

ACL 2018

**The 56th Annual Meeting of the  
Association for Computational Linguistics**

**Proceedings of the Conference, Vol. 1 (Long Papers)**

July 15 - 20, 2018  
Melbourne, Australia

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ISBN 978-1-948087-32-2 (Volume 1)

## Message from the General Chair

It is an honor to write the initial words of this proceedings as General Chair of the 56th Annual Meeting of the Association for Computational Linguistics! This is only the second time that an ACL conference has been held in Australia — the first time was for the joint COLING/ACL conference in June of 2006 in Sydney, and I was one of its Program Chairs. For ACL 2018 we have tried to maintain the welcoming and intimate spirit and the relaxed and genial character of the much smaller ACL conferences of the past in spite of the ever-growing number of researchers in the field and participants in our conferences.

It is my pleasure here to express gratitude to all those without whom this conference would not exist. My biggest thanks go to the Program Chairs Iryna Gurevych and Yusuke Miyao, as well as to Local Chairs Tim Baldwin, Trevor Cohn and Karin Verspoor. They have done a tremendous job to manage the submission and review process, and the local arrangement details, respectively.

I also want to thank all of the other chairs for their very hard work: Workshops Chairs Brendan O'Connor and Eva Maria Vecchi; Tutorials Chairs Yoav Artzi and Jacob Eisenstein; Demo Chairs Fei Liu and Tamar Solorio; Student Research Workshop Organizers Vered Shwartz, Jeniya Tabassum and Rob Voigt; Faculty Advisors to the Student Research Workshop Marie-Catherine de Marneffe, Wanxiang Che and Malvina Nissim; Publications Chairs Shay Cohen, Kevin Gimpel and Wei Lu; Exhibits Coordinator Karin Vespoor; Student Volunteer Coordinator Karin Vespoor; Conference Handbook Chairs Jey Han Lau and Trevor Cohn; Publicity Chair Sarvnaz Karimi; Local Sponsorship Chair Cecile Paris; Webmaster Andrew MacKinlay; and Priscilla Rasmussen, giver of advice and wisdom to all of us as ACL Business Manager.

I also warmly thank the ACL Executive Committee for its guidance and advice on many important issues and concerns as they arose.

I am also extremely grateful to all the sponsors for their great support to the conference.

Many thanks to the area chairs, the reviewers, the invited speakers, the authors of the various papers, posters and presentations.

And, finally, many many thanks to all the participants who will put the final touches on making ACL 2018 an exciting, stimulating and inspiring event!

Claire Cardie  
ACL 2018 General Chair  
July 2018

## Message from the Program Committee Co-Chairs

Welcome to the 56th Annual Meeting of the Association for Computational Linguistics 2018 – or ACL 2018 for short.

In September 2017, Program Committee Co-Chairs (PCs) posted the call for nominations of Area Chairs (AC), Reviewers and Invited Speakers. We received 752 responses in total. Overall, out of 388 valid nominations for area chairs, 299 unique persons were suggested; 110 persons were self-nominations. About 70% of the 56 selected area chairs (later expanded to 61 area chairs due to the high number of submissions) were nominated by the community. For the reviewers, we collected 936 valid nominations. At the PhD level, 139 persons were self-nominations and 129 were nominated by others. At the Postdoc/Ass.Prof. level, 160 were self-nominated, 112 nominated by others. At the Prof. level, 221 persons were self-nominated, 175 nominated by others.

We received 138 unique nominations for invited speakers, from which two invited speakers of the conference were selected:

- Carolyn Penstein Rosé, Language Technologies Institute at Carnegie Mellon University, USA
- Anton van den Hengel, Australian Centre for Visual Technologies at University of Adelaide, Australia

Our community is steadily growing: in total, 1621 submissions were received right after the submission deadline: 1045 long, 576 short papers. 13 erroneous submissions were deleted or withdrawn in the preliminary checks by PCs. 25 papers were rejected without review (16 long, 9 short); the reasons are the violation of the ACL 2018 style and dual submission guidelines. 32 papers were withdrawn before the review period started; the main reason was that the papers have been accepted as the short papers at NAACL HLT 2018. In total, 1551 papers went into the reviewing phase: 1021 long, 530 short papers. 1610 reviewers (1473 primary and 137 secondary reviewers) were involved in the reviewing process; each reviewer has reviewed about 3 papers on average. 3 long and 4 short papers were withdrawn during the reviewing period, and finally 1018 long and 526 short papers were considered during the acceptance decision phase.

The assignment of papers to areas and reviewers has been done in multiple rounds. First round: Initial assignments of papers to areas were determined automatically with the help of the authors' input, while PCs went through all submissions and moved papers to other areas, considering COI and the topical fit. PCs assigned one AC as a meta-reviewer to each paper using Toronto Paper Matching System (TPMS) scores. Second round: ACs looked into the papers in their area, and adjusted meta-reviewer assignments. ACs sent a report to PCs if they found any problems. Third round: PCs made the final decision, considering the workload balance, possible COIs and the topical fit. Fourth round: ACs decided which reviewers would review each paper, based on AC's knowledge about the reviewers, TPMS scores, reviewers' bids, and COI.

We have introduced several innovations to the reviewing process. One of them is an argument-based review form. The reviewers were asked to provide arguments for and against the paper. This has been tremendously helpful for ACs and PCs to analyze the reviews and come up with final recommendations. The authors were asked to respond to the con arguments during the rebuttal. In coordination with the NAACL HLT 2018 PCs, we plan to do some analytics on anonymized reviews and rebuttal statements, with the consent of the reviewers and authors. Our purpose is to improve the quality of the review process. The data will be compiled into a unique corpus for NLP, and will be made available to the research community after appropriate anonymization checks, at the earliest in 2 years after ACL 2018.

We hope to provide data on *how to review* to younger researchers, and to improve the transparency of the reviewing process in general.

The ACL 2018 conference is super-competitive: We accepted 256 out of 1018 submitted long papers and 125 out of 526 short papers, with an overall acceptance rate of 24.7%. The details of the review process are available at the conference homepage. Criteria of acceptance were mainly:

- strengths/weaknesses raised by reviewers and their significance;
- the result of discussions and author responses;
- contribution to CL as the science of language: whether the paper advances (or contributes to) our understanding of language in any way;
- diversity: we do not want to fill ACL with similar papers like achieving 1% improvement on a well-known task.

We also considered the balance of paper types, topics and contributions and re-considered the acceptance when reviewers reported any problem in preliminary checks (*Appropriateness to Handling of Human Participants*).

Continuing the tradition, ACL 2018 will feature 20 papers which were accepted for publication in the Transactions of the Association for Computational Linguistics (TACL). The TACL papers were split into 10 oral presentations and 10 poster presentations.

There are many people to thank for who have worked diligently to make ACL 2018 possible. All names are listed in the Program Committee section of the Front Matter.

Since the conference size continues to grow and the organizational complexity increases, we have introduced the role of Program Committee Co-Chair Assistants. In total, 5 senior researchers have supported the PCs during most intensive work phases to handle the communication in a timely manner, draft various documents and effectively prepare decisions.

Thanks to our area chairs for their hard work on recruiting reviewers, managing reviews, leading discussions, and making recommendations.

This program certainly would not be possible without the help of the 1610 reviewers. In particular, 192 reviewers from this list were recognized by the area chairs as outstanding reviewers who have turned in exceptionally well-written and constructive reviews and who have actively engaged themselves in the post-rebuttal discussions.

We are also deeply indebted to the best paper selection committee which consists of 22 members. They had to additionally review 6-8 papers according to the best paper criteria on short notice. Their time and effort in recommending the best paper awards is much appreciated.

We also would like to thank many colleagues for generously sharing their experience in organizing prior ACL conferences and for their advice. We are grateful for the guidance and the support of the ACL presidents Joakim Nivre and Marti Hearst, and the ACL board. We also would like to thank the publication co-chairs Shay Cohen, Kevin Gimpel and Wei Lu (Advisory) and the handbook chair Jey Han Lau for putting together the proceedings and the conference handbook; and Rich Gerber from Softconf for always being responsive to our requests. We would like to thank the ACL Business Manager Priscilla Rasmussen for helping us to sort important things out. Finally, this conference could not have happened without the efforts of the general chair, Claire Cardie. We thank her for the leadership and advice, especially when matters got complicated.

We hope you will enjoy ACL 2018 and contribute to the future success of our community!

ACL 2018 Program Committee Co-Chairs

Iryna Gurevych, TU Darmstadt, Germany

Yusuke Miyao, National Institute of Informatics, Japan



## The process for selecting best papers and honourable mentions

The Program Committee Co-Chairs (PCs) have defined a multi-step process. Area Chairs (ACs) were asked to select a number of top papers in their areas satisfying as many as possible of the following criteria:

- high quality
- nominated for the award by at least one primary reviewer
- bringing disruptive ground-breaking innovation as compared to the current mainstream

ACs re-read their finalists and discussed among themselves the merits of the nominee's work with the help of the primary reviews. ACs then submitted the papers to the PCs along with their selection decisions. PCs balanced ACs' nominations for diversity and representativeness among areas and the review consistency. They prepared the papers in Softconf for best-paper reviewing and selection. There were 52 best paper candidates.

In parallel, PCs formed the best paper selection committee (BPC) from 22 experts in the field with a mix of expertise and backgrounds and at a good seniority level. In case of COIs, the BPC member was excluded from the further evaluation process. BPC members reviewed 6-8 papers each and provided a short review with respect to the best paper criteria.

Based on BPC recommendations, there were about 20 papers left in the pool. PCs then re-read those papers and discussed their particular merits. Finally, 6 long papers and 2 short papers were selected as honourable mentions. For the best papers, 3 long papers and 2 short papers were selected for presentation in the closing conference session.

The selected honourable mentions and best papers emphasize the diversity of the ACL in terms of research questions, methods, and interdisciplinarity.

### Best Long Papers

- *Finding syntax in human encephalography with beam search.* John Hale, Chris Dyer, Adhiguna Kuncoro and Jonathan Brennan.
- *Learning to Ask Good Questions: Ranking Clarification Questions using Neural Expected Value of Perfect Information.* Sudha Rao and Hal Daumé III.
- *Let's do it "again": A First Computational Approach to Detecting Adverbial Presupposition Triggers.* Andre Cianflone, Yulan Feng, Jad Kabbara and Jackie Chi Kit Cheung.

### Best Short Papers

- *Know What You Don't Know: Unanswerable Questions for SQuAD.* Pranav Rajpurkar, Robin Jia and Percy Liang.
- *'Lighter' Can Still Be Dark: Modeling Comparative Color Descriptions.* Olivia Winn and Smaranda Muresan.

# Invited Talk: Deep Neural Networks, and what they're not very good at

**Anton van den Hengel**

Professor, School of Computer Science, University of Adelaide

**Abstract:** Deep Neural Networks have had an incredible impact in a variety of areas within machine learning, including computer vision and natural language processing. Deep Neural Networks use implicit representations that are very high-dimensional, however, and are thus particularly well suited to problems that can be solved by associative recall of previous solutions. They are ill-suited to problems that require human-interpretable representations, explicit manipulation of symbols, or reasoning. The dependency of Deep Neural Networks on large volumes of training data, also means that they are typically only applicable when the problem itself, and the nature of the test data, are predictable long in advance.

The application of Deep Neural Networks to Visual Question Answering has achieved results that would have been thought impossible only a few years ago. It has also thrown a spotlight on the shortcomings of current Deep Nets in solving problems that require explicit reasoning, the use of a knowledge base, or the ability to learn on the fly. In this talk I will illustrate some of the steps being taken to address these problems, and a new learning-to-learn approach that we hope will combine the power of Deep Learning with the significant benefits of explicit-reasoning-based methods.

**Bio:** Anton van den Hengel is a Professor in the School of Computer Science at the University of Adelaide, the Director of the Australian Institute for Machine Learning, and a Chief Investigator of the Australian Centre for Robotic Vision. Prof. van den Hengel has been a CI on over \$60m in external research funding from sources including Google, Canon, BHP Billiton and the ARC, and has won a number of awards, including the Pearcey Foundation Entrepreneur Award, the SA Science Excellence Award for Research Collaboration, and the CVPR Best Paper prize in 2010. He has authored over 300 publications, had 8 patents commercialised, formed 2 start-ups, and has recently had a medical technology achieve first-in-class FDA approval. Current research interests include Deep Learning, vision and language problems, interactive image-based modelling, large-scale video surveillance, and learning from large image databases.

# Invited Talk: Who is the Bridge Between the What and the How

**Carolyn Penstein Rosé**

Professor, School of Computer Science, Carnegie Mellon University

**Abstract:** This talk reports on over a decade of research where theoretical foundations motivate computational models that produce real world impact in online spaces. Both the earliest philosophers of language and the most recent researchers in computational approaches to social media analysis have acknowledged the distinction between the what of language, namely its propositional content, and the how of language, or its form, style, or framing. What bridges between these realms are social processes that motivate the linguistic choices that result in specific realizations of propositional content situated within social interactions, designed to achieve social goals. These insights allow researchers to make sense of the connection between discussion processes and outcomes from those discussions. These findings motivate on the one hand design of computational approaches to real time monitoring of discussion processes and on the other hand the design of interventions that support interactions in online spaces with the goal of increasing desired outcomes, including learning, health, and wellbeing.

As an example, in this talk we probe into a specific quality of discussion referred to as Transactivity. Transactivity is the extent to which a contribution articulates the reasoning of the speaker, that of an interlocutor, and the relation between them. In different contexts, and within very distinct theoretical frameworks, this construct has been associated with solidarity, influence, expertise transfer, and learning. Within the construct of Transactivity, the cognitive and social underpinnings are inextricably linked such that modeling the who enables prediction of the connection between the what and the how.

**Bio:** Dr. Carolyn Rosé is a Professor of Language Technologies and Human-Computer Interaction in the School of Computer Science at Carnegie Mellon University. Her research program is focused on better understanding the social and pragmatic nature of conversation, and using this understanding to build computational systems that can improve the efficacy of conversation between people, and between people and computers. In order to pursue these goals, she invokes approaches from computational discourse analysis and text mining, conversational agents, and computer supported collaborative learning. Her research group's highly interdisciplinary work, published in 200 peer reviewed publications, is represented in the top venues in 5 fields: namely, Language Technologies, Learning Sciences, Cognitive Science, Educational Technology, and Human-Computer Interaction, with awards in 3 of these fields. She serves as Past President and Inaugural Fellow of the International Society of the Learning Sciences, Chair of the International Alliance to Advance Learning in the Digital Era, and Executive Editor of the International Journal of Computer-Supported Collaborative Learning.



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# Conference Program

**Monday, July 16, 2018**

**9:00–10:00**    *Welcome Session & Presidential Address*

**10:00–10:30**    *Coffee Break*

## **Session 1A: Word Semantics 1**

10:30–10:55    *Probabilistic FastText for Multi-Sense Word Embeddings*  
Ben Athiwaratkun, Andrew Wilson and Anima Anandkumar

10:55–11:20    *A La Carte Embedding: Cheap but Effective Induction of Semantic Feature Vectors*  
Mikhail Khodak, Nikunj Saunshi, Yingyu Liang, Tengyu Ma, Brandon Stewart and Sanjeev Arora

11:20–11:45    *Unsupervised Learning of Distributional Relation Vectors*  
Shoaib Jameel, Zied Bouraoui and Steven Schockaert

11:45–12:10    *Explicit Retrofitting of Distributional Word Vectors*  
Goran Glavaš and Ivan Vulić

## **Session 1B: Machine Translation 1**

10:30–10:55    *Unsupervised Neural Machine Translation with Weight Sharing*  
Zhen Yang, Wei Chen, Feng Wang and Bo Xu

10:55–11:20    *Triangular Architecture for Rare Language Translation*  
Shuo Ren, Wenhui Chen, Shujie Liu, Mu Li, Ming Zhou and Shuai Ma

11:20–11:45    *Subword Regularization: Improving Neural Network Translation Models with Multiple Subword Candidates*  
Taku Kudo

11:45–12:10    *The Best of Both Worlds: Combining Recent Advances in Neural Machine Translation*  
Mia Xu Chen, Orhan Firat, Ankur Bapna, Melvin Johnson, Wolfgang Macherey, George Foster, Llion Jones, Mike Schuster, Noam Shazeer, Niki Parmar, Ashish Vaswani, Jakob Uszkoreit, Lukasz Kaiser, Zhifeng Chen, Yonghui Wu and Macduff Hughes

**Monday, July 16, 2018 (continued)**

**Session 1C: Information Extraction 1**

- 10:30–10:55 *Ultra-Fine Entity Typing*  
Eunsol Choi, Omer Levy, Yejin Choi and Luke Zettlemoyer
- 10:55–11:20 *Hierarchical Losses and New Resources for Fine-grained Entity Typing and Linking*  
Shikhar Murty, Patrick Verga, Luke Vilnis, Irena Radovanovic and Andrew McCallum
- 11:20–11:45 *Improving Knowledge Graph Embedding Using Simple Constraints*  
Boyang Ding, Quan Wang, Bin Wang and Li Guo
- 11:45–12:10 *Towards Understanding the Geometry of Knowledge Graph Embeddings*  
Chandrashekar, Aditya Sharma and Partha Talukdar

**Session 1D: Summarization**

- 10:30–10:55 *A Unified Model for Extractive and Abstractive Summarization using Inconsistency Loss*  
Wan-Ting Hsu, Chieh-Kai Lin, Ming-Ying Lee, Kerui Min, Jing Tang and Min Sun
- 10:55–11:20 *Extractive Summarization with SWAP-NET: Sentences and Words from Alternating Pointer Networks*  
Aishwarya Jadhav and Vaibhav Rajan
- 11:20–11:45 *Retrieve, Rerank and Rewrite: Soft Template Based Neural Summarization*  
Ziqiang Cao, Wenjie Li, Sujian Li and Furu Wei
- 11:45–12:10 *Simple and Effective Text Simplification Using Semantic and Neural Methods*  
Elior Sulem, Omri Abend and Ari Rappoport

**Monday, July 16, 2018 (continued)**

**Session 1E: Resource, Annotation**

- 10:30–10:55 *Obtaining Reliable Human Ratings of Valence, Arousal, and Dominance for 20,000 English Words*  
Saif Mohammad
- 10:55–11:20 *Comprehensive Supersense Disambiguation of English Prepositions and Posses-sives*  
Nathan Schneider, Jena D. Hwang, Vivek Srikumar, Jakob Prange, Austin Blodgett, Sarah R. Moeller, Aviram Stern, Adi Bitan and Omri Abend
- 11:20–11:45 *A Corpus with Multi-Level Annotations of Patients, Interventions and Outcomes to Support Language Processing for Medical Literature*  
Benjamin Nye, Junyi Jessy Li, Roma Patel, Yinfei Yang, Iain Marshall, Ani Nenkova and Byron Wallace
- 11:45–12:10 *Efficient Online Scalar Annotation with Bounded Support*  
Keisuke Sakaguchi and Benjamin Van Durme

**Session 1F: Argument Mining**

- 10:30–10:55 *Neural Argument Generation Augmented with Externally Retrieved Evidence*  
Xinyu Hua and Lu Wang
- 10:55–11:20 *A Stylometric Inquiry into Hyperpartisan and Fake News*  
Martin Potthast, Johannes Kiesel, Kevin Reinartz, Janek Bevendorff and Benno Stein
- 11:20–11:45 *Retrieval of the Best Counterargument without Prior Topic Knowledge*  
Henning Wachsmuth, Shahbaz Syed and Benno Stein

**12:10–12:30** *Short Break*

**12:30–14:00** *Poster Session 1A: Machine Learning*

*LinkNBed: Multi-Graph Representation Learning with Entity Linkage*  
Rakshit Trivedi, Bunyamin Sisman, Xin Luna Dong, Christos Faloutsos, Jun Ma and Hongyuan Zha

**Monday, July 16, 2018 (continued)**

*Probabilistic Embedding of Knowledge Graphs with Box Lattice Measures*

Luke Vilnis, Xiang Li, Shikhar Murty and Andrew McCallum

*Graph-to-Sequence Learning using Gated Graph Neural Networks*

Daniel Beck, Gholamreza Haffari and Trevor Cohn

*Sharp Nearby, Fuzzy Far Away: How Neural Language Models Use Context*

Urvashi Khandelwal, He He, Peng Qi and Dan Jurafsky

*Bridging CNNs, RNNs, and Weighted Finite-State Machines*

Roy Schwartz, Sam Thomson and Noah A. Smith

*Zero-shot Learning of Classifiers from Natural Language Quantification*

Shashank Srivastava, Igor Labutov and Tom Mitchell

*Sentence-State LSTM for Text Representation*

Yue Zhang, Qi Liu and Linfeng Song

*Universal Language Model Fine-tuning for Text Classification*

Jeremy Howard and Sebastian Ruder

*Evaluating neural network explanation methods using hybrid documents and morphosyntactic agreement*

Nina Poerner, Hinrich Schütze and Benjamin Roth

**12:30–14:00** *Poster Session 1B: Semantics*

*Improving Text-to-SQL Evaluation Methodology*

Catherine Finegan-Dollak, Jonathan K. Kummerfeld, Li Zhang, Karthik Ramathan, Sesh Sadasivam, Rui Zhang and Dragomir Radev

*Semantic Parsing with Syntax- and Table-Aware SQL Generation*

Yibo Sun, Duyu Tang, Nan Duan, Jianshu Ji, Guihong Cao, Xiaocheng Feng, Bing Qin, Ting Liu and Ming Zhou

*Multitask Parsing Across Semantic Representations*

Daniel Hershcovich, Omri Abend and Ari Rappoport

**Monday, July 16, 2018 (continued)**

*Character-Level Models versus Morphology in Semantic Role Labeling*

Gozde Gul Sahin and Mark Steedman

*AMR Parsing as Graph Prediction with Latent Alignment*

Chunchuan Lyu and Ivan Titov

*Accurate SHRG-Based Semantic Parsing*

Yufei Chen, Weiwei Sun and Xiaojun Wan

*Using Intermediate Representations to Solve Math Word Problems*

Danqing Huang, Jin-Ge Yao, Chin-Yew Lin, Qingyu Zhou and Jian Yin

*Discourse Representation Structure Parsing*

Jiangming Liu, Shay B. Cohen and Mirella Lapata

*Baseline Needs More Love: On Simple Word-Embedding-Based Models and Associated Pooling Mechanisms*

Dinghan Shen, Guoyin Wang, Wenlin Wang, Martin Renqiang Min, Qinliang Su, Yizhe Zhang, Chunyuan Li, Ricardo Henao and Lawrence Carin

*ParaNMT-50M: Pushing the Limits of Paraphrastic Sentence Embeddings with Millions of Machine Translations*

John Wieting and Kevin Gimpel

*Event2Mind: Commonsense Inference on Events, Intents, and Reactions*

Hannah Rashkin, Maarten Sap, Emily Allaway, Noah A. Smith and Yejin Choi

*Neural Adversarial Training for Semi-supervised Japanese Predicate-argument Structure Analysis*

Shuhei Kurita, Daisuke Kawahara and Sadao Kurohashi

**12:30–14:00** *Poster Session 1C: Information Extraction, Text Mining*

*Improving Event Coreference Resolution by Modeling Correlations between Event Coreference Chains and Document Topic Structures*

Prafulla Kumar Choubey and Ruihong Huang

*DSGAN: Generative Adversarial Training for Distant Supervision Relation Extraction*

Pengda Qin, Weiran XU and William Yang Wang

**Monday, July 16, 2018 (continued)**

*Extracting Relational Facts by an End-to-End Neural Model with Copy Mechanism*  
Xiangrong Zeng, Daojian Zeng, Shizhu He, Kang Liu and Jun Zhao

*Self-regulation: Employing a Generative Adversarial Network to Improve Event Detection*  
Yu Hong, Wenxuan Zhou, Jingli Zhang, Guodong Zhou and Qiaoming Zhu

*Context-Aware Neural Model for Temporal Information Extraction*  
Yuanliang Meng and Anna Rumshisky

*Temporal Event Knowledge Acquisition via Identifying Narratives*  
Wenlin Yao and Ruihong Huang

*Textual Deconvolution Saliency (TDS) : a deep tool box for linguistic analysis*  
Laurent Vanni, Mélanie Ducoffe, Carlos Aguilar, Frederic Precioso and Damon Mayaffre

**12:30–14:00** *Poster Session 1D: Discourse, Linguistics, Cognitive Modeling*

*Coherence Modeling of Asynchronous Conversations: A Neural Entity Grid Approach*  
Shafiq Joty, Muhammad Tasnim Mohiuddin and Dat Tien Nguyen

*Deep Reinforcement Learning for Chinese Zero Pronoun Resolution*  
Qingyu Yin, Yu Zhang, Wei-Nan Zhang, Ting Liu and William Yang Wang

*Entity-Centric Joint Modeling of Japanese Coreference Resolution and Predicate Argument Structure Analysis*  
Tomohide Shibata and Sadao Kurohashi

*Constraining MGBank: Agreement, L-Selection and Supertagging in Minimalist Grammars*  
John Torr

*Not that much power: Linguistic alignment is influenced more by low-level linguistic features rather than social power*  
Yang Xu, Jeremy Cole and David Reitter

**12:30–14:00** *Poster Session 1E: Resources and Evaluation*

**Monday, July 16, 2018 (continued)**

*TutorialBank: A Manually-Collected Corpus for Prerequisite Chains, Survey Extraction and Resource Recommendation*

Alexander Fabbri, Irene Li, Prawat Trairatvorakul, Yijiao He, Weitai Ting, Robert Tung, Caitlin Westerfield and Dragomir Radev

*Give Me More Feedback: Annotating Argument Persuasiveness and Related Attributes in Student Essays*

Winston Carlile, Nishant Gurrupadi, Zixuan Ke and Vincent Ng

*Inherent Biases in Reference-based Evaluation for Grammatical Error Correction*

Leshem Choshen and Omri Abend

*The price of debiasing automatic metrics in natural language evaluation*

Arun Chaganty, Stephen Mussmann and Percy Liang

**12:30–14:00** *Poster Session 1F: Summarization, Social Media*

*Neural Document Summarization by Jointly Learning to Score and Select Sentences*

Qingyu Zhou, Nan Yang, Furu Wei, Shaohan Huang, Ming Zhou and Tiejun Zhao

*Unsupervised Abstractive Meeting Summarization with Multi-Sentence Compression and Budgeted Submodular Maximization*

Guokan Shang, Wensi Ding, Zekun Zhang, Antoine Tixier, Polykarpos Meladianos, Michalis Vazirgiannis and Jean-Pierre Lorré

*Fast Abstractive Summarization with Reinforce-Selected Sentence Rewriting*

Yen-Chun Chen and Mohit Bansal

*Soft Layer-Specific Multi-Task Summarization with Entailment and Question Generation*

Han Guo, Ramakanth Pasunuru and Mohit Bansal

*Modeling and Prediction of Online Product Review Helpfulness: A Survey*

Gerardo Ocampo Diaz and Vincent Ng

*Mining Cross-Cultural Differences and Similarities in Social Media*

Bill Yuchen Lin, Frank F. Xu, Kenny Zhu and Seung-won Hwang

*Classification of Moral Foundations in Microblog Political Discourse*

Kristen Johnson and Dan Goldwasser

**Monday, July 16, 2018 (continued)**

**Session 2A: Semantic Parsing 1**

- 14:00–14:25 *Coarse-to-Fine Decoding for Neural Semantic Parsing*  
Li Dong and Mirella Lapata
- 14:25–14:50 *Confidence Modeling for Neural Semantic Parsing*  
Li Dong, Chris Quirk and Mirella Lapata
- 14:50–15:15 *StructVAE: Tree-structured Latent Variable Models for Semi-supervised Semantic Parsing*  
Pengcheng Yin, Chunting Zhou, Junxian He and Graham Neubig
- 15:15–15:40 *Sequence-to-Action: End-to-End Semantic Graph Generation for Semantic Parsing*  
Bo Chen, Le Sun and Xianpei Han

**Session 2B: Multilinguality**

- 14:00–14:25 *On the Limitations of Unsupervised Bilingual Dictionary Induction*  
Anders Søgaard, Sebastian Ruder and Ivan Vulić
- 14:25–14:50 *A robust self-learning method for fully unsupervised cross-lingual mappings of word embeddings*  
Mikel Artetxe, Gorka Labaka and Eneko Agirre
- 14:50–15:15 *A Multi-lingual Multi-task Architecture for Low-resource Sequence Labeling*  
Ying Lin, Shengqi Yang, Veselin Stoyanov and Heng Ji
- 15:15–15:40 *Two Methods for Domain Adaptation of Bilingual Tasks: Delightfully Simple and Broadly Applicable*  
Viktor Hangya, Fabienne Braune, Alexander Fraser and Hinrich Schütze



**Monday, July 16, 2018 (continued)**

**Session 2C: Question Answering 1**

- 14:00–14:25 *Knowledgeable Reader: Enhancing Cloze-Style Reading Comprehension with External Commonsense Knowledge*  
Todor Mihaylov and Anette Frank
- 14:25–14:50 *Multi-Relational Question Answering from Narratives: Machine Reading and Reasoning in Simulated Worlds*  
Igor Labutov, Bishan Yang, Anusha Prakash and Amos Azaria
- 14:50–15:15 *Simple and Effective Multi-Paragraph Reading Comprehension*  
Christopher Clark and Matt Gardner
- 15:15–15:40 *Semantically Equivalent Adversarial Rules for Debugging NLP models*  
Marco Tulio Ribeiro, Sameer Singh and Carlos Guestrin

**Session 2D: Generation 1**

- 14:00–14:25 *Style Transfer Through Back-Translation*  
Shrimai Prabhumoye, Yulia Tsvetkov, Ruslan Salakhutdinov and Alan W Black
- 14:25–14:50 *Generating Fine-Grained Open Vocabulary Entity Type Descriptions*  
Rajarshi Bhowmik and Gerard de Melo
- 14:50–15:15 *Hierarchical Neural Story Generation*  
Angela Fan, Mike Lewis and Yann Dauphin

**Monday, July 16, 2018 (continued)**

**Session 2E: Vision**

- 14:00–14:25 *No Metrics Are Perfect: Adversarial Reward Learning for Visual Storytelling*  
Xin Wang, Wenhua Chen, Yuan-Fang Wang and William Yang Wang
- 14:25–14:50 *Bridging Languages through Images with Deep Partial Canonical Correlation Analysis*  
Guy Rotman, Ivan Vulić and Roi Reichart
- 14:50–15:15 *Illustrative Language Understanding: Large-Scale Visual Grounding with Image Search*  
Jamie Kiros, William Chan and Geoffrey Hinton
- 15:15–15:40 *What Action Causes This? Towards Naive Physical Action-Effect Prediction*  
Qiaozi Gao, Shaohua Yang, Joyce Chai and Lucy Vanderwende

**Session 2F: Sentiment**

- 14:00–14:25 *Transformation Networks for Target-Oriented Sentiment Classification*  
Xin Li, Lidong Bing, Wai Lam and Bei Shi
- 14:25–14:50 *Target-Sensitive Memory Networks for Aspect Sentiment Classification*  
Shuai Wang, Sahisnu Mazumder, Bing Liu, Mianwei Zhou and Yi Chang
- 14:50–15:15 *Identifying Transferable Information Across Domains for Cross-domain Sentiment Classification*  
Raksha Sharma, Pushpak Bhattacharyya, Sandipan Dandapat and Himanshu Sharad Bhatt
- 15:15–15:40 *Unpaired Sentiment-to-Sentiment Translation: A Cycled Reinforcement Learning Approach*  
Jingjing Xu, Xu SUN, Qi Zeng, Xiaodong Zhang, Xuancheng Ren, Houfeng Wang and Wenjie Li
- 15:40–16:10** *Coffee Break*

**Monday, July 16, 2018 (continued)**

**Session 3A: Inference, Reasoning**

- 16:10–16:35 *Discourse Marker Augmented Network with Reinforcement Learning for Natural Language Inference*  
Boyuan Pan, Yazheng Yang, Zhou Zhao, Yueting Zhuang, Deng Cai and Xiaofei He
- 16:35–17:00 *Working Memory Networks: Augmenting Memory Networks with a Relational Reasoning Module*  
Juan Pavez, Hector Allende and Hector Allende-Cid
- 17:00–17:25 *Reasoning with Sarcasm by Reading In-Between*  
Yi Tay, Anh Tuan Luu, Siu Cheung Hui and Jian Su

**Session 3B: Machine Learning 1**

- 16:10–16:35 *Adversarial Contrastive Estimation*  
Avishek Joey Bose, huan ling and Yanshuai Cao
- 16:35–17:00 *Adaptive Scaling for Sparse Detection in Information Extraction*  
Hongyu Lin, Yaojie Lu, Xianpei Han and Le Sun
- 17:00–17:25 *Strong Baselines for Neural Semi-Supervised Learning under Domain Shift*  
Sebastian Ruder and Barbara Plank
- 17:25–17:50 *Fluency Boost Learning and Inference for Neural Grammatical Error Correction*  
Tao Ge, Furu Wei and Ming Zhou

**Monday, July 16, 2018 (continued)**

**Session 3C: Text Mining and Applications**

- 16:10–16:35 *A Neural Architecture for Automated ICD Coding*  
Pengtao Xie and Eric Xing
- 16:35–17:00 *Domain Adaptation with Adversarial Training and Graph Embeddings*  
Firoj Alam, Shafiq Joty and Muhammad Imran
- 17:00–17:25 *TDNN: A Two-stage Deep Neural Network for Prompt-independent Automated Essay Scoring*  
Cancan Jin, Ben He, Kai Hui and Le Sun

**Session 3D: Dialog System 1**

- 16:10–16:35 *Unsupervised Discrete Sentence Representation Learning for Interpretable Neural Dialog Generation*  
Tiancheng Zhao, Kyusong Lee and Maxine Eskenazi
- 16:35–17:00 *Learning to Control the Specificity in Neural Response Generation*  
Ruqing Zhang, Jiafeng Guo, Yixing Fan, Yanyan Lan, Jun Xu and Xueqi Cheng
- 17:00–17:25 *Multi-Turn Response Selection for Chatbots with Deep Attention Matching Network*  
Xiangyang Zhou, Lu Li, Daxiang Dong, Yi Liu, Ying Chen, Wayne Xin Zhao, Dianhai Yu and Hua Wu
- 17:25–17:50 *MojiTalk: Generating Emotional Responses at Scale*  
Xianda Zhou and William Yang Wang

**Monday, July 16, 2018 (continued)**

**Session 3E: Linguistics, Psycholinguistics and Cognitive Modeling**

- 16:10–16:35 *Taylor’s law for Human Linguistic Sequences*  
Tatsuru Kobayashi and Kumiko Tanaka-Ishii
- 16:35–17:00 *A Framework for Representing Language Acquisition in a Population Setting*  
Jordan Kodner and Christopher Cerezo Falco

**Session 3F: Parsing 1**

- 16:10–16:35 *Prefix Lexicalization of Synchronous CFGs using Synchronous TAG*  
Logan Born and Anoop Sarkar
- 16:35–17:00 *Straight to the Tree: Constituency Parsing with Neural Syntactic Distance*  
Yikang Shen, Zhouhan Lin, Athul Paul Jacob, Alessandro Sordoni, Aaron Courville  
and Yoshua Bengio
- 17:00–17:25 *Gaussian Mixture Latent Vector Grammars*  
Yanpeng Zhao, Liwen Zhang and Kewei Tu
- 17:25–17:50 *Extending a Parser to Distant Domains Using a Few Dozen Partially Annotated  
Examples*  
Vidur Joshi, Matthew Peters and Mark Hopkins

**Tuesday, July 17, 2018**

**9:00–10:00**    *Invited Talk 1: Carolyn Penstein Rosé*

**10:00–10:30**    *Coffee Break*

**Session 4A: Word Semantics 2**

10:30–10:55    *Paraphrase to Explicate: Revealing Implicit Noun-Compound Relations*  
Vered Shwartz and Ido Dagan

10:55–11:20    *Searching for the X-Factor: Exploring Corpus Subjectivity for Word Embeddings*  
Maksim Tkachenko, Chong Cher Chia and Hady Lauw

11:20–11:45    *Word Embedding and WordNet Based Metaphor Identification and Interpretation*  
Rui Mao, Chenghua Lin and Frank Guerin

11:45–12:10    *Incorporating Latent Meanings of Morphological Compositions to Enhance Word Embeddings*  
Yang Xu, Jiawei Liu, Wei Yang and Liusheng Huang

**Session 4B: Machine Translation 2**

10:30–10:55    *A Stochastic Decoder for Neural Machine Translation*  
Philip Schulz, Wilker Aziz and Trevor Cohn

10:55–11:20    *Forest-Based Neural Machine Translation*  
Chunpeng Ma, Akihiro Tamura, Masao Utiyama, Tiejun Zhao and Eiichiro Sumita

11:20–11:45    *Context-Aware Neural Machine Translation Learns Anaphora Resolution*  
Elena Voita, Pavel Serdyukov, Rico Sennrich and Ivan Titov

11:45–12:10    *Document Context Neural Machine Translation with Memory Networks*  
Sameen Maruf and Gholamreza Haffari

**Tuesday, July 17, 2018 (continued)**

**Session 4C: Information Extraction 2**

- 10:30–10:55 *Which Melbourne? Augmenting Geocoding with Maps*  
Milan Gritta, Mohammad Taher Pilehvar and Nigel Collier
- 10:55–11:20 *Learning Prototypical Goal Activities for Locations*  
Tianyu Jiang and Ellen Riloff
- 11:20–11:45 *Guess Me if You Can: Acronym Disambiguation for Enterprises*  
Yang Li, Bo Zhao, Ariel Fuxman and Fangbo Tao
- 11:45–12:10 *A Multi-Axis Annotation Scheme for Event Temporal Relations*  
Qiang Ning, Hao Wu and Dan Roth

**Session 4D: Dialog System 2**

- 10:30–10:55 *Exemplar Encoder-Decoder for Neural Conversation Generation*  
Gaurav Pandey, Danish Contractor, Vineet Kumar and Sachindra Joshi
- 10:55–11:20 *DialSQL: Dialogue Based Structured Query Generation*  
Izzeddin Gur, Semih Yavuz, Yu Su and Xifeng Yan
- 11:20–11:45 *Conversations Gone Awry: Detecting Early Signs of Conversational Failure*  
Justine Zhang, Jonathan Chang, Cristian Danescu-Niculescu-Mizil, Lucas Dixon,  
Yiqing Hua, Dario Taraborelli and Nithum Thain

**Tuesday, July 17, 2018 (continued)**

**Session 4E: Evaluation**

- 10:30–10:55 *Are BLEU and Meaning Representation in Opposition?*  
Ondřej Cířka and Ondřej Bojar
- 10:55–11:20 *Automatic Metric Validation for Grammatical Error Correction*  
Leshem Choshen and Omri Abend
- 11:20–11:45 *The Hitchhiker’s Guide to Testing Statistical Significance in Natural Language Processing*  
Rotem Dror, Gili Baumer, Segev Shlomov and Roi Reichart

**Session 4F: Parsing 2**

- 10:30–10:55 *Distilling Knowledge for Search-based Structured Prediction*  
Yijia Liu, Wanxiang Che, Huaipeng Zhao, Bing Qin and Ting Liu
- 10:55–11:20 *Stack-Pointer Networks for Dependency Parsing*  
Xuezhe Ma, Zecong Hu, Jingzhou Liu, Nanyun Peng, Graham Neubig and Eduard Hovy
- 11:20–11:45 *Twitter Universal Dependency Parsing for African-American and Mainstream American English*  
Su Lin Blodgett, Johnny Wei and Brendan O’Connor
- 11:45–12:10 *LSTMs Can Learn Syntax-Sensitive Dependencies Well, But Modeling Structure Makes Them Better*  
Adhiguna Kuncoro, Chris Dyer, John Hale, Dani Yogatama, Stephen Clark and Phil Blunsom

**12:10–12:30** *Short Break*

**12:30–14:00** *Poster Session 2A: Student Research Workshop*

**12:30–14:00** *Poster Session 2B: Dialog and Interactive Systems, Multilinguality*

*Sequicity: Simplifying Task-oriented Dialogue Systems with Single Sequence-to-Sequence Architectures*  
Wenqiang Lei, Xisen Jin, Min-Yen Kan, Zhaochun Ren, Xiangnan He and Dawei Yin



**Tuesday, July 17, 2018 (continued)**

*An End-to-end Approach for Handling Unknown Slot Values in Dialogue State Tracking*

Puyang Xu and Qi Hu

*Global-Locally Self-Attentive Encoder for Dialogue State Tracking*

Victor Zhong, Caiming Xiong and Richard Socher

*Mem2Seq: Effectively Incorporating Knowledge Bases into End-to-End Task-Oriented Dialog Systems*

Andrea Madotto, Chien-Sheng Wu and Pascale Fung

*Tailored Sequence to Sequence Models to Different Conversation Scenarios*

Hainan Zhang, Yanyan Lan, Jiafeng Guo, Jun Xu and Xueqi Cheng

*Knowledge Diffusion for Neural Dialogue Generation*

Shuman Liu, Hongshen Chen, Zhaochun Ren, Yang Feng, Qun Liu and Dawei Yin

*Generating Informative Responses with Controlled Sentence Function*

Pei Ke, Jian Guan, Minlie Huang and xiaoyan zhu

*Sentiment Adaptive End-to-End Dialog Systems*

Weiyan Shi and Zhou Yu

*Embedding Learning Through Multilingual Concept Induction*

Philipp Dufter, Mengjie Zhao, Martin Schmitt, Alexander Fraser and Hinrich Schütze

*Isomorphic Transfer of Syntactic Structures in Cross-Lingual NLP*

Edoardo Maria Ponti, Roi Reichart, Anna Korhonen and Ivan Vulić

*Language Modeling for Code-Mixing: The Role of Linguistic Theory based Synthetic Data*

Adithya Pratapa, Gayatri Bhat, Monojit Choudhury, Sunayana Sitaram, Sandipan Dandapat and Kalika Bali

**12:30–14:00** *Poster Session 2C: Information Extraction, Text Mining*

*Chinese NER Using Lattice LSTM*

Yue Zhang and Jie Yang

**Tuesday, July 17, 2018 (continued)**

*Nugget Proposal Networks for Chinese Event Detection*

Hongyu Lin, Yaojie Lu, Xianpei Han and Le Sun

*Higher-order Relation Schema Induction using Tensor Factorization with Back-off and Aggregation*

Madhav Nimishakavi, Manish Gupta and Partha Talukdar

*Discovering Implicit Knowledge with Unary Relations*

Michael Glass and Alfio Gliozzo

*Improving Entity Linking by Modeling Latent Relations between Mentions*

Phong Le and Ivan Titov

*Dating Documents using Graph Convolution Networks*

Shikhar Vashishth, Shib Sankar Dasgupta, Swayambhu Nath Ray and Partha Talukdar

**12:30–14:00** *Poster Session 2D: Generation*

*A Graph-to-Sequence Model for AMR-to-Text Generation*

Linfeng Song, Yue Zhang, Zhiguo Wang and Daniel Gildea

*GTR-LSTM: A Triple Encoder for Sentence Generation from RDF Data*

Bayu Distiawan Trisedya, Jianzhong Qi, Rui Zhang and Wei Wang

*Learning to Write with Cooperative Discriminators*

Ari Holtzman, Jan Buys, Maxwell Forbes, Antoine Bosselut, David Golub and Yejin Choi

*A Neural Approach to Pun Generation*

Zhiwei Yu, Jiwei Tan and Xiaojun Wan

*Learning to Generate Move-by-Move Commentary for Chess Games from Large-Scale Social Forum Data*

Harsh Jhamtani, Varun Gangal, Eduard Hovy, Graham Neubig and Taylor Berg-Kirkpatrick

*From Credit Assignment to Entropy Regularization: Two New Algorithms for Neural Sequence Prediction*

Zihang Dai, Qizhe Xie and Eduard Hovy

**Tuesday, July 17, 2018 (continued)**

**12:30–14:00** *Poster Session 2E: Question Answering*

*DuoRC: Towards Complex Language Understanding with Paraphrased Reading Comprehension*

Amrita Saha, Rahul Aralikkatte, Mitesh M. Khapra and Karthik Sankaranarayanan

*Stochastic Answer Networks for Machine Reading Comprehension*

Xiaodong Liu, Yelong Shen, Kevin Duh and Jianfeng Gao

*Multi-Granularity Hierarchical Attention Fusion Networks for Reading Comprehension and Question Answering*

Wei Wang, Ming Yan and Chen Wu

*Joint Training of Candidate Extraction and Answer Selection for Reading Comprehension*

Zhen Wang, Jiachen Liu, Xinyan Xiao, Yajuan Lyu and Tian Wu

*Efficient and Robust Question Answering from Minimal Context over Documents*

Sewon Min, Victor Zhong, Richard Socher and Caiming Xiong

*Denoising Distantly Supervised Open-Domain Question Answering*

Yankai Lin, Haozhe Ji, Zhiyuan Liu and Maosong Sun

*Question Condensing Networks for Answer Selection in Community Question Answering*

Wei Wu, Xu SUN and Houfeng WANG

**12:30–14:00** *Poster Session 2F: Machine Translation*

*Towards Robust Neural Machine Translation*

Yong Cheng, Zhaopeng Tu, Fandong Meng, Junjie Zhai and Yang Liu

*Attention Focusing for Neural Machine Translation by Bridging Source and Target Embeddings*

Shaohui Kuang, Junhui Li, António Branco, Weihua Luo and Deyi Xiong

*Reliability and Learnability of Human Bandit Feedback for Sequence-to-Sequence Reinforcement Learning*

Julia Kreutzer, Joshua Uyheng and Stefan Riezler

**Tuesday, July 17, 2018 (continued)**

*Accelerating Neural Transformer via an Average Attention Network*

Biao Zhang, Deyi Xiong and jinsong su

*How Much Attention Do You Need? A Granular Analysis of Neural Machine Translation Architectures*

Tobias Domhan

**Session 6A: Semantic Parsing 2**

15:30–15:55 *Weakly Supervised Semantic Parsing with Abstract Examples*

Omer Goldman, Veronica Latcinnik, Ehud Nave, Amir Globerson and Jonathan Berant

15:55–16:20 *Improving a Neural Semantic Parser by Counterfactual Learning from Human Bandit Feedback*

Carolin Lawrence and Stefan Riezler

16:20–16:45 *AMR dependency parsing with a typed semantic algebra*

Jonas Groschwitz, Matthias Lindemann, Meaghan Fowlie, Mark Johnson and Alexander Koller

16:45–17:10 *Sequence-to-sequence Models for Cache Transition Systems*

Xiaochang Peng, Linfeng Song, Daniel Gildea and Giorgio Satta

**Session 6B: Machine Learning 2**

15:30–15:55 *Batch IS NOT Heavy: Learning Word Representations From All Samples*

Xin Xin, Fajie Yuan, Xiangnan He and Joemon M Jose

15:55–16:20 *Backpropagating through Structured Argmax using a SPIGOT*

Hao Peng, Sam Thomson and Noah A. Smith

16:20–16:45 *Learning How to Actively Learn: A Deep Imitation Learning Approach*

Ming Liu, Wray Buntine and Gholamreza Haffari

16:45–17:10 *Training Classifiers with Natural Language Explanations*

Braden Hancock, Paroma Varma, Stephanie Wang, Martin Bringmann, Percy Liang and Christopher Ré

**Tuesday, July 17, 2018 (continued)**

**Session 6C: Question Answering 2**

- 15:30–15:55 *Did the Model Understand the Question?*  
Pramod Kaushik Mudrakarta, Ankur Taly, Mukund Sundararajan and Kedar Dhamdhere
- 15:55–16:20 *Harvesting Paragraph-level Question-Answer Pairs from Wikipedia*  
Xinya Du and Claire Cardie
- 16:20–16:45 *Multi-Passage Machine Reading Comprehension with Cross-Passage Answer Verification*  
Yizhong Wang, Kai Liu, Jing Liu, Wei He, Yajuan Lyu, Hua Wu, Sujian Li and Haifeng Wang

**Session 6D: Generation 2**

- 15:30–15:55 *Language Generation via DAG Transduction*  
Yajie Ye, Weiwei Sun and Xiaojun Wan
- 15:55–16:20 *A Distributional and Orthographic Aggregation Model for English Derivational Morphology*  
Daniel Deutsch, John Hewitt and Dan Roth
- 16:20–16:45 *Deep-speare: A joint neural model of poetic language, meter and rhyme*  
Jey Han Lau, Trevor Cohn, Timothy Baldwin, Julian Brooke and Adam Hammond
- 16:45–17:10 *NeuralREG: An end-to-end approach to referring expression generation*  
Thiago Castro Ferreira, Diego Moussallem, Ákos Kádár, Sander Wubben and Emiel Krahmer

**Tuesday, July 17, 2018 (continued)**

**Session 6E: Social Media**

- 15:30–15:55 *Stock Movement Prediction from Tweets and Historical Prices*  
Yumo Xu and Shay B. Cohen
- 15:55–16:20 *Rumor Detection on Twitter with Tree-structured Recursive Neural Networks*  
Jing Ma, Wei Gao and Kam-Fai Wong
- 16:20–16:45 *Visual Attention Model for Name Tagging in Multimodal Social Media*  
Di Lu, Leonardo Neves, Vitor Carvalho, Ning Zhang and Heng Ji
- 16:45–17:10 *Multimodal Named Entity Disambiguation for Noisy Social Media Posts*  
Seungwhan Moon, Leonardo Neves and Vitor Carvalho

**Session 6F: Information Retrieval**

- 15:30–15:55 *Semi-supervised User Geolocation via Graph Convolutional Networks*  
Afshin Rahimi, Trevor Cohn and Timothy Baldwin
- 15:55–16:20 *Document Modeling with External Attention for Sentence Extraction*  
Shashi Narayan, Ronald Cardenas, Nikos Papasrantopoulos, Shay B. Cohen, Mirella Lapata, Jiangsheng Yu and Yi Chang
- 16:20–16:45 *Neural Models for Documents with Metadata*  
Dallas Card, Chenhao Tan and Noah A. Smith
- 16:45–17:10 *NASH: Toward End-to-End Neural Architecture for Generative Semantic Hashing*  
Dinghan Shen, Qinliang Su, Paidamoyo Chapfuwa, Wenlin Wang, Guoyin Wang, Ricardo Henao and Lawrence Carin

**17:10–17:20** *Short Break*

**17:20–18:50** *ACL Business Meeting*

**Tuesday, July 17, 2018 (continued)**

**19:30–22:30** *Social Event*

**Wednesday, July 18, 2018**

**9:00–10:00** *Invited Talk 2: Anton van den Hengel*

**10:00–10:30** *Coffee Break*

**Session 7A: Semantic Parsing 3**

10:30–10:55 *Large-Scale QA-SRL Parsing*

Nicholas FitzGerald, Julian Michael, Luheng He and Luke Zettlemoyer

10:55–11:20 *Syntax for Semantic Role Labeling, To Be, Or Not To Be*

Shexia He, Zuchao Li, Hai Zhao and Hongxiao Bai

11:20–11:45 *Situated Mapping of Sequential Instructions to Actions with Single-step Reward Observation*

Alane Suhr and Yoav Artzi

11:45–12:10 *Marrying Up Regular Expressions with Neural Networks: A Case Study for Spoken Language Understanding*

Bingfeng Luo, Yansong Feng, Zheng Wang, Songfang Huang, Rui Yan and Dongyan Zhao

Wednesday, July 18, 2018 (continued)

**Session 7B: Language/Document Model**

- 10:30–10:55 *Token-level and sequence-level loss smoothing for RNN language models*  
Maha ELBAYAD, Laurent Besacier and Jakob Verbeek
- 10:55–11:20 *Numeracy for Language Models: Evaluating and Improving their Ability to Predict Numbers*  
Georgios Spithourakis and Sebastian Riedel
- 11:20–11:45 *To Attend or not to Attend: A Case Study on Syntactic Structures for Semantic Relatedness*  
Amulya Gupta and Zhu Zhang
- 11:45–12:10 *What you can cram into a single  $\mathbb{R}^d$  vector: Probing sentence embeddings for linguistic properties*  
Alexis Conneau, Germán Kruszewski, Guillaume Lample, Loïc Barrault and Marco Baroni

**Session 7C: Information Extraction 3**

- 10:30–10:55 *Robust Distant Supervision Relation Extraction via Deep Reinforcement Learning*  
Pengda Qin, Weiran XU and William Yang Wang
- 10:55–11:20 *Interpretable and Compositional Relation Learning by Joint Training with an Autoencoder*  
Ryo Takahashi, Ran Tian and Kentaro Inui
- 11:20–11:45 *Zero-Shot Transfer Learning for Event Extraction*  
Lifu Huang, Heng Ji, Kyunghyun Cho, Ido Dagan, Sebastian Riedel and Clare Voss
- 11:45–12:10 *Recursive Neural Structural Correspondence Network for Cross-domain Aspect and Opinion Co-Extraction*  
Wenya Wang and Sinno Jialin Pan



Wednesday, July 18, 2018 (continued)

**Session 7D: Dialog System 3**

- 10:30–10:55 *Deep Dyna-Q: Integrating Planning for Task-Completion Dialogue Policy Learning*  
Baolin Peng, Xiujun Li, Jianfeng Gao, Jingjing Liu and Kam-Fai Wong
- 10:55–11:20 *Learning to Ask Questions in Open-domain Conversational Systems with Typed Decoders*  
Yansen Wang, Chenyi Liu, Minlie Huang and Liqiang Nie
- 11:20–11:45 *Personalizing Dialogue Agents: I have a dog, do you have pets too?*  
Saizheng Zhang, Emily Dinan, Jack Urbanek, Arthur Szlam, Douwe Kiela and Jason Weston
- 11:45–12:10 *Efficient Large-Scale Neural Domain Classification with Personalized Attention*  
Young-Bum Kim, Dongchan Kim, Anjishnu Kumar and Ruhi Sarikaya

**Session 7E: Multimodal**

- 10:30–10:55 *Multimodal Affective Analysis Using Hierarchical Attention Strategy with Word-Level Alignment*  
Yue Gu, Kangning Yang, Shiyu Fu, Shuhong Chen, Xinyu Li and Ivan Marsic
- 10:55–11:20 *Multimodal Language Analysis in the Wild: CMU-MOSEI Dataset and Interpretable Dynamic Fusion Graph*  
AmirAli Bagher Zadeh, Paul Pu Liang, Soujanya Poria, Erik Cambria and Louis-Philippe Morency
- 11:20–11:45 *Efficient Low-rank Multimodal Fusion With Modality-Specific Factors*  
Zhun Liu, Ying Shen, Varun Bharadhwaj Lakshminarasimhan, Paul Pu Liang, AmirAli Bagher Zadeh and Louis-Philippe Morency

**Wednesday, July 18, 2018 (continued)**

**Session 7F: Discourse**

- 10:30–10:55 *Discourse Coherence: Concurrent Explicit and Implicit Relations*  
Hannah Rohde, Alexander Johnson, Nathan Schneider and Bonnie Webber
- 10:55–11:20 *A Spatial Model for Extracting and Visualizing Latent Discourse Structure in Text*  
Shashank Srivastava and Nebojsa Jojic
- 11:20–11:45 *Joint Reasoning for Temporal and Causal Relations*  
Qiang Ning, Zhili Feng, Hao Wu and Dan Roth
- 11:45–12:10 *Modeling Naive Psychology of Characters in Simple Commonsense Stories*  
Hannah Rashkin, Antoine Bosselut, Maarten Sap, Kevin Knight and Yejin Choi

**12:10–12:30** *Short Break*

**12:30–14:00** *Poster Session 3A: Student Research Workshop*

**12:30–14:00** *Poster Session 3B: Document Analysis*

*A Deep Relevance Model for Zero-Shot Document Filtering*  
Chenliang Li, Wei Zhou, Feng Ji, Yu Duan and Haiqing Chen

*Disconnected Recurrent Neural Networks for Text Categorization*  
Baoxin Wang

*Joint Embedding of Words and Labels for Text Classification*  
Guoyin Wang, Chunyuan Li, Wenlin Wang, Yizhe Zhang, Dinghan Shen, Xinyuan Zhang, Ricardo Henao and Lawrence Carin

*Neural Sparse Topical Coding*  
Min Peng, Qianqian Xie, Yanchun Zhang, Hua Wang, Xiuzhen Zhang, Jimin Huang and Gang Tian

**Wednesday, July 18, 2018 (continued)**

*Document Similarity for Texts of Varying Lengths via Hidden Topics*

Hongyu Gong, Tarek Sakakini, Suma Bhat and JinJun Xiong

*Eyes are the Windows to the Soul: Predicting the Rating of Text Quality Using Gaze Behaviour*

Sandeep Mathias, Diptesh Kanojia, Kevin Patel, Samarth Agrawal, Abhijit Mishra and Pushpak Bhattacharyya

*Multi-Input Attention for Unsupervised OCR Correction*

Rui Dong and David Smith

*Building Language Models for Text with Named Entities*

Md Rizwan Parvez, Saikat Chakraborty, Baishakhi Ray and Kai-Wei Chang

*hyperdoc2vec: Distributed Representations of Hypertext Documents*

Jialong Han, Yan Song, Wayne Xin Zhao, Shuming Shi and Haisong Zhang

*Entity-Duet Neural Ranking: Understanding the Role of Knowledge Graph Semantics in Neural Information Retrieval*

Zhenghao Liu, Chenyan Xiong, Maosong Sun and Zhiyuan Liu

**12:30–14:00** *Poster Session 3C: Semantics*

*Neural Natural Language Inference Models Enhanced with External Knowledge*

Qian Chen, Xiaodan Zhu, Zhen-Hua Ling, Diana Inkpen and Si Wei

*AdvEntuRe: Adversarial Training for Textual Entailment with Knowledge-Guided Examples*

Dongyeop Kang, Tushar Khot, Ashish Sabharwal and Eduard Hovy

*Subword-level Word Vector Representations for Korean*

Sungjoon Park, Jeongmin Byun, Sion Baek, Yongseok Cho and Alice Oh

*Incorporating Chinese Characters of Words for Lexical Sememe Prediction*

Huiming Jin, Hao Zhu, Zhiyuan Liu, Ruobing Xie, Maosong Sun, Fen Lin and Leyu Lin

*SemAxis: A Lightweight Framework to Characterize Domain-Specific Word Semantics Beyond Sentiment*

Jisun An, Haewoon Kwak and Yong-Yeol Ahn

**Wednesday, July 18, 2018 (continued)**

*End-to-End Reinforcement Learning for Automatic Taxonomy Induction*

Yuning Mao, Xiang Ren, Jiaming Shen, Xiaotao Gu and Jiawei Han

*Incorporating Glosses into Neural Word Sense Disambiguation*

Fuli Luo, Tianyu Liu, Qiaolin Xia, Baobao Chang and Zhifang Sui

**12:30–14:00** *Poster Session 3D: Sentiment Analysis and Argument Mining*

*Bilingual Sentiment Embeddings: Joint Projection of Sentiment Across Languages*

Jeremy Barnes, Roman Klinger and Sabine Schulte im Walde

*Learning Domain-Sensitive and Sentiment-Aware Word Embeddings*

Bei Shi, Zihao Fu, Lidong Bing and Wai Lam

*Cross-Domain Sentiment Classification with Target Domain Specific Information*

Minlong Peng, Qi Zhang, Yu-gang Jiang and Xuanjing Huang

*Aspect Based Sentiment Analysis with Gated Convolutional Networks*

Wei Xue and Tao Li

*A Helping Hand: Transfer Learning for Deep Sentiment Analysis*

Xin Dong and Gerard de Melo

*Cold-Start Aware User and Product Attention for Sentiment Classification*

Reinald Kim Amplayo, Jihyeok Kim, Sua Sung and Seung-won Hwang

*Modeling Deliberative Argumentation Strategies on Wikipedia*

Khalid Al Khatib, Henning Wachsmuth, Kevin Lang, Jakob Herpel, Matthias Hagen and Benno Stein

**12:30–14:00** *Poster Session 3E: Vision, Multimodal, Grounding, Speech*

*Conceptual Captions: A Cleaned, Hypernymed, Image Alt-text Dataset For Automatic Image Captioning*

Piyush Sharma, Nan Ding, Sebastian Goodman and Radu Soricut

Wednesday, July 18, 2018 (continued)

*Learning Translations via Images with a Massively Multilingual Image Dataset*

John Hewitt, Daphne Ippolito, Brendan Callahan, Reno Kriz, Derry Tanti Wijaya and Chris Callison-Burch

*On the Automatic Generation of Medical Imaging Reports*

Baoyu Jing, Pengtao Xie and Eric Xing

*Attacking Visual Language Grounding with Adversarial Examples: A Case Study on Neural Image Captioning*

Hongge Chen, Huan Zhang, Pin-Yu Chen, Jinfeng Yi and Cho-Jui Hsieh

*Think Visually: Question Answering through Virtual Imagery*

Ankit Goyal, Jian Wang and Jia Deng

*Interactive Language Acquisition with One-shot Visual Concept Learning through a Conversational Game*

Haichao Zhang, Haonan Yu and Wei Xu

*A Purely End-to-End System for Multi-speaker Speech Recognition*

Hiroshi Seki, Takaaki Hori, Shinji Watanabe, Jonathan Le Roux and John R Hershey

**12:30–14:00** *Poster Session 3F: Morphology, Tagging, Parsing*

*A Structured Variational Autoencoder for Contextual Morphological Inflection*

Ryan Cotterell, Jason Naradowsky, Sebastian J. Mielke and Lawrence Wolf-Sonkin

*Morphosyntactic Tagging with a Meta-BiLSTM Model over Context Sensitive Token Encodings*

Bernd Bohnet, Ryan McDonald, Gonçalo Simões, Daniel Andor, Emily Pitler and Joshua Maynez

*Neural Factor Graph Models for Cross-lingual Morphological Tagging*

Chaitanya Malaviya, Matthew R. Gormley and Graham Neubig

*Global Transition-based Non-projective Dependency Parsing*

Carlos Gómez-Rodríguez, Tianze Shi and Lillian Lee

*Constituency Parsing with a Self-Attentive Encoder*

Nikita Kitaev and Dan Klein

**Wednesday, July 18, 2018 (continued)**

*Pre- and In-Parsing Models for Neural Empty Category Detection*

Yufei Chen, Yuanyuan Zhao, Weiwei Sun and Xiaojun Wan

*Composing Finite State Transducers on GPUs*

Arturo Argueta and David Chiang

*Supervised Treebank Conversion: Data and Approaches*

Xinzhou Jiang, Zhenghua Li, Bo Zhang, Min Zhang, Sheng Li and Luo Si

*Object-oriented Neural Programming (OONP) for Document Understanding*

Zhengdong Lu, Xianggen Liu, Haotian Cui, Yukun Yan and Daqi Zheng

**Session 9A: Best Paper Session**

16:00–16:25

*Finding syntax in human encephalography with beam search*

John Hale, Chris Dyer, Adhiguna Kuncoro and Jonathan Brennan

16:25–16:50

*Learning to Ask Good Questions: Ranking Clarification Questions using Neural Expected Value of Perfect Information*

Sudha Rao and Hal Daumé III

16:50–17:15

*Let's do it "again": A First Computational Approach to Detecting Adverbial Pre-supposition Triggers*

Andre Cianflone, Yulan Feng, Jad Kabbara and Jackie Chi Kit Cheung

17:15–17:30

*Short Break*

17:30–18:30

*Lifetime Achievement Award*

18:30–18:45

*Closing Session*