes

*Fine-grained Knowledge Fusion for Sequence Labeling Domain Adaptation*

Huiyun Yang, Shujian Huang, XIN-YU DAI and Jiajun CHEN

*Exploiting Monolingual Data at Scale for Neural Machine Translation*

Lijun Wu, Yiren Wang, Yingce Xia, Tao QIN, Jianhuang Lai and Tie-Yan Liu

*Meta Relational Learning for Few-Shot Link Prediction in Knowledge Graphs*

Mingyang Chen, Wen Zhang, Wei Zhang, Qiang Chen and Huajun Chen

*Distributionally Robust Language Modeling*

Yonatan Oren, Shiori Sagawa, Tatsunori Hashimoto and Percy Liang

*Unsupervised Domain Adaptation of Contextualized Embeddings for Sequence Labeling*

Xiaochuang Han and Jacob Eisenstein

*Learning Latent Parameters without Human Response Patterns: Item Response Theory with Artificial Crowds*

John P. Lalor, Hao Wu and Hong Yu

*Parallel Iterative Edit Models for Local Sequence Transduction*

Abhijeet Awasthi, Sunita Sarawagi, Rasna Goyal, Sabyasachi Ghosh and Vihari Piratla

*ARAML: A Stable Adversarial Training Framework for Text Generation*

Pei Ke, Fei Huang, Minlie Huang and xiaoyan zhu

*FlowSeq: Non-Autoregressive Conditional Sequence Generation with Generative Flow*

Xuezhe Ma, Chunting Zhou, Xian Li, Graham Neubig and Eduard Hovy

*Compositional Generalization for Primitive Substitutions*

Yuanpeng Li, Liang Zhao, Jianyu Wang and Joel Hestness

*WikiCREM: A Large Unsupervised Corpus for Coreference Resolution*

Vid Kocijan, Oana-Maria Camburu, Ana-Maria Cretu, Yordan Yordanov, Phil Blunsom and Thomas Lukasiewicz



Wednesday, November 6, 2019 (continued)

*Identifying and Explaining Discriminative Attributes*

Armins Stepanjans and André Freitas

*Patient Knowledge Distillation for BERT Model Compression*

Siqi Sun, Yu Cheng, Zhe Gan and Jingjing Liu

*Neural Gaussian Copula for Variational Autoencoder*

Prince Zizhuang Wang and William Yang Wang

*Transformer Dissection: An Unified Understanding for Transformer's Attention via the Lens of Kernel*

Yao-Hung Hubert Tsai, Shaojie Bai, Makoto Yamada, Louis-Philippe Morency and Ruslan Salakhutdinov

*Learning to Learn and Predict: A Meta-Learning Approach for Multi-Label Classification*

Jiawei Wu, Wenhan Xiong and William Yang Wang

*Revealing the Dark Secrets of BERT*

Olga Kovaleva, Alexey Romanov, Anna Rogers and Anna Rumshisky

*Machine Translation With Weakly Paired Documents*

Lijun Wu, Jinhua Zhu, Di He, Fei Gao, Tao QIN, Jianhuang Lai and Tie-Yan Liu

*Countering Language Drift via Visual Grounding*

Jason Lee, Kyunghyun Cho and Douwe Kiela

*The Bottom-up Evolution of Representations in the Transformer: A Study with Machine Translation and Language Modeling Objectives*

Elena Voita, Rico Sennrich and Ivan Titov

[DEMO] *NeuronBlocks: Building Your NLP DNN Models Like Playing Lego*

Ming Gong, Linjun Shou, Wutao Lin, Zhijie Sang, Qianjia Yan, Ze Yang, Feixiang Cheng and Daxin Jiang

**Wednesday, November 6, 2019 (continued)**

[DEMO] *Controlling Sequence-to-Sequence Models - A Demonstration on Neural-based Acrostic Generator*

Liang-Hsin Shen, Pei-Lun Tai, Chao-Chung Wu and Shou-De Lin

[DEMO] *AllenNLP Interpret: A Framework for Explaining Predictions of NLP Models*

Eric Wallace, Jens Tuyls, Junlin Wang, Sanjay Subramanian, Matt Gardner and Sameer Singh

[DEMO] *UER: An Open-Source Toolkit for Pre-training Models*

Zhe Zhao, Hui Chen, Jinbin Zhang, Xin Zhao, Tao Liu, Wei Lu, Xi Chen, Haotang Deng, Qi Ju and Xiaoyong Du

[DEMO] *MedCATTrainer: A Biomedical Free Text Annotation Interface with Active Learning and Research Use Case Specific Customisation*

Thomas Searle, Zeljko Kraljevic, Rebecca Bendayan, Daniel Bean and Richard Dobson

**Thursday, November 7, 2019**

09:00–10:00 *Keynote III: Kyunghyun Cho*

10:00–10:30 *Coffee Break*

10:30–12:00 *Session 9*

**Thursday, November 7, 2019 (continued)**

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

- 10:30–10:48 *Do We Really Need Fully Unsupervised Cross-Lingual Embeddings?*  
Ivan Vulić, Goran Glavaš, Roi Reichart and Anna Korhonen
- 10:48–11:06 *Weakly-Supervised Concept-based Adversarial Learning for Cross-lingual Word Embeddings*  
Haozhou Wang, James Henderson and Paola Merlo
- 11:06–11:24 *Aligning Cross-Lingual Entities with Multi-Aspect Information*  
Hsiu-Wei Yang, Yanyan Zou, Peng Shi, Wei Lu, Jimmy Lin and Xu SUN
- 11:24–11:42 *Contrastive Language Adaptation for Cross-Lingual Stance Detection*  
Mitra Mohtarami, James Glass and Preslav Nakov
- 11:42–12:00 *Jointly Learning to Align and Translate with Transformer Models*  
Sarthak Garg, Stephan Peitz, Udhyakumar Nallasamy and Matthias Paulik

**Session 9B: Reasoning**

- 10:30–10:48 *Social IQa: Commonsense Reasoning about Social Interactions*  
Maarten Sap, Hannah Rashkin, Derek Chen, Ronan Le Bras and Yejin Choi
- 10:48–11:06 *Self-Assembling Modular Networks for Interpretable Multi-Hop Reasoning*  
Yichen Jiang and Mohit Bansal
- 11:06–11:24 *Posing Fair Generalization Tasks for Natural Language Inference*  
Atticus Geiger, Ignacio Cases, Lauri Karttunen and Christopher Potts
- 11:24–11:42 *Everything Happens for a Reason: Discovering the Purpose of Actions in Procedural Text*  
Bhavana Dalvi, Niket Tandon, Antoine Bosselut, Wen-tau Yih and Peter Clark
- 11:42–12:00 *CLUTRR: A Diagnostic Benchmark for Inductive Reasoning from Text*  
Koustuv Sinha, Shagun Sodhani, Jin Dong, Joelle Pineau and William L. Hamilton

**Thursday, November 7, 2019 (continued)**

**Session 9C: Dialog and Interactive Systems II**

- 10:30–10:48 *Taskmaster-1: Toward a Realistic and Diverse Dialog Dataset*  
Bill Byrne, Karthik Krishnamoorthi, Chinnadhurai Sankar, Arvind Neelakantan, Ben Goodrich, Daniel Duckworth, Semih Yavuz, Amit Dubey, Kyu-Young Kim and Andy Cedilnik
- 10:48–11:06 *Multi-Domain Goal-Oriented Dialogues (MultiDoGO): Strategies toward Curating and Annotating Large Scale Dialogue Data*  
Denis Peskov, Nancy Clarke, Jason Krone, Brigi Fodor, Yi Zhang, Adel Youssef and Mona Diab
- 11:06–11:24 *Build it Break it Fix it for Dialogue Safety: Robustness from Adversarial Human Attack*  
Emily Dinan, Samuel Humeau, Bharath Chintagunta and Jason Weston
- 11:24–11:42 *GECOR: An End-to-End Generative Ellipsis and Co-reference Resolution Model for Task-Oriented Dialogue*  
Jun Quan, Deyi Xiong, Bonnie Webber and Changjian Hu
- 11:42–12:00 *Task-Oriented Conversation Generation Using Heterogeneous Memory Networks*  
Zehao Lin, Xinjing Huang, Feng Ji, Haiqing Chen and Yin Zhang

**Session 9D: Sentiment Analysis and Argument Mining IV**

- 10:30–10:48 *Aspect-based Sentiment Classification with Aspect-specific Graph Convolutional Networks*  
Chen Zhang, Qiuchi Li and Dawei Song
- 10:48–11:06 *Coupling Global and Local Context for Unsupervised Aspect Extraction*  
Ming Liao, Jing Li, Haisong Zhang, Lingzhi Wang, Xixin Wu and Kam-Fai Wong
- 11:06–11:24 *Transferable End-to-End Aspect-based Sentiment Analysis with Selective Adversarial Learning*  
Zheng Li, Xin Li, Ying Wei, Lidong Bing, Yu Zhang and Qiang Yang
- 11:24–11:42 *CAN: Constrained Attention Networks for Multi-Aspect Sentiment Analysis*  
Mengting Hu, Shiwan Zhao, Li Zhang, Keke Cai, Zhong Su, Renhong Cheng and Xiaowei Shen
- 11:42–12:00 *Leveraging Just a Few Keywords for Fine-Grained Aspect Detection Through Weakly Supervised Co-Training*  
Giannis Karamanolakis, Daniel Hsu and Luis Gravano

Thursday, November 7, 2019 (continued)

**Poster and Demo Session 9: Social Media and Computational Social Science,  
Text Mining and NLP Applications**

*Integrating Text and Image: Determining Multimodal Document Intent in Instagram Posts*

Julia Kruk, Jonah Lubin, Karan Sikka, Xiao Lin, Dan Jurafsky and Ajay Divakaran

*Neural Conversation Recommendation with Online Interaction Modeling*

Xingshan Zeng, Jing Li, Lu Wang and Kam-Fai Wong

*Different Absorption from the Same Sharing: Sifted Multi-task Learning for Fake News Detection*

Lianwei Wu, Yuan Rao, Haolin Jin, Ambreen Nazir and Ling Sun

*Text-based inference of moral sentiment change*

Jing Yi Xie, Renato Ferreira Pinto Junior, Graeme Hirst and Yang Xu

*Detecting Causal Language Use in Science Findings*

Bei Yu, Yingya Li and Jun Wang

*Multilingual and Multi-Aspect Hate Speech Analysis*

Nedjma Ousidhoum, Zizheng Lin, Hongming Zhang, Yangqiu Song and Dit-Yan Yeung

*MultiFC: A Real-World Multi-Domain Dataset for Evidence-Based Fact Checking of Claims*

Isabelle Augenstein, Christina Lioma, Dongsheng Wang, Lucas Chaves Lima, Casper Hansen, Christian Hansen and Jakob Grue Simonsen

*A Deep Neural Information Fusion Architecture for Textual Network Embeddings*

Zenan Xu, Qinliang Su, Xiaojun Quan and Weijia Zhang

*You Shall Know a User by the Company It Keeps: Dynamic Representations for Social Media Users in NLP*

Marco Del Tredici, Diego Marcheggiani, Sabine Schulte im Walde and Raquel Fernández

*Adaptive Ensembling: Unsupervised Domain Adaptation for Political Document Analysis*

Shrey Desai, Barea Sinno, Alex Rosenfeld and Junyi Jessy Li

*Macrocosm: Social Media Persona Linking for Open Source Intelligence Applications*

Graham Horwood, Ning Yu, Thomas Boggs, Changjiang Yang and Chad Holvenstot

**Thursday, November 7, 2019 (continued)**

*A Hierarchical Location Prediction Neural Network for Twitter User Geolocation*

Binxuan Huang and Kathleen Carley

*Trouble on the Horizon: Forecasting the Derailment of Online Conversations as they Develop*

Jonathan P. Chang and Cristian Danescu-Niculescu-Mizil

*A Benchmark Dataset for Learning to Intervene in Online Hate Speech*

Jing Qian, Anna Bethke, Yinyin Liu, Elizabeth Belding and William Yang Wang

*Detecting and Reducing Bias in a High Stakes Domain*

Ruiqi Zhong, Yanda Chen, Desmond Patton, Charlotte Selous and Kathy McKeown

*CodeSwitch-Reddit: Exploration of Written Multilingual Discourse in Online Discussion Forums*

Ella Rabinovich, Masih Sultani and Suzanne Stevenson

*Modeling Conversation Structure and Temporal Dynamics for Jointly Predicting Rumor Stance and Veracity*

Penghui Wei, Nan Xu and Wenji Mao

[TACL] *Measuring Online Debaters' Persuasive Skill from Text over Time*

Kelvin Luu, Chenhao Tan and Noah Smith

*Reconstructing Capsule Networks for Zero-shot Intent Classification*

Han Liu, Xiaotong Zhang, Lu Fan, Xuandi Fu, Qimai Li, Xiao-Ming Wu and Albert Y.S. Lam

*Domain Adaptation for Person-Job Fit with Transferable Deep Global Match Network*

Shuqing Bian, Wayne Xin Zhao, Yang Song, Tao Zhang and Ji-Rong Wen

*Heterogeneous Graph Attention Networks for Semi-supervised Short Text Classification*

Hu Linmei, Tianchi Yang, Chuan Shi, Houye Ji and Xiaoli Li

**Thursday, November 7, 2019 (continued)**

*Comparing and Developing Tools to Measure the Readability of Domain-Specific Texts*

Elissa Redmiles, Lisa Maszkiewicz, Emily Hwang, Dhruv Kuchhal, Everest Liu, Miraida Morales, Denis Peskov, Sudha Rao, Rock Stevens, Kristina Gligorić, Sean Kross, Michelle Mazurek and Hal Daumé III

*News2vec: News Network Embedding with Subnode Information*

Ye Ma, Lu Zong, Yikang Yang and Jionglong Su

*Recursive Context-Aware Lexical Simplification*

Sian Gooding and Ekaterina Kochmar

*Leveraging Medical Literature for Section Prediction in Electronic Health Records*

Sara Rosenthal, Ken Barker and Zhicheng Liang

*Neural News Recommendation with Heterogeneous User Behavior*

Chuhan Wu, Fangzhao Wu, Mingxiao An, Tao Qi, Jianqiang Huang, Yongfeng Huang and Xing Xie

*Reviews Meet Graphs: Enhancing User and Item Representations for Recommendation with Hierarchical Attentive Graph Neural Network*

Chuhan Wu, Fangzhao Wu, Tao Qi, Suyu Ge, Yongfeng Huang and Xing Xie

*Event Representation Learning Enhanced with External Commonsense Knowledge*

Xiao Ding, Kuo Liao, Ting Liu, Zhongyang Li and Junwen Duan

*Learning to Discriminate Perturbations for Blocking Adversarial Attacks in Text Classification*

Yichao Zhou, Jyun-Yu Jiang, Kai-Wei Chang and Wei Wang

*A Neural Citation Count Prediction Model based on Peer Review Text*

Siqing Li, Wayne Xin Zhao, Eddy Jing Yin and Ji-Rong Wen

*Connecting the Dots: Document-level Neural Relation Extraction with Edge-oriented Graphs*

Fenia Christopoulou, Makoto Miwa and Sophia Ananiadou

**Thursday, November 7, 2019 (continued)**

*Semi-supervised Text Style Transfer: Cross Projection in Latent Space*

Mingyue Shang, Piji Li, Zhenxin Fu, Lidong Bing, Dongyan Zhao, Shuming Shi and Rui Yan

*Question Answering for Privacy Policies: Combining Computational and Legal Perspectives*

Abhilasha Ravichander, Alan W Black, Shomir Wilson, Thomas Norton and Norman Sadeh

*Stick to the Facts: Learning towards a Fidelity-oriented E-Commerce Product Description Generation*

Zhangming Chan, Xiuying Chen, Yongliang Wang, Juntao Li, Zhiqiang Zhang, Kun Gai, Dongyan Zhao and Rui Yan

*Fine-Grained Entity Typing via Hierarchical Multi Graph Convolutional Networks*

Hailong Jin, Lei Hou, Juanzi Li and Tiansi Dong

*Learning to Infer Entities, Properties and their Relations from Clinical Conversations*

Nan Du, Mingqiu Wang, Linh Tran, Gang Lee and Izhak Shafran

*Practical Correlated Topic Modeling and Analysis via the Rectified Anchor Word Algorithm*

Moontae Lee, Sungjun Cho, David Bindel and David Mimno

*Modeling the Relationship between User Comments and Edits in Document Revision*

Xuchao Zhang, Dheeraj Rajagopal, Michael Gamon, Sujay Kumar Jauhar and ChangTien Lu

*PRADO: Projection Attention Networks for Document Classification On-Device*

Karthik Krishnamoorthi, Sujith Ravi and Zornitsa Kozareva

*Subword Language Model for Query Auto-Completion*

Gyuwan Kim

*Enhancing Dialogue Symptom Diagnosis with Global Attention and Symptom Graph*

Xinzhu Lin, Xiahui He, Qin Chen, Huaixiao Tou, Zhongyu Wei and Ting Chen



**Thursday, November 7, 2019 (continued)**

[DEMO] *TEASPN: Framework and Protocol for Integrated Writing Assistance Environments*

Masato Hagiwara, Takumi Ito, Tatsuki Kuribayashi, Jun Suzuki and Kentaro Inui

[DEMO] *Journalist-in-the-Loop: Continuous Learning as a Service for Rumour Analysis*

Twin Karmakharm, Nikolaos Aletras and Kalina Bontcheva

[DEMO] *MAssistant: A Personal Knowledge Assistant for MOOC Learners*

Lan Jiang, Shuhan Hu, Mingyu Huang, Zhichun Wang, Jinjian Yang, Xiaoju Ye and Wei Zheng

[DEMO] *A Stylometry Toolkit for Latin Literature*

Thomas J. Bolt, Jeffrey H. Flynt, Primit Chaudhuri and Joseph P. Dexter

[DEMO] *Tanbih: Get To Know What You Are Reading*

Yifan Zhang, Giovanni Da San Martino, Alberto Barrón-Cedeño, Salvatore Romeo, Jisun An, Haewoon Kwak, Todor Staykovski, Israa Jaradat, Georgi Karadzhov, Ramy Baly, Kareem Darwish, James Glass and Preslav Nakov

[DEMO] *Visualizing Trends of Key Roles in News Articles*

Chen Xia, Haoxiang Zhang, Jacob Moghtader, Allen Wu and Kai-Wei Chang

12:00–12:30 *Lunch*

12:30–13:30 *SIGDAT Business Meeting*

13:30–15:00 *Session 10*

**Thursday, November 7, 2019 (continued)**

**Session 10A: Generation II**

- 13:30–13:48 *Counterfactual Story Reasoning and Generation*  
Lianhui Qin, Antoine Bosselut, Ari Holtzman, Chandra Bhagavatula, Elizabeth Clark and Yejin Choi
- 13:48–14:06 *Encode, Tag, Realize: High-Precision Text Editing*  
Eric Malmi, Sebastian Krause, Sascha Rothe, Daniil Mirylenka and Aliaksei Severyn
- 14:06–14:24 *Answer-guided and Semantic Coherent Question Generation in Open-domain Conversation*  
Weichao Wang, Shi Feng, Daling Wang and Yifei Zhang
- 14:24–14:42 *Read, Attend and Comment: A Deep Architecture for Automatic News Comment Generation*  
Ze Yang, Can Xu, wei wu and zhoujun li
- 14:42–15:00 *A Topic Augmented Text Generation Model: Joint Learning of Semantics and Structural Features*  
hongyin tang, Miao Li and Beihong Jin

**Session 10B: Speech, Vision, Robotics, Multimodal and Grounding II**

- 13:30–13:48 *LXMERT: Learning Cross-Modality Encoder Representations from Transformers*  
Hao Tan and Mohit Bansal
- 13:48–14:06 *Phrase Grounding by Soft-Label Chain Conditional Random Field*  
Jiacheng Liu and Julia Hockenmaier
- 14:06–14:24 *What You See is What You Get: Visual Pronoun Coreference Resolution in Dialogues*  
Xintong Yu, Hongming Zhang, Yangqiu Song, Yan Song and Changshui Zhang
- 14:24–14:42 *YouMakeup: A Large-Scale Domain-Specific Multimodal Dataset for Fine-Grained Semantic Comprehension*  
Weiyang Wang, Yongcheng Wang, Shizhe Chen and Qin Jin
- 14:42–15:00 *DEBUG: A Dense Bottom-Up Grounding Approach for Natural Language Video Localization*  
Chujie Lu, Long Chen, Chile Tan, Xiaolin Li and Jun Xiao

Thursday, November 7, 2019 (continued)

**Session 10C: Information Extraction III**

- 13:30–13:48 *CrossWeigh: Training Named Entity Tagger from Imperfect Annotations*  
Zihan Wang, Jingbo Shang, Liyuan Liu, Lihao Lu, Jiacheng Liu and Jiawei Han
- 13:48–14:06 *A Little Annotation does a Lot of Good: A Study in Bootstrapping Low-resource Named Entity Recognizers*  
Aditi Chaudhary, Jiateng Xie, Zaid Sheikh, Graham Neubig and Jaime Carbonell
- 14:06–14:24 *Open Domain Web Keyphrase Extraction Beyond Language Modeling*  
Lee Xiong, Chuan Hu, Chenyan Xiong, Daniel Campos and Arnold Overwijk
- 14:24–14:42 *TuckER: Tensor Factorization for Knowledge Graph Completion*  
Ivana Balazevic, Carl Allen and Timothy Hospedales
- 14:42–15:00 [TACL] *Weakly Supervised Domain Detection*  
Yumo Xu and Mirella Lapata

**Session 10D: Information Retrieval and Document Analysis II**

- 13:30–13:48 *Human-grounded Evaluations of Explanation Methods for Text Classification*  
Piyawat Lertvittayakumjorn and Francesca Toni
- 13:48–14:06 *A Context-based Framework for Modeling the Role and Function of On-line Resource Citations in Scientific Literature*  
He Zhao, Zhunchen Luo, Chong Feng, Anqing Zheng and Xiaopeng Liu
- 14:06–14:24 *Adversarial Reprogramming of Text Classification Neural Networks*  
Paarth Neekhara, Shehzeen Hussain, Shlomo Dubnov and Farinaz Koushanfar
- 14:24–14:42 *Document Hashing with Mixture-Prior Generative Models*  
Wei Dong, Qinliang Su, Dinghan Shen and Changyou Chen
- 14:42–15:00 *On Efficient Retrieval of Top Similarity Vectors*  
Shulong Tan, Zhixin Zhou, Zhaozhuo Xu and Ping Li

Thursday, November 7, 2019 (continued)

**Poster and Demo Session 10: Sentiment Analysis and Argument Mining, Lexical Semantics, Sentence-level Semantics**

*Multiplex Word Embeddings for Selectional Preference Acquisition*

Hongming Zhang, Jiaxin Bai, Yan Song, Kun Xu, Changlong Yu, Yangqiu Song, Wilfred Ng and Dong Yu

*MulCode: A Multiplicative Multi-way Model for Compressing Neural Language Model*

Yukun Ma, Patrick H. Chen and Cho-Jui Hsieh

*It's All in the Name: Mitigating Gender Bias with Name-Based Counterfactual Data Substitution*

Rowan Hall Maudslay, Hila Gonen, Ryan Cotterell and Simone Teufel

*Examining Gender Bias in Languages with Grammatical Gender*

Pei Zhou, Weijia Shi, Jieyu Zhao, Kuan-Hao Huang, Muhao Chen, Ryan Cotterell and Kai-Wei Chang

*Weakly Supervised Cross-lingual Semantic Relation Classification via Knowledge Distillation*

Yogarshi Vyas and Marine Carpuat

*Improved Word Sense Disambiguation Using Pre-Trained Contextualized Word Representations*

Christian Hadiwinoto, Hwee Tou Ng and Wee Chung Gan

*Do NLP Models Know Numbers? Probing Numeracy in Embeddings*

Eric Wallace, Yizhong Wang, Sujian Li, Sameer Singh and Matt Gardner

*A Split-and-Recombine Approach for Follow-up Query Analysis*

Qian Liu, Bei Chen, Haoyan Liu, Jian-Guang LOU, Lei Fang, Bin Zhou and Dongmei Zhang

*Text2Math: End-to-end Parsing Text into Math Expressions*

Yanyan Zou and Wei Lu

*Editing-Based SQL Query Generation for Cross-Domain Context-Dependent Questions*

Rui Zhang, Tao Yu, Heyang Er, Sungrok Shim, Eric Xue, Xi Victoria Lin, Tianze Shi, Caiming Xiong, Richard Socher and Dragomir Radev

*Syntax-aware Multilingual Semantic Role Labeling*

Shexia He, Zuchao Li and Hai Zhao

**Thursday, November 7, 2019 (continued)**

*Cloze-driven Pretraining of Self-attention Networks*

Alexei Baevski, Sergey Edunov, Yinhan Liu, Luke Zettlemoyer and Michael Auli

*Bridging the Gap between Relevance Matching and Semantic Matching for Short Text Similarity Modeling*

Jinfeng Rao, Linqing Liu, Yi Tay, Wei Yang, Peng Shi and Jimmy Lin

*A Syntax-aware Multi-task Learning Framework for Chinese Semantic Role Labeling*

Qingrong Xia, Zhenghua Li and Min Zhang

*Transfer Fine-Tuning: A BERT Case Study*

Yuki Arase and Jun'ichi Tsujii

*Data-Anonymous Encoding for Text-to-SQL Generation*

Zhen Dong, Shizhao Sun, Hongzhi Liu, Jian-Guang Lou and Dongmei Zhang

*Capturing Argument Interaction in Semantic Role Labeling with Capsule Networks*

Xinchi Chen, Chunchuan Lyu and Ivan Titov

*Learning Programmatic Idioms for Scalable Semantic Parsing*

Srinivasan Iyer, Alvin Cheung and Luke Zettlemoyer

*JuICE: A Large Scale Distantly Supervised Dataset for Open Domain Context-based Code Generation*

Rajas Agashe, Srinivasan Iyer and Luke Zettlemoyer

*Model-based Interactive Semantic Parsing: A Unified Framework and A Text-to-SQL Case Study*

Ziyu Yao, Yu Su, Huan Sun and Wen-tau Yih

*Modeling Graph Structure in Transformer for Better AMR-to-Text Generation*

Jie Zhu, Junhui Li, Muhua Zhu, Longhua Qian, Min Zhang and Guodong Zhou

*Syntax-Aware Aspect Level Sentiment Classification with Graph Attention Networks*

Binxuan Huang and Kathleen Carley

*Learning Explicit and Implicit Structures for Targeted Sentiment Analysis*

Hao Li and Wei Lu

**Thursday, November 7, 2019 (continued)**

*Capsule Network with Interactive Attention for Aspect-Level Sentiment Classification*

Chunning Du, Haifeng Sun, Jingyu Wang, Qi Qi, Jianxin Liao, Tong Xu and Ming Liu

*Emotion Detection with Neural Personal Discrimination*

Xiabing Zhou, Zhongqing Wang, Shoushan Li, Guodong Zhou and Min Zhang

*Specificity-Driven Cascading Approach for Unsupervised Sentiment Modification*

Pengcheng Yang, Junyang Lin, Jingjing Xu, Jun Xie, Qi Su and Xu SUN

*LexicalAT: Lexical-Based Adversarial Reinforcement Training for Robust Sentiment Classification*

Jingjing Xu, Liang Zhao, Hanqi Yan, Qi Zeng, Yun Liang and Xu SUN

*Leveraging Structural and Semantic Correspondence for Attribute-Oriented Aspect Sentiment Discovery*

Zhe Zhang and Munindar Singh

*From the Token to the Review: A Hierarchical Multimodal approach to Opinion Mining*

Alexandre Garcia, Pierre Colombo, Florence d'Alché-Buc, Slim Essid and Chloé Clavel

*Shallow Domain Adaptive Embeddings for Sentiment Analysis*

Prathusha K Sarma, Yingyu Liang and William Sethares

*Domain-Invariant Feature Distillation for Cross-Domain Sentiment Classification*

Mengting Hu, Yike Wu, Shiwan Zhao, Honglei Guo, Renhong Cheng and Zhong Su

*A Novel Aspect-Guided Deep Transition Model for Aspect Based Sentiment Analysis*

Yunlong Liang, Fandong Meng, Jinchao Zhang, Jinan Xu, Yufeng Chen and Jie Zhou

*Human-Like Decision Making: Document-level Aspect Sentiment Classification via Hierarchical Reinforcement Learning*

Jingjing Wang, Changlong Sun, Shoushan Li, Jiancheng Wang, Luo Si, Min Zhang, Xiaozhong Liu and Guodong Zhou

*A Dataset of General-Purpose Rebuttal*

Matan Orbach, Yonatan Bilu, Ariel Gera, Yoav Kantor, Lena Dankin, Tamar Lavee, Lili Kotlerman, Shachar Mirkin, Michal Jacovi, Ranit Aharonov and Noam Slonim

**Thursday, November 7, 2019 (continued)**

*Rethinking Attribute Representation and Injection for Sentiment Classification*

Reinald Kim Amplayo

*A Knowledge Regularized Hierarchical Approach for Emotion Cause Analysis*

Chuang Fan, Hongyu Yan, Jiachen Du, Lin Gui, Lidong Bing, Min Yang, Ruifeng Xu and Ruibin Mao

*Automatic Argument Quality Assessment - New Datasets and Methods*

Assaf Toledo, Shai Gretz, Edo Cohen-Karlik, Roni Friedman, Elad Venezian, Dan Lahav, Michal Jacovi, Ranit Aharonov and Noam Slonim

*Fine-Grained Analysis of Propaganda in News Article*

Giovanni Da San Martino, Seunghak Yu, Alberto Barrón-Cedeño, Rostislav Petrov and Preslav Nakov

*Context-aware Interactive Attention for Multi-modal Sentiment and Emotion Analysis*

Dushyant Singh Chauhan, Md Shad Akhtar, Asif Ekbal and Pushpak Bhattacharyya

*Sequential Learning of Convolutional Features for Effective Text Classification*

Avinash Madasu and Vijjini Anvesh Rao

*The Role of Pragmatic and Discourse Context in Determining Argument Impact*

Esin Durmus, Faisal Ladhak and Claire Cardie

*Aspect-Level Sentiment Analysis Via Convolution over Dependency Tree*

Kai Sun, Richong Zhang, Samuel Mensah, Yongyi Mao and Xudong Liu

15:00–15:30 *Coffee Break*

15:30–16:18 *Session 11*

**Thursday, November 7, 2019 (continued)**

**Session 11A: Machine Translation and Multilinguality III**

- 15:30–15:42 *Understanding Data Augmentation in Neural Machine Translation: Two Perspectives towards Generalization*  
Guanlin Li, Lemaou Liu, Guoping Huang, Conghui Zhu and Tiejun Zhao
- 15:42–15:54 *Simple and Effective Noisy Channel Modeling for Neural Machine Translation*  
Kyra Yee, Yann Dauphin and Michael Auli
- 15:54–16:06 *MultiFiT: Efficient Multi-lingual Language Model Fine-tuning*  
Julian Eisenschlos, Sebastian Ruder, Piotr Czapla, Marcin Kadras, Sylvain Gugger and Jeremy Howard
- 16:06–16:18 *Hint-Based Training for Non-Autoregressive Machine Translation*  
Zhuohan Li, Zi Lin, Di He, Fei Tian, Tao QIN, Liwei WANG and Tie-Yan Liu

**Session 11B: Syntax, Parsing, and Linguistic Theories**

- 15:30–15:42 *Working Hard or Hardly Working: Challenges of Integrating Typology into Neural Dependency Parsers*  
Adam Fisch, Jiang Guo and Regina Barzilay
- 15:42–15:54 *Cross-Lingual BERT Transformation for Zero-Shot Dependency Parsing*  
Yuxuan Wang, Wanxiang Che, Jiang Guo, Yijia Liu and Ting Liu
- 15:54–16:06 *Multilingual Grammar Induction with Continuous Language Identification*  
Wenjuan Han, Ge Wang, Yong Jiang and Kewei Tu
- 16:06–16:18 *Quantifying the Semantic Core of Gender Systems*  
Adina Williams, Damian Blasi, Lawrence Wolf-Sonkin, Hanna Wallach and Ryan Cotterell



**Thursday, November 7, 2019 (continued)**

**Session 11C: Sentiment and Social Media**

- 15:30–15:42 *Perturbation Sensitivity Analysis to Detect Unintended Model Biases*  
Vinodkumar Prabhakaran, Ben Hutchinson and Margaret Mitchell
- 15:42–15:54 *Automatically Inferring Gender Associations from Language*  
Serina Chang and Kathy McKeown
- 15:54–16:06 *Reporting the Unreported: Event Extraction for Analyzing the Local Representation of Hate Crimes*  
Aida Mostafazadeh Davani, Leigh Yeh, Mohammad Atari, Brendan Kennedy, Gwenyth Portillo Wightman, Elaine Gonzalez, Natalie Delong, Rhea Bhatia, Arineh Mirinjian, Xiang Ren and Morteza Dehghani
- 16:06–16:18 *Minimally Supervised Learning of Affective Events Using Discourse Relations*  
Jun Saito, Yugo Murawaki and Sadao Kurohashi

**Session 11D: Information Extraction IV**

- 15:30–15:42 *Event Detection with Multi-Order Graph Convolution and Aggregated Attention*  
Haoran Yan, Xiaolong Jin, Xiangbin Meng, Jiafeng Guo and Xueqi Cheng
- 15:42–15:54 *Coverage of Information Extraction from Sentences and Paragraphs*  
Simon Razniewski, Nitisha Jain, Paramita Mirza and Gerhard Weikum
- 15:54–16:06 *HMEAE: Hierarchical Modular Event Argument Extraction*  
Xiaozhi Wang, Ziqi Wang, Xu Han, Zhiyuan Liu, Juanzi Li, Peng Li, Maosong Sun, Jie Zhou and Xiang Ren
- 16:06–16:18 *Entity, Relation, and Event Extraction with Contextualized Span Representations*  
David Wadden, Ulme Wennberg, Yi Luan and Hannaneh Hajishirzi

Thursday, November 7, 2019 (continued)

**Poster and Demo Session 11: Discourse and Pragmatics, Linguistic Theories, Textual Inference, Question Answering, Summarization and Generation**

*Next Sentence Prediction helps Implicit Discourse Relation Classification within and across Domains*

Wei Shi and Vera Demberg

*Split or Merge: Which is Better for Unsupervised RST Parsing?*

Naoki Kobayashi, Tsutomu Hirao, Kengo Nakamura, Hidetaka Kamigaito, Manabu Okumura and Masaaki Nagata

*BERT for Coreference Resolution: Baselines and Analysis*

Mandar Joshi, Omer Levy, Luke Zettlemoyer and Daniel Weld

*Linguistic Versus Latent Relations for Modeling Coherent Flow in Paragraphs*

Dongyeop Kang and Eduard Hovy

*Event Causality Recognition Exploiting Multiple Annotators' Judgments and Background Knowledge*

Kazuma Kadowaki, Ryu Iida, Kentaro Torisawa, Jong-Hoon Oh and Julien Kloetzer

*What Part of the Neural Network Does This? Understanding LSTMs by Measuring and Dissecting Neurons*

Ji Xin, Jimmy Lin and Yaoliang Yu

*Quantity doesn't buy quality syntax with neural language models*

Marten van Schijndel, Aaron Mueller and Tal Linzen

*Higher-order Comparisons of Sentence Encoder Representations*

Mostafa Abdou, Artur Kulmizev, Felix Hill, Daniel M. Low and Anders Søgaard

*Text Genre and Training Data Size in Human-like Parsing*

John Hale, Adhiguna Kuncoro, Keith Hall, Chris Dyer and Jonathan Brennan

*Feature2Vec: Distributional semantic modelling of human property knowledge*

Steven Derby, Paul Miller and Barry Devereux

*Sunny and Dark Outside?! Improving Answer Consistency in VQA through Entailed Question Generation*

Arijit Ray, Karan Sikka, Ajay Divakaran, Stefan Lee and Giedrius Burachas

**Thursday, November 7, 2019 (continued)**

*GeoSQA: A Benchmark for Scenario-based Question Answering in the Geography Domain at High School Level*

Zixian Huang, Yulin Shen, Xiao Li, Yu'ang Wei, Gong Cheng, Lin Zhou, Xinyu Dai and Yuzhong Qu

*Revisiting the Evaluation of Theory of Mind through Question Answering*

Matthew Le, Y-Lan Boureau and Maximilian Nickel

*Multi-passage BERT: A Globally Normalized BERT Model for Open-domain Question Answering*

Zhiguo Wang, Patrick Ng, Xiaofei Ma, Ramesh Nallapati and Bing Xiang

*A Span-Extraction Dataset for Chinese Machine Reading Comprehension*

Yiming Cui, Ting Liu, Wanxiang Che, Li Xiao, Zhipeng Chen, Wentao Ma, Shijin Wang and Guoping Hu

*MICRON: Multigranular Interaction for Contextualizing RepresentatiON in Non-factoid Question Answering*

Hojae Han, Seungtaek Choi, Haeju Park and Seung-won Hwang

*Machine Reading Comprehension Using Structural Knowledge Graph-aware Network*

Delai Qiu, Yuanzhe Zhang, Xinwei Feng, Xiangwen Liao, Wenbin Jiang, Yajuan Lyu, Kang Liu and Jun Zhao

*Answering Conversational Questions on Structured Data without Logical Forms*

Thomas Mueller, Francesco Piccinno, Peter Shaw, Massimo Nicosia and Yasemin Altun

*Improving Answer Selection and Answer Triggering using Hard Negatives*

Sawan Kumar, shweta garg, Kartik Mehta and Nikhil Rasiwasia

*Can You Unpack That? Learning to Rewrite Questions-in-Context*

Ahmed Elgohary, Denis Peskov and Jordan Boyd-Graber

*Quoref: A Reading Comprehension Dataset with Questions Requiring Coreferential Reasoning*

Pradeep Dasigi, Nelson F. Liu, Ana Marasovic, Noah A. Smith and Matt Gardner

*Zero-shot Reading Comprehension by Cross-lingual Transfer Learning with Multilingual Language Representation Model*

Tsung-Yuan Hsu, Chi-Liang Liu and Hung-yi Lee

*QuaRTz: An Open-Domain Dataset of Qualitative Relationship Questions*

Oyvind Tafjord, Matt Gardner, Kevin Lin and Peter Clark

**Thursday, November 7, 2019 (continued)**

*Giving BERT a Calculator: Finding Operations and Arguments with Reading Comprehension*

Daniel Andor, Luheng He, Kenton Lee and Emily Pitler

*A Gated Self-attention Memory Network for Answer Selection*

Tuan Lai, Quan Hung Tran, Trung Bui and Daisuke Kihara

*Polly Want a Cracker: Analyzing Performance of Parroting on Paraphrase Generation Datasets*

Hong-Ren Mao and Hung-Yi Lee

*Query-focused Sentence Compression in Linear Time*

Abram Handler and Brendan O'Connor

*Generating Personalized Recipes from Historical User Preferences*

Bodhisattwa Prasad Majumder, Shuyang Li, Jianmo Ni and Julian McAuley

*Generating Highly Relevant Questions*

Jiazuo Qiu and Deyi Xiong

*Improving Neural Story Generation by Targeted Common Sense Grounding*

Huanru Henry Mao, Bodhisattwa Prasad Majumder, Julian McAuley and Garrison Cottrell

*Abstract Text Summarization: A Low Resource Challenge*

Shantipriya Parida and Petr Motlicek

*Generating Modern Poetry Automatically in Finnish*

Mika Hämmäläinen and Khalid Alnajjar

*SUM-QE: a BERT-based Summary Quality Estimation Model*

Stratos Xenouelas, Prodromos Malakasiotis, Marianna Apidianaki and Ion Androutsopoulos

*An Empirical Comparison on Imitation Learning and Reinforcement Learning for Paraphrase Generation*

Wanyu Du and Yangfeng Ji

*Countering the Effects of Lead Bias in News Summarization via Multi-Stage Training and Auxiliary Losses*

Matt Grenander, Yue Dong, Jackie Chi Kit Cheung and Annie Louis

**Thursday, November 7, 2019 (continued)**

*Learning Rhyming Constraints using Structured Adversaries*

Harsh Jhamtani, Sanket Vaibhav Mehta, Jaime Carbonell and Taylor Berg-Kirkpatrick

*Question-type Driven Question Generation*

Wenjie Zhou, Minghua Zhang and Yunfang Wu

*Deep Reinforcement Learning with Distributional Semantic Rewards for Abstractive Summarization*

Siyao Li, Deren Lei, Pengda Qin and William Yang Wang

*Clause-Wise and Recursive Decoding for Complex and Cross-Domain Text-to-SQL Generation*

Dongjun Lee

*Do Nuclear Submarines Have Nuclear Captains? A Challenge Dataset for Commonsense Reasoning over Adjectives and Objects*

James Mullenbach, Jonathan Gordon, Nanyun Peng and Jonathan May

*Aggregating Bidirectional Encoder Representations Using MatchLSTM for Sequence Matching*

Bo Shao, Yeyun Gong, Weizhen Qi, Nan Duan and Xiaola Lin

*What Does This Word Mean? Explaining Contextualized Embeddings with Natural Language Definition*

Ting-Yun Chang and Yun-Nung Chen

*Pre-Training BERT on Domain Resources for Short Answer Grading*

Chul Sung, Tejas Dhamecha, Swarnadeep Saha, Tengfei Ma, Vinay Reddy and Rishi Arora

*WIQA: A dataset for "What if..." reasoning over procedural text*

Niket Tandon, Bhavana Dalvi, Keisuke Sakaguchi, Peter Clark and Antoine Bosselut

*Evaluating BERT for natural language inference: A case study on the Commitment-Bank*

Nanjiang Jiang and Marie-Catherine de Marneffe

*Incorporating Domain Knowledge into Medical NLI using Knowledge Graphs*

Soumya Sharma, Bishal Santra, Abhik Jana, Santosh Tokala, Niloy Ganguly and Pawan Goyal

16:18–16:30 *Mini-Break*

**Thursday, November 7, 2019 (continued)**

16:30–17:24 *Session 12*

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

16:30–16:48 *The FLORES Evaluation Datasets for Low-Resource Machine Translation: Nepali–English and Sinhala–English*

Francisco Guzmán, Peng-Jen Chen, Myle Ott, Juan Pino, Guillaume Lample, Philipp Koehn, Vishrav Chaudhary and Marc’Aurelio Ranzato

16:48–17:06 *Mask-Predict: Parallel Decoding of Conditional Masked Language Models*

Marjan Ghazvininejad, Omer Levy, Yinhan Liu and Luke Zettlemoyer

17:06–17:24 *Learning to Copy for Automatic Post-Editing*

Xuanheng Huang, Yang Liu, Huanbo Luan, Jingfang Xu and Maosong Sun

**Session 12B: Lexical Semantics III**

16:30–16:48 *Exploring Human Gender Stereotypes with Word Association Test*

Yupe Du, Yuanbin Wu and Man Lan

16:48–17:06 [TACL] *Still a Pain in the Neck: Evaluating Text Representations on Lexical Composition*

Vered Shwartz and Ido Dagan

17:06–17:24 [TACL] *Where’s My Head? Definition, Dataset and Models for Numeric Fused-Heads Identification and Resolution*

Yanai Elazar and Yoav Goldberg

**Session 12C: Generation III**

16:30–16:48 *A Modular Architecture for Unsupervised Sarcasm Generation*

Abhijit Mishra, Tarun Tater and Karthik Sankaranarayanan

16:48–17:06 *Generating Classical Chinese Poems from Vernacular Chinese*

Zhichao Yang, Pengshan Cai, Yansong Feng, Fei Li, Weijiang Feng, Elena Suet-Ying Chiu and hong yu

17:06–17:24 *Set to Ordered Text: Generating Discharge Instructions from Medical Billing Codes*

Litton J Kurisinkel and Nancy Chen

**Thursday, November 7, 2019 (continued)**

**Session 12D: Phonology, Word Segmentation, and Parsing**

- 16:30–16:48 *Constraint-based Learning of Phonological Processes*  
Shraddha Barke, Rose Kunkel, Nadia Polikarpova, Eric Meinhardt, Eric Bakovic  
and Leon Bergen
- 16:48–17:06 *Detect Camouflaged Spam Content via StoneSkipping: Graph and Text Joint Em-  
bedding for Chinese Character Variation Representation*  
Zhuoren Jiang, Zhe Gao, Guoxiu He, Yangyang Kang, Changlong Sun, Qiong  
Zhang, Luo Si and Xiaozhong Liu
- 17:06–17:24 [TACL] *A Generative Model for Punctuation in Dependency Trees*  
Xiang Lisa Li, Dingquan Wang and Jason Eisner

**Poster and Demo Session 12: Information Extraction, Text Mining and NLP  
Applications, Social Media and Computational Social Science, Sentiment Anal-  
ysis and Argument Mining**

*An Attentive Fine-Grained Entity Typing Model with Latent Type Representation*  
Ying Lin and Heng Ji

*An Improved Neural Baseline for Temporal Relation Extraction*  
Qiang Ning, Sanjay Subramanian and Dan Roth

*Improving Fine-grained Entity Typing with Entity Linking*  
Hongliang Dai, Donghong Du, Xin Li and Yangqiu Song

*Combining Spans into Entities: A Neural Two-Stage Approach for Recognizing Dis-  
contiguous Entities*  
Bailin Wang and Wei Lu

*Cross-Sentence N-ary Relation Extraction using Lower-Arity Universal Schemas*  
Kosuke Akimoto, Takuya Hiraoka, Kunihiko Sadamasa and Mathias Niepert

*Gazetteer-Enhanced Attentive Neural Networks for Named Entity Recognition*  
Hongyu Lin, Yaojie Lu, Xianpei Han, Le Sun, Bin Dong and Shanshan Jiang

*“A Buster Keaton of Linguistics”: First Automated Approaches for the Extraction  
of Vossian Antonomasia*  
Michel Schwab, Robert Jäschke, Frank Fischer and Jannik Strötgen

**Thursday, November 7, 2019 (continued)**

*Multi-Task Learning for Chemical Named Entity Recognition with Chemical Compound Paraphrasing*

Taiki Watanabe, Akihiro Tamura, Takashi Ninomiya, Takuya Makino and Tomoya Iwakura

*FewRel 2.0: Towards More Challenging Few-Shot Relation Classification*

Tianyu Gao, Xu Han, Hao Zhu, Zhiyuan Liu, Peng Li, Maosong Sun and Jie Zhou

*ner and pos when nothing is capitalized*

Stephen Mayhew, Tatiana Tsygankova and Dan Roth

*CaRB: A Crowdsourced Benchmark for Open IE*

Sangnie Bhardwaj, Samarth Aggarwal and Mausam Mausam

*Weakly Supervised Attention Networks for Entity Recognition*

Barun Patra and Joel Ruben Antony Moniz

*Revealing and Predicting Online Persuasion Strategy with Elementary Units*

Gaku Morio, Ryo Egawa and Katsuhide Fujita

*A Challenge Dataset and Effective Models for Aspect-Based Sentiment Analysis*

Qingnan Jiang, Lei Chen, Ruifeng Xu, Xiang Ao and Min Yang

*Learning with Noisy Labels for Sentence-level Sentiment Classification*

Hao Wang, Bing Liu, Chaozhuo Li, Yan Yang and Tianrui Li

*DENS: A Dataset for Multi-class Emotion Analysis*

Chen Liu, Muhammad Osama and Anderson De Andrade

*Multi-Task Stance Detection with Sentiment and Stance Lexicons*

Yingjie Li and Cornelia Caragea

*A Robust Self-Learning Framework for Cross-Lingual Text Classification*

Xin Dong and Gerard de Melo

*Learning to Flip the Sentiment of Reviews from Non-Parallel Corpora*

Canasai Kruengkrai

*Label Embedding using Hierarchical Structure of Labels for Twitter Classification*

Taro Miyazaki, Kiminobu Makino, Yuka Takei, Hiroki Okamoto and Jun Goto



**Thursday, November 7, 2019 (continued)**

*Interpretable Word Embeddings via Informative Priors*

Miriam Hurtado Bodell, Martin Arvidsson and Måns Magnusson

*Adversarial Removal of Demographic Attributes Revisited*

Maria Barrett, Yova Kementchedjhieva, Yanai Elazar, Desmond Elliott and Anders Søgaard

*A deep-learning framework to detect sarcasm targets*

Jsabanta Patro, Srijan Bansal and Animesh Mukherjee

*In Plain Sight: Media Bias Through the Lens of Factual Reporting*

Lisa Fan, Marshall White, Eva Sharma, Ruisi Su, Prafulla Kumar Choubey, Ruihong Huang and Lu Wang

*Incorporating Label Dependencies in Multilabel Stance Detection*

William Ferreira and Andreas Vlachos

*Investigating Sports Commentator Bias within a Large Corpus of American Football Broadcasts*

Jack Merullo, Luke Yeh, Abram Handler, Alvin Grissom II, Brendan O'Connor and Mohit Iyyer

*Charge-Based Prison Term Prediction with Deep Gating Network*

Huajie Chen, Deng Cai, Wei Dai, Zehui Dai and Yadong Ding

*Restoring ancient text using deep learning: a case study on Greek epigraphy*

Yannis Assael, Thea Sommerschild and Jonathan Prag

*Embedding Lexical Features via Tensor Decomposition for Small Sample Humor Recognition*

Zhenjie Zhao, Andrew Cattle, Evangelos Papalexakis and Xiaojuan Ma

*EDA: Easy Data Augmentation Techniques for Boosting Performance on Text Classification Tasks*

Jason Wei and Kai Zou

*Neural News Recommendation with Multi-Head Self-Attention*

Chuhan Wu, Fangzhao Wu, Suyu Ge, Tao Qi, Yongfeng Huang and Xing Xie

*What Matters for Neural Cross-Lingual Named Entity Recognition: An Empirical Analysis*

Xiaolei Huang, Jonathan May and Nanyun Peng

**Thursday, November 7, 2019 (continued)**

*Telling the Whole Story: A Manually Annotated Chinese Dataset for the Analysis of Humor in Jokes*

Dongyu Zhang, Heting Zhang, Xikai Liu, Hongfei LIN and Feng Xia

*Generating Natural Anagrams: Towards Language Generation Under Hard Combinatorial Constraints*

Masaaki Nishino, Sho Takase, Tsutomu Hirao and Masaaki Nagata

*STANCY: Stance Classification Based on Consistency Cues*

Kashyap Popat, Subhabrata Mukherjee, Andrew Yates and Gerhard Weikum

*Cross-lingual intent classification in a low resource industrial setting*

Talaat Khalil, Kornel Kielczewski, Georgios Christos Chouliaras, Amina Keldibek and Maarten Versteegh

*SoftRegex: Generating Regex from Natural Language Descriptions using Softened Regex Equivalence*

Jun-U Park, Sang-Ki Ko, Marco Cognetta and Yo-Sub Han

*Using Clinical Notes with Time Series Data for ICU Management*

Swaraj Khadanga, Karan Aggarwal, Shafiq Joty and Jaideep Srivastava

*Spelling-Aware Construction of Macaronic Texts for Teaching Foreign-Language Vocabulary*

Adithya Renduchintala, Philipp Koehn and Jason Eisner

*Towards Machine Reading for Interventions from Humanitarian-Assistance Program Literature*

Bonan Min, Yee Seng Chan, Haoling Qiu and Joshua Fasching

*RUN through the Streets: A New Dataset and Baseline Models for Realistic Urban Navigation*

Tzuf Paz-Argaman and Reut Tsarfaty

*Context-Aware Conversation Thread Detection in Multi-Party Chat*

Ming Tan, Dakuo Wang, Yupeng Gao, Haoyu Wang, Saloni Potdar, Xiaoxiao Guo, Shiyu Chang and Mo Yu

17:24–17:30 *Mini-Break*

17:30–18:00 *Best Paper Awards and Closing*