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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, Emmanuelle 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-IJNL 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 Saedi 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
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.

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<th>Long</th>
<th>Short</th>
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<td>Reviewed</td>
<td>1,813</td>
<td>1,063</td>
<td>2,876</td>
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<td>Accepted as talk</td>
<td>164 (9.0%)</td>
<td>48 (4.5%)</td>
<td>212 (7.3%)</td>
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<tr>
<td>Accepted as poster</td>
<td>301 (16.6%)</td>
<td>170 (16.0%)</td>
<td>471 (16.4%)</td>
</tr>
<tr>
<td>Accepted (total)</td>
<td>465 (25.6%)</td>
<td>218 (20.5%)</td>
<td>683 (23.7%)</td>
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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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Kentaro Inui, Tohoku University, Japan

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Vincent Ng, University of Texas at Dallas, USA
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Conference Handbook Advisor
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Marzieh Saeidi, Facebook AI Research, UK

**Childcare Policy and Grant Coordinators**
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Sujian Li, Peking University, China

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Vivek Srikumar, University of Utah, USA
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Vincent Ng, University of Texas at Dallas, USA
Xiaojun Wan, Peking University, China

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Discourse and Pragmatics
Bonnie Webber, University of Edinburgh, UK

Information Extraction
Dan Roth, University of Pennsylvania, USA

Information Retrieval and Document Analysis
Hang Li, Bytedance Technology, China

Lexical Semantics
Mona Diab, George Washington University, USA

Linguistic Theories, Cognitive Modeling and Psycholinguistics
Andrew Kehler, University of California, San Diego, USA

Machine Learning for NLP
Kevin Duh, Johns Hopkins University, USA

Machine Translation and Multilinguality
Chris Quirk, Microsoft Research, USA

Phonology, Morphology and Word Segmentation
Yuji Matsumoto, Nara Institute of Science and Technology, Japan

Question Answering
Scott Wen-tau Yih, Facebook AI Research, USA

Sentence-level Semantics
Mirella Lapata, University of Edinburgh, UK

Sentiment Analysis and Argument Mining
Yulan He, University of Warwick, UK

Social Media and Computational Social Science
Dirk Hovy, Bocconi University, Italy

Speech, Vision, Robotics, Multimodal and Grounding
Haizhou Li, National University of Singapore, Singapore
Summarization and Generation
Michael White, Ohio State University, USA

Tagging, Chunking, Syntax and Parsing
Yue Zhang, Westlake University, China

Text Mining and NLP Applications
Jimmy Lin, University of Waterloo, Canada

Textual Inference and Other Areas of Semantics
Alessandro Moschitti, Amazon, USA

Area Chairs

Dialog and Interactive Systems
Luciana Benotti, Asli Celikyilmaz, Yun-Nung Chen, Milica Gasic, Ryuichiro Higashinaka, Casey Kennington, Kazunori Komatani, Sungjin Lee, Stefan Ultes

Discourse and Pragmatics
Yangfeng Ji, Shafiq Joty, Annie Louis, Michael Strube

Information Extraction
Snigdha Chaturvedi, Doug Downey, Radu Florian, Daniel Khashabi, Marius Pasca, Roi Reichart, Satoshi Sekine, Vivek Srikumar, Shyam Upadhyay, Jun Zhao

Information Retrieval and Document Analysis
Eugene Agichtein, Gerard de Melo, Oren Kurland, Craig Macdonald, Alice Oh, Xiang Ren, Quan Wang, Andrew Yates

Lexical Semantics
Marianna Apidianaki, Mohit Bansal, Manaal Faruqui, Qin Lu, Michael Roth

Linguistic Theories, Cognitive Modeling and Psycholinguistics
Leon Bergen, Richard Futrell, William Schuler, Suzanne Stevenson

Machine Learning for NLP

Machine Translation and Multilinguality
Marine Carpuat, Daniel Cer, Boxing Chen, Colin Cherry, David Chiang, Ann Clifton, Marcello Federico, Orhan Firat, George Foster, Yang Liu, Minh-Thang Luong, Haitao Mi, Anders Søgaard, Jinsong Su, Zhaopeng Tu, Taro Watanabe, Deyi Xiong, Jiajun Zhang

Phonology, Morphology and Word Segmentation
Nizar Habash, Kemal Oflazer, Xipeng Qiu, Hiroyuki Shindo

Question Answering
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Sentence-level Semantics
Jacob Andreas, Li Dong, Daniel Gildea, Wei Lu, Patrick Pantel

Sentiment Analysis and Argument Mining
Nikolaos Aletras, Alexandra Balahur, Dan Goldwasser, Minlie Huang, Saif Mohammad, Chris Reed, Rui Xia, Xiaodan Zhu

Social Media and Computational Social Science
David Bamman, David Jurgens, Dong Nguyen, Alan Ritter, Chenhao Tan, Oren Tsur, Yulia Tsvetkov, Svitlana Volkova, Wayne Xin Zhao

Speech, Vision, Robotics, Multimodal and Grounding
Yoav Artzi, Hannaneh Hajishirzi, Xiaodong He, Gina-Anne Levow, Yang Liu, Soujanya Poria, Kai Yu

Summarization and Generation
Anya Belz, Giuseppe Carenini, Jackie Chi Kit Cheung, Mark Dras, Michael Elhadad, Mary Ellen Foster, Claire Gardent, Albert Gatt, Chin-Yew Lin, Kathleen McKeown, Shashi Narayanan, Lu Wang, Leo Wanner, Sina Zarrieß

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Text Mining and NLP Applications
Kai-Wei Chang, Wei Gao, Lun-Wei Ku, Lei Li, Zhiyuan Liu, David Mimno, Preslav Nakov, Ming-Feng Tsai, Yoshimasa Tsuruoka, Byron C. Wallace, Min Zhang

Textual Inference and Other Areas of Semantics
Weiwei Cheng, Markus Dreyer, Cicero Nogueira dos Santos, Aliaksei Severyn, Kevin Small, Nianwen Xue, Fabio Massimo Zanzotto

Reviewers
Outstanding ACs and Reviewers

We would like to recognize the following outstanding Area Chairs.

We would also like to recognize the following outstanding reviewers.

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.
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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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 1

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 Wiegreffe 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

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**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
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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
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, Zhi-gang 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

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
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
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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
Xiaohan Ding and Kevin Gimpel
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

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
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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 Krämer

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

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

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

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

Filipe Mesquita, Matteo Cannaviccio, Jordan Schmidek, Paramita Mirza and Denilson Barbosa

14:42–15:00  Effective Use of Transformer Networks for Entity Tracking
Aditya Gupta and Greg Durrett
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
Xuewen 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
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Multi-agent Learning for Neural Machine Translation
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Pivot-based Transfer Learning for Neural Machine Translation between Non-English Languages
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Context-Aware Monolingual Repair for Neural Machine Translation
Elena Voita, Rico Sennrich and Ivan Titov
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 Czarnowska, 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
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 Xuanjing 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
Yaushian 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 Kementchedjhieva, Anders Søgaard and Adam Lopez

Target Language-Aware Constrained Inference for Cross-lingual Dependency Parsing
Tao Meng, Nanyun Peng and Kai-Wei Chang
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

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
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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

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

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 Aralikatte, Heather Lent, Ana Valeria Gonzalez, Daniel Hershcovich, Chen Qiu, Anders Sandholm, Michael Ringaard 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

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

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
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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

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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
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

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: Parallelly 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 Napoles, Maria Nadejde and Joel Tetreault
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
zhbin 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
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
Liliang 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
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
Weiyan 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

Partners in Crime: Multi-view Sequential Inference for Movie Understanding
Nikos Papasarantopoulos, Lea Frermann, Mirella Lapata and Shay B. Cohen
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] 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

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 Dunkers, 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

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

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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 Duxin 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
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 Kulmiziev, 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

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

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

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 Christodouloupolous 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
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
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 Vasan 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 Kiesewetter, Jan Zottmann, Michael Sailer, Elisabeth Bauer, Frank Fischer, Martin R. Fischer and Iryna Gurevych

[DEMO] *A Summarization System for Scientific Documents*

[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*
Qiongkai 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 Kementchedjhieva, 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
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, Shunyao 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, Dursh 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
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
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
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

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  *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
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, Shiyan 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
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
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, Quanjia 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

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-I: 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

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

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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
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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

ModelingConversation 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
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 Giligorić, 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
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, Huaiyao Tou, Zhongyu Wei and Ting Chen
Thursday, November 7, 2019 (continued)

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 Karmakham, 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, Pramit 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
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

Hao Tan and Mohit Bansal

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
Weiying 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, Chilie Tan, Xiaolin Li and Jun Xiao
**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 Lerntittayakumjorn and Francesca Toni

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
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
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
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, Lemao 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
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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, Gwennyth 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
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
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 Shyu, Massimo Nicosia and Yasemin Altun

Improving Answer Selection and Answer Triggering using Hard Negatives
Sawan Kumar, shweta garg, Kartik Mehta and Nikhil Rasiwasia

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
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 Hämäläinen and Khalid Alnajjar

SUM-QE: a BERT-based Summary Quality Estimation Model
Stratos Xenouleas, 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
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 Bosse-lut

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

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16:30–17:24  Session 12

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

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
Xuancheng 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
Yupei Du, Yuanbin Wu and Man Lan

Vered Shwartz and Ido Dagan

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 Embedding for Chinese Character Variation Representation
Zhuoren Jiang, Zhe Gao, Guoxiu He, Yangyang Kang, Changlong Sun, Qiong Zhang, Luo Si and Xiaozhong Liu

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 Analysis 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
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Combining Spans into Entities: A Neural Two-Stage Approach for Recognizing Discontiguous Entities
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Cross-Sentence N-ary Relation Extraction using Lower-Arity Universal Schemas
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Gazetteer-Enhanced Attentive Neural Networks for Named Entity Recognition
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“A Buster Keaton of Linguistics”: First Automated Approaches for the Extraction of Vossian Antonomasia
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Multi-Task Learning for Chemical Named Entity Recognition with Chemical Compound Paraphrasing
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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

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CaRB: A Crowdsourced Benchmark for Open IE
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Weakly Supervised Attention Networks for Entity Recognition
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Revealing and Predicting Online Persuasion Strategy with Elementary Units
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A Challenge Dataset and Effective Models for Aspect-Based Sentiment Analysis
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Learning with Noisy Labels for Sentence-level Sentiment Classification
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DENS: A Dataset for Multi-class Emotion Analysis
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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
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Label Embedding using Hierarchical Structure of Labels for Twitter Classification
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Interpretable Word Embeddings via Informative Priors
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Adversarial Removal of Demographic Attributes Revisited
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A deep-learning framework to detect sarcasm targets
Jasabanta 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
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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 Sommerschield 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
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What Matters for Neural Cross-Lingual Named Entity Recognition: An Empirical Analysis
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**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**
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**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 Kiełczewski, Georgios Christos Chouliaras, Amina Keldibek, and Maarten Versteegh

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