

EMNLP 2020

**2020 Conference on Empirical Methods in  
Natural Language Processing**

**Proceedings of the Conference**

November 16–20, 2020

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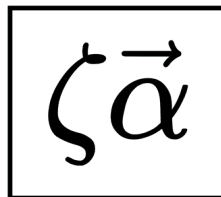
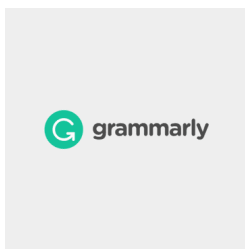
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## Preface by the General Chair

Like my colleague, Dan Jurafsky, General Chair of ACL-2020, the first ACL conference to be hit by the virus that has up-ended our world, I am sitting at my laptop, in the same chair I have sat in since March 2020, to welcome you to EMNLP-2020. It is also where I am likely to be sitting for EMNLP-2020 itself.

As in previous years, the purpose of the General Chair’s preface to express thanks — first, to the obvious people whose heroic efforts brought such a large conference to fruition, including:

- the three Programme Co-Chairs — Trevor Cohn, Yulan He and Yang Liu — who oversaw a process in which 3677 papers were submitted for review from 57 countries;
- the Senior Area Chairs, Area Chairs and reviewers whose expertise enabled authors to learn from their reviews and to deliver papers that improved on their original submissions;
- the Publication Co-Chairs — Yang Gao, Veronika Laippala and Philippe Muller — and the experience they gained from the General Publication Chair, Fei Liu, who met the challenge of identifying and correcting the myriad ways in which papers could be mis-formatted and assembled the result into our conference proceedings
- the Co-Chairs of *Findings of the ACL* – Jing Li and Lemaou Liu – ACL’s new publication venue, and Kushal Arora, who implemented a new process for matching Findings papers to workshops where they might be presented;
- the Tutorial Co-Chairs — Aline Villavicencio and Benjamin Van Durme — who selected the seven tutorials to be presented at the conference;
- the Demonstration Co-Chairs — Qun Liu and David Schlangen — who did the same for the 35 demos that we will see over the course of the conference;
- the new Ethics Co-Chairs — Dirk Hovy and Karèn Fort — who undertook the delicate task of checking papers that had been flagged for potential ethics issues;
- our website chair, Andy MacKinlay, who ensured that the EMNLP-2020 website stayed fit for purpose.

But, in addition, we must also thank others whose support has been critical to both virtualizing EMNLP-2020 and keeping the community engaged with it —

- the members of the Virtual Infra-structure Committee, co-chaired by Jan-Christoph Klie and Zhongyu Wei — Eduardo Blanco, Yang Feng and Yansong Feng — helped by advisors from the ACL-2020 Virtual Infra-structure Committee — Hao Fang, Sudha Rao and Xiruo Ding;
- the Volunteer Coordinator — Kellie Webster — who managed to attract over 200 student and early career volunteers willing to help make EMNLP a success;
- of those student and early career volunteers, those who shouldered responsibility for important parts of the infra-structure, including Luciana Benotti and Cyril Weerasooriya (RocketChat), Ed Howard-Jones (HelpDesk), and Gisela Vallejo (Zoom);
- also of those student and early career volunteers, those who undertook to build booths for our sponsors — Kaushal Kumar Maurya, Francisco Xavier Sumba Toral, Saichethan M. Reddy, Shirley Anugrah Hayati, Manan Dey, Eraldo R. Fernandes, Arshiya Aggarwal, Alfredo Lozano, Jiaxin Pei, Junheng Hao, Reem Al-Yami, Anish Mohan, Christian Kavouras, Tornike Tsereteli, Emily Chen, Wiem Ben Rim and Chandrahas;

- the Publicity Co-chairs — Anna Rogers and Ruifeng Xu — who have served as both the voice of EMNLP in communicating with the community and as its ears, reporting on community concerns as soon as they were expressed;
- the Workshop Co-chairs — Jackie Chi Kit Cheung and Lonneke van der Plas — whose work in selecting the 24 workshops for EMNLP-2020 turned out to be only the start of ensuring that the workshops could successfully run virtually;
- the Diversity & Inclusion Chairs – Isabelle Augenstein and Chris Brew — and the D&I Student Chairs – Murathan Kurfali and Prathyusha Jwalapuram — who have worked tirelessly to make EMNLP as welcoming and inclusive as possible for all participants. The activities that they have worked with community members to create (Birds of a Feather sessions, Affinity Group sessions, student panels, Mentoring sessions and Coffee Socials) should contribute to reinforcing us as a community (and as sub-groups within the community), despite not being together physically.

We also want to express special thanks to Priscilla Rasmussen, the ACL Business Manager, first for booking EMNLP 2020 into a beautiful resort in the Dominican Republic, and then for getting the booking postponed until EMNLP 2021.

Last but not least, I would like to express gratitude to our sponsors, whose generous support has been invaluable in building up EMNLP to what it is now. These include our Diamond-level sponsors — Bloomberg Engineering, Google Research, Apple and Amazon Science; our Platinum-level sponsors — Baidu, Megagon Labs, Facebook and DeepMind; our Gold-level sponsors — Grammarly, ByteDance and Zeta Alpha; our Silver-level sponsors — Babelscape, Naver, Adobe, Hitachi and Salesforce; and our Bronze-level sponsor — USC ISI. DeepMind has also generously contributed to supporting our Diversity & Inclusion activities.

EMNLP 2020 General Chair

*Bonnie Webber*, University of Edinburgh, UK

## Preface by the Program Committee Co-Chairs

Welcome to EMNLP 2020!

Due to the unprecedented situation with the Covid-19 pandemic, EMNLP 2020 will be held completely online this year. We decided to move EMNLP to a virtual format early on, when the pandemic just started, and postponed the paper submission deadlines by three weeks such that authors affected by the pandemic could have more time for their paper submissions. This resulted in a much tighter schedule for paper review and decisions, as well as publications, workshop programs, virtual infrastructure, etc. However, thanks to everyone’s hard work, we made it.

We received a record number of 3,677 submissions. This is a significant increase of 26% over EMNLP 2019, making it the largest NLP conference to date in terms of paper submissions. After removing withdrawals and desk rejecting papers which violated our formatting requirements, the anonymity policy, or double submission policy, 3,359 submissions were sent out for review. Despite the sharp increase in submissions, we kept the acceptance rates at a similar level as past years. The acceptance statistics are shown below:

	Long	Short	Total
Reviewed	2,455	904	3,359
Accepted	602	150	752
Acceptance Rate	24.6%	16.6%	22.4%

It is important to have a well-organized review structure to handle a large number of submissions. We first set up a total of 21 tracks (including a special Multidisciplinary and Area Chair Conflict of Interest track) based on the track information in past conferences such as ACL 2020, EMNLP 2019 and NAACL 2019. We used the submission numbers per track from past conferences to estimate the number of Senior Area Chairs (SACs) and Area Chairs (ACs) required for each track. We eventually recruited 33 SACs and 196 ACs.

For reviewer recruitment, we started with the reviewer lists from NAACL 2019, EMNLP 2019 and ACL 2020 and sent out initial invitations asking reviewers to express their track preferences. In addition, we introduced a new policy that in order to submit paper(s) to EMNLP, at least one author must be nominated to serve as a reviewer (usually the most senior author) and for that author to take on a full load of up to 6 reviews. We filtered out some reviewers who were less experienced in paper review or did not hold a PhD degree (except those final-year PhD students). We then passed the reviewer list to SACs and asked them to select from these candidate reviewers based on their expertise and semantic scholar profiles. Overall, this resulted in a total of 2,633 reviewers.

For AC assignments, we matched papers with ACs automatically based on comparing submissions’ abstracts with ACs’ past papers in ACL\* venues, using semantic scholar to harvest this data. For reviewer assignment, we generated a “seniority score” for each reviewer based on their past publication record and recent ACL\* papers. Where possible, we have ensured every paper has at least one “senior” reviewer and not more than one “junior” reviewer.

As a result of ever increasing paper submissions, review quality is a pressing issue in our community. To help improve review quality, this year we prepared review guidelines with explicit dos and don’ts. We observed many cases where authors called out problems in reviews for these papers based on these guidelines, ACs took action, and reviewers revised their reviews. Overall the review guidelines seem to be well received by authors and reviewers, and we feel they lead to improved reviews in aggregate. Having said this, we emphasize that the guidelines are only a partial solution, and more work is needed

from the entire community to manage the increasing submissions and continue to maintain or improve review quality.

Authors resubmitting papers that were previously rejected from another publication venue were given the option of providing these previous reviews and a rejoinder as part of their submission. This was designed to accommodate authors who have improved their paper based on previous feedback, and feel they have addressed the key issues raised, and would benefit from having this considered as part of the EMNLP review process. Roughly, this is designed to mimic the “revise-and-resubmit” procedure in a journal. These “sticky reviews” were made available to the AC, SACs and PCs, but not the reviewers, lest it bias their assessments. A total of 349 submissions used this facility. While we do not have firm numbers confirming the utility of sticky reviews, we feel that it was useful for making decisions for borderline submissions, where the past reviews and quality of the rejoinder could be used to justify paper acceptance.

This year we experimented with “*Findings*”, a new publication model based on an idea floated in the ACL reviewing committee, designed to allow more papers to be accepted for publication beyond those accepted to the main conference. Please see the Preface to the *Findings of ACL: EMNLP 2020* for a detailed description of this new initiative, including the acceptance rate and processes specific to this publication.

Another “first” was the formation of an ethics committee, which was assembled to provide input on submissions which were flagged by reviewers, ACs or SACs as needing further consideration on ethical grounds during the review process. This might relate to potential misuse of the work, the legality of use of data, ethics approvals for work involving human subjects, suspected plagiarism and more. The committee provided careful assessment to ensure these papers were treated uniformly and fairly, and these ethics assessments were considered alongside the reviews when making acceptance decisions. Ideally, authors would be given a chance to respond to the ethical assessments, however this was not possible given the reviewing timeline. We recommend this is something that should be factored into future conference planning.

Finally this year we introduced a Reproducibility Checklist in order to encourage reporting information necessary for reproducible research (thanks to Jesse Dodge and Noah Smith for initiating this). Many papers have included more details relating to code, data, and their experimental setup. 78% of reviewers felt the reproducibility checklist is useful or somewhat useful. In addition, EMNLP will join several major AI conferences in the upcoming ML Reproducibility Challenge (<https://paperswithcode.com/rc2020>). We hope you can participate in or contribute to the challenge. The current reproducibility checklist may not be a norm yet for our scientific community, but it is a step forward, and we expect it will lead to more reproducible published work in the future.

From the accepted papers, 5 papers were selected for awards, include a best long paper and 4 outstanding papers. Best paper candidates were initially selected based on recommendations from SACs and ACs, and then evaluated by the best paper committee. The award winners will be announced at the closing session.

In addition, EMNLP 2020 will feature 25 papers from Transactions of Association for Computational Linguistics (TACL), and 5 papers from the journal of Computational Linguistics.

We are excited to have three keynote talks, by Professor Claire Cardie (Cornell University) on information extraction, Dr. Rich Caruana (Microsoft) on interpretability in machine learning, and Professor Janet Pierrehumbert (University of Oxford) on linguistic behaviour and the realistic testing of NLP systems. We thank them for accepting our invitation to give the keynote speeches.

Another highlight of the program is the two panel sessions, one industry panel discussing NLP practice in industry and future directions, and another one on Ethics statements for future NLP paper submissions.



We thank all the panelists for joining the live discussions.

Putting together a virtual program is challenging. Based on the feedback on the ACL 2020 program, one of our goals is to provide more opportunities for authors and attendees to interact with each other and create an experience similar to in-person conferences. We have grouped papers into Zoom QA sessions (each session with 4-5 papers in similar areas) and Gather.towns (analogous to poster sessions where attendees can walk around and interact with paper authors). Doing this with timezone constraints is a hard optimization problem. We tried our best to make the program timezone friendly such that everyone is able to attend as many sessions as possible. However, the solutions are not perfect, and we appreciate everyone's understanding and cooperation.

We are grateful for many people's contributions in the past year. Without their help, EMNLP 2020 would not be possible. We thank:

- First our general chair, Bonnie Webber, who has provided us all the guidance we need and helped with many of our decision processes;
- Past ACL\* PCs, including Jing Jiang, Vincent Ng, and Xiaojun Wan (EMNLP 2019), and Joyce Chai, Natalie Schluter, and Joel Tetreault (ACL 2020) for all the useful tips and suggestions about organizing NLP conferences;
- Amanda Stent and Graham Neubig for providing the code for reviewer COI detection and paper assignment, and their time in helping to get it running;
- 33 SACs who have helped us tremendously through the entire review process, from recruiting ACs and reviewers, paper assignment, to making final paper recommendation decisions and selection of best paper candidates;
- 196 ACs who led paper discussions, wrote meta reviews, and ensured review quality;
- 2,633 reviewers, 565 secondary reviewers for reviewing papers and actively participating in paper discussions;
- 8,682 authors for submitting their work to EMNLP;
- Our Publicity chairs Anna Rogers and Ruifeng Xu who keep us connected with the community, announce conference news on social media, follow EMNLP related online discussions, and collect feedback from the community;
- Publication chairs Fei Liu, Philippe Muller, Yang Gao, Veronika Laippala, Jing Li, and Lemao Liu for completing the proceedings within a shortened work period, including additional Findings proceedings;
- Best paper committee, Mirella Lapata (Chair), Kyunghyun Cho, Vera Demberg, Matt Gardner, Nizar Habash, Xuanjing Huang, Haizhou Li, Kathleen McKeown, Barbara Plank, Alexander Rush, for selecting the best papers and outstanding papers;
- The Ethics committee, chaired by Dirk Hovy and Karën Fort, and members: Emily Bender, Ryan Georgi, Alvin Grissom II, Margot Mieskes, Aurélie Névéol, and Amanda Stent, who graciously accepted our invitation towards the end of the review period and assessed papers with ethical concerns in a very tight schedule;
- Infrastructure chairs Eduardo Blanco, Jan-Christoph Klie, Yang Feng, Yansong Feng, Zhongyu Wei, Hao Fang, Sudha Rao who have made the virtual conference possible;
- Webmaster Andy Mckinlay for keeping the conference website updated;

- TACL editors-in-chief Mark Johnson, Ani Nenkova, and Brian Roark, TACL Editorial Assistant Cindy Robinson, and CL Editor-in-Chief Hwee Tou Ng for coordinating TACL and CL presentations with us;
- Jesse Dodge and Noah Smith for initiating the Reproducibility Checklist, helping the NLP community with more reproducible results;
- SIGDAT board members that have provided guidance regarding various decisions;
- Rich Gerber from Softconf who set up the EMNLP conference site, has always answered our questions in a timely manner, and helped us with different new requests such as handling Findings papers and sharing reviews between EMNLP and workshops;
- Priscilla Rasmussen for various discussions on organizing EMNLP;
- The entire EMNLP organizing committee who have worked together to make EMNLP a success.

We hope you will enjoy the virtual conference, and can participate in as many sessions as possible!

EMNLP 2020 Program Co-Chairs

*Trevor Cohn*, University of Melbourne, Australia

*Yulan He*, University of Warwick, UK

*Yang Liu*, Amazon – Alexa AI, USA

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## **Invited Speaker: Claire Cardie, Cornell University**

### **Information Extraction Through the Years: How Did We Get Here?**

**Abstract:** In this talk, I'll examine the state of the NLP subfield of information extraction from its inception almost 30 years ago to its current realization in neural network models. Which aspects of the original formulation of the task are more or less solved? In what ways are current state-of-the-art methods still falling short? What's up next for information extraction?

**Bio:** Claire Cardie is the John C. Ford Professor of Engineering in the Departments of Computer Science and Information Science at Cornell University. She has worked since the early 1990's on application of machine learning methods to problems in Natural Language Processing — on topics ranging from information extraction, noun phrase coreference resolution, text summarization and question answering to the automatic analysis of opinions, argumentation, and deception in text. She has served on the executive committees of the ACL and AAAI and twice as secretary of NAACL. She has been Program Chair for ACL/COLING, EMNLP and CoNLL, and General Chair for ACL in 2018. Cardie was named a Fellow of the ACL in 2015 and a Fellow of the Association for Computing Machinery (ACM) in 2019. At Cornell, she led the development of the university's academic programs in Information Science and was the founding Chair of its Information Science Department.

## **Invited Speaker: Rich Caruana, Microsoft**

### **Friends Don't Let Friends Deploy Black-Box Models: The Importance of Intelligibility in Machine Learning**

**Abstract:** In machine learning sometimes tradeoffs must be made between accuracy and intelligibility: the most accurate models usually are not very intelligible, and the most intelligible models usually are less accurate. This can limit the accuracy of models that can safely be deployed in mission-critical applications where being able to understand, validate, edit, and ultimately trust a model is important. We have been working on a learning method to escape this tradeoff that is as accurate as full complexity models such as boosted trees and random forests, but more intelligible than linear models. This makes it easy to understand what the model has learned and to edit the model when it learns inappropriate things. Making it possible for humans to understand and repair a model is critical because most training data has unexpected problems. I'll present several case studies where these high-accuracy GAMs discover surprising patterns in the data that would have made deploying a black-box model inappropriate. I'll also show how these models can be used to detect and correct bias. And if there's time, I'll briefly discuss using intelligible GAM models to predict COVID-19 mortality.

**Bio:** Rich Caruana is a Senior Principal Researcher at Microsoft. His focus is on intelligible/transparent modeling, machine learning for medical decision making, deep learning, and computational ecology. Before joining Microsoft, Rich was on the faculty in Computer Science at Cornell, at UCLA's Medical School, and at CMU's Center for Learning and Discovery. Rich's Ph.D. is from CMU. His work on Multitask Learning helped create interest in a subfield of machine learning called Transfer Learning. Rich received an NSF CAREER Award in 2004 (for Meta Clustering), best paper awards in 2005 (with Alex Niculescu-Mizil), 2007 (with Daria Sorokina), and 2014 (with Todd Kulesza, Saleema Amershi, Danyel Fisher, and Denis Charles), and co-chaired KDD in 2007 with Xindong Wu.



# **Invited Speaker: Janet B. Pierrehumbert, University of Oxford**

## **Linguistic Behaviour and the Realistic Testing of NLP Systems**

**Abstract:** To evaluate the performance of NLP systems, the standard is to use held-out test data. When the systems are deployed in real-world applications, they will only be successful if they perform well on examples that their architects never saw before. Many of these will be examples that nobody ever saw before; the central observation of generative linguistics, going back to Von Humboldt, is that human language involves “The infinite use of finite means”.

Predicting the real-world success of NLP systems thus comes down to predicting future human linguistic behaviour. In this talk, I will discuss some general characteristics of human linguistic behaviour, and the extent to which they are, or are not addressed in current NLP methodology. The topics I will address include: look-ahead and prediction; the role of categorization in building abstractions; effects of context; and variability across individuals.

**Bio:** Janet B. Pierrehumbert is the Professor of Language Modelling in the Department of Engineering Science at the University of Oxford. She received her BA in Linguistics and Mathematics at Harvard in 1975, and her Ph.D in Linguistics from MIT in 1980. Much of her Ph.D dissertation research on English prosody and intonation was carried out at AT&T Bell Laboratories, where she was also a Member of Technical Staff from 1982 to 1989. After she moved to Northwestern University in 1989, her research program used a wide variety of experimental and computational methods to explore how lexical systems emerge in speech communities. She showed that the mental representations of words are at once abstract and phonetically detailed, and that social factors interact with cognitive factors as lexical patterns are learned, remembered, and generalized. Pierrehumbert joined the faculty at the University of Oxford in 2015 as a member of the interdisciplinary Oxford e-Research Centre. Her current research uses machine-learning methods to model the dynamics of on-line language. Her latest project, funded by the UK EPSRC, seeks to develop new NLP methods to characterize exaggeration, cohesion, and fragmentation in on-line forums.

Pierrehumbert is a Fellow of the Linguistic Society of America, the Cognitive Science Society, and the American Academy of Arts and Sciences. She was elected to the National Academy of Sciences in 2019. She is the recipient of the 2020 Medal for Scientific Achievement from the International Speech Communication Association.



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# Conference Program

## Monday, November 16, 2020

10:45–11:00 *Opening Remarks*

11:00–12:00 *Keynote I: Claire Cardie*

12:00–13:00 *Zoom Q&A Session I*

12:00–13:00 *Zoom Q&A Session Ii: Sentiment Analysis, Stylistic Analysis, and Argument Mining*

*Detecting Attackable Sentences in Arguments*

Yohan Jo, Seojin Bang, Emaad Manzoor, Eduard Hovy and Chris Reed

*Extracting Implicitly Asserted Propositions in Argumentation*

Yohan Jo, Jacky Visser, Chris Reed and Eduard Hovy

*Quantitative Argument Summarization and Beyond: Cross-Domain Key Point Analysis*

Roy Bar-Haim, Yoav Kantor, Lilach Eden, Roni Friedman, Dan Lahav and Noam Slonim

*Unsupervised Stance Detection for Arguments from Consequences*

Jonathan Kobbe, Ioana Hulpuş and Heiner Stuckenschmidt

12:00–13:00 *Zoom Q&A Session Iii: Machine Translation and Multilinguality*

*BLEU might be Guilty but References are not Innocent*

Markus Freitag, David Grangier and Isaac Caswell

*Statistical Power and Translationese in Machine Translation Evaluation*

Yvette Graham, Barry Haddow and Philipp Koehn

*Simulated Multiple Reference Training Improves Low-Resource Machine Translation*

Huda Khayrallah, Brian Thompson, Matt Post and Philipp Koehn

**Monday, November 16, 2020 (continued)**

*Automatic Machine Translation Evaluation in Many Languages via Zero-Shot Paraphrasing*

Brian Thompson and Matt Post

12:00–13:00 *Zoom Q&A Session Iiii: Question Answering*

*PROver: Proof Generation for Interpretable Reasoning over Rules*

Swarnadeep Saha, Sayan Ghosh, Shashank Srivastava and Mohit Bansal

*Learning to Explain: Datasets and Models for Identifying Valid Reasoning Chains in Multihop Question-Answering*

Harsh Jhamtani and Peter Clark

*Self-Supervised Knowledge Triplet Learning for Zero-Shot Question Answering*

Pratyay Banerjee and Chitta Baral

*More Bang for Your Buck: Natural Perturbation for Robust Question Answering*

Daniel Khashabi, Tushar Khot and Ashish Sabharwal

12:00–13:00 *Zoom Q&A Session Iiv: Interpretability and Analysis of Models for NLP*

*A Matter of Framing: The Impact of Linguistic Formalism on Probing Results*

Iliia Kuznetsov and Iryna Gurevych

*Information-Theoretic Probing with Minimum Description Length*

Elena Voita and Ivan Titov

*Intrinsic Probing through Dimension Selection*

Lucas Torroba Hennigen, Adina Williams and Ryan Cotterell

*Learning Which Features Matter: RoBERTa Acquires a Preference for Linguistic Generalizations (Eventually)*

Alex Warstadt, Yian Zhang, Xiaocheng Li, Haokun Liu and Samuel R. Bowman

13:00–14:00 *Zoom Q&A Session 2*



**Monday, November 16, 2020 (continued)**

13:00–14:00 *Zoom Q&A Session 2i: Machine Learning for NLP*

*Repulsive Attention: Rethinking Multi-head Attention as Bayesian Inference*

Bang An, Jie Lyu, Zhenyi Wang, Chunyuan Li, Changwei Hu, Fei Tan, Ruiyi Zhang, Yifan Hu and Changyou Chen

*KERMIT: Complementing Transformer Architectures with Encoders of Explicit Syntactic Interpretations*

Fabio Massimo Zanzotto, Andrea Santilli, Leonardo Ranaldi, Dario Onorati, Pierfrancesco Tommasino and Francesca Fallucchi

*ETC: Encoding Long and Structured Inputs in Transformers*

Joshua Ainslie, Santiago Ontanon, Chris Alberti, Vaclav Cvicek, Zachary Fisher, Philip Pham, Anirudh Ravula, Sumit Sanghai, Qifan Wang and Li Yang

*Pre-Training Transformers as Energy-Based Cloze Models*

Kevin Clark, Minh-Thang Luong, Quoc Le and Christopher D. Manning

*Calibration of Pre-trained Transformers*

Shrey Desai and Greg Durrett

13:00–14:00 *Zoom Q&A Session 2ii: NLP Applications*

*Near-imperceptible Neural Linguistic Steganography via Self-Adjusting Arithmetic Coding*

Jiaming Shen, Heng Ji and Jiawei Han

*Multi-Dimensional Gender Bias Classification*

Emily Dinan, Angela Fan, Ledell Wu, Jason Weston, Douwe Kiela and Adina Williams

*FIND: Human-in-the-Loop Debugging Deep Text Classifiers*

Piyawat Lertvittayakumjorn, Lucia Specia and Francesca Toni

*Conversational Document Prediction to Assist Customer Care Agents*

Jatin Ganhotra, Haggai Roitman, Doron Cohen, Nathaniel Mills, Chulaka Gunasekara, Yosi Mass, Sachindra Joshi, Luis Lastras and David Konopnicki

13:00–14:00 *Zoom Q&A Session 2iii: Dialog and Interactive Systems*

**Monday, November 16, 2020 (continued)**

*Incremental Processing in the Age of Non-Incremental Encoders: An Empirical Assessment of Bidirectional Models for Incremental NLU*

Brielen Madureira and David Schlangen

*Augmented Natural Language for Generative Sequence Labeling*

Ben Athiwaratkun, Cicero Nogueira dos Santos, Jason Krone and Bing Xiang

*Dialogue Response Ranking Training with Large-Scale Human Feedback Data*

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

13:00–14:00 *Zoom Q&A Session 2iv: Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Semantic Evaluation for Text-to-SQL with Distilled Test Suites*

Ruiqi Zhong, Tao Yu and Dan Klein

*Cross-Thought for Sentence Encoder Pre-training*

Shuohang Wang, Yuwei Fang, Siqi Sun, Zhe Gan, Yu Cheng, Jingjing Liu and Jing Jiang

*AutoQA: From Databases To QA Semantic Parsers With Only Synthetic Training Data*

Silei Xu, Sina Semnani, Giovanni Campagna and Monica Lam

19:00–20:00 *Industry Panel*

20:00–21:00 *Zoom Q&A Session 3*

20:00–21:00 *Zoom Q&A Session 3i: Summarization*

*A Spectral Method for Unsupervised Multi-Document Summarization*

Kexiang Wang, Baobao Chang and Zhifang Sui

*What Have We Achieved on Text Summarization?*

Dandan Huang, Leyang Cui, Sen Yang, Guangsheng Bao, Kun Wang, Jun Xie and Yue Zhang

*Q-learning with Language Model for Edit-based Unsupervised Summarization*

Ryosuke Kohita, Akifumi Wachi, Yang Zhao and Ryuki Tachibana

**Monday, November 16, 2020 (continued)**

*Friendly Topic Assistant for Transformer Based Abstractive Summarization*

Zhengjue Wang, Zhibin Duan, Hao Zhang, chaojie wang, long tian, Bo Chen and Mingyuan Zhou

20:00–21:00 *Zoom Q&A Session 3ii: Machine Learning for NLP*

*Contrastive Distillation on Intermediate Representations for Language Model Compression*

Siqi Sun, Zhe Gan, Yuwei Fang, Yu Cheng, Shuohang Wang and Jingjing Liu

*TernaryBERT: Distillation-aware Ultra-low Bit BERT*

Wei Zhang, Lu Hou, Yichun Yin, Lifeng Shang, Xiao Chen, Xin Jiang and Qun Liu

*Self-Supervised Meta-Learning for Few-Shot Natural Language Classification Tasks*

Trapit Bansal, Rishikesh Jha, Tsendsuren Munkhdalai and Andrew McCallum

*Efficient Meta Lifelong-Learning with Limited Memory*

Zirui Wang, Sanket Vaibhav Mehta, Barnabas Póczos and Jaime Carbonell

20:00–21:00 *Zoom Q&A Session 3iii: Machine Translation and Multilinguality*

*Don't Use English Dev: On the Zero-Shot Cross-Lingual Evaluation of Contextual Embeddings*

Phillip Keung, Yichao Lu, Julian Salazar and Vikas Bhardwaj

*A Supervised Word Alignment Method based on Cross-Language Span Prediction using Multilingual BERT*

Masaaki Nagata, Katsuki Chousa and Masaaki Nishino

*Accurate Word Alignment Induction from Neural Machine Translation*

Yun Chen, Yang Liu, Guanhua Chen, Xin Jiang and Qun Liu

*ChrEn: Cherokee-English Machine Translation for Endangered Language Revitalization*

Shiyue Zhang, Benjamin Frey and Mohit Bansal

20:00–21:00 *Zoom Q&A Session 3iv: Computational Social Science and Social Media*

**Monday, November 16, 2020 (continued)**

*Unsupervised Discovery of Implicit Gender Bias*

Anjalie Field and Yulia Tsvetkov

*Condolence and Empathy in Online Communities*

Naitian Zhou and David Jurgens

*An Embedding Model for Estimating Legislative Preferences from the Frequency and Sentiment of Tweets*

Gregory Spell, Brian Guay, Sunshine Hillygus and Lawrence Carin

*Measuring Information Propagation in Literary Social Networks*

Matthew Sims and David Bamman

*Social Chemistry 101: Learning to Reason about Social and Moral Norms*

Maxwell Forbes, Jena D. Hwang, Vered Shwartz, Maarten Sap and Yejin Choi

21:00–22:00 *Zoom Q&A Session 4*

21:00–22:00 *Zoom Q&A Session 4i: Information Extraction*

*Event Extraction by Answering (Almost) Natural Questions*

Xinya Du and Claire Cardie

*Connecting the Dots: Event Graph Schema Induction with Path Language Modeling*

Manling Li, Qi Zeng, Ying Lin, Kyunghyun Cho, Heng Ji, Jonathan May, Nathanael Chambers and Clare Voss

*Joint Constrained Learning for Event-Event Relation Extraction*

Haoyu Wang, Muhao Chen, Hongming Zhang and Dan Roth

*Incremental Event Detection via Knowledge Consolidation Networks*

Pengfei Cao, Yubo Chen, Jun Zhao and Taifeng Wang

*Semi-supervised New Event Type Induction and Event Detection*

Lifu Huang and Heng Ji

**Monday, November 16, 2020 (continued)**

21:00–22:00 *Zoom Q&A Session 4ii: Language Generation*

*Language Generation with Multi-Hop Reasoning on Commonsense Knowledge Graph*

Haozhe Ji, Pei Ke, Shaohan Huang, Furu Wei, Xiaoyan Zhu and Minlie Huang

*Reformulating Unsupervised Style Transfer as Paraphrase Generation*

Kalpesh Krishna, John Wieting and Mohit Iyyer

*De-Biased Court's View Generation with Causality*

Yiquan Wu, Kun Kuang, Yating Zhang, Xiaozhong Liu, Changlong Sun, Jun Xiao, Yueting Zhuang, Luo Si and Fei Wu

*PAIR: Planning and Iterative Refinement in Pre-trained Transformers for Long Text Generation*

Xinyu Hua and Lu Wang

*Back to the Future: Unsupervised Backprop-based Decoding for Counterfactual and Abductive Commonsense Reasoning*

Lianhui Qin, Vered Shwartz, Peter West, Chandra Bhagavatula, Jena D. Hwang, Ronan Le Bras, Antoine Bosselut and Yejin Choi

21:00–22:00 *Zoom Q&A Session 4iii: Language Grounding to Vision, Robotics and Beyond*

*Where Are You? Localization from Embodied Dialog*

Meera Hahn, Jacob Krantz, Dhruv Batra, Devi Parikh, James Rehg, Stefan Lee and Peter Anderson

*Learning to Represent Image and Text with Denotation Graph*

Bowen Zhang, Hexiang Hu, Vihan Jain, Eugene Ie and Fei Sha

*Video2Commonsense: Generating Commonsense Descriptions to Enrich Video Captioning*

Zhiyuan Fang, Tejas Gokhale, Pratyay Banerjee, Chitta Baral and Yezhou Yang

*Does my multimodal model learn cross-modal interactions? It's harder to tell than you might think!*

Jack Hessel and Lillian Lee

*MUTANT: A Training Paradigm for Out-of-Distribution Generalization in Visual Question Answering*

Tejas Gokhale, Pratyay Banerjee, Chitta Baral and Yezhou Yang

**Monday, November 16, 2020 (continued)**

21:00–22:00 *Zoom Q&A Session 4iv: Dialog and Interactive Systems*

*Mitigating Gender Bias for Neural Dialogue Generation with Adversarial Learning*  
Haochen Liu, Wentao Wang, Yiqi Wang, Hui Liu, Zitao Liu and Jiliang Tang

*Will I Sound Like Me? Improving Persona Consistency in Dialogues through Pragmatic Self-Consciousness*  
Hyunwoo Kim, Byeongchang Kim and Gunhee Kim

*TOD-BERT: Pre-trained Natural Language Understanding for Task-Oriented Dialogue*  
Chien-Sheng Wu, Steven C.H. Hoi, Richard Socher and Caiming Xiong

*RiSAWOZ: A Large-Scale Multi-Domain Wizard-of-Oz Dataset with Rich Semantic Annotations for Task-Oriented Dialogue Modeling*  
Jun Quan, Shian Zhang, Qian Cao, Zizhong Li and Deyi Xiong

*Filtering Noisy Dialogue Corpora by Connectivity and Content Relatedness*  
Reina Akama, Sho Yokoi, Jun Suzuki and Kentaro Inui

22:00–00:00 *Gather Session 1i: Linguistic Theories, Cognitive Modeling and Psycholinguistics; Machine Translation and Multilinguality; Question Answering*

*Latent Geographical Factors for Analyzing the Evolution of Dialects in Contact*  
Yugo Murawaki

*Predicting Reference: What do Language Models Learn about Discourse Models?*  
Shiva Upadhye, Leon Bergen and Andrew Kehler

*Word class flexibility: A deep contextualized approach*  
Bai Li, Guillaume Thomas, Yang Xu and Frank Rudzicz

*Shallow-to-Deep Training for Neural Machine Translation*  
Bei Li, Ziyang Wang, Hui Liu, Yufan Jiang, Quan Du, Tong Xiao, Huizhen Wang and Jingbo Zhu

*Iterative Refinement in the Continuous Space for Non-Autoregressive Neural Machine Translation*  
Jason Lee, Raphael Shu and Kyunghyun Cho

**Monday, November 16, 2020 (continued)**

*Why Skip If You Can Combine: A Simple Knowledge Distillation Technique for Intermediate Layers*

Yimeng Wu, Peyman Passban, Mehdi Rezagholizadeh and Qun Liu

*Multi-task Learning for Multilingual Neural Machine Translation*

Yiren Wang, ChengXiang Zhai and Hany Hassan

*Token-level Adaptive Training for Neural Machine Translation*

Shuhao Gu, Jinchao Zhang, Fandong Meng, Yang Feng, Wanying Xie, Jie Zhou and Dong Yu

*Multi-Unit Transformers for Neural Machine Translation*

Jianhao Yan, Fandong Meng and Jie Zhou

*On the Sparsity of Neural Machine Translation Models*

Yong Wang, Longyue Wang, Victor Li and Zhaopeng Tu

*Incorporating a Local Translation Mechanism into Non-autoregressive Translation*

Xiang Kong, Zhisong Zhang and Eduard Hovy

*Self-Paced Learning for Neural Machine Translation*

Yu Wan, Baosong Yang, Derek F. Wong, Yikai Zhou, Lidia S. Chao, Haibo Zhang and Boxing Chen

*Long-Short Term Masking Transformer: A Simple but Effective Baseline for Document-level Neural Machine Translation*

Pei Zhang, Boxing Chen, Niyu Ge and Kai Fan

*Generating Diverse Translation from Model Distribution with Dropout*

Xuanfu Wu, Yang Feng and Chenze Shao

*Non-Autoregressive Machine Translation with Latent Alignments*

Chitwan Saharia, William Chan, Saurabh Saxena and Mohammad Norouzi

*Look at the First Sentence: Position Bias in Question Answering*

Miyoung Ko, Jinhyuk Lee, Hyunjae Kim, Gangwoo Kim and Jaewoo Kang

*ProtoQA: A Question Answering Dataset for Prototypical Common-Sense Reasoning*

Michael Boratko, Xiang Li, Tim O’Gorman, Rajarshi Das, Dan Le and Andrew McCallum

**Monday, November 16, 2020 (continued)**

*IIRC: A Dataset of Incomplete Information Reading Comprehension Questions*

James Ferguson, Matt Gardner, Hannaneh Hajishirzi, Tushar Khot and Pradeep Dasigi

*Unsupervised Adaptation of Question Answering Systems via Generative Self-training*

Steven Rennie, Etienne Marcheret, Neil Mallinar, David Nahamoo and Vaibhava Goel

*TORQUE: A Reading Comprehension Dataset of Temporal Ordering Questions*

Qiang Ning, Hao Wu, Rujun Han, Nanyun Peng, Matt Gardner and Dan Roth

22:00–00:00 *Gather Session Iii: Language Generation; Machine Learning for NLP*

*ToTTo: A Controlled Table-To-Text Generation Dataset*

Ankur Parikh, Xuezhi Wang, Sebastian Gehrmann, Manaal Faruqui, Bhuwan Dhingra, Diyi Yang and Dipanjan Das

*ENT-DESC: Entity Description Generation by Exploring Knowledge Graph*

Liyang Cheng, Dekun Wu, Lidong Bing, Yan Zhang, Zhanming Jie, Wei Lu and Luo Si

*Small but Mighty: New Benchmarks for Split and Rephrase*

Li Zhang, Huaiyu Zhu, Siddhartha Brahma and Yunyao Li

*Online Back-Parsing for AMR-to-Text Generation*

Xuefeng Bai, Linfeng Song and Yue Zhang

*Reading Between the Lines: Exploring Infilling in Visual Narratives*

Khyathi Raghavi Chandu, Ruo-Ping Dong and Alan W Black

*Acrostic Poem Generation*

Rajat Agarwal and Katharina Kann

*Local Additivity Based Data Augmentation for Semi-supervised NER*

Jiaao Chen, Zhenghui Wang, Ran Tian, Zichao Yang and Diyi Yang

*Grounded Compositional Outputs for Adaptive Language Modeling*

Nikolaos Pappas, Phoebe Mulcaire and Noah A. Smith



**Monday, November 16, 2020 (continued)**

*SSMBA: Self-Supervised Manifold Based Data Augmentation for Improving Out-of-Domain Robustness*

Nathan Ng, Kyunghyun Cho and Marzyeh Ghassemi

*SetConv: A New Approach for Learning from Imbalanced Data*

Yang Gao, Yi-Fan Li, Yu Lin, Charu Aggarwal and Latifur Khan

*Scalable Multi-Hop Relational Reasoning for Knowledge-Aware Question Answering*

Yanlin Feng, Xinyue Chen, Bill Yuchen Lin, Peifeng Wang, Jun Yan and Xiang Ren

*Improving Bilingual Lexicon Induction for Low Frequency Words*

Jiaji Huang, Xingyu Cai and Kenneth Church

*Learning VAE-LDA Models with Rounded Reparameterization Trick*

Runzhi Tian, Yongyi Mao and Richong Zhang

*Calibrated Language Model Fine-Tuning for In- and Out-of-Distribution Data*

Lingkai Kong, Haoming Jiang, Yuchen Zhuang, Jie Lyu, Tuo Zhao and Chao Zhang

*Scaling Hidden Markov Language Models*

Justin Chiu and Alexander Rush

*Coding Textual Inputs Boosts the Accuracy of Neural Networks*

Abdul Rafae Khan, Jia Xu and Weiwei Sun

*Learning from Task Descriptions*

Orion Weller, Nicholas Lourie, Matt Gardner and Matthew Peters

22:00–00:00 *Gather Session Iiii: Computational Social Science and Social Media; NLP Applications; Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Hashtags, Emotions, and Comments: A Large-Scale Dataset to Understand Fine-Grained Social Emotions to Online Topics*

Keyang Ding, Jing Li and Yuji Zhang

*Named Entity Recognition for Social Media Texts with Semantic Augmentation*

Yuyang Nie, Yuanhe Tian, Xiang Wan, Yan Song and Bo Dai

**Monday, November 16, 2020 (continued)**

*Coupled Hierarchical Transformer for Stance-Aware Rumor Verification in Social Media Conversations*

Jianfei Yu, Jing Jiang, Ling Min Serena Khoo, Hai Leong Chieu and Rui Xia

*Social Media Attributions in the Context of Water Crisis*

Rupak Sarkar, Sayantan Mahinder, Hirak Sarkar and Ashiqur KhudaBukhsh

*On the Reliability and Validity of Detecting Approval of Political Actors in Tweets*

Indira Sen, Fabian Flöck and Claudia Wagner

*Towards Medical Machine Reading Comprehension with Structural Knowledge and Plain Text*

Dongfang Li, Baotian Hu, Qingcai Chen, Weihua Peng and Anqi Wang

*Generating Radiology Reports via Memory-driven Transformer*

Zhihong Chen, Yan Song, Tsung-Hui Chang and Xiang Wan

*Planning and Generating Natural and Diverse Disfluent Texts as Augmentation for Disfluency Detection*

Jingfeng Yang, Diyi Yang and Zhaoran Ma

*Predicting Clinical Trial Results by Implicit Evidence Integration*

Qiao Jin, Chuanqi Tan, Mosha Chen, Xiaozhong Liu and Songfang Huang

*Explainable Clinical Decision Support from Text*

Jinyue Feng, Chantal Shaib and Frank Rudzicz

*A Knowledge-driven Generative Model for Multi-implication Chinese Medical Procedure Entity Normalization*

Jinghui Yan, Yining Wang, Lu Xiang, Yu Zhou and Chengqing Zong

*Combining Automatic Labelers and Expert Annotations for Accurate Radiology Report Labeling Using BERT*

Akshay Smit, Saahil Jain, Pranav Rajpurkar, Anuj Pareek, Andrew Ng and Matthew Lungren

*Benchmarking Meaning Representations in Neural Semantic Parsing*

Jiaqi Guo, Qian Liu, Jian-Guang LOU, Zhenwen Li, Xueqing Liu, Tao Xie and Ting Liu

*Analogous Process Structure Induction for Sub-event Sequence Prediction*

Hongming Zhang, Muhao Chen, Haoyu Wang, Yangqiu Song and Dan Roth

Monday, November 16, 2020 (continued)

*SLM: Learning a Discourse Language Representation with Sentence Unshuffling*  
Haejun Lee, Drew A. Hudson, Kangwook Lee and Christopher D. Manning

*Detecting Fine-Grained Cross-Lingual Semantic Divergences without Supervision by Learning to Rank*  
Eleftheria Briakou and Marine Carpuat

*A Bilingual Generative Transformer for Semantic Sentence Embedding*  
John Wieting, Graham Neubig and Taylor Berg-Kirkpatrick

*Semantically Inspired AMR Alignment for the Portuguese Language*  
Rafael Anchiêta and Thiago Pardo

*An Unsupervised Sentence Embedding Method by Mutual Information Maximization*  
Yan Zhang, Ruidan He, ZUOZHU LIU, Kwan Hui Lim and Lidong Bing

*Compositional Phrase Alignment and Beyond*  
Yuki Arase and Jun'ichi Tsujii

22:00–00:00 *Gather Session Iiv: Information Extraction; Information Retrieval and Text Mining; Speech and Multimodality*

*Table Fact Verification with Structure-Aware Transformer*  
Hongzhi Zhang, Yingyao Wang, Sirui Wang, Xuezhi Cao, Fuzheng Zhang and Zhongyuan Wang

*Double Graph Based Reasoning for Document-level Relation Extraction*  
Shuang Zeng, Runxin Xu, Baobao Chang and Lei Li

*Event Extraction as Machine Reading Comprehension*  
Jian Liu, Yubo Chen, Kang Liu, Wei Bi and Xiaojiang Liu

*MAVEN: A Massive General Domain Event Detection Dataset*  
Xiaozhi Wang, Ziqi Wang, Xu Han, Wangyi Jiang, Rong Han, Zhiyuan Liu, Juanzi Li, Peng Li, Yankai Lin and Jie Zhou

*Knowledge Graph Alignment with Entity-Pair Embedding*  
Zhichun Wang, Jinjian Yang and Xiaoju Ye

**Monday, November 16, 2020 (continued)**

*Adaptive Attentional Network for Few-Shot Knowledge Graph Completion*

Jiawei Sheng, Shu Guo, Zhenyu Chen, Juwei Yue, Lihong Wang, Tingwen Liu and Hongbo Xu

*Pre-training Entity Relation Encoder with Intra-span and Inter-span Information*

Yijun Wang, Changzhi Sun, Yuanbin Wu, Junchi Yan, Peng Gao and Guotong Xie

*Two are Better than One: Joint Entity and Relation Extraction with Table-Sequence Encoders*

Jue WANG and Wei Lu

*Beyond [CLS] through Ranking by Generation*

Cicero Nogueira dos Santos, Xiaofei Ma, Ramesh Nallapati, zhiheng huang and Bing Xiang

*Tired of Topic Models? Clusters of Pretrained Word Embeddings Make for Fast and Good Topics too!*

Suzanna Sia, Ayush Dalmia and Sabrina J. Mielke

*Multi-document Summarization with Maximal Marginal Relevance-guided Reinforcement Learning*

Yuning Mao, Yanru Qu, Yiqing Xie, Xiang Ren and Jiawei Han

*Improving Neural Topic Models using Knowledge Distillation*

Alexander Miserlis Hoyle, Pranav Goel and Philip Resnik

*Short Text Topic Modeling with Topic Distribution Quantization and Negative Sampling Decoder*

Xiaobao Wu, Chunping Li, Yan Zhu and Yishu Miao

*Querying Across Genres for Medical Claims in News*

Chaoyuan Zuo, Narayan Acharya and Ritwik Banerjee

*Incorporating Multimodal Information in Open-Domain Web Keyphrase Extraction*

Yansen Wang, Zhen Fan and Carolyn Rose

*CMU-MOSEAS: A Multimodal Language Dataset for Spanish, Portuguese, German and French*

AmirAli Bagher Zadeh, Yansheng Cao, Simon Hessner, Paul Pu Liang, Soujanya Poria and Louis-Philippe Morency

*Combining Self-Training and Self-Supervised Learning for Unsupervised Disfluency Detection*

Shaolei Wang, Zhongyuan Wang, Wanxiang Che and Ting Liu

**Monday, November 16, 2020 (continued)**

*Multimodal Routing: Improving Local and Global Interpretability of Multimodal Language Analysis*

Yao-Hung Hubert Tsai, Martin Ma, Muqiao Yang, Ruslan Salakhutdinov and Louis-Philippe Morency

*Multistage Fusion with Forget Gate for Multimodal Summarization in Open-Domain Videos*

Nayu Liu, Xian Sun, Hongfeng Yu, Wenkai Zhang and Guangluan Xu

22:00–00:00 *Gather Session 1v: Dialog and Interactive Systems; Interpretability and Analysis of Models for NLP; Language Grounding to Vision, Robotics and Beyond*

*BiST: Bi-directional Spatio-Temporal Reasoning for Video-Grounded Dialogues*

Hung Le, Doyen Sahoo, Nancy Chen and Steven C.H. Hoi

*UniConv: A Unified Conversational Neural Architecture for Multi-domain Task-oriented Dialogues*

Hung Le, Doyen Sahoo, Chenghao Liu, Nancy Chen and Steven C.H. Hoi

*GraphDialog: Integrating Graph Knowledge into End-to-End Task-Oriented Dialogue Systems*

Shiquan Yang, Rui Zhang and Sarah Erfani

*Structured Attention for Unsupervised Dialogue Structure Induction*

Liang Qiu, Yizhou Zhao, Weiyang Shi, Yuan Liang, Feng Shi, Tao Yuan, Zhou Yu and Song-Chun Zhu

*Cross Copy Network for Dialogue Generation*

Changzhen Ji, Xin Zhou, Yating Zhang, Xiaozhong Liu, Changlong Sun, Conghui Zhu and Tiejun Zhao

*Multi-turn Response Selection using Dialogue Dependency Relations*

Qi Jia, Yizhu Liu, Siyu Ren, Kenny Zhu and Haifeng Tang

*Parallel Interactive Networks for Multi-Domain Dialogue State Generation*

Junfan Chen, Richong Zhang, Yongyi Mao and Jie Xu

*SlotRefine: A Fast Non-Autoregressive Model for Joint Intent Detection and Slot Filling*

Di Wu, Liang Ding, Fan Lu and Jian Xie

*An Information Bottleneck Approach for Controlling Conciseness in Rationale Extraction*

Bhargavi Paranjape, Mandar Joshi, John Thickstun, Hannaneh Hajishirzi and Luke Zettlemoyer

**Monday, November 16, 2020 (continued)**

*CrowS-Pairs: A Challenge Dataset for Measuring Social Biases in Masked Language Models*

Nikita Nangia, Clara Vania, Rasika Bhalerao and Samuel R. Bowman

*LOGAN: Local Group Bias Detection by Clustering*

Jieyu Zhao and Kai-Wei Chang

*RNNs can generate bounded hierarchical languages with optimal memory*

John Hewitt, Michael Hahn, Surya Ganguli, Percy Liang and Christopher D. Manning

*Detecting Independent Pronoun Bias with Partially-Synthetic Data Generation*

Robert Munro and Alex (Carmen) Morrison

*Visually Grounded Continual Learning of Compositional Phrases*

Xisen Jin, Junyi Du, Arka Sadhu, Ram Nevatia and Xiang Ren

*MAF: Multimodal Alignment Framework for Weakly-Supervised Phrase Grounding*

Qinxin Wang, Hao Tan, Sheng Shen, Michael Mahoney and Zhewei Yao

*Domain-Specific Lexical Grounding in Noisy Visual-Textual Documents*

Gregory Yauney, Jack Hessel and David Mimno

*HERO: Hierarchical Encoder for Video+Language Omni-representation Pre-training*

Linjie Li, Yen-Chun Chen, Yu Cheng, Zhe Gan, Licheng Yu and Jingjing Liu

*Vokenization: Improving Language Understanding with Contextualized, Visual-Grounded Supervision*

Hao Tan and Mohit Bansal

*Detecting Cross-Modal Inconsistency to Defend Against Neural Fake News*

Reuben Tan, Bryan Plummer and Kate Saenko

**Tuesday, November 17, 2020**

04:00–05:00 *Zoom Q&A Session 5*

04:00–05:00 *Zoom Q&A Session 5i: Information Extraction*

*Enhancing Aspect Term Extraction with Soft Prototypes*

Zhuang Chen and Tiejun Qian

*FedED: Federated Learning via Ensemble Distillation for Medical Relation Extraction*

Dianbo Sui, Yubo Chen, Jun Zhao, Yantao Jia, Yuantao Xie and Weijian Sun

*Multimodal Joint Attribute Prediction and Value Extraction for E-commerce Product*

Tiangang Zhu, Yue Wang, Haoran Li, Youzheng Wu, Xiaodong He and Bowen Zhou

*A Predicate-Function-Argument Annotation of Natural Language for Open-Domain Information eXpression*

Mingming Sun, Wenyue Hua, Zoey Liu, Xin Wang, Kangjie Zheng and Ping Li

04:00–05:00 *Zoom Q&A Session 5ii: Language Generation*

*Retrofitting Structure-aware Transformer Language Model for End Tasks*

Hao Fei, Yafeng Ren and Donghong Ji

*Lightweight, Dynamic Graph Convolutional Networks for AMR-to-Text Generation*

Yan Zhang, Zhijiang Guo, Zhiyang Teng, Wei Lu, Shay B. Cohen, ZUOZHU LIU and Lidong Bing

*If beam search is the answer, what was the question?*

Clara Meister, Ryan Cotterell and Tim Vieira

04:00–05:00 *Zoom Q&A Session 5iii: Machine Learning for NLP*

*Understanding the Mechanics of SPIGOT: Surrogate Gradients for Latent Structure Learning*

Tsvetomila Mihaylova, Vlad Niculae and André F. T. Martins

**Tuesday, November 17, 2020 (continued)**

*Is the Best Better? Bayesian Statistical Model Comparison for Natural Language Processing*

Piotr Szymański and Kyle Gorman

*Exploring Logically Dependent Multi-task Learning with Causal Inference*

Wenqing Chen, Jidong Tian, Liqiang Xiao, Hao He and Yaohui Jin

*Masking as an Efficient Alternative to Finetuning for Pretrained Language Models*

Mengjie Zhao, Tao Lin, Fei Mi, Martin Jaggi and Hinrich Schütze

04:00–05:00 *Zoom Q&A Session 5iv: Machine Translation and Multilinguality*

*Dynamic Context Selection for Document-level Neural Machine Translation via Reinforcement Learning*

Xiaomian Kang, Yang Zhao, Jiajun Zhang and Chengqing Zong

*Data Rejuvenation: Exploiting Inactive Training Examples for Neural Machine Translation*

Wenxiang Jiao, Xing Wang, Shilin He, Irwin King, Michael Lyu and Zhaopeng Tu

*Pronoun-Targeted Fine-tuning for NMT with Hybrid Losses*

Prathyusha Jwalapuram, Shafiq Joty and Youlin Shen

*Learning Adaptive Segmentation Policy for Simultaneous Translation*

Ruiqing Zhang, Chuanqiang Zhang, Zhongjun He, Hua Wu and Haifeng Wang

*Learn to Cross-lingual Transfer with Meta Graph Learning Across Heterogeneous Languages*

Zheng Li, Mukul Kumar, William Headden, Bing Yin, Ying Wei, Yu Zhang and Qiang Yang

05:00–06:00 *Zoom Q&A Session 6*

05:00–06:00 *Zoom Q&A Session 6i: Syntax: Tagging, Chunking, and Parsing*

*UDapter: Language Adaptation for Truly Universal Dependency Parsing*

Ahmet Üstün, Arianna Bisazza, Gosse Bouma and Gertjan van Noord



**Tuesday, November 17, 2020 (continued)**

*Uncertainty-Aware Label Refinement for Sequence Labeling*

Tao Gui, Jiacheng Ye, Qi Zhang, Zhengyan Li, Zichu Fei, Yeyun Gong and Xuan-jing Huang

*Adversarial Attack and Defense of Structured Prediction Models*

Wenjuan Han, Liwen Zhang, Yong Jiang and Kewei Tu

*Position-Aware Tagging for Aspect Sentiment Triplet Extraction*

Lu Xu, Hao Li, Wei Lu and Lidong Bing

05:00–06:00 *Zoom Q&A Session 6ii: Machine Translation and Multilinguality*

*Simultaneous Machine Translation with Visual Context*

Ozan Caglayan, Julia Ive, Veneta Haralampieva, Pranava Madhyastha, Loïc Barrault and Lucia Specia

*XCOPA: A Multilingual Dataset for Causal Commonsense Reasoning*

Edoardo Maria Ponti, Goran Glavaš, Olga Majewska, Qianchu Liu, Ivan Vulić and Anna Korhonen

*The Secret is in the Spectra: Predicting Cross-lingual Task Performance with Spectral Similarity Measures*

Haim Dubossarsky, Ivan Vulić, Roi Reichart and Anna Korhonen

*Bridging Linguistic Typology and Multilingual Machine Translation with Multi-View Language Representations*

Arturo Oncevay, Barry Haddow and Alexandra Birch

05:00–06:00 *Zoom Q&A Session 6iii: Question Answering*

*AnswerFact: Fact Checking in Product Question Answering*

Wenxuan Zhang, Yang Deng, Jing Ma and Wai Lam

*Context-Aware Answer Extraction in Question Answering*

Yeon Seonwoo, Ji-Hoon Kim, Jung-Woo Ha and Alice Oh

*What do Models Learn from Question Answering Datasets?*

Priyanka Sen and Amir Saffari

**Tuesday, November 17, 2020 (continued)**

*Discern: Discourse-Aware Entailment Reasoning Network for Conversational Machine Reading*

Yifan Gao, Chien-Sheng Wu, Jingjing Li, Shafiq Joty, Steven C.H. Hoi, Caiming Xiong, Irwin King and Michael Lyu

05:00–06:00 *Zoom Q&A Session 6iv: Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*A Method for Building a Commonsense Inference Dataset based on Basic Events*

Kazumasa Omura, Daisuke Kawahara and Sadao Kurohashi

*Neural Deepfake Detection with Factual Structure of Text*

Wanjun Zhong, Duyu Tang, Zenan Xu, Ruize Wang, Nan Duan, Ming Zhou, Jiahai Wang and Jian Yin

*MultiCQA: Zero-Shot Transfer of Self-Supervised Text Matching Models on a Massive Scale*

Andreas Rücklé, Jonas Pfeiffer and Iryna Gurevych

*XL-AMR: Enabling Cross-Lingual AMR Parsing with Transfer Learning Techniques*

Rexhina Blloshmi, Rocco Tripodi and Roberto Navigli

*Improving AMR Parsing with Sequence-to-Sequence Pre-training*

Dongqin Xu, Junhui Li, Muhua Zhu, Min Zhang and Guodong Zhou

06:00–08:00 *Gather Session 2i: Computational Social Science and Social Media; Machine Translation and Multilinguality; Syntax: Tagging, Chunking, and Parsing*

*Hate-Speech and Offensive Language Detection in Roman Urdu*

Hammad Rizwan, Muhammad Haroon Shakeel and Asim Karim

*Suicidal Risk Detection for Military Personnel*

Sungjoon Park, Kiwoong Park, Jaimeen Ahn and Alice Oh

*Comparative Evaluation of Label-Agnostic Selection Bias in Multilingual Hate Speech Datasets*

Nedjma Ousidhoum, Yangqiu Song and Dit-Yan Yeung

*HENIN: Learning Heterogeneous Neural Interaction Networks for Explainable Cyberbullying Detection on Social Media*

Hsin-Yu Chen and Cheng-Te Li

**Tuesday, November 17, 2020 (continued)**

*Reactive Supervision: A New Method for Collecting Sarcasm Data*

Boaz Shmueli, Lun-Wei Ku and Soumya Ray

*Self-Induced Curriculum Learning in Self-Supervised Neural Machine Translation*

Dana Ruiter, Josef van Genabith and Cristina España-Bonet

*Towards Reasonably-Sized Character-Level Transformer NMT by Finetuning Sub-word Systems*

Jindřich Libovický and Alexander Fraser

*Transfer Learning and Distant Supervision for Multilingual Transformer Models: A Study on African Languages*

Michael A. Hedderich, David Adelani, Dawei Zhu, Jesujoba Alabi, Udia Markus and Dietrich Klakow

*Translation Quality Estimation by Jointly Learning to Score and Rank*

Jingyi Zhang and Josef van Genabith

*Direct Segmentation Models for Streaming Speech Translation*

Javier Iranzo-Sánchez, Adrià Giménez Pastor, Joan Albert Silvestre-Cerdà, Pau Baquero-Arnal, Jorge Civera Saiz and Alfons Juan

*Not Low-Resource Anymore: Aligner Ensembling, Batch Filtering, and New Datasets for Bengali-English Machine Translation*

Tahmid Hasan, Abhik Bhattacharjee, Kazi Samin, Masum Hasan, Madhusudan Basak, M. Sohel Rahman and Rifat Shahriyar

*CSP: Code-Switching Pre-training for Neural Machine Translation*

Zhen Yang, Bojie Hu, ambyera han, shen huang and Qi Ju

*Type B Reflexivization as an Unambiguous Testbed for Multilingual Multi-Task Gender Bias*

Ana Valeria González, Maria Barrett, Rasmus Hvingelby, Kellie Webster and Anders Søgaard

*Pre-training Multilingual Neural Machine Translation by Leveraging Alignment Information*

Zehui Lin, Xiao Pan, Mingxuan Wang, Xipeng Qiu, Jiangtao Feng, Hao Zhou and Lei Li

*Losing Heads in the Lottery: Pruning Transformer Attention in Neural Machine Translation*

Maximiliana Behnke and Kenneth Heafield

*Towards Enhancing Faithfulness for Neural Machine Translation*

Rongxiang Weng, Heng Yu, Xiangpeng Wei and Weihua Luo

**Tuesday, November 17, 2020 (continued)**

*COMET: A Neural Framework for MT Evaluation*

Ricardo Rei, Craig Stewart, Ana C Farinha and Alon Lavie

*Reusing a Pretrained Language Model on Languages with Limited Corpora for Unsupervised NMT*

Alexandra Chronopoulou, Dario Stojanovski and Alexander Fraser

*LNMap: Departures from Isomorphic Assumption in Bilingual Lexicon Induction Through Non-Linear Mapping in Latent Space*

Tasnim Mohiuddin, M Saiful Bari and Shafiq Joty

*Uncertainty-Aware Semantic Augmentation for Neural Machine Translation*

Xiangpeng Wei, Heng Yu, Yue Hu, Rongxiang Weng, Luxi Xing and Weihua Luo

*Can Automatic Post-Editing Improve NMT?*

Shamil Chollampatt, Raymond HENDY Susanto, Liling Tan and Ewa Szymanska

*Parsing Gapping Constructions Based on Grammatical and Semantic Roles*

Yoshihide Kato and Shigeki Matsubara

*Span-based discontinuous constituency parsing: a family of exact chart-based algorithms with time complexities from  $O(n^6)$  down to  $O(n^3)$*

Caio Corro

*Some Languages Seem Easier to Parse Because Their Treebanks Leak*

Anders Søgaard

*Discontinuous Constituent Parsing as Sequence Labeling*

David Vilares and Carlos Gómez-Rodríguez

*Modularized Syntactic Neural Networks for Sentence Classification*

Haiyan Wu, Ying Liu and Shaoyun Shi

06:00–08:00 *Gather Session 2ii: Discourse and Pragmatics; Language Generation; Machine Learning for NLP; Question Answering*

*TED-CDB: A Large-Scale Chinese Discourse Relation Dataset on TED Talks*

Wanqiu Long, Bonnie Webber and Deyi Xiong

**Tuesday, November 17, 2020 (continued)**

*QADiscourse - Discourse Relations as QA Pairs: Representation, Crowdsourcing and Baselines*

Valentina Pyatkin, Ayal Klein, Reut Tsarfaty and Ido Dagan

*Discourse Self-Attention for Discourse Element Identification in Argumentative Student Essays*

Wei Song, Ziyao Song, Ruiji Fu, Lizhen Liu, Miaomiao Cheng and Ting Liu

*MEGATRON-CNTRL: Controllable Story Generation with External Knowledge Using Large-Scale Language Models*

Peng Xu, Mostofa Patwary, Mohammad Shoeybi, Raul Puri, Pascale Fung, Anima Anandkumar and Bryan Catanzaro

*Incomplete Utterance Rewriting as Semantic Segmentation*

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

*Improving Grammatical Error Correction Models with Purpose-Built Adversarial Examples*

Lihao Wang and Xiaoqing Zheng

*Homophonic Pun Generation with Lexically Constrained Rewriting*

Zhiwei Yu, Hongyu Zang and Xiaojun Wan

*How to Make Neural Natural Language Generation as Reliable as Templates in Task-Oriented Dialogue*

Henry Elder, Alexander O'Connor and Jennifer Foster

*Multilingual AMR-to-Text Generation*

Angela Fan and Claire Gardent

*Exploring the Linear Subspace Hypothesis in Gender Bias Mitigation*

Francisco Vargas and Ryan Cotterell

*Lifelong Language Knowledge Distillation*

Yung-Sung Chuang, Shang-Yu Su and Yun-Nung Chen

*Sparse Parallel Training of Hierarchical Dirichlet Process Topic Models*

Alexander Terenin, Måns Magnusson and Leif Jonsson

*Multi-label Few/Zero-shot Learning with Knowledge Aggregated from Multiple Label Graphs*

Jueqing Lu, Lan Du, Ming Liu and Joanna Dipnall

**Tuesday, November 17, 2020 (continued)**

*Word Rotator's Distance*

Sho Yokoi, Ryo Takahashi, Reina Akama, Jun Suzuki and Kentaro Inui

*Disentangle-based Continual Graph Representation Learning*

Xiaoyu Kou, Yankai Lin, Shaobo Liu, Peng Li, Jie Zhou and Yan Zhang

*Semi-Supervised Bilingual Lexicon Induction with Two-way Interaction*

Xu Zhao, Zihao Wang, Hao Wu and Yong Zhang

*Wasserstein Distance Regularized Sequence Representation for Text Matching in Asymmetrical Domains*

Weijie Yu, Chen Xu, Jun Xu, Liang Pang, Xiaopeng Gao, Xiaozhao Wang and Ji-Rong Wen

*A Simple Approach to Learning Unsupervised Multilingual Embeddings*

Pratik Jawanpuria, Mayank Meghwanshi and Bamdev Mishra

*Bootstrapped Q-learning with Context Relevant Observation Pruning to Generalize in Text-based Games*

Subhajit Chaudhury, Daiki Kimura, Kartik Talamadupula, Michiaki Tatsubori, Asim Munawar and Ryuki Tachibana

*BERT-EMD: Many-to-Many Layer Mapping for BERT Compression with Earth Mover's Distance*

jianquan li, Xiaokang Liu, Honghong Zhao, Ruifeng Xu, Min Yang and yaohong jin

*Slot Attention with Value Normalization for Multi-Domain Dialogue State Tracking*

Yexiang Wang, Yi Guo and Siqi Zhu

*Don't Read Too Much Into It: Adaptive Computation for Open-Domain Question Answering*

Yuxiang Wu, Sebastian Riedel, Pasquale Minervini and Pontus Stenetorp

*Multi-Step Inference for Reasoning Over Paragraphs*

Jiangming Liu, Matt Gardner, Shay B. Cohen and Mirella Lapata

*Learning a Cost-Effective Annotation Policy for Question Answering*

Bernhard Kratzwald, Stefan Feuerriegel and Huan Sun

*Scene Restoring for Narrative Machine Reading Comprehension*

Zhixing Tian, Yuanzhe Zhang, Kang Liu, Jun Zhao, Yantao Jia and Zhicheng Sheng

**Tuesday, November 17, 2020 (continued)**

*A Simple and Effective Model for Answering Multi-span Questions*

Elad Segal, Avia Efrat, Mor Shoham, Amir Globerson and Jonathan Berant

06:00–08:00 *Gather Session 2iii: Information Retrieval and Text Mining; Interpretability and Analysis of Models for NLP; Language Grounding to Vision, Robotics and Beyond*

*Top-Rank-Focused Adaptive Vote Collection for the Evaluation of Domain-Specific Semantic Models*

Pierangelo Lombardo, Alessio Boiardi, Luca Colombo, Angelo Schiavone and Nicolò Tamagnone

*Meta Fine-Tuning Neural Language Models for Multi-Domain Text Mining*

Chengyu Wang, Minghui Qiu, Jun Huang and XIAOFENG HE

*Incorporating Behavioral Hypotheses for Query Generation*

Ruey-Cheng Chen and Chia-Jung Lee

*Conditional Causal Relationships between Emotions and Causes in Texts*

Xinhong Chen, Qing Li and Jianping Wang

*COMETA: A Corpus for Medical Entity Linking in the Social Media*

Marco Basaldella, Fangyu Liu, Ehsan Shareghi and Nigel Collier

*Pareto Probing: Trading Off Accuracy for Complexity*

Tiago Pimentel, Naomi Saphra, Adina Williams and Ryan Cotterell

*Interpretation of NLP models through input marginalization*

Siwon Kim, Jihun Yi, Eunji Kim and Sungroh Yoon

*Generating Label Cohesive and Well-Formed Adversarial Claims*

Pepa Atanasova, Dustin Wright and Isabelle Augenstein

*Are All Good Word Vector Spaces Isomorphic?*

Ivan Vulić, Sebastian Ruder and Anders Søgaard

*Cold-Start and Interpretability: Turning Regular Expressions into Trainable Recurrent Neural Networks*

Chengyue Jiang, Yinggong Zhao, Shanbo Chu, Libin Shen and Kewei Tu

**Tuesday, November 17, 2020 (continued)**

*When BERT Plays the Lottery, All Tickets Are Winning*

Sai Prasanna, Anna Rogers and Anna Rumshisky

*On the weak link between importance and prunability of attention heads*

Aakriti Budhreja, Madhura Pande, Preksha Nema, Pratyush Kumar and Mitesh M. Khapra

*Towards Interpreting BERT for Reading Comprehension Based QA*

Sahana Ramnath, Preksha Nema, Deep Sahni and Mitesh M. Khapra

*How do Decisions Emerge across Layers in Neural Models? Interpretation with Differentiable Masking*

Nicola De Cao, Michael Sejr Schlichtkrull, Wilker Aziz and Ivan Titov

*A Diagnostic Study of Explainability Techniques for Text Classification*

Pepa Atanasova, Jakob Grue Simonsen, Christina Lioma and Isabelle Augenstein

*STL-CQA: Structure-based Transformers with Localization and Encoding for Chart Question Answering*

Hrituraj Singh and Sumit Shekhar

*Learning to Contrast the Counterfactual Samples for Robust Visual Question Answering*

Zujie Liang, Weitao Jiang, Haifeng Hu and Jiaying Zhu

*Learning Physical Common Sense as Knowledge Graph Completion via BERT Data Augmentation and Constrained Tucker Factorization*

Zhenjie Zhao, Evangelos Papalexakis and Xiaojuan Ma

*A Visually-grounded First-person Dialogue Dataset with Verbal and Non-verbal Responses*

Hisashi Kamezawa, Noriki Nishida, Nobuyuki Shimizu, Takashi Miyazaki and Hideki Nakayama

*Cross-Media Keyphrase Prediction: A Unified Framework with Multi-Modality Multi-Head Attention and Image Wordings*

Yue Wang, Jing Li, Michael Lyu and Irwin King

*VD-BERT: A Unified Vision and Dialog Transformer with BERT*

Yue Wang, Shafiq Joty, Michael Lyu, Irwin King, Caiming Xiong and Steven C.H. Hoi

*The Grammar of Emergent Languages*

Oskar van der Wal, Silvan de Boer, Elia Bruni and Dieuwke Hupkes



**Tuesday, November 17, 2020 (continued)**

*Sub-Instruction Aware Vision-and-Language Navigation*

Yicong Hong, Cristian Rodriguez, Qi Wu and Stephen Gould

06:00–08:00 *Gather Session 2iv: Dialog and Interactive Systems; Semantics: Lexical Semantics; Sentiment Analysis, Stylistic Analysis, and Argument Mining; Summarization*

*Knowledge-Grounded Dialogue Generation with Pre-trained Language Models*

Xueliang Zhao, wei wu, Can Xu, Chongyang Tao, Dongyan Zhao and Rui Yan

*MinTL: Minimalist Transfer Learning for Task-Oriented Dialogue Systems*

Zhaojiang Lin, Andrea Madotto, Genta Indra Winata and Pascale Fung

*Variational Hierarchical Dialog Autoencoder for Dialog State Tracking Data Augmentation*

Kang Min Yoo, Hanbit Lee, Franck Dernoncourt, Trung Bui, Walter Chang and Sang-goo Lee

*Bridging the Gap between Prior and Posterior Knowledge Selection for Knowledge-Grounded Dialogue Generation*

Xiuyi Chen, Fandong Meng, Peng Li, Feilong Chen, Shuang Xu, Bo Xu and Jie Zhou

*Counterfactual Off-Policy Training for Neural Dialogue Generation*

Qingfu Zhu, Wei-Nan Zhang, Ting Liu and William Yang Wang

*Dialogue Distillation: Open-Domain Dialogue Augmentation Using Unpaired Data*

Rongsheng Zhang, Yinhe Zheng, Jianzhi Shao, Xiaoxi Mao, Yadong Xi and Minlie Huang

*Task-Completion Dialogue Policy Learning via Monte Carlo Tree Search with Dueling Network*

Sihan Wang, kaijie zhou, Kunfeng Lai and Jianping Shen

*Learning a Simple and Effective Model for Multi-turn Response Generation with Auxiliary Tasks*

YUFAN ZHAO, Can Xu and wei wu

*AttnIO: Knowledge Graph Exploration with In-and-Out Attention Flow for Knowledge-Grounded Dialogue*

Jaehun Jung, Bokyung Son and Sungwon Lyu

*Amalgamating Knowledge from Two Teachers for Task-oriented Dialogue System with Adversarial Training*

Wanwei He, Min Yang, Rui Yan, Chengming Li, Ying Shen and Ruifeng Xu

**Tuesday, November 17, 2020 (continued)**

*Task-oriented Domain-specific Meta-Embedding for Text Classification*

Xin Wu, Yi Cai, Yang Kai, Tao Wang and Qing Li

*Don't Neglect the Obvious: On the Role of Unambiguous Words in Word Sense Disambiguation*

Daniel Loureiro and Jose Camacho-Collados

*Within-Between Lexical Relation Classification*

Oren Barkan, Avi Caciularu and Ido Dagan

*With More Contexts Comes Better Performance: Contextualized Sense Embeddings for All-Round Word Sense Disambiguation*

Bianca Scarlini, Tommaso Pasini and Roberto Navigli

*Convolution over Hierarchical Syntactic and Lexical Graphs for Aspect Level Sentiment Analysis*

Mi Zhang and Tiejun Qian

*Multi-Instance Multi-Label Learning Networks for Aspect-Category Sentiment Analysis*

Yuncong Li, Cunxiang Yin, Sheng-hua Zhong and Xu Pan

*Aspect Sentiment Classification with Aspect-Specific Opinion Spans*

Lu Xu, Lidong Bing, Wei Lu and Fei Huang

*Emotion-Cause Pair Extraction as Sequence Labeling Based on A Novel Tagging Scheme*

Chaofa Yuan, Chuang Fan, Jianzhu Bao and Ruifeng Xu

*End-to-End Emotion-Cause Pair Extraction based on Sliding Window Multi-Label Learning*

Zixiang Ding, Rui Xia and Jianfei Yu

*Multi-modal Multi-label Emotion Detection with Modality and Label Dependence*

Dong Zhang, Xincheng Ju, Junhui Li, Shoushan Li, Qiaoming Zhu and Guodong Zhou

*Tasty Burgers, Soggy Fries: Probing Aspect Robustness in Aspect-Based Sentiment Analysis*

Xiaoyu Xing, Zhijing Jin, Di Jin, Bingning Wang, Qi Zhang and Xuanjing Huang

*Modeling Content Importance for Summarization with Pre-trained Language Models*

Liqiang Xiao, Lu Wang, Hao He and Yaohui Jin

**Tuesday, November 17, 2020 (continued)**

*Unsupervised Reference-Free Summary Quality Evaluation via Contrastive Learning*

Hanlu Wu, Tengfei Ma, Lingfei Wu, Tariro Manyumwa and Shouling Ji

*Neural Extractive Summarization with Hierarchical Attentive Heterogeneous Graph Network*

Ruipeng Jia, Yanan Cao, Hengzhu Tang, Fang Fang, Cong Cao and Shi Wang

*Coarse-to-Fine Query Focused Multi-Document Summarization*

Yumo Xu and Mirella Lapata

*Pre-training for Abstractive Document Summarization by Reinstating Source Text*

Yanyan Zou, Xingxing Zhang, Wei Lu, Furu Wei and Ming Zhou

06:00–08:00 *Gather Session 2v: Information Extraction; NLP Applications; Phonology, Morphology and Word Segmentation; Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Learning from Context or Names? An Empirical Study on Neural Relation Extraction*

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

*SelfORE: Self-supervised Relational Feature Learning for Open Relation Extraction*

Xuming Hu, Lijie Wen, Yusong Xu, Chenwei Zhang and Philip Yu

*Denoising Relation Extraction from Document-level Distant Supervision*

Chaojun Xiao, Yuan Yao, Ruobing Xie, Xu Han, Zhiyuan Liu, Maosong Sun, Fen Lin and Leyu Lin

*Let's Stop Incorrect Comparisons in End-to-end Relation Extraction!*

Bruno Taillé, Vincent Guigues, Geoffrey Scoutheeten and patrick Gallinari

*Exposing Shallow Heuristics of Relation Extraction Models with Challenge Data*

Shachar Rosenman, Alon Jacovi and Yoav Goldberg

*Global-to-Local Neural Networks for Document-Level Relation Extraction*

Difeng Wang, Wei Hu, Ermei Cao and Weijian Sun

*Recurrent Interaction Network for Jointly Extracting Entities and Classifying Relations*

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

**Tuesday, November 17, 2020 (continued)**

*Temporal Knowledge Base Completion: New Algorithms and Evaluation Protocols*

Prachi Jain, Sushant Rathi, Mausam and Soumen Chakrabarti

*OpenIE6: Iterative Grid Labeling and Coordination Analysis for Open Information Extraction*

Keshav Kolluru, Vaibhav Adlakha, Samarth Aggarwal, Mausam and Soumen Chakrabarti

*Public Sentiment Drift Analysis Based on Hierarchical Variational Auto-encoder*

Wenyue Zhang, Xiaoli Li, Yang Li, Suge Wang, Deyu Li, Jian Liao and Jianxing Zheng

*Point to the Expression: Solving Algebraic Word Problems using the Expression-Pointer Transformer Model*

Bugeun Kim, Kyung Seo Ki, Donggeon Lee and Gahgene Gweon

*Semantically-Aligned Universal Tree-Structured Solver for Math Word Problems*

Jinghui Qin, Lihui Lin, Xiaodan Liang, Rumin Zhang and Liang Lin

*Neural Topic Modeling by Incorporating Document Relationship Graph*

Deyu Zhou, Xuemeng Hu and Rui Wang

*Routing Enforced Generative Model for Recipe Generation*

Zhiwei Yu, Hongyu Zang and Xiaojun Wan

*Assessing the Helpfulness of Learning Materials with Inference-Based Learner-Like Agent*

Yun-Hsuan Jen, Chieh-Yang Huang, MeiHua Chen, Ting-Hao Huang and Lun-Wei Ku

*Selection and Generation: Learning towards Multi-Product Advertisement Post Generation*

Zhangming Chan, Yuchi Zhang, Xiuying Chen, Shen Gao, Zhiqiang Zhang, Dongyan Zhao and Rui Yan

*Form2Seq : A Framework for Higher-Order Form Structure Extraction*

Milan Aggarwal, Hires Gupta, Mausoom Sarkar and Balaji Krishnamurthy

*Domain Adaptation of Thai Word Segmentation Models using Stacked Ensemble*

Peerat Limkonchotiwat, Wannaphong Phatthiyaphaibun, Raheem Sarwar, Ekapol Chuangsuwanich and Sarana Nutanong

*DagoBERT: Generating Derivational Morphology with a Pretrained Language Model*

Valentin Hofmann, Janet Pierrehumbert and Hinrich Schütze

**Tuesday, November 17, 2020 (continued)**

*Attention Is All You Need for Chinese Word Segmentation*

Sufeng Duan and Hai Zhao

*A Joint Multiple Criteria Model in Transfer Learning for Cross-domain Chinese Word Segmentation*

Kaiyu Huang, Degen Huang, Zhuang Liu and Fengran Mo

*Alignment-free Cross-lingual Semantic Role Labeling*

Rui Cai and Mirella Lapata

*Leveraging Declarative Knowledge in Text and First-Order Logic for Fine-Grained Propaganda Detection*

Ruize Wang, Duyu Tang, Nan Duan, Wanjun Zhong, Zhongyu Wei, Xuanjing Huang, Daxin Jiang and Ming Zhou

*X-SRL: A Parallel Cross-Lingual Semantic Role Labeling Dataset*

Angel Daza and Anette Frank

*Graph Convolutions over Constituent Trees for Syntax-Aware Semantic Role Labeling*

Diego Marcheggiani and Ivan Titov

*Fast semantic parsing with well-typedness guarantees*

Matthias Lindemann, Jonas Groschwitz and Alexander Koller

11:00–12:00 *Ethics Panel Discussion*

12:00–13:00 *Zoom Q&A Session 7*

12:00–13:00 *Zoom Q&A Session 7i: Dialog and Interactive Systems*

*Improving Out-of-Scope Detection in Intent Classification by Using Embeddings of the Word Graph Space of the Classes*

Paulo Cavalin, Victor Henrique Alves Ribeiro, Ana Appel and Claudio Pinhanez

*Supervised Seeded Iterated Learning for Interactive Language Learning*

Yuchen Lu, Soumye Singhal, Florian Strub, Olivier Pietquin and Aaron Courville

**Tuesday, November 17, 2020 (continued)**

*Spot The Bot: A Robust and Efficient Framework for the Evaluation of Conversational Dialogue Systems*

Jan Deriu, Don Tuggener, Pius von Däniken, Jon Ander Campos, Alvaro Rodrigo, Thiziri Belkacem, Aitor Soroa, Eneko Agirre and Mark Cieliebak

*Human-centric dialog training via offline reinforcement learning*

Natasha Jaques, Judy Hanwen Shen, Asma Ghandeharioun, Craig Ferguson, Agata Lapedriza, Noah Jones, Shixiang Gu and Rosalind Picard

12:00–13:00 *Zoom Q&A Session 7ii: Linguistic Theories, Cognitive Modeling and Psycholinguistics*

*Speakers Fill Lexical Semantic Gaps with Context*

Tiago Pimentel, Rowan Hall Maudslay, Damian Blasi and Ryan Cotterell

*Investigating Cross-Linguistic Adjective Ordering Tendencies with a Latent-Variable Model*

Jun Yen Leung, Guy Emerson and Ryan Cotterell

*Surprisal Predicts Code-Switching in Chinese-English Bilingual Text*

Jesús Calvillo, Le Fang, Jeremy Cole and David Reitter

*Word Frequency Does Not Predict Grammatical Knowledge in Language Models*

Charles Yu, Ryan Sie, Nicolas Tedeschi and Leon Bergen

12:00–13:00 *Zoom Q&A Session 7iii: Semantics: Lexical Semantics*

*Improving Word Sense Disambiguation with Translations*

Yixing Luan, Bradley Hauer, Lili Mou and Grzegorz Kondrak

*Towards Better Context-aware Lexical Semantics: Adjusting Contextualized Representations through Static Anchors*

Qianchu Liu, Diana McCarthy and Anna Korhonen

*Compositional Demographic Word Embeddings*

Charles Welch, Jonathan K. Kummerfeld, Verónica Pérez-Rosas and Rada Mihalcea

*Do “Undocumented Workers” == “Illegal Aliens”? Differentiating Denotation and Connotation in Vector Spaces*

Albert Webson, Zhizhong Chen, Carsten Eickhoff and Ellie Pavlick

**Tuesday, November 17, 2020 (continued)**

12:00–13:00 *Zoom Q&A Session 7iv: Summarization*

*Multi-View Sequence-to-Sequence Models with Conversational Structure for Abstractive Dialogue Summarization*

Jiaao Chen and Diyi Yang

*Few-Shot Learning for Opinion Summarization*

Arthur Bražinskas, Mirella Lapata and Ivan Titov

*Learning to Fuse Sentences with Transformers for Summarization*

Logan Lebanoff, Franck Dernoncourt, Doo Soon Kim, Lidan Wang, Walter Chang and Fei Liu

*Stepwise Extractive Summarization and Planning with Structured Transformers*

Shashi Narayan, Joshua Maynez, Jakub Adamek, Daniele Pighin, Blaz Bratanić and Ryan McDonald

13:00–14:00 *Zoom Q&A Session 8*

13:00–14:00 *Zoom Q&A Session 8i: Information Retrieval and Text Mining*

*CLIRMatrix: A massively large collection of bilingual and multilingual datasets for Cross-Lingual Information Retrieval*

Shuo Sun and Kevin Duh

*SLEDGE-Z: A Zero-Shot Baseline for COVID-19 Literature Search*

Sean MacAvaney, Arman Cohan and Nazli Goharian

*Modularized Transformer-based Ranking Framework*

Luyu Gao, Zhuyun Dai and Jamie Callan

*Ad-hoc Document Retrieval using Weak-Supervision with BERT and GPT2*

Yosi Mass and Haggai Roitman

13:00–14:00 *Zoom Q&A Session 8ii: Interpretability and Analysis of Models for NLP*

*Adversarial Semantic Collisions*

Congzheng Song, Alexander Rush and Vitaly Shmatikov

**Tuesday, November 17, 2020 (continued)**

*Learning Explainable Linguistic Expressions with Neural Inductive Logic Programming for Sentence Classification*

Prithviraj Sen, Marina Danilevsky, Yunyao Li, Siddhartha Brahma, Matthias Boehm, Laura Chiticariu and Rajasekar Krishnamurthy

*AutoPrompt: Eliciting Knowledge from Language Models with Automatically Generated Prompts*

Taylor Shin, Yasaman Razeghi, Robert L Logan IV, Eric Wallace and Sameer Singh

*Learning Variational Word Masks to Improve the Interpretability of Neural Text Classifiers*

Hanjie Chen and Yangfeng Ji

13:00–14:00 *Zoom Q&A Session 8iii: Language Generation*

*Sparse Text Generation*

Pedro Henrique Martins, Zita Marinho and André F. T. Martins

*PlotMachines: Outline-Conditioned Generation with Dynamic Plot State Tracking*

Hannah Rashkin, Asli Celikyilmaz, Yejin Choi and Jianfeng Gao

*Do sequence-to-sequence VAEs learn global features of sentences?*

Tom Bosc and Pascal Vincent

*Content Planning for Neural Story Generation with Aristotelian Rescoring*

Seraphina Goldfarb-Tarrant, Tuhin Chakrabarty, Ralph Weischedel and Nanyun Peng

*Generating Dialogue Responses from a Semantic Latent Space*

Wei-Jen Ko, Avik Ray, Yilin Shen and Hongxia Jin

13:00–14:00 *Zoom Q&A Session 8iv: Language Grounding to Vision, Robotics and Beyond*

*Refer, Reuse, Reduce: Generating Subsequent References in Visual and Conversational Contexts*

Ece Takmaz, Mario Giulianelli, Sandro Pezzelle, Arabella Sinclair and Raquel Fernández

*Visually Grounded Compound PCFGs*

Yanpeng Zhao and Ivan Titov



**Tuesday, November 17, 2020 (continued)**

*ALICE: Active Learning with Contrastive Natural Language Explanations*

Weixin Liang, James Zou and Zhou Yu

*Room-Across-Room: Multilingual Vision-and-Language Navigation with Dense Spatiotemporal Grounding*

Alexander Ku, Peter Anderson, Roma Patel, Eugene Ie and Jason Baldridge

*SSCR: Iterative Language-Based Image Editing via Self-Supervised Counterfactual Reasoning*

Tsu-Jui Fu, Xin Wang, Scott Grafton, Miguel Eckstein and William Yang Wang

14:00–16:00 *Gather Session 3i: Machine Translation and Multilinguality; Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Identifying Elements Essential for BERT's Multilinguality*

Philipp Dufter and Hinrich Schütze

*On Negative Interference in Multilingual Models: Findings and A Meta-Learning Treatment*

Zirui Wang, Zachary C. Lipton and Yulia Tsvetkov

*Pre-tokenization of Multi-word Expressions in Cross-lingual Word Embeddings*

Naoki Otani, Satoru Ozaki, Xingyuan Zhao, Yucen Li, Micael St Johns and Lori Levin

*Monolingual Adapters for Zero-Shot Neural Machine Translation*

Jerin Philip, Alexandre Berard, Matthias Gallé and Laurent Besacier

*Do Explicit Alignments Robustly Improve Multilingual Encoders?*

Shijie Wu and Mark Dredze

*From Zero to Hero: On the Limitations of Zero-Shot Language Transfer with Multilingual Transformers*

Anne Lauscher, Vinit Ravishankar, Ivan Vulić and Goran Glavaš

*Distilling Multiple Domains for Neural Machine Translation*

Anna Currey, Prashant Mathur and Georgiana Dinu

*Making Monolingual Sentence Embeddings Multilingual using Knowledge Distillation*

Nils Reimers and Iryna Gurevych

**Tuesday, November 17, 2020 (continued)**

*A Streaming Approach For Efficient Batched Beam Search*

Kevin Yang, Violet Yao, John DeNero and Dan Klein

*Improving Multilingual Models with Language-Clustered Vocabularies*

Hyung Won Chung, Dan Garrette, Kiat Chuan Tan and Jason Riesa

*Zero-Shot Cross-Lingual Transfer with Meta Learning*

Farhad Nooralahzadeh, Giannis Bekoulis, Johannes Bjerva and Isabelle Augenstein

*The Multilingual Amazon Reviews Corpus*

Phillip Keung, Yichao Lu, György Szarvas and Noah A. Smith

*GLUCOSE: GeneraLized and COntextualized Story Explanations*

Nasrin Mostafazadeh, Aditya Kalyanpur, Lori Moon, David Buchanan, Lauren Berkowitz, Or Biran and Jennifer Chu-Carroll

*Character-level Representations Improve DRS-based Semantic Parsing Even in the Age of BERT*

Rik van Noord, Antonio Toral and Johan Bos

*Infusing Disease Knowledge into BERT for Health Question Answering, Medical Inference and Disease Name Recognition*

Yun He, Ziwei Zhu, Yin Zhang, Qin Chen and James Caverlee

*Unsupervised Commonsense Question Answering with Self-Talk*

Vered Shwartz, Peter West, Ronan Le Bras, Chandra Bhagavatula and Yejin Choi

*Reasoning about Goals, Steps, and Temporal Ordering with WikiHow*

Li Zhang, Qing Lyu and Chris Callison-Burch

14:00–16:00 *Gather Session 3ii: Linguistic Theories, Cognitive Modeling and Psycholinguistics; NLP Applications; Syntax: Tagging, Chunking, and Parsing*

*Structural Supervision Improves Few-Shot Learning and Syntactic Generalization in Neural Language Models*

Ethan Wilcox, Peng Qian, Richard Futrell, Ryosuke Kohita, Roger Levy and Miguel Ballesteros

*Investigating representations of verb bias in neural language models*

Robert Hawkins, Takateru Yamakoshi, Thomas Griffiths and Adele Goldberg

**Tuesday, November 17, 2020 (continued)**

*Generating Image Descriptions via Sequential Cross-Modal Alignment Guided by Human Gaze*

Ece Takmaz, Sandro Pezzelle, Lisa Beinborn and Raquel Fernández

*Optimus: Organizing Sentences via Pre-trained Modeling of a Latent Space*

Chunyuan Li, Xiang Gao, Yuan Li, Baolin Peng, Xiujun Li, Yizhe Zhang and Jianfeng Gao

*BioMegatron: Larger Biomedical Domain Language Model*

Hoo-Chang Shin, Yang Zhang, Evelina Bakhturina, Raul Puri, Mostofa Patwary, Mohammad Shoeybi and Raghav Mani

*Text Segmentation by Cross Segment Attention*

Michal Lukasik, Boris Dadachev, Kishore Papineni and Goncalo Simoes

*RussianSuperGLUE: A Russian Language Understanding Evaluation Benchmark*

Tatiana Shavrina, Alena Fenogenova, Emelyanov Anton, Denis Shevelev, Ekaterina Artemova, Valentin Malykh, Vladislav Mikhailov, Maria Tikhonova, Andrey Chertok and Andrey Evlampiev

*An Empirical Study of Pre-trained Transformers for Arabic Information Extraction*

Wuwei Lan, Yang Chen, Wei Xu and Alan Ritter

*TNT: Text Normalization based Pre-training of Transformers for Content Moderation*

Fei Tan, Yifan Hu, Changwei Hu, Keqian Li and Kevin Yen

*Methods for Numeracy-Preserving Word Embeddings*

Dhanasekar Sundararaman, Shijing Si, Vivek Subramanian, Guoyin Wang, Devamanyu Hazarika and Lawrence Carin

*An Empirical Investigation of Contextualized Number Prediction*

Taylor Berg-Kirkpatrick and Daniel Spokoyny

*Modeling the Music Genre Perception across Language-Bound Cultures*

Elena V. Epure, Guillaume Salha, Manuel Moussallam and Romain Hennequin

*Joint Estimation and Analysis of Risk Behavior Ratings in Movie Scripts*

Victor Martinez, Krishna Somandepalli, Yalda Tehrani-Uhls and Shrikanth Narayanan

*Keep it Surprisingly Simple: A Simple First Order Graph Based Parsing Model for Joint Morphosyntactic Parsing in Sanskrit*

Amrith Krishna, Ashim Gupta, Deepak Garasangi, Pavankumar Satuluri and Pawan Goyal

**Tuesday, November 17, 2020 (continued)**

*Unsupervised Parsing via Constituency Tests*

Steven Cao, Nikita Kitaev and Dan Klein

*Please Mind the Root: Decoding Arborescences for Dependency Parsing*

Ran Zmigrod, Tim Vieira and Ryan Cotterell

*Unsupervised Cross-Lingual Part-of-Speech Tagging for Truly Low-Resource Scenarios*

Ramy Eskander, Smaranda Muresan and Michael Collins

*Unsupervised Parsing with S-DIORA: Single Tree Encoding for Deep Inside-Outside Recursive Autoencoders*

Andrew Drozdov, Subendhu Rongali, Yi-Pei Chen, Tim O’Gorman, Mohit Iyyer and Andrew McCallum

14:00–16:00 *Gather Session 3iii: Interpretability and Analysis of Models for NLP; Machine Learning for NLP*

*Utility is in the Eye of the User: A Critique of NLP Leaderboards*

Kawin Ethayarajh and Dan Jurafsky

*An Empirical Investigation Towards Efficient Multi-Domain Language Model Pre-training*

Kristjan Arumae, Qing Sun and Parminder Bhatia

*Analyzing Individual Neurons in Pre-trained Language Models*

Nadir Durrani, Hassan Sajjad, Fahim Dalvi and Yonatan Belinkov

*Dissecting Span Identification Tasks with Performance Prediction*

Sean Papay, Roman Klinger and Sebastian Padó

*Assessing Phrasal Representation and Composition in Transformers*

Lang Yu and Allyson Ettinger

*Analyzing Redundancy in Pretrained Transformer Models*

Fahim Dalvi, Hassan Sajjad, Nadir Durrani and Yonatan Belinkov

*Be More with Less: Hypergraph Attention Networks for Inductive Text Classification*

Kaize Ding, Jianling Wang, Jundong Li, Dingcheng Li and Huan Liu

**Tuesday, November 17, 2020 (continued)**

*Entities as Experts: Sparse Memory Access with Entity Supervision*

Thibault Févry, Livio Baldini Soares, Nicholas FitzGerald, Eunsol Choi and Tom Kwiatkowski

*H2KGAT: Hierarchical Hyperbolic Knowledge Graph Attention Network*

Shen Wang, Xiaokai Wei, Cicero Nogueira dos Santos, Zhiguo Wang, Ramesh Nalapat, Andrew Arnold, Bing Xiang and Philip S. Yu

*Does the Objective Matter? Comparing Training Objectives for Pronoun Resolution*

Yordan Yordanov, Oana-Maria Camburu, Vid Kocijan and Thomas Lukasiewicz

*On Losses for Modern Language Models*

Stéphane Aroca-Ouellette and Frank Rudzicz

*We Can Detect Your Bias: Predicting the Political Ideology of News Articles*

Ramy Baly, Giovanni Da San Martino, James Glass and Preslav Nakov

*Semantic Label Smoothing for Sequence to Sequence Problems*

Michal Lukasik, Himanshu Jain, Aditya Menon, Seungyeon Kim, Srinadh Bhojanapalli, Felix Yu and Sanjiv Kumar

*Training for Gibbs Sampling on Conditional Random Fields with Neural Scoring Factors*

Sida Gao and Matthew R. Gormley

*Multilevel Text Alignment with Cross-Document Attention*

Xuhui Zhou, Nikolaos Pappas and Noah A. Smith

14:00–16:00 *Gather Session 3iv: Dialog and Interactive Systems; Language Generation; Phonology, Morphology and Word Segmentation*

*Conversational Semantic Parsing*

Armen Aghajanyan, Jean Maillard, Akshat Shrivastava, Keith Diedrick, Michael Haeger, Haoran Li, Yashar Mehdad, Veselin Stoyanov, Anuj Kumar, Mike Lewis and Sonal Gupta

*Probing Task-Oriented Dialogue Representation from Language Models*

Chien-Sheng Wu and Caiming Xiong

*End-to-End Slot Alignment and Recognition for Cross-Lingual NLU*

Weijia Xu, Batool Haider and Saab Mansour

**Tuesday, November 17, 2020 (continued)**

*Discriminative Nearest Neighbor Few-Shot Intent Detection by Transferring Natural Language Inference*

Jianguo Zhang, Kazuma Hashimoto, Wenhao Liu, Chien-Sheng Wu, Yao Wan, Philip Yu, Richard Socher and Caiming Xiong

*Simple Data Augmentation with the Mask Token Improves Domain Adaptation for Dialog Act Tagging*

Semih Yavuz, Kazuma Hashimoto, Wenhao Liu, Nitish Shirish Keskar, Richard Socher and Caiming Xiong

*Low-Resource Domain Adaptation for Compositional Task-Oriented Semantic Parsing*

Xilun Chen, Asish Ghoshal, Yashar Mehdad, Luke Zettlemoyer and Sonal Gupta

*Sound Natural: Content Rephrasing in Dialog Systems*

Arash Einolghozati, Anchit Gupta, Keith Diedrick and Sonal Gupta

*Zero-Shot Crosslingual Sentence Simplification*

Jonathan Mallinson, Rico Sennrich and Mirella Lapata

*Facilitating the Communication of Politeness through Fine-Grained Paraphrasing*

Liye Fu, Susan Fussell and Cristian Danescu-Niculescu-Mizil

*CAT-Gen: Improving Robustness in NLP Models via Controlled Adversarial Text Generation*

Tianlu Wang, Xuezhi Wang, Yao Qin, Ben Packer, Kang Li, Jilin Chen, Alex Beutel and Ed Chi

*Seq2Edits: Sequence Transduction Using Span-level Edit Operations*

Felix Stahlberg and Shankar Kumar

*Controllable Meaning Representation to Text Generation: Linearization and Data Augmentation Strategies*

Chris Kedzie and Kathleen McKeown

*Blank Language Models*

Tianxiao Shen, Victor Quach, Regina Barzilay and Tommi Jaakkola

*COD3S: Diverse Generation with Discrete Semantic Signatures*

Nathaniel Weir, João Sedoc and Benjamin Van Durme

*Automatic Extraction of Rules Governing Morphological Agreement*

Aditi Chaudhary, Antonios Anastasopoulos, Adithya Pratapa, David R. Mortensen, Zaid Sheikh, Yulia Tsvetkov and Graham Neubig

**Tuesday, November 17, 2020 (continued)**

*Tackling the Low-resource Challenge for Canonical Segmentation*

Manuel Mager, Özlem Çetinoğlu and Katharina Kann

*IGT2P: From Interlinear Glossed Texts to Paradigms*

Sarah Moeller, Ling Liu, Changbing Yang, Katharina Kann and Mans Hulden

14:00–16:00 *Gather Session 3v: Computational Social Science and Social Media; Information Extraction; Question Answering*

*A Computational Approach to Understanding Empathy Expressed in Text-Based Mental Health Support*

Ashish Sharma, Adam Miner, David Atkins and Tim Althoff

*Modeling Protagonist Emotions for Emotion-Aware Storytelling*

Faeze Brahman and Snigdha Chaturvedi

*Help! Need Advice on Identifying Advice*

Venkata Subrahmanyam Govindarajan, Benjamin Chen, Rebecca Warholic, Katrin Erk and Junyi Jessy Li

*Quantifying Intimacy in Language*

Jiaxin Pei and David Jurgens

*Writing Strategies for Science Communication: Data and Computational Analysis*

Tal August, Lauren Kim, Katharina Reinecke and Noah A. Smith

*Weakly Supervised Subevent Knowledge Acquisition*

Wenlin Yao, Zeyu Dai, Maitreyi Ramaswamy, Bonan Min and Ruihong Huang

*Biomedical Event Extraction as Sequence Labeling*

Alan Ramponi, Rob van der Goot, Rosario Lombardo and Barbara Plank

*Annotating Temporal Dependency Graphs via Crowdsourcing*

Jiarui Yao, Haoling Qiu, Bonan Min and Nianwen Xue

*Introducing a New Dataset for Event Detection in Cybersecurity Texts*

Hieu Man Duc Trong, Duc Trong Le, Amir Pouran Ben Veyseh, Thuat Nguyen and Thien Huu Nguyen

**Tuesday, November 17, 2020 (continued)**

*CHARM: Inferring Personal Attributes from Conversations*

Anna Tigunova, Andrew Yates, Paramita Mirza and Gerhard Weikum

*Event Detection: Gate Diversity and Syntactic Importance Scores for Graph Convolution Neural Networks*

Viet Dac Lai, Tuan Ngo Nguyen and Thien Huu Nguyen

*Severing the Edge Between Before and After: Neural Architectures for Temporal Ordering of Events*

Miguel Ballesteros, Rishita Anubhai, Shuai Wang, Nima Pourdamghani, Yogarshi Vyas, Jie Ma, Parminder Bhatia, Kathleen McKeown and Yaser Al-Onaizan

*How Much Knowledge Can You Pack Into the Parameters of a Language Model?*

Adam Roberts, Colin Raffel and Noam Shazeer

*EXAMS: A Multi-subject High School Examinations Dataset for Cross-lingual and Multilingual Question Answering*

Momchil Hardalov, Todor Mihaylov, Dimitrina Zlatkova, Yoan Dinkov, Ivan Koychev and Preslav Nakov

*End-to-End Synthetic Data Generation for Domain Adaptation of Question Answering Systems*

Siamak Shakeri, Cicero Nogueira dos Santos, Henghui Zhu, Patrick Ng, Feng Nan, Zhiguo Wang, Ramesh Nallapati and Bing Xiang

*Multi-Stage Pre-training for Low-Resource Domain Adaptation*

Rong Zhang, Revanth Gangi Reddy, Md Arafat Sultan, Vittorio Castelli, Anthony Ferritto, Radu Florian, Efsun Sarioglu Kayi, Salim Roukos, Avi Sil and Todd Ward

*ISAAQ - Mastering Textbook Questions with Pre-trained Transformers and Bottom-Up and Top-Down Attention*

Jose Manuel Gomez-Perez and Raúl Ortega

*SubjQA: A Dataset for Subjectivity and Review Comprehension*

Johannes Bjerva, Nikita Bhutani, Behzad Golshan, Wang-Chiew Tan and Isabelle Augenstein

19:00–20:00 *Keynote II: Rich Caruana*

20:00–21:00 *Zoom Q&A Session 9*

20:00–21:00 *Zoom Q&A Session 9i: Speech and Multimodality*



**Tuesday, November 17, 2020 (continued)**

*Widget Captioning: Generating Natural Language Description for Mobile User Interface Elements*

Yang Li, Gang Li, Luheng He, Jingjie Zheng, Hong Li and Zhiwei Guan

*Unsupervised Natural Language Inference via Decoupled Multimodal Contrastive Learning*

Wanyun Cui, Guangyu Zheng and Wei Wang

*Digital Voicing of Silent Speech*

David Gaddy and Dan Klein

20:00–21:00 *Zoom Q&A Session 9ii: Machine Learning for NLP*

*Imitation Attacks and Defenses for Black-box Machine Translation Systems*

Eric Wallace, Mitchell Stern and Dawn Song

*Sequence-Level Mixed Sample Data Augmentation*

Demi Guo, Yoon Kim and Alexander Rush

*Consistency of a Recurrent Language Model With Respect to Incomplete Decoding*

Sean Welleck, Ilia Kulikov, Jaedeok Kim, Richard Yuanzhe Pang and Kyunghyun Cho

*An Exploration of Arbitrary-Order Sequence Labeling via Energy-Based Inference Networks*

Lifu Tu, Tianyu Liu and Kevin Gimpel

*Ensemble Distillation for Structured Prediction: Calibrated, Accurate, Fast—Choose Three*

Steven Reich, David Mueller and Nicholas Andrews

20:00–21:00 *Zoom Q&A Session 9iii: Sentiment Analysis, Stylistic Analysis, and Argument Mining*

*Inducing Target-Specific Latent Structures for Aspect Sentiment Classification*

Chenhua Chen, Zhiyang Teng and Yue Zhang

*Affective Event Classification with Discourse-enhanced Self-training*

Yuan Zhuang, Tianyu Jiang and Ellen Riloff

**Tuesday, November 17, 2020 (continued)**

*Deep Weighted MaxSAT for Aspect-based Opinion Extraction*

Meixi Wu, Wenya Wang and Sinno Jialin Pan

*Multi-view Story Characterization from Movie Plot Synopses and Reviews*

Sudipta Kar, Gustavo Aguilar, Mirella Lapata and Thamar Solorio

21:00–22:00 *Zoom Q&A Session 10*

21:00–22:00 *Zoom Q&A Session 10i: Phonology, Morphology and Word Segmentation*

*Mind Your Inflections! Improving NLP for Non-Standard Englishes with Base-Inflection Encoding*

Samson Tan, Shafiq Joty, Lav Varshney and Min-Yen Kan

*Measuring the Similarity of Grammatical Gender Systems by Comparing Partitions*

Arya D. McCarthy, Adina Williams, Shijia Liu, David Yarowsky and Ryan Cotterell

*RethinkCWS: Is Chinese Word Segmentation a Solved Task?*

Jinlan Fu, Pengfei Liu, Qi Zhang and Xuanjing Huang

*Learning to Pronounce Chinese Without a Pronunciation Dictionary*

Christopher Chu, Scot Fang and Kevin Knight

21:00–22:00 *Zoom Q&A Session 10ii: Information Extraction*

*Dynamic Anticipation and Completion for Multi-Hop Reasoning over Sparse Knowledge Graph*

Xin Lv, Xu Han, Lei Hou, Juanzi Li, Zhiyuan Liu, Wei Zhang, YICHI ZHANG, Hao Kong and Suhui Wu

*Knowledge Association with Hyperbolic Knowledge Graph Embeddings*

Zequn Sun, Muhao Chen, Wei Hu, Chengming Wang, Jian Dai and Wei Zhang

*Domain Knowledge Empowered Structured Neural Net for End-to-End Event Temporal Relation Extraction*

Rujun Han, Yichao Zhou and Nanyun Peng

**Tuesday, November 17, 2020 (continued)**

*TeMP: Temporal Message Passing for Temporal Knowledge Graph Completion*

Jiapeng Wu, Meng Cao, Jackie Chi Kit Cheung and William L. Hamilton

21:00–22:00 *Zoom Q&A Session 10iii: Machine Translation and Multilinguality*

*Understanding the Difficulty of Training Transformers*

Liyuan Liu, Xiaodong Liu, Jianfeng Gao, Weizhu Chen and Jiawei Han

*An Empirical Study of Generation Order for Machine Translation*

William Chan, Mitchell Stern, Jamie Kiros and Jakob Uszkoreit

*Inference Strategies for Machine Translation with Conditional Masking*

Julia Kreutzer, George Foster and Colin Cherry

21:00–22:00 *Zoom Q&A Session 10iv: Question Answering*

*AmbigQA: Answering Ambiguous Open-domain Questions*

Sewon Min, Julian Michael, Hannaneh Hajishirzi and Luke Zettlemoyer

*Tell Me How to Ask Again: Question Data Augmentation with Controllable Rewriting in Continuous Space*

Dayiheng Liu, Yeyun Gong, Jie Fu, Yu Yan, Jiusheng Chen, Jiancheng Lv, Nan Duan and Ming Zhou

*Training Question Answering Models From Synthetic Data*

Raul Puri, Ryan Spring, Mohammad Shoeybi, Mostofa Patwary and Bryan Catanzaro

*Few-Shot Complex Knowledge Base Question Answering via Meta Reinforcement Learning*

Yuncheng Hua, Yuan-Fang Li, Gholamreza Haffari, Guilin Qi and Tongtong Wu

22:00–00:00 *Gather Session 4i: Computational Social Science and Social Media; Machine Translation and Multilinguality; Syntax: Tagging, Chunking, and Parsing*

*Multilingual Offensive Language Identification with Cross-lingual Embeddings*

Tharindu Ranasinghe and Marcos Zampieri

**Tuesday, November 17, 2020 (continued)**

*Solving Historical Dictionary Codes with a Neural Language Model*

Christopher Chu, Raphael Valenti and Kevin Knight

*Toward Micro-Dialect Identification in Diaglossic and Code-Switched Environments*

Muhammad Abdul-Mageed, Chiyu Zhang, AbdelRahim Elmadany and Lyle Ungar

*Investigating African-American Vernacular English in Transformer-Based Text Generation*

Sophie Groenwold, Lily Ou, Aesha Parekh, Samhita Honnavalli, Sharon Levy, Diba Mirza and William Yang Wang

*Iterative Domain-Repaired Back-Translation*

Hao-Ran Wei, Zhirui Zhang, Boxing Chen and Weihua Luo

*Dynamic Data Selection and Weighting for Iterative Back-Translation*

Zi-Yi Dou, Antonios Anastasopoulos and Graham Neubig

*Revisiting Modularized Multilingual NMT to Meet Industrial Demands*

Sungwon Lyu, Bokyung Son, Kichang Yang and Jaekyoung Bae

*LAReQA: Language-Agnostic Answer Retrieval from a Multilingual Pool*

Uma Roy, Noah Constant, Rami Al-Rfou, Aditya Barua, Aaron Phillips and Yinfei Yang

*OCR Post Correction for Endangered Language Texts*

Shruti Rijhwani, Antonios Anastasopoulos and Graham Neubig

*X-FACTR: Multilingual Factual Knowledge Retrieval from Pretrained Language Models*

Zhengbao Jiang, Antonios Anastasopoulos, Jun Araki, Haibo Ding and Graham Neubig

*CCAligned: A Massive Collection of Cross-Lingual Web-Document Pairs*

Ahmed El-Kishky, Vishrav Chaudhary, Francisco Guzmán and Philipp Koehn

*Localizing Open-Ontology QA Semantic Parsers in a Day Using Machine Translation*

Mehrad Moradshahi, Giovanni Campagna, Sina Semnani, Silei Xu and Monica Lam

*Interactive Refinement of Cross-Lingual Word Embeddings*

Michelle Yuan, Mozhi Zhang, Benjamin Van Durme, Leah Findlater and Jordan Boyd-Graber

**Tuesday, November 17, 2020 (continued)**

*Exploiting Sentence Order in Document Alignment*

Brian Thompson and Philipp Koehn

*XGLUE: A New Benchmark Dataset for Cross-lingual Pre-training, Understanding and Generation*

Yaobo Liang, Nan Duan, Yeyun Gong, Ning Wu, Fenfei Guo, Weizhen Qi, Ming Gong, Linjun Shou, Daxin Jiang, Guihong Cao, Xiaodong Fan, Ruofei Zhang, Rahul Agrawal, Edward Cui, Sining Wei, Taroon Bharti, Ying Qiao, Jiun-Hung Chen, Winnie Wu, Shuguang Liu, Fan Yang, Daniel Campos, Rangan Majumder and Ming Zhou

*AIN: Fast and Accurate Sequence Labeling with Approximate Inference Network*

Xinyu Wang, Yong Jiang, Nguyen Bach, Tao Wang, Zhongqiang Huang, Fei Huang and Kewei Tu

*HIT: Nested Named Entity Recognition via Head-Tail Pair and Token Interaction*

Yu Wang, Yun Li, Hanghang Tong and Ziyi Zhu

*Supertagging Combinatory Categorical Grammar with Attentive Graph Convolutional Networks*

Yuanhe Tian, Yan Song and Fei Xia

*DAGA: Data Augmentation with a Generation Approach for Low-resource Tagging Tasks*

BOSHENG DING, Linlin Liu, Lidong Bing, Canasai Kruengkrai, Thien Hai Nguyen, Shafiq Joty, Luo Si and Chunyan Miao

*Interpretable Multi-dataset Evaluation for Named Entity Recognition*

Jinlan Fu, Pengfei Liu and Graham Neubig

*Adversarial Semantic Decoupling for Recognizing Open-Vocabulary Slots*

Yuanmeng Yan, Keqing He, Hong Xu, Sihong Liu, Fanyu Meng, Min Hu and Weiran XU

22:00–00:00 *Gather Session 4ii: Machine Learning for NLP; Semantics: Lexical Semantics; Summarization*

*Plug and Play Autoencoders for Conditional Text Generation*

Florian Mai, Nikolaos Pappas, Ivan Montero, Noah A. Smith and James Henderson

*Structure Aware Negative Sampling in Knowledge Graphs*

Kian Ahrabian, Aarash Feizi, Yasmin Salehi, William L. Hamilton and Avishek Joey Bose

*Neural Mask Generator: Learning to Generate Adaptive Word Maskings for Language Model Adaptation*

Minki Kang, Moon-su Han and Sung Ju Hwang

**Tuesday, November 17, 2020 (continued)**

*Autoregressive Knowledge Distillation through Imitation Learning*

Alexander Lin, Jeremy Wohlwend, Howard Chen and Tao Lei

*T3: Tree-Autoencoder Constrained Adversarial Text Generation for Targeted Attack*

Boxin Wang, Hengzhi Pei, Boyuan Pan, Qian Chen, Shuohang Wang and Bo Li

*Structured Pruning of Large Language Models*

Ziheng Wang, Jeremy Wohlwend and Tao Lei

*Effective Unsupervised Domain Adaptation with Adversarially Trained Language Models*

Thuy-Trang Vu, Dinh Phung and Gholamreza Haffari

*BAE: BERT-based Adversarial Examples for Text Classification*

Siddhant Garg and Goutham Ramakrishnan

*Adversarial Self-Supervised Data-Free Distillation for Text Classification*

Xinyin Ma, Yongliang Shen, Gongfan Fang, Chen Chen, Chenghao Jia and Weiming Lu

*BERT-ATTACK: Adversarial Attack Against BERT Using BERT*

Linyang Li, Ruotian Ma, Qipeng Guo, Xiangyang Xue and Xipeng Qiu

*The Thieves on Sesame Street are Polyglots - Extracting Multilingual Models from Monolingual APIs*

Nitish Shirish Keskar, Bryan McCann, Caiming Xiong and Richard Socher

*When Hearst Is not Enough: Improving Hypernymy Detection from Corpus with Distributional Models*

Changlong Yu, Jialong Han, Peifeng Wang, Yangqiu Song, Hongming Zhang, Wilfred Ng and Shuming Shi

*Interpreting Open-Domain Modifiers: Decomposition of Wikipedia Categories into Disambiguated Property-Value Pairs*

Marius Pasca

*A Synset Relation-enhanced Framework with a Try-again Mechanism for Word Sense Disambiguation*

Ming Wang and Yinglin Wang

*Diverse, Controllable, and Keyphrase-Aware: A Corpus and Method for News Multi-Headline Generation*

Dayiheng Liu, Yeyun Gong, Yu Yan, Jie Fu, Bo Shao, Daxin Jiang, Jiancheng Lv and Nan Duan

**Tuesday, November 17, 2020 (continued)**

*Factual Error Correction for Abstractive Summarization Models*

Meng Cao, Yue Dong, Jiapeng Wu and Jackie Chi Kit Cheung

*Compressive Summarization with Plausibility and Saliency Modeling*

Shrey Desai, Jiacheng Xu and Greg Durrett

*Understanding Neural Abstractive Summarization Models via Uncertainty*

Jiacheng Xu, Shrey Desai and Greg Durrett

*Better Highlighting: Creating Sub-Sentence Summary Highlights*

Sangwoo Cho, Kaiqiang Song, Chen Li, Dong Yu, Hassan Foroosh and Fei Liu

*Summarizing Text on Any Aspects: A Knowledge-Informed Weakly-Supervised Approach*

Bowen Tan, Lianhui Qin, Eric Xing and Zhiting Hu

22:00–00:00 *Gather Session 4iii: Discourse and Pragmatics; Information Extraction; Language Generation*

*BERT-enhanced Relational Sentence Ordering Network*

Baiyun Cui, Yingming Li and Zhongfei Zhang

*Online Conversation Disentanglement with Pointer Networks*

Tao Yu and Shafiq Joty

*VCDM: Leveraging Variational Bi-encoding and Deep Contextualized Word Representations for Improved Definition Modeling*

Machel Reid, Edison Marrese-Taylor and Yutaka Matsuo

*Coarse-to-Fine Pre-training for Named Entity Recognition*

Xue Mengge, Bowen Yu, Zhenyu Zhang, Tingwen Liu, Yue Zhang and Bin Wang

*Exploring and Evaluating Attributes, Values, and Structures for Entity Alignment*

Zhiyuan Liu, Yixin Cao, Liangming Pan, Juanzi Li, Zhiyuan Liu and Tat-Seng Chua

*Simple and Effective Few-Shot Named Entity Recognition with Structured Nearest Neighbor Learning*

Yi Yang and Arzoo Katiyar

**Tuesday, November 17, 2020 (continued)**

*Learning Structured Representations of Entity Names using ActiveLearning and Weak Supervision*

Kun Qian, Poornima Chozhiyath Raman, Yunyao Li and Lucian Popa

*Entity Enhanced BERT Pre-training for Chinese NER*

Chen Jia, Yuefeng Shi, Qinrong Yang and Yue Zhang

*Scalable Zero-shot Entity Linking with Dense Entity Retrieval*

Ledell Wu, Fabio Petroni, Martin Josifoski, Sebastian Riedel and Luke Zettlemoyer

*A Dataset for Tracking Entities in Open Domain Procedural Text*

Niket Tandon, Keisuke Sakaguchi, Bhavana Dalvi, Dheeraj Rajagopal, Peter Clark, Michal Guerquin, Kyle Richardson and Eduard Hovy

*Design Challenges in Low-resource Cross-lingual Entity Linking*

Xingyu Fu, Weijia Shi, Xiaodong Yu, Zian Zhao and Dan Roth

*Efficient One-Pass End-to-End Entity Linking for Questions*

Belinda Z. Li, Sewon Min, Srinivasan Iyer, Yashar Mehdad and Wen-tau Yih

*LUKE: Deep Contextualized Entity Representations with Entity-aware Self-attention*

Ikuya Yamada, Akari Asai, Hiroyuki Shindo, Hideaki Takeda and Yuji Matsumoto

*Generating similes effortlessly like a Pro: A Style Transfer Approach for Simile Generation*

Tuhin Chakrabarty, Smaranda Muresan and Nanyun Peng

*STORIUM: A Dataset and Evaluation Platform for Machine-in-the-Loop Story Generation*

Nader Akoury, Shufan Wang, Josh Whiting, Stephen Hood, Nanyun Peng and Mohit Iyyer

*Substance over Style: Document-Level Targeted Content Transfer*

Allison Hegel, Sudha Rao, Asli Celikyilmaz and Bill Dolan

*Template Guided Text Generation for Task-Oriented Dialogue*

Mihir Kale and Abhinav Rastogi

*MOCHA: A Dataset for Training and Evaluating Generative Reading Comprehension Metrics*

Anthony Chen, Gabriel Stanovsky, Sameer Singh and Matt Gardner



**Tuesday, November 17, 2020 (continued)**

*Plan ahead: Self-Supervised Text Planning for Paragraph Completion Task*

Dongyeop Kang and Eduard Hovy

*Inquisitive Question Generation for High Level Text Comprehension*

Wei-Jen Ko, TE-YUAN CHEN, Yiyan Huang, Greg Durrett and Junyi Jessy Li

22:00–00:00 *Gather Session 4iv: Dialog and Interactive Systems; NLP Applications; Question Answering*

*Towards Persona-Based Empathetic Conversational Models*

Peixiang Zhong, Chen Zhang, Hao Wang, Yong Liu and Chunyan Miao

*Personal Information Leakage Detection in Conversations*

Qionikai Xu, Lizhen Qu, Zeyu Gao and Gholamreza Haffari

*Response Selection for Multi-Party Conversations with Dynamic Topic Tracking*

Weishi Wang, Steven C.H. Hoi and Shafiq Joty

*Regularizing Dialogue Generation by Imitating Implicit Scenarios*

Shaoxiong Feng, Xuancheng Ren, Hongshen Chen, Bin Sun, Kan Li and Xu SUN

*MovieChats: Chat like Humans in a Closed Domain*

Hui Su, Xiaoyu Shen, Zhou Xiao, Zheng Zhang, Ernie Chang, Cheng Zhang, Cheng Niu and Jie Zhou

*Conundrums in Entity Coreference Resolution: Making Sense of the State of the Art*

Jing Lu and Vincent Ng

*Semantic Role Labeling Guided Multi-turn Dialogue ReWriter*

Kun Xu, Haochen Tan, Linfeng Song, Han Wu, Haisong Zhang, Linqi Song and Dong Yu

*Continuity of Topic, Interaction, and Query: Learning to Quote in Online Conversations*

Lingzhi Wang, Jing Li, Xingshan Zeng, Haisong Zhang and Kam-Fai Wong

*Profile Consistency Identification for Open-domain Dialogue Agents*

Haoyu Song, Yan Wang, Wei-Nan Zhang, Zhengyu Zhao, Ting Liu and Xiaojiang Liu

**Tuesday, November 17, 2020 (continued)**

*An Element-aware Multi-representation Model for Law Article Prediction*

Huilin Zhong, Junsheng Zhou, Weiguang QU, Yunfei Long and Yanhui Gu

*Recurrent Event Network: Autoregressive Structure Inference over Temporal Knowledge Graphs*

Woojeong Jin, Meng Qu, Xisen Jin and Xiang Ren

*Multi-resolution Annotations for Emoji Prediction*

Weicheng Ma, Ruibo Liu, Lili Wang and Soroush Vosoughi

*Less is More: Attention Supervision with Counterfactuals for Text Classification*

Seungtaek Choi, Haeju Park, Jinyoung Yeo and Seung-won Hwang

*MODE-LSTM: A Parameter-efficient Recurrent Network with Multi-Scale for Sentence Classification*

Qianli Ma, Zhenxi Lin, Jiangyue Yan, Zipeng Chen and Liuhong Yu

*HSCNN: A Hybrid-Siamese Convolutional Neural Network for Extremely Imbalanced Multi-label Text Classification*

Wenshuo Yang, Jiyi Li, Fumiyo Fukumoto and Yanming Ye

*Multi-Stage Pre-training for Automated Chinese Essay Scoring*

Wei Song, Kai Zhang, Ruiji Fu, Lizhen Liu, Ting Liu and Miaomiao Cheng

*Multi-hop Inference for Question-driven Summarization*

Yang Deng, Wenxuan Zhang and Wai Lam

*Towards Interpretable Reasoning over Paragraph Effects in Situation*

Mucheng Ren, Xiubo Geng, Tao QIN, Heyan Huang and Daxin Jiang

*Question Directed Graph Attention Network for Numerical Reasoning over Text*

Kunlong Chen, Weidi Xu, Xingyi Cheng, Zou Xiaochuan, Yuyu Zhang, Le Song, Taifeng Wang, Yuan Qi and Wei Chu

*Dense Passage Retrieval for Open-Domain Question Answering*

Vladimir Karpukhin, Barlas Oguz, Sewon Min, Patrick Lewis, Ledell Wu, Sergey Edunov, Danqi Chen and Wen-tau Yih

*Distilling Structured Knowledge for Text-Based Relational Reasoning*

Jin Dong, Marc-Antoine Rondeau and William L. Hamilton

**Tuesday, November 17, 2020 (continued)**

22:00–00:00 *Gather Session 4v: Interpretability and Analysis of Models for NLP; Semantics: Sentence-level Semantics, Textual Inference and Other areas; Sentiment Analysis, Stylistic Analysis, and Argument Mining*

*Asking without Telling: Exploring Latent Ontologies in Contextual Representations*  
Julian Michael, Jan A. Botha and Ian Tenney

*Pretrained Language Model Embryology: The Birth of ALBERT*  
Cheng-Han Chiang, Sung-Feng Huang and Hung-yi Lee

*Learning Music Helps You Read: Using Transfer to Study Linguistic Structure in Language Models*  
Isabel Papadimitriou and Dan Jurafsky

*What Do Position Embeddings Learn? An Empirical Study of Pre-Trained Language Model Positional Encoding*  
Yu-An Wang and Yun-Nung Chen

*“You are grounded!”: Latent Name Artifacts in Pre-trained Language Models*  
Vered Shwartz, Rachel Rudinger and Oyvind Tafjord

*Birds have four legs?! NumerSense: Probing Numerical Commonsense Knowledge of Pre-Trained Language Models*  
Bill Yuchen Lin, Seyeon Lee, Rahul Khanna and Xiang Ren

*Grounded Adaptation for Zero-shot Executable Semantic Parsing*  
Victor Zhong, Mike Lewis, Sida I. Wang and Luke Zettlemoyer

*An Imitation Game for Learning Semantic Parsers from User Interaction*  
Ziyu Yao, Yiqi Tang, Wen-tau Yih, Huan Sun and Yu Su

*IGSQL: Database Schema Interaction Graph Based Neural Model for Context-Dependent Text-to-SQL Generation*  
Yitao Cai and Xiaojun Wan

*“What Do You Mean by That?” A Parser-Independent Interactive Approach for Enhancing Text-to-SQL*  
Yuntao Li, Bei Chen, Qian Liu, Yan Gao, Jian-Guang LOU, Yan Zhang and Dongmei Zhang

*DuSQL: A Large-Scale and Pragmatic Chinese Text-to-SQL Dataset*  
Lijie Wang, Ao Zhang, Kun Wu, Ke Sun, Zhenghua Li, Hua Wu, Min Zhang and Haifeng Wang

**Tuesday, November 17, 2020 (continued)**

*Mention Extraction and Linking for SQL Query Generation*

Jianqiang Ma, ZEYU YAN, Shuai Pang, Yang Zhang and Jianping Shen

*Re-examining the Role of Schema Linking in Text-to-SQL*

Wenqiang Lei, Weixin Wang, Zhixin MA, Tian Gan, Wei Lu, Min-Yen Kan and Tat-Seng Chua

*A Multi-Task Incremental Learning Framework with Category Name Embedding for Aspect-Category Sentiment Analysis*

Zehui Dai, Cheng Peng, Huajie Chen and Yadong Ding

*Train No Evil: Selective Masking for Task-Guided Pre-Training*

Yuxian Gu, Zhengyan Zhang, Xiaozhi Wang, Zhiyuan Liu and Maosong Sun

*SentiLARE: Sentiment-Aware Language Representation Learning with Linguistic Knowledge*

Pei Ke, Haozhe Ji, Siyang Liu, Xiaoyan Zhu and Minlie Huang

*Weakly-Supervised Aspect-Based Sentiment Analysis via Joint Aspect-Sentiment Topic Embedding*

Jiaxin Huang, Yu Meng, Fang Guo, Heng Ji and Jiawei Han

*APE: Argument Pair Extraction from Peer Review and Rebuttal via Multi-task Learning*

Liyang Cheng, Lidong Bing, Qian Yu, Wei Lu and Luo Si

*Diversified Multiple Instance Learning for Document-Level Multi-Aspect Sentiment Classification*

Yunjie Ji, Hao Liu, Bolei He, Xinyan Xiao, Hua Wu and Yanhua Yu

*Identifying Exaggerated Language*

Li Kong, Chuanyi Li, Jidong Ge, Bin Luo and Vincent Ng

*Unified Feature and Instance Based Domain Adaptation for Aspect-Based Sentiment Analysis*

Chenggong Gong, Jianfei Yu and Rui Xia

**Wednesday, November 18, 2020**

04:00–05:00 *Zoom Q&A Session II*

04:00–05:00 *Zoom Q&A Session III: Interpretability and Analysis of Models for NLP*

*Compositional and Lexical Semantics in RoBERTa, BERT and DistilBERT: A Case Study on CoQA*

Ieva Staliūnaitė and Ignacio Iacobacci

*Attention is Not Only a Weight: Analyzing Transformers with Vector Norms*

Goro Kobayashi, Tatsuki Kuribayashi, Sho Yokoi and Kentaro Inui

*F1 is Not Enough! Models and Evaluation Towards User-Centered Explainable Question Answering*

Hendrik Schuff, Heike Adel and Ngoc Thang Vu

*On the Ability and Limitations of Transformers to Recognize Formal Languages*

Satwik Bhattamishra, Kabir Ahuja and Navin Goyal

04:00–05:00 *Zoom Q&A Session III: NLP Applications*

*An Unsupervised Joint System for Text Generation from Knowledge Graphs and Semantic Parsing*

Martin Schmitt, Sahand Sharifzadeh, Volker Tresp and Hinrich Schütze

*DGST: a Dual-Generator Network for Text Style Transfer*

Xiao Li, Guanyi Chen, Chenghua Lin and Ruizhe Li

*A Knowledge-Aware Sequence-to-Tree Network for Math Word Problem Solving*

Qinzhao Wu, Qi Zhang, Jinlan Fu and Xuanjing Huang

*Generating Fact Checking Briefs*

Angela Fan, Aleksandra Piktus, Fabio Petroni, Guillaume Wenzek, Marzieh Saeidi, Andreas Vlachos, Antoine Bordes and Sebastian Riedel

*Improving the Efficiency of Grammatical Error Correction with Erroneous Span Detection and Correction*

Mengyun Chen, Tao Ge, Xingxing Zhang, Furu Wei and Ming Zhou

**Wednesday, November 18, 2020 (continued)**

04:00–05:00 *Zoom Q&A Session 11iii: Question Answering*

*Coreferential Reasoning Learning for Language Representation*

Deming Ye, Yankai Lin, Jiaju Du, Zhenghao Liu, Peng Li, Maosong Sun and Zhiyuan Liu

*Is Graph Structure Necessary for Multi-hop Question Answering?*

Nan Shao, Yiming Cui, Ting Liu, Shijin Wang and Guoping Hu

04:00–05:00 *Zoom Q&A Session 11iv: Semantics: Lexical Semantics*

*XL-WiC: A Multilingual Benchmark for Evaluating Semantic Contextualization*

Alessandro Raganato, Tommaso Pasini, Jose Camacho-Collados and Mohammad Taher Pilehvar

*Generational or "How We Went beyond Word Sense Inventories and Learned to Gloss"*

Michele Bevilacqua, Marco Maru and Roberto Navigli

*Probing Pretrained Language Models for Lexical Semantics*

Ivan Vulić, Edoardo Maria Ponti, Robert Litschko, Goran Glavaš and Anna Korhonen

05:00–06:00 *Zoom Q&A Session 12*

05:00–06:00 *Zoom Q&A Session 12i: Dialog and Interactive Systems*

*Cross-lingual Spoken Language Understanding with Regularized Representation Alignment*

Zihan Liu, Genta Indra Winata, Peng Xu, Zhaojiang Lin and Pascale Fung

*SLURP: A Spoken Language Understanding Resource Package*

Emanuele Bastianelli, Andrea Vanzo, Pawel Swietojanski and Verena Rieser

*Neural Conversational QA: Learning to Reason vs Exploiting Patterns*

Nikhil Verma, Abhishek Sharma, Dhiraj Madan, Danish Contractor, Harshit Kumar and Sachindra Joshi

05:00–06:00 *Zoom Q&A Session 12ii: Information Extraction*

**Wednesday, November 18, 2020 (continued)**

*Counterfactual Generator: A Weakly-Supervised Method for Named Entity Recognition*

Xiangji Zeng, Yunliang Li, Yuchen Zhai and Yin Zhang

*Understanding Procedural Text using Interactive Entity Networks*

Jizhi Tang, Yansong Feng and Dongyan Zhao

*A Rigorous Study on Named Entity Recognition: Can Fine-tuning Pretrained Model Lead to the Promised Land?*

Hongyu Lin, Yaojie Lu, Jialong Tang, Xianpei Han, Le Sun, Zhicheng Wei and Nicholas Jing Yuan

05:00–06:00 *Zoom Q&A Session 12iii: Machine Learning for NLP*

*DyERNIE: Dynamic Evolution of Riemannian Manifold Embeddings for Temporal Knowledge Graph Completion*

Zhen Han, Peng Chen, Yunpu Ma and Volker Tresp

*Embedding Words in Non-Vector Space with Unsupervised Graph Learning*

Max Ryabinin, Sergei Popov, Liudmila Prokhorenkova and Elena Voita

*Debiasing knowledge graph embeddings*

Joseph Fisher, Arpit Mittal, Dave Palfrey and Christos Christodoulopoulos

*Message Passing for Hyper-Relational Knowledge Graphs*

Mikhail Galkin, Priyansh Trivedi, Gaurav Maheshwari, Ricardo Usbeck and Jens Lehmann

05:00–06:00 *Zoom Q&A Session 12iv: Sentiment Analysis, Stylistic Analysis, and Argument Mining*

*Relation-aware Graph Attention Networks with Relational Position Encodings for Emotion Recognition in Conversations*

Taichi Ishiwatari, Yuki Yasuda, Taro Miyazaki and Jun Goto

*BERT Knows Punta Cana is not just beautiful, it's gorgeous: Ranking Scalar Adjectives with Contextualised Representations*

Aina Garí Soler and Marianna Apidianaki

*Feature Adaptation of Pre-Trained Language Models across Languages and Domains with Robust Self-Training*

Hai Ye, Qingyu Tan, Ruidan He, Juntao Li, Hwee Tou Ng and Lidong Bing

**Wednesday, November 18, 2020 (continued)**

*Textual Data Augmentation for Efficient Active Learning on Tiny Datasets*

Husam Quteineh, Spyridon Samothrakis and Richard Sutcliffe

11:00–12:00 *Keynote III: Janet B. Pierrehumbert*

12:00–13:00 *Zoom Q&A Session 13*

12:00–13:00 *Zoom Q&A Session 13i: Discourse and Pragmatics*

*"I'd rather just go to bed": Understanding Indirect Answers*

Annie Louis, Dan Roth and Filip Radlinski

*PowerTransformer: Unsupervised Controllable Revision for Biased Language Correction*

Xinyao Ma, Maarten Sap, Hannah Rashkin and Yejin Choi

*MEGA RST Discourse Treebanks with Structure and Nuclearity from Scalable Distant Sentiment Supervision*

Patrick Huber and Giuseppe Carenini

*Centering-based Neural Coherence Modeling with Hierarchical Discourse Segments*

Sungho Jeon and Michael Strube

*Keeping Up Appearances: Computational Modeling of Face Acts in Persuasion Oriented Discussions*

Ritam Dutt, Rishabh Joshi and Carolyn Rose

12:00–13:00 *Zoom Q&A Session 13ii: NLP Applications*

*HABERTOR: An Efficient and Effective Deep Hatespeech Detector*

Thanh Tran, Yifan Hu, Changwei Hu, Kevin Yen, Fei Tan, Kyumin Lee and Se Rim Park

*An Empirical Study on Large-Scale Multi-Label Text Classification Including Few and Zero-Shot Labels*

Ilias Chalkidis, Manos Fergadiotis, Sotiris Kotitsas, Prodromos Malakasiotis, Nikolaos Aletras and Ion Androutsopoulos

*Which \*BERT? A Survey Organizing Contextualized Encoders*

Patrick Xia, Shijie Wu and Benjamin Van Durme



**Wednesday, November 18, 2020 (continued)**

*Fact or Fiction: Verifying Scientific Claims*

David Wadden, Shanchuan Lin, Kyle Lo, Lucy Lu Wang, Madeleine van Zuylen, Arman Cohan and Hannaneh Hajishirzi

12:00–13:00 *Zoom Q&A Session 13iii: Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Semantic Role Labeling as Syntactic Dependency Parsing*

Tianze Shi, Igor Malioutov and Ozan Irsoy

*PARADE: A New Dataset for Paraphrase Identification Requiring Computer Science Domain Knowledge*

Yun He, Zhuoer Wang, Yin Zhang, Ruihong Huang and James Caverlee

*Causal Inference of Script Knowledge*

Noah Weber, Rachel Rudinger and Benjamin Van Durme

*Towards Debiasing NLU Models from Unknown Biases*

Prasetya Ajie Utama, Nafise Sadat Moosavi and Iryna Gurevych

12:00–13:00 *Zoom Q&A Session 13iv: Syntax: Tagging, Chunking, and Parsing*

*On the Role of Supervision in Unsupervised Constituency Parsing*

Haoyue Shi, Karen Livescu and Kevin Gimpel

13:00–14:00 *Zoom Q&A Session 14*

13:00–14:00 *Zoom Q&A Session 14i: Machine Translation and Multilinguality*

*Language Model Prior for Low-Resource Neural Machine Translation*

Christos Baziotis, Barry Haddow and Alexandra Birch

*Detecting Word Sense Disambiguation Biases in Machine Translation for Model-Agnostic Adversarial Attacks*

Denis Emelin, Ivan Titov and Rico Sennrich

*MAD-X: An Adapter-Based Framework for Multi-Task Cross-Lingual Transfer*

Jonas Pfeiffer, Ivan Vulić, Iryna Gurevych and Sebastian Ruder

**Wednesday, November 18, 2020 (continued)**

*Translation Artifacts in Cross-lingual Transfer Learning*

Mikel Artetxe, Gorka Labaka and Eneko Agirre

13:00–14:00 *Zoom Q&A Session 14ii: Computational Social Science and Social Media*

*A Time-Aware Transformer Based Model for Suicide Ideation Detection on Social Media*

Ramit Sawhney, Harshit Joshi, Saumya Gandhi and Rajiv Ratn Shah

*Weakly Supervised Learning of Nuanced Frames for Analyzing Polarization in News Media*

Shamik Roy and Dan Goldwasser

*Where Are the Facts? Searching for Fact-checked Information to Alleviate the Spread of Fake News*

Nguyen Vo and Kyumin Lee

*Fortifying Toxic Speech Detectors Against Veiled Toxicity*

Xiaochuang Han and Yulia Tsvetkov

*Explainable Automated Fact-Checking for Public Health Claims*

Neema Kotonya and Francesca Toni

13:00–14:00 *Zoom Q&A Session 14iii: Machine Learning for NLP*

*Interactive Fiction Game Playing as Multi-Paragraph Reading Comprehension with Reinforcement Learning*

Xiaoxiao Guo, Mo Yu, Yupeng Gao, Chuang Gan, Murray Campbell and Shiyu Chang

*DORB: Dynamically Optimizing Multiple Rewards with Bandits*

Ramakanth Pasunuru, Han Guo and Mohit Bansal

13:00–14:00 *Zoom Q&A Session 14iv: Information Extraction*

*MedFilter: Improving Extraction of Task-relevant Utterances through Integration of Discourse Structure and Ontological Knowledge*

Sopan Khosla, Shikhar Vashishth, Jill Fain Lehman and Carolyn Rose

Wednesday, November 18, 2020 (continued)

*Hierarchical Evidence Set Modeling for Automated Fact Extraction and Verification*  
Shyam Subramanian and Kyumin Lee

*Program Enhanced Fact Verification with Verbalization and Graph Attention Network*  
Xiaoyu Yang, Feng Nie, Yufei Feng, Quan Liu, Zhigang Chen and Xiaodan Zhu

*Constrained Fact Verification for FEVER*  
Adithya Pratapa, Sai Muralidhar Jayanthi and Kavya Nerella

*Entity Linking in 100 Languages*  
Jan A. Botha, Zifei Shan and Daniel Gillick

14:00–16:00 *Gather Session 5i: Machine Learning for NLP; Speech and Multimodality; Summarization*

*PatchBERT: Just-in-Time, Out-of-Vocabulary Patching*  
Sangwhan Moon and Naoaki Okazaki

*On the importance of pre-training data volume for compact language models*  
Vincent Micheli, Martin d’Hoffschmidt and François Fleuret

*BERT-of-Theseus: Compressing BERT by Progressive Module Replacing*  
Canwen Xu, Wangchunshu Zhou, Tao Ge, Furu Wei and Ming Zhou

*Recall and Learn: Fine-tuning Deep Pretrained Language Models with Less Forgetting*  
Sanyuan Chen, Yutai Hou, Yiming Cui, Wanxiang Che, Ting Liu and Xiangzhan Yu

*Exploring and Predicting Transferability across NLP Tasks*  
Tu Vu, Tong Wang, Tsendsuren Munkhdalai, Alessandro Sordani, Adam Trischler, Andrew Mattarella-Micke, Subhransu Maji and Mohit Iyyer

*To BERT or Not to BERT: Comparing Task-specific and Task-agnostic Semi-Supervised Approaches for Sequence Tagging*  
Kasturi Bhattacharjee, Miguel Ballesteros, Rishita Anubhai, Smaranda Muresan, Jie Ma, Faisal Ladhak and Yaser Al-Onaizan

*Cold-start Active Learning through Self-supervised Language Modeling*  
Michelle Yuan, Hsuan-Tien Lin and Jordan Boyd-Graber

Wednesday, November 18, 2020 (continued)

*Active Learning for BERT: An Empirical Study*

Liat Ein-Dor, Alon Halfon, Ariel Gera, Eyal Shnarch, Lena Dankin, Leshem Choshen, Marina Danilevsky, Ranit Aharonov, Yoav Katz and Noam Slonim

*Transformer Based Multi-Source Domain Adaptation*

Dustin Wright and Isabelle Augenstein

*Vector-Vector-Matrix Architecture: A Novel Hardware-Aware Framework for Low-Latency Inference in NLP Applications*

Matthew Khoury, Rumén Dangovski, Longwu Ou, Preslav Nakov, Yichen Shen and Li Jing

*The importance of fillers for text representations of speech transcripts*

Tanvi Dinkar, Pierre Colombo, Matthieu Labeau and Chloé Clavel

*The role of context in neural pitch accent detection in English*

Elizabeth Nielsen, Mark Steedman and Sharon Goldwater

*VOLTAGE: Volatility Forecasting via Text Audio Fusion with Graph Convolution Networks for Earnings Calls*

Ramit Sawhney, Piyush Khanna, Arshiya Aggarwal, Taru Jain, Puneet Mathur and Rajiv Ratn Shah

*Effectively pretraining a speech translation decoder with Machine Translation data*

Ashkan Alinejad and Anoop Sarkar

*A Preliminary Exploration of GANs for Keyphrase Generation*

Avinash Swaminathan, Haimin Zhang, Debanjan Mahata, Rakesh Gosangi, Rajiv Ratn Shah and Amanda Stent

*TESA: A Task in Entity Semantic Aggregation for Abstractive Summarization*

Clément Jumel, Annie Louis and Jackie Chi Kit Cheung

*MLSUM: The Multilingual Summarization Corpus*

Thomas Scialom, Paul-Alexis Dray, Sylvain Lamprier, Benjamin Piwowarski and Jacopo Staiano

*Multi-XScience: A Large-scale Dataset for Extreme Multi-document Summarization of Scientific Articles*

Yao Lu, Yue Dong and Laurent Charlin

*Intrinsic Evaluation of Summarization Datasets*

Rishi Bommasani and Claire Cardie

**Wednesday, November 18, 2020 (continued)**

14:00–16:00 *Gather Session 5ii: Dialog and Interactive Systems; Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*Iterative Feature Mining for Constraint-Based Data Collection to Increase Data Diversity and Model Robustness*

Stefan Larson, Anthony Zheng, Anish Mahendran, Rishi Tekriwal, Adrian Cheung, Eric Guldan, Kevin Leach and Jonathan K. Kummerfeld

*Conversational Semantic Parsing for Dialog State Tracking*

Jianpeng Cheng, Devang Agrawal, Héctor Martínez Alonso, Shruti Bhargava, Joris Driesen, Federico Flego, Dain Kaplan, Dimitri Kartsaklis, Lin Li, Dhivya Piravipermal, Jason D Williams, Hong Yu, Diarmuid Ó Séaghdha and Anders Johannsen

*doc2dial: A Goal-Oriented Document-Grounded Dialogue Dataset*

Song Feng, Hui Wan, Chulaka Gunasekara, Siva Patel, Sachindra Joshi and Luis Lastras

*Interview: Large-scale Modeling of Media Dialog with Discourse Patterns and Knowledge Grounding*

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

*INSPIRED: Toward Sociable Recommendation Dialog Systems*

Shirley Anugrah Hayati, Dongyeop Kang, Qingxiaoyang Zhu, Weiyan Shi and Zhou Yu

*Information Seeking in the Spirit of Learning: A Dataset for Conversational Curiosity*

Pedro Rodriguez, Paul Crook, Seungwhan Moon and Zhiguang Wang

*Queens are Powerful too: Mitigating Gender Bias in Dialogue Generation*

Emily Dinan, Angela Fan, Adina Williams, Jack Urbanek, Douwe Kiela and Jason Weston

*Discriminatively-Tuned Generative Classifiers for Robust Natural Language Inference*

Xiaoan Ding, Tianyu Liu, Baobao Chang, Zhifang Sui and Kevin Gimpel

*New Protocols and Negative Results for Textual Entailment Data Collection*

Samuel R. Bowman, Jennimaria Palomaki, Livio Baldini Soares and Emily Pitler

*The Curse of Performance Instability in Analysis Datasets: Consequences, Source, and Suggestions*

Xiang Zhou, Yixin Nie, Hao Tan and Mohit Bansal

*Universal Natural Language Processing with Limited Annotations: Try Few-shot Textual Entailment as a Start*

Wenpeng Yin, Nazneen Fatema Rajani, Dragomir Radev, Richard Socher and Caiming Xiong

Wednesday, November 18, 2020 (continued)

*ConjNLI: Natural Language Inference Over Conjunctive Sentences*

Swarnadeep Saha, Yixin Nie and Mohit Bansal

*Data and Representation for Turkish Natural Language Inference*

Emrah Budur, Rıza Özçelik, Tunga Gungor and Christopher Potts

*Multitask Learning for Cross-Lingual Transfer of Broad-coverage Semantic Dependencies*

Maryam Aminian, Mohammad Sadegh Rasooli and Mona Diab

*Precise Task Formalization Matters in Winograd Schema Evaluations*

Haokun Liu, William Huang, Dhara Mungra and Samuel R. Bowman

*Avoiding the Hypothesis-Only Bias in Natural Language Inference via Ensemble Adversarial Training*

Joe Stacey, Pasquale Minervini, Haim Dubossarsky, Sebastian Riedel and Tim Rocktäschel

14:00–16:00 *Gather Session 5iii: Information Retrieval and Text Mining; NLP Applications; Semantics: Lexical Semantics*

*SynSetExpan: An Iterative Framework for Joint Entity Set Expansion and Synonym Discovery*

Jiaming Shen, Wenda Qiu, Jingbo Shang, Michelle Vanni, Xiang Ren and Jiawei Han

*Evaluating the Calibration of Knowledge Graph Embeddings for Trustworthy Link Prediction*

Tara Safavi, Danai Koutra and Edgar Meij

*Text Graph Transformer for Document Classification*

Haopeng Zhang and Jiawei Zhang

*CoDEX: A Comprehensive Knowledge Graph Completion Benchmark*

Tara Safavi and Danai Koutra

*META: Metadata-Empowered Weak Supervision for Text Classification*

Dheeraj Mekala, Xinyang Zhang and Jingbo Shang

*Towards More Accurate Uncertainty Estimation In Text Classification*

Jianfeng He, Xuchao Zhang, Shuo Lei, Zhiqian Chen, Fanglan Chen, Abdulaziz Alhamadani, Bei Xiao and ChangTien Lu

Wednesday, November 18, 2020 (continued)

*Chapter Captor: Text Segmentation in Novels*

Charuta Pethe, Allen Kim and Steve Skiena

*Authorship Attribution for Neural Text Generation*

Adaku Uchendu, Thai Le, Kai Shu and Dongwon Lee

*NwQM: A neural quality assessment framework for Wikipedia*

Bhanu Prakash Reddy Guda, Sasi Bhushan Seelaboyina, Soumya Sarkar and Animesh Mukherjee

*Towards Modeling Revision Requirements in wikiHow Instructions*

Irshad Bhat, Talita Anthonio and Michael Roth

*Deep Attentive Learning for Stock Movement Prediction From Social Media Text and Company Correlations*

Ramit Sawhney, Shivam Agarwal, Arnav Wadhwa and Rajiv Ratn Shah

*Natural Language Processing for Achieving Sustainable Development: the Case of Neural Labelling to Enhance Community Profiling*

Costanza Conforti, Stephanie Hirmer, Dai Morgan, Marco Basaldella and Yau Ben Or

*To Schedule or not to Schedule: Extracting Task Specific Temporal Entities and Associated Negation Constraints*

Barun Patra, Chala Fufa, Pamela Bhattacharya and Charles Lee

*Competence-Level Prediction and Resume & Job Description Matching Using Context-Aware Transformer Models*

Changmao Li, Elaine Fisher, Rebecca Thomas, Steve Pittard, Vicki Hertzberg and Jinho D. Choi

*Grammatical Error Correction in Low Error Density Domains: A New Benchmark and Analyses*

Simon Flachs, Ophélie Lacroix, Helen Yannakoudakis, Marek Rei and Anders Søgaard

*Deconstructing word embedding algorithms*

Kian Kenyon-Dean, Edward Newell and Jackie Chi Kit Cheung

*Sequential Modelling of the Evolution of Word Representations for Semantic Change Detection*

Adam Tsakalidis and Maria Liakata

*Sparsity Makes Sense: Word Sense Disambiguation Using Sparse Contextualized Word Representations*

Gábor Berend

**Wednesday, November 18, 2020 (continued)**

*Exploring Semantic Capacity of Terms*

Jie Huang, Zilong Wang, Kevin Chang, Wen-mei Hwu and JinJun Xiong

14:00–16:00 *Gather Session 5iv: Discourse and Pragmatics; Information Extraction; Language Generation*

*Learning to Ignore: Long Document Coreference with Bounded Memory Neural Networks*

Shubham Toshniwal, Sam Wiseman, Allyson Ettinger, Karen Livescu and Kevin Gimpel

*Revealing the Myth of Higher-Order Inference in Coreference Resolution*

Liyan Xu and Jinho D. Choi

*Pre-training Mention Representations in Coreference Models*

Yuval Varkel and Amir Globerson

*Learning Collaborative Agents with Rule Guidance for Knowledge Graph Reasoning*

Deren Lei, Gangrong Jiang, Xiaotao Gu, Kexuan Sun, Yuning Mao and Xiang Ren

*Exploring Contextualized Neural Language Models for Temporal Dependency Parsing*

Hayley Ross, Jonathon Cai and Bonan Min

*Systematic Comparison of Neural Architectures and Training Approaches for Open Information Extraction*

Patrick Hohenecker, Frank Mtumbuka, Vid Kocijan and Thomas Lukasiewicz

*SeqMix: Augmenting Active Sequence Labeling via Sequence Mixup*

Rongzhi Zhang, Yue Yu and Chao Zhang

*AxCell: Automatic Extraction of Results from Machine Learning Papers*

Marcin Kardas, Piotr Czapla, Pontus Stenetorp, Sebastian Ruder, Sebastian Riedel, Ross Taylor and Robert Stojnic

*Knowledge-guided Open Attribute Value Extraction with Reinforcement Learning*

Ye Liu, Sheng Zhang, Rui Song, Suo Feng and Yanghua Xiao

*DualTKB: A Dual Learning Bridge between Text and Knowledge Base*

Pierre Dognin, Igor Melnyk, Inkit Padhi, Cicero Nogueira dos Santos and Payel Das



Wednesday, November 18, 2020 (continued)

*Incremental Neural Coreference Resolution in Constant Memory*

Patrick Xia, João Sedoc and Benjamin Van Durme

*Improving Low Compute Language Modeling with In-Domain Embedding Initialization*

Charles Welch, Rada Mihalcea and Jonathan K. Kummerfeld

*KGPT: Knowledge-Grounded Pre-Training for Data-to-Text Generation*

Wenhu Chen, Yu Su, Xifeng Yan and William Yang Wang

*POINTER: Constrained Progressive Text Generation via Insertion-based Generative Pre-training*

Yizhe Zhang, Guoyin Wang, Chunyuan Li, Zhe Gan, Chris Brockett and Bill Dolan

*Unsupervised Text Style Transfer with Padded Masked Language Models*

Eric Malmi, Aliaksei Severyn and Sascha Rothe

*PALM: Pre-training an Autoencoding&Autoregressive Language Model for Context-conditioned Generation*

Bin Bi, Chenliang Li, Chen Wu, Ming Yan, Wei Wang, Songfang Huang, Fei Huang and Luo Si

*Gradient-guided Unsupervised Lexically Constrained Text Generation*

Lei Sha

*TeaForN: Teacher-Forcing with N-grams*

Sebastian Goodman, Nan Ding and Radu Soricut

14:00–16:00 *Gather Session 5v: Language Grounding to Vision, Robotics and Beyond; Question Answering; Sentiment Analysis, Stylistic Analysis, and Argument Mining*

*Experience Grounds Language*

Yonatan Bisk, Ari Holtzman, Jesse Thomason, Jacob Andreas, Yoshua Bengio, Joyce Chai, Mirella Lapata, Angeliki Lazaridou, Jonathan May, Aleksandr Nisnevich, Nicolas Pinto and Joseph Turian

*Keep CALM and Explore: Language Models for Action Generation in Text-based Games*

Shunyu Yao, Rohan Rao, Matthew Hausknecht and Karthik Narasimhan

*CapWAP: Image Captioning with a Purpose*

Adam Fisch, Kenton Lee, Ming-Wei Chang, Jonathan Clark and Regina Barzilay

Wednesday, November 18, 2020 (continued)

*What is More Likely to Happen Next? Video-and-Language Future Event Prediction*  
Jie Lei, Licheng Yu, Tamara Berg and Mohit Bansal

*X-LXMERT: Paint, Caption and Answer Questions with Multi-Modal Transformers*  
Jaemin Cho, jiasen lu, Dustin Schwenk, Hannaneh Hajishirzi and Aniruddha Kembhavi

*Towards Understanding Sample Variance in Visually Grounded Language Generation: Evaluations and Observations*  
Wanrong Zhu, Xin Wang, Pradyumna Narayana, Kazoo Sone, Sugato Basu and William Yang Wang

*Beyond Instructional Videos: Probing for More Diverse Visual-Textual Grounding on YouTube*  
Jack Hessel, Zhenhai Zhu, Bo Pang and Radu Soricut

*Hierarchical Graph Network for Multi-hop Question Answering*  
Yuwei Fang, Siqi Sun, Zhe Gan, Rohit Pillai, Shuohang Wang and Jingjing Liu

*A Simple Yet Strong Pipeline for HotpotQA*  
Dirk Groeneveld, Tushar Khot, Mausam and Ashish Sabharwal

*Is Multihop QA in DiRe Condition? Measuring and Reducing Disconnected Reasoning*  
Harsh Trivedi, Niranjan Balasubramanian, Tushar Khot and Ashish Sabharwal

*Unsupervised Question Decomposition for Question Answering*  
Ethan Perez, Patrick Lewis, Wen-tau Yih, Kyunghyun Cho and Douwe Kiela

*SRLGRN: Semantic Role Labeling Graph Reasoning Network*  
Chen Zheng and Parisa Kordjamshidi

*CancerEmo: A Dataset for Fine-Grained Emotion Detection*  
Tiberiu Sosea and Cornelia Caragea

*Exploring the Role of Argument Structure in Online Debate Persuasion*  
Jialu Li, Esin Durmus and Claire Cardie

*Zero-Shot Stance Detection: A Dataset and Model using Generalized Topic Representations*  
Emily Allaway and Kathleen McKeown

**Wednesday, November 18, 2020 (continued)**

*Sentiment Analysis of Tweets using Heterogeneous Multi-layer Network Representation and Embedding*

Loitongbam Gyanendro Singh, Anasua Mitra and Sanasam Ranbir Singh

*Introducing Syntactic Structures into Target Opinion Word Extraction with Deep Learning*

Amir Pouran Ben Veyseh, Nasim Nouri, Franck Deroncourt, Dejing Dou and Thien Huu Nguyen

*EmoTag1200: Understanding the Association between Emojis and Emotions*

Abu Awal Md Shoeb and Gerard de Melo

*MIME: MIMicking Emotions for Empathetic Response Generation*

Navonil Majumder, Pengfei Hong, Shanshan Peng, Jiankun Lu, Deepanway Ghosal, Alexander Gelbukh, Rada Mihalcea and Soujanya Poria

19:00–20:00 *Zoom Q&A Session 15*

19:00–20:00 *Zoom Q&A Session 15i: Information Retrieval and Text Mining*

*Exploiting Structured Knowledge in Text via Graph-Guided Representation Learning*

Tao Shen, Yi Mao, Pengcheng He, Guodong Long, Adam Trischler and Weizhu Chen

*Named Entity Recognition Only from Word Embeddings*

Ying Luo, Hai Zhao and Junlang Zhan

*Text Classification Using Label Names Only: A Language Model Self-Training Approach*

Yu Meng, Yunyi Zhang, Jiaxin Huang, Chenyan Xiong, Heng Ji, Chao Zhang and Jiawei Han

*Neural Topic Modeling with Cycle-Consistent Adversarial Training*

Xuemeng Hu, Rui Wang, Deyu Zhou and Yuxuan Xiong

19:00–20:00 *Zoom Q&A Session 15ii: NLP Applications*

*Data Boost: Text Data Augmentation Through Reinforcement Learning Guided Conditional Generation*

Ruibo Liu, Guangxuan Xu, Chenyan Jia, Weicheng Ma, Lili Wang and Soroush Vosoughi

Wednesday, November 18, 2020 (continued)

*A State-independent and Time-evolving Network for Early Rumor Detection in Social Media*

Rui Xia, Kaizhou Xuan and Jianfei Yu

*PyMT5: multi-mode translation of natural language and Python code with transformers*

Colin Clement, Dawn Drain, Jonathan Timcheck, Alexey Svyatkovskiy and Neel Sundaresan

*PathQG: Neural Question Generation from Facts*

Siyuan Wang, Zhongyu Wei, Zhihao Fan, Zengfeng Huang, Weijian Sun, Qi ZHANG and Xuanjing Huang

*What time is it? Temporal Analysis of Novels*

Allen Kim, Charuta Pethe and Steve Skiena

19:00–20:00 *Zoom Q&A Session 15iii: Semantics: Sentence-level Semantics, Textual Inference and Other areas*

*COGS: A Compositional Generalization Challenge Based on Semantic Interpretation*

Najoung Kim and Tal Linzen

*An Analysis of Natural Language Inference Benchmarks through the Lens of Negation*

Md Mosharaf Hossain, Venelin Kovatchev, Pranoy Dutta, Tiffany Kao, Elizabeth Wei and Eduardo Blanco

*On the Sentence Embeddings from Pre-trained Language Models*

Bohan Li, Hao Zhou, Junxian He, Mingxuan Wang, Yiming Yang and Lei Li

*What Can We Learn from Collective Human Opinions on Natural Language Inference Data?*

Yixin Nie, Xiang Zhou and Mohit Bansal

19:00–20:00 *Zoom Q&A Session 15iv: Language Generation*

*Improving Text Generation with Student-Forcing Optimal Transport*

Jianqiao Li, Chunyuan Li, Guoyin Wang, Hao Fu, Yuhchen Lin, Liqun Chen, Yizhe Zhang, Chenyang Tao, Ruiyi Zhang, Wenlin Wang, Dinghan Shen, Qian Yang and Lawrence Carin

*UNION: An Unreferenced Metric for Evaluating Open-ended Story Generation*

Jian Guan and Minlie Huang

Wednesday, November 18, 2020 (continued)

*F<sup>2</sup>-Softmax: Diversifying Neural Text Generation via Frequency Factorized Softmax*

Byung-Ju Choi, Jimin Hong, David Park and Sang Wan Lee

*Partially-Aligned Data-to-Text Generation with Distant Supervision*

Zihao Fu, Bei Shi, Wai Lam, Lidong Bing and Zhiyuan Liu

20:00–21:00 *Zoom Q&A Session 16*

20:00–21:00 *Zoom Q&A Session 16i: Dialog and Interactive Systems*

*Like hiking? You probably enjoy nature: Persona-grounded Dialog with Commonsense Expansions*

Bodhisattwa Prasad Majumder, Harsh Jhamtani, Taylor Berg-Kirkpatrick and Julian McAuley

*A Probabilistic End-To-End Task-Oriented Dialog Model with Latent Belief States towards Semi-Supervised Learning*

Yichi Zhang, Zhijian Ou, Min Hu and Junlan Feng

*The World is Not Binary: Learning to Rank with Grayscale Data for Dialogue Response Selection*

Zibo Lin, Deng Cai, Yan Wang, Xiaojiang Liu, Haitao Zheng and Shuming Shi

*GRADE: Automatic Graph-Enhanced Coherence Metric for Evaluating Open-Domain Dialogue Systems*

Lishan Huang, Zheng Ye, Jinghui Qin, Liang Lin and Xiaodan Liang

*MedDialog: Large-scale Medical Dialogue Datasets*

Guangtao Zeng, Wenmian Yang, Zeqian Ju, Yue Yang, Sicheng Wang, Ruisi Zhang, Meng Zhou, Jiaqi Zeng, Xiangyu Dong, Ruoyu Zhang, Hongchao Fang, Penghui Zhu, Shu Chen and Pengtao Xie

20:00–21:00 *Zoom Q&A Session 16ii: Interpretability and Analysis of Models for NLP*

*An information theoretic view on selecting linguistic probes*

Zining Zhu and Frank Rudzicz

*With Little Power Comes Great Responsibility*

Dallas Card, Peter Henderson, Urvashi Khandelwal, Robin Jia, Kyle Mahowald and Dan Jurafsky

**Wednesday, November 18, 2020 (continued)**

*Dataset Cartography: Mapping and Diagnosing Datasets with Training Dynamics*

Swabha Swayamdipta, Roy Schwartz, Nicholas Lourie, Yizhong Wang, Hannaneh Hajishirzi, Noah A. Smith and Yejin Choi

*Evaluating and Characterizing Human Rationales*

Samuel Carton, Anirudh Rathore and Chenhao Tan

20:00–21:00 *Zoom Q&A Session 16iii: Summarization*

*On Extractive and Abstractive Neural Document Summarization with Transformer Language Models*

Jonathan Pilault, Raymond Li, Sandeep Subramanian and Chris Pal

*Multi-Fact Correction in Abstractive Text Summarization*

Yue Dong, Shuohang Wang, Zhe Gan, Yu Cheng, Jackie Chi Kit Cheung and Jingjing Liu

*Evaluating the Factual Consistency of Abstractive Text Summarization*

Wojciech Kryscinski, Bryan McCann, Caiming Xiong and Richard Socher

*Re-evaluating Evaluation in Text Summarization*

Manik Bhandari, Pranav Narayan Gour, Atabak Ashfaq, Pengfei Liu and Graham Neubig

*VMSMO: Learning to Generate Multimodal Summary for Video-based News Articles*

Mingzhe Li, Xiuying Chen, Shen Gao, Zhangming Chan, Dongyan Zhao and Rui Yan

21:00–21:45 *Business Meeting*

21:45–21:50 *Mini-break*

21:50–22:20 *Best Paper Awards and Closing*