

ACL 2017

**The 55th Annual Meeting of the
Association for Computational Linguistics**

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Preface: General Chair

Welcome to ACL 2017 in Vancouver, Canada! This is the 55th annual meeting of the Association for Computational Linguistics. A tremendous amount of knowledge has been presented at more than half a century's worth of our conferences. Hopefully, some of it is still relevant now that deep learning has solved language. We are anticipating one of the largest ACL conferences ever. We had a record number of papers submitted to the conference, and a record number of industry partners joining us as sponsors of the conference. We are on track to be one of the best attended ACL conferences to date. I hope that this year's conference is intellectually stimulating and that you take home many new ideas and techniques that will help extend your own research.

Each year, the ACL conference is organized by a dedicated team of volunteers. Please thank this year's organizers for their service to the community when you see them at the conference. Without these people, this conference would not happen: Regina Barzilay and Min-Yen Kan (Program Co-Chairs), Priscilla Rasmussen and Anoop Sarkar (Local Organizing Committee), Wei Xu and Jonathan Berant (Workshop Chairs), Maja Popović and Jordan Boyd-Graber (Tutorial Chairs), Wei Lu, Sameer Singh and Margaret Mitchell (Publication Chairs), Heng Ji and Mohit Bansal (Demonstration Chairs), Spandana Gella, Allyson Ettinger, and Matthieu Labeau (Student Research Workshop Organizers), Cecilia Ovesdotter Alm, Mark Dredze, and Marine Carpuat (Faculty Advisors to the Student Research Workshop), Charley Chan (Publicity Chair), Christian Federmann (Conference Handbook Chair), Maryam Siahbani (Student Volunteer Coordinator), and Nitin Madnani (Webmaster and Appmaster).

The organizers have been working for more than a year to put together the conference. Far more than a year in advance, the ACL 2017 Coordinating Committee helped to select the venue and to pick the General Chair and the Program Co-Chairs. This consisted of members from NAACL and ACL executive boards. Representing NAACL we had Hal Daumé III, Michael White, Joel Tetreault, and Emily Bender. Representing ACL we had Pushpak Bhattacharyya, Dragomir Radev, Graeme Hirst, Yejin Choi, and Priscilla Rasmussen. I would like to extend a personal thanks to Graeme and Priscilla who often serve as the ACL's institutional memory, and who have helped fill in many details along the way.

I would like to extend a special thanks to our Program Co-Chairs, Regina Barzilay and Min-Yen Kan. They documented their work creating the program by running a blog. They used their blog as a platform for engaging the ACL community in many of the decision making processes including soliciting suggestions for the conference's area chairs and invited speakers. They hosted discussions with Marti Hearst and Joakim Nivre about the value of publishing pre-prints of submitted paper on arXiv and how they relate to double blind reviewing. They even invited several prominent members of our community to provide last-minute writing advice. If you weren't following the blog in the lead-up to the conference, I highly recommend taking a look through it now. You can find it linked from the ACL 2017 web page.

This year's program looks like it will be excellent! We owe a huge thank you to Regina Barzilay and Min-Yen Kan. They selected this year's papers from 1,318 submissions with the help of 44 area chairs and more than 1,200 reviewers. Thanks to Regina, Min, the area chairs, the reviewers and the authors. Beyond the papers, we have talks by luminaries in the field of NLP, including ACL President Joakim Nivre, invited speakers Mirella Lapata and Noah Smith, and the recipient of this year's Lifetime Achievement Award. We also have an excellent set of workshops and tutorials. On the tutorial day, there will also be a special workshop on Women and Underrepresented Minorities in Natural Language Processing. Thank you to our workshop organizers and tutorial presenters.

This year's conference features two outreach activities that I would like to highlight. First, on Sunday, July 30, 2017, there will be a workshop on Women and Underrepresented Minorities in Natural Language Processing organized by Libby Barak, Isabelle Augenstein, Chloé Braud, He He, and Margaret Mitchell. The goals of the workshop are to increase awareness of the work women and underrepresented

groups do, support women and underrepresented groups in continuing to pursue their research, and motivate long-term resources for underrepresented groups within ACL. Second, for the first time ever, ACL is offering subsidized on-site childcare at the conference hotel. The goal of this is to allow ACL participants with children to more readily be able to attend the conference. Since childcare duties often fall disproportionately on women, our hope is that by having professional childcare on-site that we will allow more women to participate, and therefore to help promote their careers. My hope is that the childcare will be continued in future conferences.

I would like to thank our many sponsors for their generous contributions. Our platinum sponsors are Alibaba, Amazon, Apple, Baidu, Bloomberg, Facebook, Google, Samsung and Tencent. Our gold sponsors are eBay, Elsevier, IBM Research, KPMG, Maluuba, Microsoft, Naver Line, NEC, Recruit Institute of Technology, and SAP. Our silver sponsors are Adobe, Bosch, CVTE, Duolingo, Huawei, Nuance, Oracle, and Sogou. Our bronze sponsors are Grammarly, Toutiao, and Yandex. Our supporters include Newsela and four professional master's degree programs from Brandeis, Columbia, NYU and the University of Washington. We would like to acknowledge the generous support of the National Science Foundation which has awarded a \$15,000 grant to the ACL Student Research Workshop. Finally, NVIDIA donated several Titan X GPU cards for us to raffle off during the conference.

Lastly, I would like to thank everyone else who helped to make this conference a success. Thank you to our area chairs, our army of reviewers, our workshop organizers, our tutorial presenters, our invited speakers, and our authors. Best regards to all of you.

Welcome to ACL 2017!

Chris Callison-Burch
General Chair

Preface: Program Committee Co-Chairs

Welcome to the 55th Annual Meeting of the Association for Computational Linguistics! This year, ACL received 751 long paper submissions and 567 short paper submissions¹. Of the long papers, 195 were accepted for presentation at ACL — 117 as oral presentations and 78 as poster presentations (25% acceptance rate). 107 short papers were accepted — 34 as oral and 73 as poster presentations (acceptance rate of 18%). In addition, ACL will also feature 21 presentations of papers accepted in the *Transactions of the Association for Computational Linguistics* (TACL). Including the student research workshop and software demonstrations, the ACL program swells to a massive total of 367 paper presentations on the scientific program, representing the largest ACL program to date.

ACL 2017 will have two distinguished invited speakers: Noah A. Smith (Associate Professor of Computer Science and Engineering at the University of Washington) and Mirella Lapata (Professor in the School of Informatics at the University of Edinburgh). Both are well-renowned for their contributions to the field of computational linguistics and are excellent orators. We are honored that they have accepted our invitation to address the membership at this exciting juncture in our field's history, addressing key issues in representation learning and multimodal machine translation.

To manage the tremendous growth of our field, we introduced some changes to the conference. With the rotation of the annual meeting to the Americas, we anticipated a heavy load of submissions and early on we decided to have both the long and short paper deadlines merged to reduce reviewing load and to force authors to take a stand on their submissions' format. The joint deadline allowed us to only load our reviewers once, and also enabled us to have an extended period for more lengthy dialogue among authors, reviewers and area chairs.

In addition, oral presentations were shortened to fourteen (twelve) minutes for long (short) papers, plus time for questions. While this places a greater demand on speakers to be concise, we believe it is worth the effort, allowing far more work to be presented orally. We also took advantage of the many halls available and expanded the number of parallel talks to five during most of the conference sessions.

In keeping with changes introduced in the ACL community from last year, we continued the practice of recognizing outstanding papers at ACL. The 22 outstanding papers (15 long, 7 short, 1.6% of submissions) represent a broad spectrum of exciting contributions and have been specially placed on the final day of the main conference where the program is focused into two parallel sessions of these outstanding contributions. From these, a best paper and a best short paper those will be announced in the awards session on Wednesday afternoon.

Chris has already mentioned our introduction of the chairs' blog², where we strove to make the selection process of the internal workings of the scientific committee more transparent. We have publicly documented our calls for area chairs, reviewers and accepted papers selection process. Via the blog, we communicated several innovations in the conference organization workflow, of which we would call attention to two key ones here.

In the review process, we pioneered the use of the Toronto Paper Matching System, a topic model based approach to the assignment of reviewers to papers. We hope this decision will spur other program chairs to adopt the system, as increased coverage will better the reviewer/submission matching process, ultimately leading to a higher quality program.

For posterity, we also introduced the usage of hyperlinks in the bibliography reference sections of papers,

¹These numbers exclude papers that were not reviewed due to formatting, anonymity, or double submission violations or that were withdrawn prior to review, which was unfortunately a substantial number.

²<https://chairs-blog.acl2017.org/>

and have worked with the ACL Anthology to ensure that digital object identifiers (DOIs) appear in the footer of each paper. These steps will help broaden the long-term impact of the work that our community has on the scientific world at large.

There are many individuals we wish to thank for their contributions to ACL 2017, some multiple times:

- The 61 area chairs who volunteered for our extra duty. They recruited reviewers, led discussions on each paper, replied to authors' direct comments to them and carefully assessed each submission. Their input was instrumental in guiding the final decisions on papers and selecting the outstanding papers.
- Our full program committee of BUG hard-working individuals who reviewed the conference's 1,318 submissions (including secondary reviewers).
- TACL editors-in-chief Mark Johnson, Lillian Lee, and Kristina Toutanova, for coordinating with us on TACL presentations at ACL.
- Noah Smith and Katrin Erk, program co-chairs of ACL 2016 and Ani Nenkova and Owen Rambow, program co-chairs of NAACL 2016, who we consulted several times on short order for help and advice.
- Wei Lu and Sameer Singh, our well-organized publication chairs, with direction and oversight from publication chair mentor Meg Mitchell. Also, Christian Federmann who helped with the local handbook.
- The responsive team at Softconf led by Rich Gerber, who worked quickly to resolve problems and who strove to integrate the use of the Toronto Paper Matching System (TPMS) for our use.
- Priscilla Rasmussen and Anoop Sarkar and the local organization team, especially webmaster Nitin Madnani.
- Christopher Calliston-Burch, our general chair, who kept us coordinated with the rest of the ACL 2017 team and helped us free our time to concentrate on the key duty of organizing the scientific program.
- Key-Sun Choi, Jing Jiang, Graham Neubig, Emily Pitler, and Bonnie Webber who carefully reviewed papers under consideration for best paper recognition.
- Our senior correspondents for the blog, who contributed guest posts and advice for writing and reviewing: Waleed Ammar, Yoav Artzi, Tim Baldwin, Marco Baroni, Claire Cardie, Xavier Carreras, Hal Daumé, Kevin Duh, Chris Dyer, Marti Hearst, Mirella Lapata, Emily M. Bender, Aurélien Max, Kathy McKeown, Ray Mooney, Ani Nenkova, Joakim Nivre, Philip Resnik, and Joel Tetreault. Without them, the participation of the community through the productive comments, and without you the readership, our blog for disseminating information about the decision processes would not have been possible and a success.

We hope that you enjoy ACL 2017 in Vancouver!

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Min-Yen Kan, National University of Singapore

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Outstanding Papers

With twin upward trends in the interest in computational linguistics and natural language processing and the size of our annual meeting, ACL has begun the practice of recognizing outstanding papers that represent a select cross-section of the entire field, as nominated by reviewers and vetted by the area chairs and program co-chairs. These papers have been centrally located in the program, on the last day of our meeting, in a more focused two parallel tracks format.

This year, we have nominated 15 long papers and 7 short papers, representing 1.8% of all submissions and approximately 5% of the accepted ACL program. Congratulations, authors!

(in alphabetical order by first author surname)

Long Papers

- Jan Buys and Phil Blunsom. *Robust Incremental Neural Semantic Graph Parsing*.
- Xinchu Chen, Zhan Shi, Xipeng Qiu and Xuanjing Huang. *Adversarial Multi-Criteria Learning for Chinese Word Segmentation*.
- Ryan Cotterell and Jason Eisner. *Probabilistic Typology: Deep Generative Models of Vowel Inventories*.
- Yanzhuo Ding, Yang Liu, Huanbo Luan and Maosong Sun. *Visualizing and Understanding Neural Machine Translation*.
- Milan Gritta, Mohammad Taher Pilehvar, Nut Limsopatham and Nigel Collier. *Vancouver Welcomes You! Minimalist Location Metonymy Resolution*.
- Daniel Hershcovich, Omri Abend and Ari Rappoport. *A Transition-Based Directed Acyclic Graph Parser for UCCA*.
- Shuhei Kurita, Daisuke Kawahara and Sadao Kurohashi. *Neural Joint Model for Transition-based Chinese Syntactic Analysis*.
- Ryan Lowe, Michael Noseworthy, Iulian Vlad Serban, Nicolas Angelard-Gontier, Yoshua Bengio and Joelle Pineau. *Towards an Automatic Turing Test: Learning to Evaluate Dialogue Responses*.
- Yasuhide Miura, Motoki Taniguchi, Tomoki Taniguchi and Tomoko Ohkuma. *Unifying Text, Metadata, and User Network Representations with a Neural Network for Geolocation Prediction*.
- Ramakanth Pasunuru and Mohit Bansal. *Multi-Task Video Captioning with Visual and Entailment Generation*.
- Maxim Rabinovich, Mitchell Stern and Dan Klein. *Abstract Syntax Networks for Code Generation and Semantic Parsing*.
- Ines Rehbein and Josef Ruppenhofer. *Detecting annotation noise in automatically labelled data*.
- Jiwei Tan, Xiaojun Wan and Jianguo Xiao. *Abstractive Document Summarization with a Graph-Based Attentional Neural Model*.
- Mingbin Xu, Hui Jiang and Sedtawut Watcharawittayakul. *A Local Detection Approach for Named Entity Recognition and Mention Detection*.
- Suncong Zheng, Feng Wang, Hongyun Bao, Yuexing Hao, Peng Zhou and Bo Xu. *Joint Extraction of Entities and Relations Based on a Novel Tagging Scheme*.

Short Papers

- Xinyu Hua and Lu Wang. *Understanding and Detecting Diverse Supporting Arguments on Controversial Issues.*
- Jindřich Libovický and Jindřich Helcl. *Attention Strategies for Multi-Source Sequence-to-Sequence Learning.*
- Bogdan Ludusan, Reiko Mazuka, Mathieu Bernard, Alejandrina Cristia and Emmanuel Dupoux. *The Role of Prosody and Speech Register in Word Segmentation: A Computational Modelling Perspective.*
- Afshin Rahimi, Trevor Cohn and Timothy Baldwin. *A Neural Model for User Geolocation and Lexical Dialectology.*
- Keisuke Sakaguchi, Matt Post and Benjamin Van Durme. *Error-repair Dependency Parsing for Ungrammatical Texts.*
- Alane Suhr, Mike Lewis, James Yeh and Yoav Artzi. *A Corpus of Compositional Language for Visual Reasoning.*
- Yizhong Wang, Sujian Li and Houfeng Wang. *A Two-stage Parsing Method for Text-level Discourse Analysis.*

Invited Talk: Squashing Computational Linguistics

Noah A. Smith

Paul G. Allen School of Computer Science and Engineering, University of Washington

Abstract

The computational linguistics and natural language processing community is experiencing an episode of deep fascination with representation learning. Like many other presenters at this conference, I will describe new ways to use representation learning in models of natural language. Noting that a data-driven model always assumes a theory (not necessarily a good one), I will argue for the benefits of language-appropriate inductive bias for representation-learning-infused models of language. Such bias often comes in the form of assumptions baked into a model, constraints on an inference algorithm, or linguistic analysis applied to data. Indeed, many decades of research in linguistics (including computational linguistics) put our community in a strong position to identify promising inductive biases. The new models, in turn, may allow us to explore previously unavailable forms of bias, and to produce findings of interest to linguistics. I will focus on new models of documents and of sentential semantic structures, and I will emphasize abstract, reusable components and their assumptions rather than applications.

Biography

Noah Smith is an Associate Professor in the Paul G. Allen School of Computer Science and Engineering at the University of Washington. Previously, he was an Associate Professor in the School of Computer Science at Carnegie Mellon University. He received his Ph.D. in Computer Science from Johns Hopkins University and his B.S. in Computer Science and B.A. in Linguistics from the University of Maryland. His research spans many topics in natural language processing, machine learning, and computational social science. He has served on the editorial boards of CL, JAIR, and TACL, as the secretary-treasurer of SIGDAT (2012–2015), and as program co-chair of ACL 2016. Alumni of his research group, Noah’s ARK, are international leaders in NLP in academia and industry. Smith’s work has been recognized with a UW Innovation award, a Finmeccanica career development chair at CMU, an NSF CAREER award, a Hertz Foundation graduate fellowship, numerous best paper nominations and awards, and coverage by NPR, BBC, CBC, the New York Times, the Washington Post, and Time.

Invited Talk: Translating from Multiple Modalities to Text and Back

Mirella Lapata

Professor, School of Informatics, University of Edinburgh

Abstract

Recent years have witnessed the development of a wide range of computational tools that process and generate natural language text. Many of these have become familiar to mainstream computer users in the form of web search, question answering, sentiment analysis, and notably machine translation. The accessibility of the web could be further enhanced with applications that not only translate between different languages (e.g., from English to French) but also within the same language, between different modalities, or different data formats. The web is rife with non-linguistic data (e.g., video, images, source code) that cannot be indexed or searched since most retrieval tools operate over textual data.

In this talk I will argue that in order to render electronic data more accessible to individuals and computers alike, new types of translation models need to be developed. I will focus on three examples, text simplification, source code generation, and movie summarization. I will illustrate how recent advances in deep learning can be extended in order to induce general representations for different modalities and learn how to translate between these and natural language.

Biography

Mirella Lapata is professor of natural language processing in the School of Informatics at the University of Edinburgh. Her research focuses on getting computers to understand, reason with, and generate. She is an associate editor of the *Journal of Artificial Intelligence Research* and has served on the editorial boards of *Transactions of the ACL* and *Computational Linguistics*. She was the first recipient of the Karen Sparck Jones award of the British Computer Society, recognizing key contributions to NLP and information retrieval. She received two EMNLP best paper awards and currently holds a prestigious Consolidator Grant from the European Research Council.

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<i>Morphological Inflection Generation with Hard Monotonic Attention</i>	
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Conference Program

Monday, July 31st

10:30–11:45 Session 1A: Information Extraction 1 (NN)

10:30–10:48 *Adversarial Multi-task Learning for Text Classification*

Pengfei Liu, Xipeng Qiu and Xuanjing Huang

10:49–11:07 *Neural End-to-End Learning for Computational Argumentation Mining*

Steffen Eger, Johannes Daxenberger and Iryna Gurevych

11:08–11:26 *Neural Symbolic Machines: Learning Semantic Parsers on Freebase with Weak Supervision*

Chen Liang, Jonathan Berant, Quoc Le, Kenneth D. Forbus and Ni Lao

11:27–11:45 *Neural Relation Extraction with Multi-lingual Attention*

Yankai Lin, Zhiyuan Liu and Maosong Sun

Monday, July 31st

10:30–11:45 Session 1B: Semantics 1

10:30–10:48 *Learning Structured Natural Language Representations for Semantic Parsing*

Jianpeng Cheng, Siva Reddy, Vijay Saraswat and Mirella Lapata

10:49–11:07 *Morph-fitting: Fine-Tuning Word Vector Spaces with Simple Language-Specific Rules*

Ivan Vulić, Nikola Mrkšić, Roi Reichart, Diarmuid Ó Séaghdha, Steve Young and Anna Korhonen

11:08–11:26 *Skip-Gram - Zipf + Uniform = Vector Additivity*

Alex Gittens, Dimitris Achlioptas and Michael W. Mahoney

11:27–11:45 *The State of the Art in Semantic Representation*

Omri Abend and Ari Rappoport

Monday, July 31st

10:30–11:26 Session 1C: Discourse 1

10:30–10:48 *Joint Learning for Event Coreference Resolution*

Jing Lu and Vincent Ng

10:49–11:07 *Generating and Exploiting Large-scale Pseudo Training Data for Zero Pronoun Resolution*

Ting Liu, Yiming Cui, Qingyu Yin, Wei-Nan Zhang, Shijin Wang and Guoping Hu

11:08–11:26 *Discourse Mode Identification in Essays*

Wei Song, Dong Wang, Ruiji Fu, Lizhen Liu, Ting Liu and Guoping Hu

Monday, July 31st

10:30–11:07 Session 1D: Machine Translation 1

10:30–10:48 *A Convolutional Encoder Model for Neural Machine Translation*

Jonas Gehring, Michael Auli, David Grangier and Yann Dauphin

10:49–11:07 *Deep Neural Machine Translation with Linear Associative Unit*

Mingxuan Wang, Zhengdong Lu, Jie Zhou and Qun Liu

Monday, July 31st

10:30–11:45 Session 1E: Generation 1

- 10:30–10:48 *Neural AMR: Sequence-to-Sequence Models for Parsing and Generation*
Ioannis Konstas, Srinivasan Iyer, Mark Yatskar, Yejin Choi and Luke Zettlemoyer
- 10:49–11:07 *Program Induction by Rationale Generation: Learning to Solve and Explain Algebraic Word Problems*
Wang Ling, Dani Yogatama, Chris Dyer and Phil Blunsom
- 11:08–11:26 *Automatically Generating Rhythmic Verse with Neural Networks*
Jack Hopkins and Douwe Kiela
- 11:27–11:45 *Creating Training Corpora for NLG Micro-Planners*
Claire Gardent, Anastasia Shimorina, Shashi Narayan and Laura Perez-Beltrachini

Monday, July 31st

13:40–14:55 Session 2A: Question Answering 1

- 13:40–13:58 *Gated Self-Matching Networks for Reading Comprehension and Question Answering*
Wenhui Wang, Nan Yang, Furu Wei, Baobao Chang and Ming Zhou
- 13:59–14:17 *Generating Natural Answers by Incorporating Copying and Retrieving Mechanisms in Sequence-to-Sequence Learning*
Shizhu He, Cao Liu, Kang Liu and Jun Zhao
- 14:18–14:36 *Coarse-to-Fine Question Answering for Long Documents*
Eunsol Choi, Daniel Hewlett, Jakob Uszkoreit, Illia Polosukhin, Alexandre Lacoste and Jonathan Berant
- 14:37–14:55 *An End-to-End Model for Question Answering over Knowledge Base with Cross-Attention Combining Global Knowledge*
Yanchao Hao, Yuanzhe Zhang, Kang Liu, Shizhu He, Zhanyi Liu, Hua Wu and Jun Zhao

Monday, July 31st

13:40–14:55 Session 2B: Vision 1

- 13:40–13:58 *Translating Neuralese*
Jacob Andreas, Anca Dragan and Dan Klein
- 13:59–14:17 *Obtaining referential word meanings from visual and distributional information: Experiments on object naming*
Sina Zarrieß and David Schlangen
- 14:18–14:36 *FOIL it! Find One mismatch between Image and Language caption*
Ravi Shekhar, Sandro Pezzelle, Yauhen Klimovich, Aurélie Herbelot, Moin Nabi, Enver Sangineto and Raffaella Bernardi
- 14:37–14:55 *Verb Physics: Relative Physical Knowledge of Actions and Objects*
Maxwell Forbes and Yejin Choi

Monday, July 31st

13:40–14:36 Session 2C: Syntax 1

- 13:40–13:58 *A* CCG Parsing with a Supertag and Dependency Factored Model*
Masashi Yoshikawa, Hiroshi Noji and Yuji Matsumoto
- 13:59–14:17 *A Full Non-Monotonic Transition System for Unrestricted Non-Projective Parsing*
Daniel Fernández-González and Carlos Gómez-Rodríguez
- 14:18–14:36 *Aggregating and Predicting Sequence Labels from Crowd Annotations*
An Thanh Nguyen, Byron Wallace, Junyi Jessy Li, Ani Nenkova and Matthew Lease

Monday, July 31st

13:40–15:14 Session 2D: Machine Learning 1 (NN)

- 13:40–13:58 *Multi-space Variational Encoder-Decoders for Semi-supervised Labeled Sequence Transduction*
Chunting Zhou and Graham Neubig
- 13:59–14:17 *Scalable Bayesian Learning of Recurrent Neural Networks for Language Modeling*
Zhe Gan, Chunyuan Li, Changyou Chen, Yunchen Pu, Qinliang Su and Lawrence Carin
- 14:18–14:36 *Learning attention for historical text normalization by learning to pronounce*
Marcel Bollmann, Joachim Bingel and Anders Søgaard
- 14:37–14:55 *Deep Learning in Semantic Kernel Spaces*
Danilo Croce, Simone Filice, Giuseppe Castellucci and Roberto Basili
- 14:56–15:14 *Topically Driven Neural Language Model*
Jey Han Lau, Timothy Baldwin and Trevor Cohn

Monday, July 31st

13:40–14:55 Session 2E: Sentiment 1 (NN)

- 13:40–13:58 *Handling Cold-Start Problem in Review Spam Detection by Jointly Embedding Texts and Behaviors*
Xuepeng Wang, Kang Liu and Jun Zhao
- 13:59–14:17 *Learning Cognitive Features from Gaze Data for Sentiment and Sarcasm Classification using Convolutional Neural Network*
Abhijit Mishra, Kuntal Dey and Pushpak Bhattacharyya
- 14:18–14:36 *An Unsupervised Neural Attention Model for Aspect Extraction*
Ruidan He, Wee Sun Lee, Hwee Tou Ng and Daniel Dahlmeier
- 14:37–14:55 *Other Topics You May Also Agree or Disagree: Modeling Inter-Topic Preferences using Tweets and Matrix Factorization*
Akira Sasaki, Kazuaki Hanawa, Naoaki Okazaki and Kentaro Inui

Monday, July 31st

15:45–16:41 Session 3A: Information Extraction 2 / Biomedical 1

- 15:45–16:03 *Automatically Labeled Data Generation for Large Scale Event Extraction*
Yubo Chen, Shulin Liu, Xiang Zhang, Kang Liu and Jun Zhao
- 16:04–16:22 *Time Expression Analysis and Recognition Using Syntactic Token Types and General Heuristic Rules*
Xiaoshi Zhong, Aixin Sun and Erik Cambria
- 16:23–16:41 *Learning with Noise: Enhance Distantly Supervised Relation Extraction with Dynamic Transition Matrix*
Bingfeng Luo, Yansong Feng, Zheng Wang, Zhanxing Zhu, Songfang Huang, Rui Yan and Dongyan Zhao

Monday, July 31st

15:45–17:00 Session 3B: Semantics 2 (NN)

- 15:45–16:03 *A Syntactic Neural Model for General-Purpose Code Generation*
Pengcheng Yin and Graham Neubig
- 16:04–16:22 *Learning bilingual word embeddings with (almost) no bilingual data*
Mikel Artetxe, Gorka Labaka and Eneko Agirre
- 16:23–16:41 *Abstract Meaning Representation Parsing using LSTM Recurrent Neural Networks*
William Foland and James H. Martin
- 16:42–17:00 *Deep Semantic Role Labeling: What Works and What's Next*
Luheng He, Kenton Lee, Mike Lewis and Luke Zettlemoyer

Monday, July 31st

15:45–17:00 Session 3C: Speech 1 / Dialogue 1

- 15:45–16:03 *Towards End-to-End Reinforcement Learning of Dialogue Agents for Information Access*
Bhuwan Dhingra, Lihong Li, Xiujun Li, Jianfeng Gao, Yun-Nung Chen, Faisal Ahmed and Li Deng
- 16:04–16:22 *Sequential Matching Network: A New Architecture for Multi-turn Response Selection in Retrieval-Based Chatbots*
Yu Wu, Wei Wu, Chen Xing, Ming Zhou and Zhoujun Li
- 16:23–16:41 *Learning Word-Like Units from Joint Audio-Visual Analysis*
David Harwath and James Glass
- 16:42–17:00 *Joint CTC/attention decoding for end-to-end speech recognition*
Takaaki Hori, Shinji Watanabe and John Hershey

Monday, July 31st

15:45–16:22 Session 3D: Multilingual 1

- 15:45–16:03 *Found in Translation: Reconstructing Phylogenetic Language Trees from Translations*
Ella Rabinovich, Noam Ordan and Shuly Wintner
- 16:04–16:22 *Predicting Native Language from Gaze*
Yevgeni Berzak, Chie Nakamura, Suzanne Flynn and Boris Katz

Monday, July 31st

15:45–16:03 Session 3E: Phonology 1

15:45–16:03 *MORSE: Semantic-ally Drive-n MORpheme SEgment-er*
Tarek Sakakini, Suma Bhat and Pramod Viswanath

Tuesday, August 1st

10:30–11:45 Session 4A: Information Extraction 3 (NN)

10:30–10:48 *Deep Pyramid Convolutional Neural Networks for Text Categorization*
Rie Johnson and Tong Zhang

10:49–11:07 *Improved Neural Relation Detection for Knowledge Base Question Answering*
Mo Yu, Wenpeng Yin, Kazi Saidul Hasan, Cicero dos Santos, Bing Xiang and Bowen Zhou

11:08–11:26 *Deep Keyphrase Generation*
Rui Meng, Sanqiang Zhao, Shuguang Han, Daqing He, Peter Brusilovsky and Yu Chi

11:27–11:45 *Attention-over-Attention Neural Networks for Reading Comprehension*
Yiming Cui, Zhipeng Chen, Si Wei, Shijin Wang, Ting Liu and Guoping Hu

Tuesday, August 1st

10:30–11:26 Session 4B: Cognitive Modelling 1 / Vision 2

- 10:30–10:48 *Alignment at Work: Using Language to Distinguish the Internalization and Self-Regulation Components of Cultural Fit in Organizations*
Gabriel Doyle, Amir Goldberg, Sameer Srivastava and Michael Frank
- 10:49–11:07 *Representations of language in a model of visually grounded speech signal*
Grzegorz Chrupała, Lieke Gelderloos and Afra Alishahi
- 11:08–11:26 *Spectral Analysis of Information Density in Dialogue Predicts Collaborative Task Performance*
Yang Xu and David Reitter

Tuesday, August 1st

10:30–12:04 Session 4C: Dialogue 2

- 10:30–10:48 *Affect-LM: A Neural Language Model for Customizable Affective Text Generation*
Sayan Ghosh, Mathieu Chollet, Eugene Laksana, Louis-Philippe Morency and Stefan Scherer
- 10:49–11:07 *Domain Attention with an Ensemble of Experts*
Young-Bum Kim, Karl Stratos and Dongchan Kim
- 11:08–11:26 *Learning Discourse-level Diversity for Neural Dialog Models using Conditional Variational Autoencoders*
Tiancheng Zhao, Ran Zhao and Maxine Eskenazi
- 11:27–11:45 *Hybrid Code Networks: practical and efficient end-to-end dialog control with supervised and reinforcement learning*
Jason D Williams, Kavosh Asadi and Geoffrey Zweig
- 11:46–12:04 *Generating Contrastive Referring Expressions*
Martin Villalba, Christoph Teichmann and Alexander Koller

Tuesday, August 1st

10:30–11:07 Session 4D: Machine Translation 2

10:30–10:48 *Modeling Source Syntax for Neural Machine Translation*
Junhui Li, Deyi Xiong, Zhaopeng Tu, Muhua Zhu, Min Zhang and Guodong Zhou

10:49–11:07 *Sequence-to-Dependency Neural Machine Translation*
Shuangzhi Wu, Dongdong Zhang, Nan Yang, Mu Li and Ming Zhou

Tuesday, August 1st

10:30–11:45 Session 4E: Social Media 1

10:30–10:48 *Detect Rumors in Microblog Posts Using Propagation Structure via Kernel Learning*
Jing Ma, Wei Gao and Kam-Fai Wong

10:49–11:07 *EmoNet: Fine-Grained Emotion Detection with Gated Recurrent Neural Networks*
Muhammad Abdul-Mageed and Lyle Ungar

11:08–11:26 *Beyond Binary Labels: Political Ideology Prediction of Twitter Users*
Daniel Preoțiuc-Pietro, Ye Liu, Daniel Hopkins and Lyle Ungar

11:27–11:45 *Leveraging Behavioral and Social Information for Weakly Supervised Collective Classification of Political Discourse on Twitter*
Kristen Johnson, Di Jin and Dan Goldwasser

Tuesday, August 1st

13:49–14:39 Session 5A: Multidisciplinary 1

- 13:49–14:07 *A Nested Attention Neural Hybrid Model for Grammatical Error Correction*
Jianshu Ji, Qinlong Wang, Kristina Toutanova, Yongen Gong, Steven Truong and Jianfeng Gao
- 14:08–14:26 *TextFlow: A Text Similarity Measure based on Continuous Sequences*
Yassine Mrabet, Halil Kilicoglu and Dina Demner-Fushman
- 14:27–14:39 *Friendships, Rivalries, and Trysts: Characterizing Relations between Ideas in Texts*
Chenhao Tan, Dallas Card and Noah A. Smith

Tuesday, August 1st

13:30–14:26 Session 5B: Language and Resources 1

- 13:30–13:48 *Polish evaluation dataset for compositional distributional semantics models*
Alina Wróblewska and Katarzyna Krasnowska-Kieraś
- 13:49–14:07 *Automatic Annotation and Evaluation of Error Types for Grammatical Error Correction*
Christopher Bryant, Mariano Felice and Ted Briscoe
- 14:08–14:26 *Evaluation Metrics for Machine Reading Comprehension: Prerequisite Skills and Readability*
Saku Sugawara, Yusuke Kido, Hikaru Yokono and Akiko Aizawa

Tuesday, August 1st

13:30–14:26 Session 5C: Syntax 2 (NN)

13:30–13:48 *A Minimal Span-Based Neural Constituency Parser*

Mitchell Stern, Jacob Andreas and Dan Klein

13:49–14:07 *Semantic Dependency Parsing via Book Embedding*

Weiwei Sun, Junjie Cao and Xiaojun Wan

14:08–14:26 *Neural Word Segmentation with Rich Pretraining*

Jie Yang, Yue Zhang and Fei Dong

Tuesday, August 1st

13:30–14:07 Session 5D: Machine Translation 3 (NN)

13:30–13:48 *Neural Machine Translation via Binary Code Prediction*

Yusuke Oda, Philip Arthur, Graham Neubig, Koichiro Yoshino and Satoshi Nakamura

13:49–14:07 *What do Neural Machine Translation Models Learn about Morphology?*

Yonatan Belinkov, Nadir Durrani, Fahim Dalvi, Hassan Sajjad and James Glass

Tuesday, August 1st

13:30–14:07 Session 5E: Sentiment 2

- 13:30–13:48 *Context-Dependent Sentiment Analysis in User-Generated Videos*
Soujanya Poria, Erik Cambria, Devamanyu Hazarika, Navonil Majumder, Amir Zadeh and Louis-Philippe Morency
- 13:49–14:07 *A Multidimensional Lexicon for Interpersonal Stancetaking*
Umashanthi Pavalanathan, Jim Fitzpatrick, Scott Kiesling and Jacob Eisenstein

Tuesday, August 1st

15:25–16:21 Session 6A: Information Extraction 4

- 15:25–15:43 *Tandem Anchoring: a Multiword Anchor Approach for Interactive Topic Modeling*
Jeffrey Lund, Connor Cook, Kevin Seppi and Jordan Boyd-Graber
- 15:44–16:02 *Apples to Apples: Learning Semantics of Common Entities Through a Novel Comprehension Task*
Omid Bakhshandeh and James Allen
- 16:03–16:21 *Going out on a limb: Joint Extraction of Entity Mentions and Relations without Dependency Trees*
Arzoo Katiyar and Claire Cardie

Tuesday, August 1st

15:25–16:40 Session 6B: Semantics 2 (NN)

- 15:25–15:43 *Naturalizing a Programming Language via Interactive Learning*
Sida I. Wang, Samuel Ginn, Percy Liang and Christopher D. Manning
- 15:44–16:02 *Semantic Word Clusters Using Signed Spectral Clustering*
Joao Sedoc, Jean Gallier, Dean Foster and Lyle Ungar
- 16:03–16:21 *An Interpretable Knowledge Transfer Model for Knowledge Base Completion*
Qizhe Xie, Xuezhe Ma, Zihang Dai and Eduard Hovy
- 16:22–16:40 *Learning a Neural Semantic Parser from User Feedback*
Srinivasan Iyer, Ioannis Konstas, Alvin Cheung, Jayant Krishnamurthy and Luke Zettlemoyer

Tuesday, August 1st

15:25–17:00 Session 6C: Discourse 2 / Dialogue 3

- 15:25–15:43 *Joint Modeling of Content and Discourse Relations in Dialogues*
Kechen Qin, Lu Wang and Joseph Kim
- 15:44–16:02 *Argument Mining with Structured SVMs and RNNs*
Vlad Niculae, Joonsuk Park and Claire Cardie
- 16:03–16:21 *Neural Discourse Structure for Text Categorization*
Yangfeng Ji and Noah A. Smith
- 16:22–16:40 *Adversarial Connective-exploiting Networks for Implicit Discourse Relation Classification*
Lianhui Qin, Zhisong Zhang, Hai Zhao, Zhiting Hu and Eric Xing
- 16:41–17:00 *Don't understand a measure? Learn it: Structured Prediction for Coreference Resolution optimizing its measures*
Iryna Haponchyk and Alessandro Moschitti

Tuesday, August 1st

15:25–16:21 Session 6D: Machine Learning 2

- 15:25–15:43 *Bayesian Modeling of Lexical Resources for Low-Resource Settings*
Nicholas Andrews, Mark Dredze, Benjamin Van Durme and Jason Eisner
- 15:44–16:02 *Semi-Supervised QA with Generative Domain-Adaptive Nets*
Zhilin Yang, Junjie Hu, Ruslan Salakhutdinov and William Cohen
- 16:03–16:21 *From Language to Programs: Bridging Reinforcement Learning and Maximum Marginal Likelihood*
Kelvin Guu, Panupong Pasupat, Evan Liu and Percy Liang

Tuesday, August 1st

15:25–17:00 Session 6E: Summarization 1

- 15:25–15:43 *Diversity driven attention model for query-based abstractive summarization*
Preksha Nema, Mitesh M. Khapra, Anirban Laha and Balaraman Ravindran
- 15:44–16:02 *Get To The Point: Summarization with Pointer-Generator Networks*
Abigail See, Peter J. Liu and Christopher D. Manning
- 16:03–16:21 *Supervised Learning of Automatic Pyramid for Optimization-Based Multi-Document Summarization*
Maxime Peyrard and Judith Eckle-Kohler
- 16:22–16:40 *Selective Encoding for Abstractive Sentence Summarization*
Qingyu Zhou, Nan Yang, Furu Wei and Ming Zhou
- 16:41–17:00 *PositionRank: An Unsupervised Approach to Keyphrase Extraction from Scholarly Documents*
Corina Florescu and Cornelia Caragea

Wednesday, August 2nd

10:40–11:36 Session 7A: Outstanding Papers 1

10:40–10:58 *Towards an Automatic Turing Test: Learning to Evaluate Dialogue Responses*
Ryan Lowe, Michael Noseworthy, Iulian Vlad Serban, Nicolas Angelard-Gontier,
Yoshua Bengio and Joelle Pineau

10:59–11:17 *A Transition-Based Directed Acyclic Graph Parser for UCCA*
Daniel Hershcovich, Omri Abend and Ari Rappoport

11:18–11:36 *Abstract Syntax Networks for Code Generation and Semantic Parsing*
Maxim Rabinovich, Mitchell Stern and Dan Klein

Wednesday, August 2nd

10:40–11:17 Session 7B: Outstanding Papers 2

10:40–10:58 *Visualizing and Understanding Neural Machine Translation*
Yanzhuo Ding, Yang Liu, Huanbo Luan and Maosong Sun

10:59–11:17 *Detecting annotation noise in automatically labelled data*
Ines Rehbein and Josef Ruppenhofer

Wednesday, August 2nd

15:00–16:34 Session 8A: Outstanding Papers 3

- 15:00–15:18 *Abstractive Document Summarization with a Graph-Based Attentional Neural Model*
Jiwei Tan, Xiaojun Wan and Jianguo Xiao
- 15:19–15:37 *Probabilistic Typology: Deep Generative Models of Vowel Inventories*
Ryan Cotterell and Jason Eisner
- 15:38–15:56 *Adversarial Multi-Criteria Learning for Chinese Word Segmentation*
Xinchi Chen, Zhan Shi, Xipeng Qiu and Xuanjing Huang
- 15:57–16:15 *Neural Joint Model for Transition-based Chinese Syntactic Analysis*
Shuhei Kurita, Daisuke Kawahara and Sadao Kurohashi
- 16:16–16:34 *Robust Incremental Neural Semantic Graph Parsing*
Jan Buys and Phil Blunsom

Wednesday, August 2nd

15:00–16:34 Session 8B: Outstanding Papers 4

- 15:00–15:18 *Joint Extraction of Entities and Relations Based on a Novel Tagging Scheme*
Suncong Zheng, Feng Wang, Hongyun Bao, Yuxing Hao, Peng Zhou and Bo Xu
- 15:19–15:37 *A Local Detection Approach for Named Entity Recognition and Mention Detection*
Mingbin Xu, Hui Jiang and Sedtawut Watcharawittayakul
- 15:38–15:56 *Vancouver Welcomes You! Minimalist Location Metonymy Resolution*
Milan Gritta, Mohammad Taher Pilehvar, Nut Limsopatham and Nigel Collier
- 15:57–16:15 *Unifying Text, Metadata, and User Network Representations with a Neural Network for Geolocation Prediction*
Yasuhide Miura, Motoki Taniguchi, Tomoki Taniguchi and Tomoko Ohkuma
- 16:16–16:34 *Multi-Task Video Captioning with Video and Entailment Generation*
Ramakanth Pasunuru and Mohit Bansal

Monday, July 31st

18:00–21:30 Session P1: Poster Session 1

Enriching Complex Networks with Word Embeddings for Detecting Mild Cognitive Impairment from Speech Transcripts

Leandro Santos, Edilson Anselmo Corrêa Júnior, Osvaldo Oliveira Jr, Diego Amancio, Leticia Mansur and Sandra Aluísio

Adversarial Adaptation of Synthetic or Stale Data

Young-Bum Kim, Karl Stratos and Dongchan Kim

Chat Detection in an Intelligent Assistant: Combining Task-oriented and Non-task-oriented Spoken Dialogue Systems

Satoshi Akasaki and Nobuhiro Kaji

A Neural Local Coherence Model

Dat Tien Nguyen and Shafiq Joty

Data-Driven Broad-Coverage Grammars for Opinionated Natural Language Generation (ONLG)

Tomer Cagan, Stefan L. Frank and Reut Tsarfaty

Learning to Ask: Neural Question Generation for Reading Comprehension

Xinya Du, Junru Shao and Claire Cardie

Joint Optimization of User-desired Content in Multi-document Summaries by Learning from User Feedback

Avinesh PVS and Christian M. Meyer

Flexible and Creative Chinese Poetry Generation Using Neural Memory

Jiyuan Zhang, Yang Feng, Dong Wang, Yang Wang, Andrew Abel, Shiyue Zhang and Andi Zhang

Learning to Generate Market Comments from Stock Prices

Soichiro Murakami, Akihiko Watanabe, Akira Miyazawa, Keiichi Goshima, Toshihiko Yanase, Hiroya Takamura and Yusuke Miyao

Monday, July 31st (continued)

Can Syntax Help? Improving an LSTM-based Sentence Compression Model for New Domains

Liangguo Wang, Jing Jiang, Hai Leong Chieu, Chen Hui Ong, Dandan Song and Lejian Liao

Transductive Non-linear Learning for Chinese Hypernym Prediction

Chengyu Wang, Junchi Yan, Aoying Zhou and Xiaofeng He

A Constituent-Centric Neural Architecture for Reading Comprehension

Pengtao Xie and Eric Xing

Cross-lingual Distillation for Text Classification

Ruo Chen Xu and Yiming Yang

Understanding and Predicting Empathic Behavior in Counseling Therapy

Verónica Pérez-Rosas, Rada Mihalcea, Kenneth Resnicow, Satinder Singh and Lawrence An

Leveraging Knowledge Bases in LSTMs for Improving Machine Reading

Bishan Yang and Tom Mitchell

Prerequisite Relation Learning for Concepts in MOOCs

Liangming Pan, Chengjiang Li, Juanzi Li and Jie Tang

Unsupervised Text Segmentation Based on Native Language Characteristics

Shervin Malmasi, Mark Dras, Mark Johnson, Lan Du and Magdalena Wolska

Weakly Supervised Cross-Lingual Named Entity Recognition via Effective Annotation and Representation Projection

Jian Ni, Georgiana Dinu and Radu Florian

Context Sensitive Lemmatization Using Two Successive Bidirectional Gated Recurrent Networks

Abhisek Chakrabarty, Onkar Arun Pandit and Utpal Garain

Learning to Create and Reuse Words in Open-Vocabulary Neural Language Modeling

Kazuya Kawakami, Chris Dyer and Phil Blunsom

Bandit Structured Prediction for Neural Sequence-to-Sequence Learning

Julia Kreutzer, Artem Sokolov and Stefan Riezler

Monday, July 31st (continued)

Prior Knowledge Integration for Neural Machine Translation using Posterior Regularization

Yi Cheng Zhang, Yang Liu, Huanbo Luan, Jingfang Xu and Maosong Sun

Incorporating Word Reordering Knowledge into Attention-based Neural Machine Translation

Jinchao Zhang, Mingxuan Wang, Qun Liu and Jie Zhou

Lexically Constrained Decoding for Sequence Generation Using Grid Beam Search

Chris Hokamp and Qun Liu

Combating Human Trafficking with Multimodal Deep Models

Edmund Tong, Amir Zadeh, Cara Jones and Louis-Philippe Morency

MalwareTextDB: A Database for Annotated Malware Articles

Swee Kiat Lim, Aldrian Obaja Muis, Wei Lu and Chen Hui Ong

A Corpus of Annotated Revisions for Studying Argumentative Writing

Fan Zhang, Homa B. Hashemi, Rebecca Hwa and Diane Litman

Automatic Induction of Synsets from a Graph of Synonyms

Dmitry Ustalov, Alexander Panchenko and Chris Biemann

Neural Modeling of Multi-Predicate Interactions for Japanese Predicate Argument Structure Analysis

Hiroki Ouchi, Hiroyuki Shindo and Yuji Matsumoto

TriviaQA: A Large Scale Distantly Supervised Challenge Dataset for Reading Comprehension

Mandar Joshi, Eunsol Choi, Daniel Weld and Luke Zettlemoyer

Learning Semantic Correspondences in Technical Documentation

Kyle Richardson and Jonas Kuhn

Bridge Text and Knowledge by Learning Multi-Prototype Entity Mention Embedding

Yixin Cao, Lifu Huang, Heng Ji, Xu Chen and Juanzi Li

Interactive Learning of Grounded Verb Semantics towards Human-Robot Communication

Lanbo She and Joyce Chai

Monday, July 31st (continued)

Multimodal Word Distributions

Ben Athiwaratkun and Andrew Wilson

Enhanced LSTM for Natural Language Inference

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

Linguistic analysis of differences in portrayal of movie characters

Anil Ramakrishna, Victor R. Martínez, Nikolaos Malandrakis, Karan Singla and Shrikanth Narayanan

Linguistically Regularized LSTM for Sentiment Classification

Qiao Qian, Minlie Huang, Jinhao Lei and Xiaoyan Zhu

Sarcasm SIGN: Interpreting Sarcasm with Sentiment Based Monolingual Machine Translation

Lotem Peled and Roi Reichart

Active Sentiment Domain Adaptation

Fangzhao Wu, Yongfeng Huang and Jun Yan

Volatility Prediction using Financial Disclosures Sentiments with Word Embedding-based IR Models

Navid Rekabsaz, Mihai Lupu, Artem Baklanov, Alexander Dür, Linda Andersson and Allan Hanbury

CANE: Context-Aware Network Embedding for Relation Modeling

Cunchao Tu, Han Liu, Zhiyuan Liu and Maosong Sun

Universal Dependencies Parsing for Colloquial Singaporean English

Hongmin Wang, Yue Zhang, GuangYong Leonard Chan, Jie Yang and Hai Leong Chieu

Generic Axiomatization of Families of Noncrossing Graphs in Dependency Parsing

Anssi Yli-Jyrä and Carlos Gómez-Rodríguez

Semi-supervised sequence tagging with bidirectional language models

Matthew Peters, Waleed Ammar, Chandra Bhagavatula and Russell Power

Tuesday, August 1st

19:00–22:00 Session P2: Poster Session 2

Learning Symmetric Collaborative Dialogue Agents with Dynamic Knowledge Graph Embeddings

He He, Anusha Balakrishnan, Mihail Eric and Percy Liang

Neural Belief Tracker: Data-Driven Dialogue State Tracking

Nikola Mrkšić, Diarmuid Ó Séaghdha, Tsung-Hsien Wen, Blaise Thomson and Steve Young

Exploiting Argument Information to Improve Event Detection via Supervised Attention Mechanisms

Shulin Liu, Yubo Chen, Kang Liu and Jun Zhao

Topical Coherence in LDA-based Models through Induced Segmentation

Hesam Amoualian, Wei Lu, Eric Gaussier, Georgios Balikas, Massih R Amini and Marianne Clausel

Jointly Extracting Relations with Class Ties via Effective Deep Ranking

Hai Ye, Wenhan Chao, Zhunchen Luo and Zhoujun Li

Search-based Neural Structured Learning for Sequential Question Answering

Mohit Iyyer, Wen-tau Yih and Ming-Wei Chang

Gated-Attention Readers for Text Comprehension

Bhuwan Dhingra, Hanxiao Liu, Zhilin Yang, William Cohen and Ruslan Salakhutdinov

Determining Gains Acquired from Word Embedding Quantitatively Using Discrete Distribution Clustering

Jianbo Ye, Yanran Li, Zhaohui Wu, James Z. Wang, Wenjie Li and Jia Li

Towards a Seamless Integration of Word Senses into Downstream NLP Applications

Mohammad Taher Pilehvar, Jose Camacho-Collados, Roberto Navigli and Nigel Collier

Reading Wikipedia to Answer Open-Domain Questions

Danqi Chen, Adam Fisch, Jason Weston and Antoine Bordes

Tuesday, August 1st (continued)

Learning to Skim Text

Adams Wei Yu, Hongrae Lee and Quoc Le

An Algebra for Feature Extraction

Vivek Srikumar

Chunk-based Decoder for Neural Machine Translation

Shonosuke Ishiwatari, Jingtao Yao, Shujie Liu, Mu Li, Ming Zhou, Naoki Yoshinaga, Masaru Kitsuregawa and Weijia Jia

Doubly-Attentive Decoder for Multi-modal Neural Machine Translation

Iacer Calixto, Qun Liu and Nick Campbell

A Teacher-Student Framework for Zero-Resource Neural Machine Translation

Yun Chen, Yang Liu, Yong Cheng and Victor O.K. Li

Improved Neural Machine Translation with a Syntax-Aware Encoder and Decoder

Huadong Chen, Shujian Huang, David Chiang and Jiajun Chen

Cross-lingual Name Tagging and Linking for 282 Languages

Xiaoman Pan, Boliang Zhang, Jonathan May, Joel Nothman, Kevin Knight and Heng Ji

Adversarial Training for Unsupervised Bilingual Lexicon Induction

Meng Zhang, Yang Liu, Huanbo Luan and Maosong Sun

Estimating Code-Switching on Twitter with a Novel Generalized Word-Level Language Detection Technique

Shruti Rijhwani, Royal Sequiera, Monojit Choudhury, Kalika Bali and Chandra Shekhar Maddila

Using Global Constraints and Reranking to Improve Cognates Detection

Michael Bloodgood and Benjamin Strauss

One-Shot Neural Cross-Lingual Transfer for Paradigm Completion

Katharina Kann, Ryan Cotterell and Hinrich Schütze

Morphological Inflection Generation with Hard Monotonic Attention

Roei Aharoni and Yoav Goldberg

Tuesday, August 1st (continued)

From Characters to Words to in Between: Do We Capture Morphology?

Clara Vania and Adam Lopez

Riemannian Optimization for Skip-Gram Negative Sampling

Alexander Fonarev, Oleksii Grinchuk, Gleb Gusev, Pavel Serdyukov and Ivan Os-
eledets

Deep Multitask Learning for Semantic Dependency Parsing

Hao Peng, Sam Thomson and Noah A. Smith

Improved Word Representation Learning with Sememes

Yilin Niu, Ruobing Xie, Zhiyuan Liu and Maosong Sun

Learning Character-level Compositionality with Visual Features

Frederick Liu, Han Lu, Chieh Lo and Graham Neubig

A Progressive Learning Approach to Chinese SRL Using Heterogeneous Data

Qiaolin Xia, Lei Sha, Baobao Chang and Zhifang Sui

Revisiting Recurrent Networks for Paraphrastic Sentence Embeddings

John Wieting and Kevin Gimpel

Ontology-Aware Token Embeddings for Prepositional Phrase Attachment

Pradeep Dasigi, Waleed Ammar, Chris Dyer and Eduard Hovy

*Identifying 1950s American Jazz Musicians: Fine-Grained IsA Extraction via Mod-
ifier Composition*

Ellie Pavlick and Marius Pasca

Parsing to 1-Endpoint-Crossing, Pagenumber-2 Graphs

Junjie Cao, Sheng Huang, Weiwei Sun and Xiaojun Wan

Semi-supervised Multitask Learning for Sequence Labeling

Marek Rei

Semantic Parsing of Pre-university Math Problems

Takuya Matsuzaki, Takumi Ito, Hidenao Iwane, Hirokazu Anai and Noriko H. Arai