

NAACL HLT 2016

**The 2016 Conference of the
North American Chapter of the
Association for Computational Linguistics:
Human Language Technologies**



Proceedings of the Conference

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Message from the General Chair

Greetings,

Welcome to NAACL HLT 2016! This year's conference is held in San Diego, California, where we have assembled an exciting program of computational linguistics research.

The main program features a wide array of topics, and it includes excellent invited talks by Prof. Regina Barzilay and Prof. Ehud Reiter. In addition, we have six tutorials on the day before the main program, plus fifteen workshops on the following two days. Some of these workshops are back for their 10th or 11th incarnation, while others are brand-new. In parallel, we have a live demonstration track, and a Student Research Workshop that showcases work by the junior members of our research community.

This NAACL HLT meeting takes place only through the hard work of many people who deserve our gratitude.

Thanks to Priscilla Rasmussen for making local arrangements, handling registration, setting up social events, writing visa invitation letters, and solving a myriad of issues. Priscilla, your experience is a great asset to any conference!

The NAACL HLT organizing committee took all the steps to bring you a great conference. Many thanks to Ani Nenkova and Owen Rambow (Program Co-chairs), Mohit Bansal and Alexander M. Rush (Tutorial Co-chairs), Radu Soricut and Adrià de Gispert (Workshop Co-chairs), Jacob Andreas, Eunsol Choi, and Angeliki Lazaridou (Student Research Workshop Co-Chairs) and their faculty advisors Jacob Eisenstein and Nianwen Xue, Aliya Deri (Student Volunteer Coordinator), Julie Medero (Local Sponsorship Chair), Mark Finlayson, Sravana Reddy, and John DeNero (Demonstration Co-chairs), Adam Lopez and Margaret Mitchell (Publications Co-chairs), Jason Riesa (Website Chair), Wei Xu (Publicity Chair), and Jonathan May (Social Media Chair).

Thanks also to the NAACL Board for providing excellent advice, and thanks to previous chairs for their suggestions and timelines.

Sponsors of NAACL HLT 2016 include Baidu and Google (Platinum Sponsors), Amazon, Bloomberg, eBay, Microsoft Research, and UnitedHealth Group (Gold Sponsors), Huawei (Silver Sponsors), Cavis Analytics, Facebook, @newsela, and Nuance (Bronze Sponsors), and the University of Washington (Supporter). Thanks for your extremely valuable contributions!

Finally, thanks to the scientists, engineers, authors, and attendees who come to share and learn at this leading venue for computational linguistics research!

Kevin Knight
Information Sciences Institute, University of Southern California
NAACL HLT 2016 General Chair

Message from the Program Co-Chairs

Welcome to San Diego for the 15th Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies!

The conference has grown remarkably in the past five years: we had 698 submissions this year, despite our deadline right after the end-of-the-year holidays. As we worked on organizing the conference program, we made many changes to reflect the growth of the NAACL community, the increasing diversity of topics covered by the field, and the acceleration of the pace of the publication cycle.

We had a record short time between paper submission and author notification—less than two months. We settled on such compressed timeline in order to avoid spreading the reviewing period over the winter holidays, to ensure that papers spend only a short time under submission, and to coordinate submission deadlines with ACL. Our incredible team of area chairs and reviewers ensured that the planned schedule went smoothly.

As the computational linguistics field has expanded, it has become increasingly difficult to recruit a sufficient number of knowledgeable reviewers. We decided to reach out to the largest possible pool of computational linguists and provide convenient ways for the area chairs to control which reviewers they end up working with: we invited all researchers actively working in the area of computational linguistics/language processing to review for the conference. We defined “active researchers” to be those who have published at least five papers in the last ten years in the ACL, NAACL, EMNLP, EACL or COLING conferences. In order to be inclusive of the amazing young researchers who became active in the field only more recently, we also included everyone who had published at least three papers in the same venues for the last five years. This yielded a list of over 1,400 researchers that we invited to serve as reviewers for the conference. Of these, 685 agreed and participated in the review process. This is another record for NAACL HLT 2016, no previous NAACL has had such a large program committee. Among these, the area chairs recognized 120 as best reviewers.

Working with the reviewers were the 42 area chairs. We asked the area chairs to work in pairs, so they can have a back-up in case other obligations need their attention during the review period and to ensure that all decisions about reviewer assignment and paper recommendation are discussed in detail. All area chairs and reviewers submitted a list of keywords that describe their area of expertise (the full list appears in the conference call for papers). The area chairs were paired based on the keyword overlap.

To match reviewers to area chairs, we used a bidding system. For bidding, each area received a list of the 140 reviewers with best matching keyword profiles. If the area chairs did not know the work of a potential reviewer on their bidding list, they looked him or her up on DBLP or Google Scholar before making their final bid. Areas were assigned only reviewers for which the area chairs bid positively. Area chairs were free as usual to recruit additional reviewers they wished to work with.

Submissions were assigned to areas by taking into account the match between the paper keywords and the area chair keywords. Areas were capped at 40 submissions maximum (long and short combined). As in the past, reviewers bid on papers they wanted to review. 69% of the reviews were written by reviewers who had bid indicating that they want to review the paper; 29% of the reviews were written by reviewers who had bid indicating they are ok with reviewing the paper. The remaining 2% of reviews

were written by reviewers who did not bid on the paper but were asked by an area chair to review it. Three reviewers were assigned a paper that they did not want to review according to their bid. The average reviewer load was 3 papers, which included a mix of long and short submissions. Only 43 reviewers had more than four papers to review.

Area chairs wrote meta-reviews, for use only by us, justifying their accept/reject recommendation. In making difficult decisions, we drew on these meta-reviews, the reviews themselves, the discussion among the reviewers, and the author response to the initial reviews.

We are happy with our changes to the review process: area chairs had control over the reviewers they worked with, reviewers were assigned papers they wanted to review and the overall reviewing load was low. Needless to say, there is room for further improvements. The reviewing process is crucial to the quality of this conference; only if the community has confidence in the quality of the reviewing process will this conference continue to be a leading conference in our field. Our goal has been to make sure that every single submission receives a complete and fair review and decision, and to make sure that the authors of every single submission understand why their paper was accepted or declined for the conference. We would like to thank our 685 reviewers, and we would especially like to thank our 42 area chairs, who were patient in allowing us to pursue some of the innovative aspects of this year's reviewing cycle.

Eighteen of the 698 initial submissions were withdrawn by the authors or rejected without review because of formatting violations. A total of 396 long and 284 short papers underwent review; 100 long and 82 short papers were accepted, for an acceptance rate of 25% and 29% respectively. In addition, ten TACL papers will be presented at the conference.

This year we decided to have shorter slots for oral presentations, in order to have more of the accepted papers presented as talks. In the program, long papers are allotted 20-minute slots (15 min presentation + 5 min questions). Short papers are allotted 10-minute slots (6 min presentation + 4 min questions).

The best paper award committee consisted of NAACL general and program chairs from the last three years. Not all past chairs could participate in the selection. The final best paper committee included Joyce Chai, Katrin Kirchhoff, Rada Mihalcea, Kristina Toutanova, Lucy Vanderwende and Hua Wu. They selected two best long papers and one best short paper, along with two runner-ups in each category.

Best Short Paper

Improving sentence compression by learning to predict gaze

Sigrid Klerke, Yoav Goldberg and Anders Søgaard

Short Paper, Runners Up

Patterns of Wisdom: Discourse-Level Style in Multi-Sentence Quotations

Kyle Booten and Marti A. Hearst

A Joint Model of Orthography and Morphological Segmentation

Ryan Cotterell, Tim Vieira and Hinrich Schütze

Best Long Papers

Feuding Families and Former Friends: Unsupervised Learning for Dynamic Fictional Relationships

Mohit Iyyer, Anupam Guha, Snigdha Chaturvedi, Jordan Boyd-Graber and Hal Daumé III

Learning to Compose Neural Networks for Question Answering
Jacob Andreas, Marcus Rohrbach, Trevor Darrell and Dan Klein

Long Paper, Runners Up

Multi-way, Multilingual Neural Machine Translation with a Shared Attention Mechanism

Orhan Firat, Kyunghyun Cho and Yoshua Bengio

Black Holes and White Rabbits: Metaphor Identification with Visual Features

Ekaterina Shutova, Douwe Kiela and Jean Maillard

The conference program includes two inspiring invited talks by Regina Barzilay and Ehud Reiter. Both push the boundaries of the field, discussing the potential for real-world impact of language technologies.

Finally we would like to thank all other people who supported us in the past year in our work for NAACL HLT 2016. Last year's program chairs, Anoop Sarkar and Joyce Chai shared their valuable advice and promptly answered the many questions we had throughout the process. The NAACL board chair for 2015 (Hal Daumé III) and 2016 (Emily Bender) were our effective link with the NAACL board. The conference general chair, Kevin Knight, was always available to us when we needed to consult about decisions we were making. The conference business manager, Priscilla Rasmussen, gave us details about the venue and coordinated with us at the final stages of making the conference schedule. The ACL treasurer, Greame Hirst, answered questions about the venue. The conference webmaster, Jason Riesa, put content on the conference webpage as soon as we made it available to him. The publication chairs, Meg Mitchell and Adam Lopez, answered all lingering author questions about formatting for submission and final versions. Many thanks to all of them!

We look forward to an exciting conference!

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Min Yang.

Invited Talk: How can NLP help cure cancer?

Regina Barzilay

Massachusetts Institute of Technology

Abstract

Cancer inflicts a heavy toll on our society. One out of seven women will be diagnosed with breast cancer during their lifetime, a fraction of them contributing to about 450,000 deaths annually worldwide. Despite billions of dollars invested in cancer research, our understanding of the disease, treatment, and prevention is still limited.

Majority of cancer research today takes place in biology and medicine. Computer science plays a minor supporting role in this process if at all. In this talk, I hope to convince you that NLP as a field has a chance to play a significant role in this battle. Indeed, free-form text remains the primary means by which physicians record their observations and clinical findings. Unfortunately, this rich source of textual information is severely underutilized by predictive models in oncology. Current models rely primarily only on structured data.

In the first part of my talk, I will describe a number of tasks where NLP-based models can make a difference in clinical practice. For example, these include improving models of disease progression, preventing over-treatment, and narrowing down to the cure. This part of the talk draws on active collaborations with oncologists from Massachusetts General Hospital (MGH).

In the second part of the talk, I will push beyond standard tools, introducing new functionalities and avoiding annotation-hungry training paradigms ill-suited for clinical practice. In particular, I will focus on interpretable neural models that provide rationales underlying their predictions, and semi-supervised methods for information extraction.

Biography

Regina Barzilay is a professor in the Department of Electrical Engineering and Computer Science and a member of the Computer Science and Artificial Intelligence Laboratory at the Massachusetts Institute of Technology. Her research interests are in natural language processing. She is a recipient of various awards including of the NSF Career Award, the MIT Technology Review TR-35 Award, Microsoft Faculty Fellowship and several Best Paper Awards at NAACL and ACL. She received her Ph.D. in Computer Science from Columbia University, and spent a year as a postdoc at Cornell University.

Invited Talk: Evaluating Natural Language Generation Systems

Ehud Reitter

University of Aberdeen and Arria NLG

Abstract

Natural Language Generation (NLG) systems have different characteristics than other NLP systems, which affects how they are evaluated. In particular, it can be difficult to meaningfully evaluate NLG texts by comparing them against gold-standard reference texts, because (A) there are usually many possible texts which are acceptable to users and (B) some NLG systems produce texts which are better (as judged by human users) than human-written corpus texts. Partially because of these reasons, the NLG community places much more emphasis on human-based evaluations than most areas of NLP.

I will discuss the various ways in which NLG systems are evaluated, focusing on human-based evaluations. These typically either measure the success of generated texts at achieving a goal (eg, measuring how many people change their behaviour after reading behaviour-change texts produced by an NLG system); or ask human subjects to rate various aspects of generated texts (such as readability, accuracy, and appropriateness), often on Likert scales. I will use examples from evaluations I have carried out, and highlight some of the lessons I have learnt, including the importance of reporting negative results, the difference between laboratory and real-world evaluations, and the need to look at worse-case as well as average-case performance. I hope my talk will be interesting and relevant to anyone who is interested in the evaluation of NLP systems.

Biography

Ehud Reitter is a Professor of Computing Science at the University of Aberdeen and also Chief Scientist of Arria NLG. He has worked on natural language generation for the past 30 years, on methodology (including evaluation) and resources as well as algorithms, and is one of the most cited authors in NLG. His 2000 book *Building Natural Language Generation Systems* is widely used as an NLG textbook. Dr Reitter currently spends most of his time trying to commercialise NLG at Arria (one of the largest specialist NLG companies), which grew out of a startup he cofounded in 2009.

Table of Contents

<i>Achieving Accurate Conclusions in Evaluation of Automatic Machine Translation Metrics</i> Yvette Graham and Qun Liu	1
<i>Flexible Non-Terminals for Dependency Tree-to-Tree Reordering</i> John Richardson, Fabien Cromières, Toshiaki Nakazawa and Sadao Kurohashi	11
<i>Selecting Syntactic, Non-redundant Segments in Active Learning for Machine Translation</i> Akiva Miura, Graham Neubig, Michael Paul and Satoshi Nakamura	20
<i>Multi-Source Neural Translation</i> Barret Zoph and Kevin Knight	30
<i>Controlling Politeness in Neural Machine Translation via Side Constraints</i> Rico Sennrich, Barry Haddow and Alexandra Birch	35
<i>An Empirical Evaluation of Noise Contrastive Estimation for the Neural Network Joint Model of Translation</i> Colin Cherry	41
<i>Neural Network-Based Abstract Generation for Opinions and Arguments</i> Lu Wang and Wang Ling	47
<i>A Low-Rank Approximation Approach to Learning Joint Embeddings of News Stories and Images for Timeline Summarization</i> William Yang Wang, Yashar Mehdad, Dragomir R. Radev and Amanda Stent	58
<i>Entity-balanced Gaussian pLSA for Automated Comparison</i> Danish Contractor, Parag Singla and Mausam	69
<i>Automatic Summarization of Student Course Feedback</i> Wencan Luo, Fei Liu, Zitao Liu and Diane Litman	80
<i>Knowledge-Guided Linguistic Rewrites for Inference Rule Verification</i> Prachi Jain and Mausam	86
<i>Abstractive Sentence Summarization with Attentive Recurrent Neural Networks</i> Sumit Chopra, Michael Auli and Alexander M. Rush	93
<i>Integer Linear Programming for Discourse Parsing</i> Jérémy Perret, Stergos Afantenos, Nicholas Asher and Mathieu Morey	99
<i>A Diversity-Promoting Objective Function for Neural Conversation Models</i> Jiwei Li, Michel Galley, Chris Brockett, Jianfeng Gao and Bill Dolan	110

<i>Multi-domain Neural Network Language Generation for Spoken Dialogue Systems</i>	
Tsung-Hsien Wen, Milica Gašić, Nikola Mrkšić, Lina M. Rojas-Barahona, Pei-Hao Su, David Vandyke and Steve Young	120
<i>A Long Short-Term Memory Framework for Predicting Humor in Dialogues</i>	
Dario Bertero and Pascale Fung	130
<i>Conversational Flow in Oxford-style Debates</i>	
Justine Zhang, Ravi Kumar, Sujith Ravi and Cristian Danescu-Niculescu-Mizil	136
<i>Counter-fitting Word Vectors to Linguistic Constraints</i>	
Nikola Mrkšić, Diarmuid Ó Séaghdha, Blaise Thomson, Milica Gašić, Lina M. Rojas-Barahona, Pei-Hao Su, David Vandyke, Tsung-Hsien Wen and Steve Young	142
<i>Grounded Semantic Role Labeling</i>	
Shaohua Yang, Qiaozhi Gao, Changsong Liu, Caiming Xiong, Song-Chun Zhu and Joyce Y. Chai	149
<i>Black Holes and White Rabbits: Metaphor Identification with Visual Features</i>	
Ekaterina Shutova, Douwe Kiela and Jean Maillard	160
<i>Bridge Correlational Neural Networks for Multilingual Multimodal Representation Learning</i>	
Janarthanan Rajendran, Mitesh M. Khapra, Sarath Chandar and Balaraman Ravindran	171
<i>Unsupervised Visual Sense Disambiguation for Verbs using Multimodal Embeddings</i>	
Spandana Gella, Mirella Lapata and Frank Keller	182
<i>Stating the Obvious: Extracting Visual Common Sense Knowledge</i>	
Mark Yatskar, Vicente Ordonez and Ali Farhadi	193
<i>Recurrent Neural Network Grammars</i>	
Chris Dyer, Adhiguna Kuncoro, Miguel Ballesteros and Noah A. Smith	199
<i>Expected F-Measure Training for Shift-Reduce Parsing with Recurrent Neural Networks</i>	
Wenduan Xu, Michael Auli and Stephen Clark	210
<i>LSTM CCG Parsing</i>	
Mike Lewis, Kenton Lee and Luke Zettlemoyer	221
<i>Supertagging With LSTMs</i>	
Ashish Vaswani, Yonatan Bisk, Kenji Sagae and Ryan Musa	232
<i>An Empirical Study of Automatic Chinese Word Segmentation for Spoken Language Understanding and Named Entity Recognition</i>	
Wencan Luo and Fan Yang	238
<i>Name Tagging for Low-resource Incident Languages based on Expectation-driven Learning</i>	
Boliang Zhang, Xiaoman Pan, Tianlu Wang, Ashish Vaswani, Heng Ji, Kevin Knight and Daniel Marcu	249

<i>Neural Architectures for Named Entity Recognition</i>	
Guillaume Lample, Miguel Ballesteros, Sandeep Subramanian, Kazuya Kawakami and Chris Dyer	260
<i>Dynamic Feature Induction: The Last Gist to the State-of-the-Art</i>	
Jinho D. Choi	271
<i>Drop-out Conditional Random Fields for Twitter with Huge Mined Gazetteer</i>	
Eunsuk Yang, Young-Bum Kim, Ruhi Sarikaya and Yu-Seop Kim	282
<i>Joint Extraction of Events and Entities within a Document Context</i>	
Bishan Yang and Tom M. Mitchell	289
<i>Joint Event Extraction via Recurrent Neural Networks</i>	
Thien Huu Nguyen, Kyunghyun Cho and Ralph Grishman	300
<i>Top-down Tree Long Short-Term Memory Networks</i>	
Xingxing Zhang, Liang Lu and Mirella Lapata	310
<i>Recurrent Memory Networks for Language Modeling</i>	
Ke Tran, Arianna Bisazza and Christof Monz	321
<i>A Latent Variable Recurrent Neural Network for Discourse-Driven Language Models</i>	
Yangfeng Ji, Gholamreza Haffari and Jacob Eisenstein	332
<i>Questioning Arbitrariness in Language: a Data-Driven Study of Conventional Iconicity</i>	
Ekaterina Abramova and Raquel Fernández	343
<i>Distinguishing Literal and Non-Literal Usage of German Particle Verbs</i>	
Maximilian Köper and Sabine Schulte im Walde	353
<i>Phrasal Substitution of Idiomatic Expressions</i>	
Changsheng Liu and Rebecca Hwa	363
<i>Leverage Financial News to Predict Stock Price Movements Using Word Embeddings and Deep Neural Networks</i>	
Yangtuo Peng and Hui Jiang	374
<i>Grammatical error correction using neural machine translation</i>	
Zheng Yuan and Ted Briscoe	380
<i>Multimodal Semantic Learning from Child-Directed Input</i>	
Angeliki Lazaridou, Grzegorz Chrupała, Raquel Fernández and Marco Baroni	387
<i>Recurrent Support Vector Machines For Slot Tagging In Spoken Language Understanding</i>	
Yangyang Shi, Kaisheng Yao, Hu Chen, Dong Yu, Yi-Cheng Pan and Mei-Yuh Hwang	393
<i>Expectation-Regulated Neural Model for Event Mention Extraction</i>	
Ching-Yun Chang, Zhiyang Teng and Yue Zhang	400

<i>Agreement on Target-bidirectional Neural Machine Translation</i>	
Lemao Liu, Masao Utiyama, Andrew Finch and Eiichiro Sumita	411
<i>Psycholinguistic Features for Deceptive Role Detection in Werewolf</i>	
Codruta Girlea, Roxana Girju and Eyal Amir	417
<i>Individual Variation in the Choice of Referential Form</i>	
Thiago Castro Ferreira, Emiel Kraahmer and Sander Wubben	423
<i>Joint Learning Templates and Slots for Event Schema Induction</i>	
Lei Sha, Sujian Li, Baobao Chang and Zhifang Sui	428
<i>Inferring Psycholinguistic Properties of Words</i>	
Gustavo Paetzold and Lucia Specia	435
<i>Intra-Topic Variability Normalization based on Linear Projection for Topic Classification</i>	
Quan Liu, Wu Guo, Zhen-Hua Ling, Hui Jiang and Yu Hu	441
<i>Shift-Reduce CCG Parsing using Neural Network Models</i>	
Bharat Ram Ambati, Tejaswini Deoskar and Mark Steedman	447
<i>Online Multilingual Topic Models with Multi-Level Hyperpriors</i>	
Kriste Krstovski, David Smith and Michael J. Kurtz	454
<i>STransE: a novel embedding model of entities and relationships in knowledge bases</i>	
Dat Quoc Nguyen, Kairit Sirts, Lizhen Qu and Mark Johnson	460
<i>An Unsupervised Model of Orthographic Variation for Historical Document Transcription</i>	
Dan Garrette and Hannah Alpert-Abrams	467
<i>Bidirectional RNN for Medical Event Detection in Electronic Health Records</i>	
Abhyuday N Jagannatha and Hong Yu	473
<i>The Sensitivity of Topic Coherence Evaluation to Topic Cardinality</i>	
Jey Han Lau and Timothy Baldwin	483
<i>Transition-Based Syntactic Linearization with Lookahead Features</i>	
Ratish Puduppully, Yue Zhang and Manish Shrivastava	488
<i>A Recurrent Neural Networks Approach for Estimating the Quality of Machine Translation Output</i>	
Hyun Kim and Jong-Hyeok Lee	494
<i>Symmetric Patterns and Coordinations: Fast and Enhanced Representations of Verbs and Adjectives</i>	
Roy Schwartz, Roi Reichart and Ari Rappoport	499
<i>Breaking the Closed World Assumption in Text Classification</i>	
Geli Fei and Bing Liu	506
<i>Sequential Short-Text Classification with Recurrent and Convolutional Neural Networks</i>	
Ji Young Lee and Franck Dernoncourt	515

<i>Improved Neural Network-based Multi-label Classification with Better Initialization Leveraging Label Co-occurrence</i>	
Gakuto Kurata, Bing Xiang and Bowen Zhou	521
<i>Learning Distributed Word Representations For Bidirectional LSTM Recurrent Neural Network</i>	
Peilu Wang, Yao Qian, Frank K. Soong, Lei He and Hai Zhao	527
<i>Combining Recurrent and Convolutional Neural Networks for Relation Classification</i>	
Ngoc Thang Vu, Heike Adel, Pankaj Gupta and Hinrich Schütze	534
<i>Building Chinese Affective Resources in Valence-Arousal Dimensions</i>	
Liang-Chih Yu, Lung-Hao Lee, Shuai Hao, Jin Wang, Yunchao He, Jun Hu, K. Robert Lai and Xuejie Zhang	540
<i>Improving event prediction by representing script participants</i>	
Simon Ahrendt and Vera Demberg	546
<i>Structured Prediction with Output Embeddings for Semantic Image Annotation</i>	
Ariadna Quattoni, Arnau Ramisa, Pranava Swaroop Madhyastha, Edgar Simo-Serra and Francesc Moreno-Noguer	552
<i>Large-scale Multitask Learning for Machine Translation Quality Estimation</i>	
Kashif Shah and Lucia Specia	558
<i>Conversational Markers of Constructive Discussions</i>	
Vlad Niculae and Cristian Danescu-Niculescu-Mizil	568
<i>Vision and Feature Norms: Improving automatic feature norm learning through cross-modal maps</i>	
Luana Bulat, Douwe Kiela and Stephen Clark	579
<i>Cross-lingual Wikification Using Multilingual Embeddings</i>	
Chen-Tse Tsai and Dan Roth	589
<i>Deconstructing Complex Search Tasks: a Bayesian Nonparametric Approach for Extracting Sub-tasks</i>	
Rishabh Mehrotra, Prasanta Bhattacharya and Emine Yilmaz	599
<i>Probabilistic Models for Learning a Semantic Parser Lexicon</i>	
Jayant Krishnamurthy	606
<i>Unsupervised Compound Splitting With Distributional Semantics Rivals Supervised Methods</i>	
Martin Riedl and Chris Biemann	617
<i>Weighting Finite-State Transductions With Neural Context</i>	
Pushpendre Rastogi, Ryan Cotterell and Jason Eisner	623
<i>Morphological Inflection Generation Using Character Sequence to Sequence Learning</i>	
Manaal Faruqui, Yulia Tsvetkov, Graham Neubig and Chris Dyer	634

<i>Towards Unsupervised and Language-independent Compound Splitting using Inflectional Morphological Transformations</i>	
Patrick Ziering and Lonneke van der Plas	644
<i>Phonological Pun-derstanding</i>	
Aaron Jaech, Rik Koncel-Kedziorski and Mari Ostendorf	654
<i>A Joint Model of Orthography and Morphological Segmentation</i>	
Ryan Cotterell, Tim Vieira and Hinrich Schütze	664
<i>Syntactic Parsing of Web Queries with Question Intent</i>	
Yuval Pinter, Roi Reichart and Idan Szpektor	670
<i>Visualizing and Understanding Neural Models in NLP</i>	
Jiwei Li, Xinlei Chen, Eduard Hovy and Dan Jurafsky	681
<i>Bilingual Word Embeddings from Parallel and Non-parallel Corpora for Cross-Language Text Classification</i>	
Aditya Mogadala and Achim Rettinger	692
<i>Joint Learning with Global Inference for Comment Classification in Community Question Answering</i>	
Shafiq Joty, Lluís Màrquez and Preslav Nakov	703
<i>Weak Semi-Markov CRFs for Noun Phrase Chunking in Informal Text</i>	
Aldrian Obaja Muis and Wei Lu	714
<i>What to talk about and how? Selective Generation using LSTMs with Coarse-to-Fine Alignment</i>	
Hongyuan Mei, Mohit Bansal and Matthew R. Walter	720
<i>Generation from Abstract Meaning Representation using Tree Transducers</i>	
Jeffrey Flanigan, Chris Dyer, Noah A. Smith and Jaime Carbonell	731
<i>A Corpus and Semantic Parser for Multilingual Natural Language Querying of OpenStreetMap</i>	
Carolin Haas and Stefan Riezler	740
<i>Natural Language Communication with Robots</i>	
Yonatan Bisk, Deniz Yuret and Daniel Marcu	751
<i>Inter-document Contextual Language model</i>	
Quan Hung Tran, Ingrid Zukerman and Gholamreza Haffari	762
<i>Ultradense Word Embeddings by Orthogonal Transformation</i>	
Sascha Rothe, Sebastian Ebert and Hinrich Schütze	767
<i>Separating Actor-View from Speaker-View Opinion Expressions using Linguistic Features</i>	
Michael Wiegand, Marc Schulder and Josef Ruppenhofer	778
<i>Clustering for Simultaneous Extraction of Aspects and Features from Reviews</i>	
Lu Chen, Justin Martineau, Doreen Cheng and Amit Sheth	789

<i>Opinion Holder and Target Extraction on Opinion Compounds – A Linguistic Approach</i> Michael Wiegand, Christine Bocionek and Josef Ruppenhofer	800
<i>Capturing Reliable Fine-Grained Sentiment Associations by Crowdsourcing and Best–Worst Scaling</i> Svetlana Kiritchenko and Saif M. Mohammad	811
<i>Mapping Verbs in Different Languages to Knowledge Base Relations using Web Text as Interlingua</i> Derry Tanti Wijaya and Tom M. Mitchell	818
<i>Comparing Convolutional Neural Networks to Traditional Models for Slot Filling</i> Heike Adel, Benjamin Roth and Hinrich Schütze	828
<i>A Corpus and Cloze Evaluation for Deeper Understanding of Commonsense Stories</i> Nasrin Mostafazadeh, Nathanael Chambers, Xiaodong He, Devi Parikh, Dhruv Batra, Lucy Vanderwende, Pushmeet Kohli and James Allen	839
<i>Dynamic Entity Representation with Max-pooling Improves Machine Reading</i> Sosuke Kobayashi, Ran Tian, Naoaki Okazaki and Kentaro Inui	850
<i>Speed-Constrained Tuning for Statistical Machine Translation Using Bayesian Optimization</i> Daniel Beck, Adrià de Gispert, Gonzalo Iglesias, Aurelien Waite and Bill Byrne	856
<i>Multi-Way, Multilingual Neural Machine Translation with a Shared Attention Mechanism</i> Orhan Firat, Kyunghyun Cho and Yoshua Bengio	866
<i>Incorporating Structural Alignment Biases into an Attentional Neural Translation Model</i> Trevor Cohn, Cong Duy Vu Hoang, Ekaterina Vymolova, Kaisheng Yao, Chris Dyer and Gholamreza Haffari	876
<i>Multilingual Relation Extraction using Compositional Universal Schema</i> Patrick Verga, David Belanger, Emma Strubell, Benjamin Roth and Andrew McCallum	886
<i>Effective Crowd Annotation for Relation Extraction</i> Angli Liu, Stephen Soderland, Jonathan Bragg, Christopher H. Lin, Xiao Ling and Daniel S. Weld	897
<i>A Translation-Based Knowledge Graph Embedding Preserving Logical Property of Relations</i> Hee-Geun Yoon, Hyun-Je Song, Seong-Bae Park and Se-Young Park	907
<i>DAG-Structured Long Short-Term Memory for Semantic Compositionality</i> Xiaodan Zhu, Parinaz Sobhani and Hongyu Guo	917
<i>Bayesian Supervised Domain Adaptation for Short Text Similarity</i> Md Arafat Sultan, Jordan Boyd-Graber and Tamara Sumner	927
<i>Pairwise Word Interaction Modeling with Deep Neural Networks for Semantic Similarity Measurement</i> Hua He and Jimmy Lin	937
<i>An Attentional Model for Speech Translation Without Transcription</i> Long Duong, Antonios Anastasopoulos, David Chiang, Steven Bird and Trevor Cohn	949

<i>Information Density and Quality Estimation Features as Translationese Indicators for Human Translation Classification</i>	
Raphael Rubino, Ekaterina Lapshinova-Koltunski and Josef van Genabith	960
<i>Interpretese vs. Translationese: The Uniqueness of Human Strategies in Simultaneous Interpretation</i>	
He He, Jordan Boyd-Graber and Hal Daumé III	971
<i>LSTM Neural Reordering Feature for Statistical Machine Translation</i>	
Yiming Cui, Shijin Wang and Jianfeng Li	977
<i>A Novel Approach to Dropped Pronoun Translation</i>	
Longyue Wang, Zhaopeng Tu, Xiaojun Zhang, Hang Li, Andy Way and Qun Liu	983
<i>Learning Global Features for Coreference Resolution</i>	
Sam Wiseman, Alexander M. Rush and Stuart M. Shieber	994
<i>Search Space Pruning: A Simple Solution for Better Coreference Resolvers</i>	
Nafise Sadat Moosavi and Michael Strube	1005
<i>Unsupervised Ranking Model for Entity Coreference Resolution</i>	
Xuezhe Ma, Zhengzhong Liu and Eduard Hovy	1012
<i>Embedding Lexical Features via Low-Rank Tensors</i>	
Mo Yu, Mark Dredze, Raman Arora and Matthew R. Gormley	1019
<i>The Role of Context Types and Dimensionality in Learning Word Embeddings</i>	
Oren Melamud, David McClosky, Siddharth Patwardhan and Mohit Bansal	1030
<i>Improve Chinese Word Embeddings by Exploiting Internal Structure</i>	
Jian Xu, Jiawei Liu, Liangang Zhang, Zhengyu Li and Huanhuan Chen	1041
<i>Assessing Relative Sentence Complexity using an Incremental CCG Parser</i>	
Bharat Ram Ambati, Siva Reddy and Mark Steedman	1051
<i>Frustratingly Easy Cross-Lingual Transfer for Transition-Based Dependency Parsing</i>	
Ophélie Lacroix, Lauriane Aufrant, Guillaume Wisniewski and François Yvon	1058
<i>Geolocation for Twitter: Timing Matters</i>	
Mark Dredze, Miles Osborne and Prabhanjan Kambadur	1064
<i>Fast and Easy Short Answer Grading with High Accuracy</i>	
Md Arafat Sultan, Cristobal Salazar and Tamara Sumner	1070
<i>Interlocking Phrases in Phrase-based Statistical Machine Translation</i>	
Ye Kyaw Thu, Andrew Finch and Eiichiro Sumita	1076
<i>Eyes Don't Lie: Predicting Machine Translation Quality Using Eye Movement</i>	
Hassan Sajjad, Francisco Guzmán, Nadir Durrani, Ahmed Abdelali, Houda Bouamor, Irina Temnikova and Stephan Vogel	1082

<i>Making Dependency Labeling Simple, Fast and Accurate</i> Tianxiao Shen, Tao Lei and Regina Barzilay	1089
<i>Deep Lexical Segmentation and Syntactic Parsing in the Easy-First Dependency Framework</i> Matthieu Constant, Joseph Le Roux and Nadi Tomeh	1095
<i>Sentiment Composition of Words with Opposing Polarities</i> Svetlana Kiritchenko and Saif M. Mohammad	1102
<i>Learning to Recognize Ancillary Information for Automatic Paraphrase Identification</i> Simone Filice and Alessandro Moschitti	1109
<i>Learning a POS tagger for AAVE-like language</i> Anna Jørgensen, Dirk Hovy and Anders Søgaard	1115
<i>PIC a Different Word: A Simple Model for Lexical Substitution in Context</i> Stephen Roller and Katrin Erk	1121
<i>Bootstrapping Translation Detection and Sentence Extraction from Comparable Corpora</i> Kriste Krstovski and David Smith	1127
<i>Discriminative Reranking for Grammatical Error Correction with Statistical Machine Translation</i> Tomoya Mizumoto and Yuji Matsumoto	1133
<i>Patterns of Wisdom: Discourse-Level Style in Multi-Sentence Quotations</i> Kyle Booten and Marti A. Hearst	1139
<i>Right-truncatable Neural Word Embeddings</i> Jun Suzuki and Masaaki Nagata	1145
<i>MAWPS: A Math Word Problem Repository</i> Rik Koncel-Kedziorski, Subhro Roy, Aida Amini, Nate Kushman and Hannaneh Hajishirzi ..	1152
<i>Cross-genre Event Extraction with Knowledge Enrichment</i> Hao Li and Heng Ji	1158
<i>Emergent: a novel data-set for stance classification</i> William Ferreira and Andreas Vlachos	1163
<i>BIRA: Improved Predictive Exchange Word Clustering</i> Jon Dehdari, Liling Tan and Josef van Genabith	1169
<i>Integrating Morphological Desegmentation into Phrase-based Decoding</i> Mohammad Salameh, Colin Cherry and Grzegorz Kondrak	1175
<i>The Instantiation Discourse Relation: A Corpus Analysis of Its Properties and Improved Detection</i> Junyi Jessy Li and Ani Nenkova	1181
<i>Sparse Bilingual Word Representations for Cross-lingual Lexical Entailment</i> Yogarshi Vyas and Marine Carpuat	1187

<i>Automatic Prediction of Linguistic Decline in Writings of Subjects with Degenerative Dementia</i>	
Davy Weissenbacher, Travis A. Johnson, Laura Wojtulewicz, Amylou Dueck, Dona Locke, Richard Caselli and Graciela Gonzalez	1198
<i>Consensus Maximization Fusion of Probabilistic Information Extractors</i>	
Miguel Rodríguez, Sean Goldberg and Daisy Zhe Wang	1208
<i>Simple, Fast Noise-Contrastive Estimation for Large RNN Vocabularies</i>	
Barret Zoph, Ashish Vaswani, Jonathan May and Kevin Knight	1217
<i>Automatically Inferring Implicit Properties in Similes</i>	
Ashequl Qadir, Ellen Riloff and Marilyn A. Walker	1223
<i>Visual Storytelling</i>	
Ting-Hao (Kenneth) Huang, Francis Ferraro, Nasrin Mostafazadeh, Ishan Misra, Aishwarya Agrawal, Jacob Devlin, Ross Girshick, Xiaodong He, Pushmeet Kohli, Dhruv Batra, C. Lawrence Zitnick, Devi Parikh, Lucy Vanderwende, Michel Galley and Margaret Mitchell	1233
<i>PRIMT: A Pick-Revise Framework for Interactive Machine Translation</i>	
Shanbo Cheng, Shujian Huang, Huadong Chen, Xin-Yu Dai and Jiajun Chen	1240
<i>Incorporating Side Information into Recurrent Neural Network Language Models</i>	
Cong Duy Vu Hoang, Trevor Cohn and Gholamreza Haffari	1250
<i>Capturing Semantic Similarity for Entity Linking with Convolutional Neural Networks</i>	
Matthew Francis-Landau, Greg Durrett and Dan Klein	1256
<i>K-Embeddings: Learning Conceptual Embeddings for Words using Context</i>	
Thuy Vu and D. Stott Parker	1262
<i>Convolutional Neural Networks vs. Convolution Kernels: Feature Engineering for Answer Sentence Reranking</i>	
Kateryna Tymoshenko, Daniele Bonadiman and Alessandro Moschitti	1268
<i>Semi-supervised Question Retrieval with Gated Convolutions</i>	
Tao Lei, Hrishikesh Joshi, Regina Barzilay, Tommi Jaakkola, Kateryna Tymoshenko, Alessandro Moschitti and Lluís Màrquez	1279
<i>This is how we do it: Answer Reranking for Open-domain How Questions with Paragraph Vectors and Minimal Feature Engineering</i>	
Dasha Bogdanova and Jennifer Foster	1290
<i>Multilingual Language Processing From Bytes</i>	
Dan Gillick, Cliff Brunk, Oriol Vinyals and Amarnag Subramanya	1296
<i>Ten Pairs to Tag – Multilingual POS Tagging via Coarse Mapping between Embeddings</i>	
Yuan Zhang, David Gaddy, Regina Barzilay and Tommi Jaakkola	1307
<i>Part-of-Speech Tagging for Historical English</i>	
Yi Yang and Jacob Eisenstein	1318

<i>Statistical Modeling of Creole Genesis</i> Yugo Murawaki	1329
<i>Shallow Parsing Pipeline - Hindi-English Code-Mixed Social Media Text</i> Arnav Sharma, Sakshi Gupta, Raveesh Motlani, Piyush Bansal, Manish Shrivastava, Radhika Mamidi and Dipti M. Sharma	1340
<i>Bilingual Learning of Multi-sense Embeddings with Discrete Autoencoders</i> Simon Šuster, Ivan Titov and Gertjan van Noord	1346
<i>Polyglot Neural Language Models: A Case Study in Cross-Lingual Phonetic Representation Learning</i> Yulia Tsvetkov, Sunayana Sitaram, Manaal Faruqui, Guillaume Lample, Patrick Littell, David Mortensen, Alan W Black, Lori Levin and Chris Dyer	1357
<i>Learning Distributed Representations of Sentences from Unlabelled Data</i> Felix Hill, Kyunghyun Cho and Anna Korhonen	1367
<i>Retrofitting Sense-Specific Word Vectors Using Parallel Text</i> Allyson Ettinger, Philip Resnik and Marine Carpuat	1378
<i>End-to-End Argumentation Mining in Student Essays</i> Isaac Persing and Vincent Ng	1384
<i>Cross-Domain Mining of Argumentative Text through Distant Supervision</i> Khalid Al-Khatib, Henning Wachsmuth, Matthias Hagen, Jonas Köhler and Benno Stein ...	1395
<i>A Study of the Impact of Persuasive Argumentation in Political Debates</i> Amparo Elizabeth Cano-Basave and Yulan He	1405
<i>Lexical Coherence Graph Modeling Using Word Embeddings</i> Mohsen Mesgar and Michael Strube	1414
<i>Using Context to Predict the Purpose of Argumentative Writing Revisions</i> Fan Zhang and Diane Litman	1424
<i>Automatic Generation and Scoring of Positive Interpretations from Negated Statements</i> Eduardo Blanco and Zahra Sarabi	1431
<i>Learning Natural Language Inference with LSTM</i> Shuohang Wang and Jing Jiang	1442
<i>Activity Modeling in Email</i> Ashequl Qadir, Michael Gamon, Patrick Pantel and Ahmed Hassan Awadallah	1452
<i>Clustering Paraphrases by Word Sense</i> Anne Cocos and Chris Callison-Burch	1463
<i>Unsupervised Learning of Prototypical Fillers for Implicit Semantic Role Labeling</i> Niko Schenk and Christian Chiarcos	1473

<i>Hierarchical Attention Networks for Document Classification</i>	
Zichao Yang, Diyi Yang, Chris Dyer, Xiaodong He, Alex Smola and Eduard Hovy	1480
<i>Dependency Based Embeddings for Sentence Classification Tasks</i>	
Alexandros Komninos and Suresh Manandhar	1490
<i>Deep LSTM based Feature Mapping for Query Classification</i>	
Yangyang Shi, Kaisheng Yao, Le Tian and Daxin Jiang	1501
<i>Dependency Sensitive Convolutional Neural Networks for Modeling Sentences and Documents</i>	
Rui Zhang, Honglak Lee and Dragomir R. Radev	1512
<i>MGNC-CNN: A Simple Approach to Exploiting Multiple Word Embeddings for Sentence Classification</i>	
Ye Zhang, Stephen Roller and Byron C. Wallace	1522
<i>Improving sentence compression by learning to predict gaze</i>	
Sigrid Klerke, Yoav Goldberg and Anders Søgaard	1528
<i>Feuding Families and Former Friends: Unsupervised Learning for Dynamic Fictional Relationships</i>	
Mohit Iyyer, Anupam Guha, Snigdha Chaturvedi, Jordan Boyd-Graber and Hal Daumé III . .	1534
<i>Learning to Compose Neural Networks for Question Answering</i>	
Jacob Andreas, Marcus Rohrbach, Trevor Darrell and Dan Klein	1545

Conference Program

Sunday, June 12, 2016

18:00–21:00 *Welcome reception, Pavilion*

Monday, June 13, 2016

7:30–8:45 *Breakfast, Pavilion*

9:00–9:15 *Welcome, Grande Ballroom*
Kevin Knight, Ani Nenkova, Owen Rambow

9:15–10:30 *Invited talk: "How can NLP help cure cancer?"*
Regina Barzilay

10:30–11:00 *Coffee break, Pavilion*

11:00–12:30 *Session 1*

1A. Machine translation

11:00–11:20 *Achieving Accurate Conclusions in Evaluation of Automatic Machine Translation Metrics*
Yvette Graham and Qun Liu

11:20–11:40 *Flexible Non-Terminals for Dependency Tree-to-Tree Reordering*
John Richardson, Fabien Cromières, Toshiaki Nakazawa and Sadao Kurohashi

11:40–12:00 *Selecting Syntactic, Non-redundant Segments in Active Learning for Machine Translation*
Akiva Miura, Graham Neubig, Michael Paul and Satoshi Nakamura

12:00–12:10 *Multi-Source Neural Translation*
Barret Zoph and Kevin Knight

12:10–12:20 *Controlling Politeness in Neural Machine Translation via Side Constraints*
Rico Sennrich, Barry Haddow and Alexandra Birch

Monday, June 13, 2016 (continued)

12:20–12:30 *An Empirical Evaluation of Noise Contrastive Estimation for the Neural Network Joint Model of Translation*
Colin Cherry

1B. Summarization

11:00–11:20 *Neural Network-Based Abstract Generation for Opinions and Arguments*
Lu Wang and Wang Ling

11:20–11:40 *A Low-Rank Approximation Approach to Learning Joint Embeddings of News Stories and Images for Timeline Summarization*
William Yang Wang, Yashar Mehdad, Dragomir R. Radev and Amanda Stent

11:40–12:00 *Entity-balanced Gaussian pLSA for Automated Comparison*
Danish Contractor, Parag Singla and Mausam

12:00–12:10 *Automatic Summarization of Student Course Feedback*
Wencan Luo, Fei Liu, Zitao Liu and Diane Litman

12:10–12:20 *Knowledge-Guided Linguistic Rewrites for Inference Rule Verification*
Prachi Jain and Mausam

12:20–12:30 *Abstractive Sentence Summarization with Attentive Recurrent Neural Networks*
Sumit Chopra, Michael Auli and Alexander M. Rush

1C. Dialog

11:00–11:20 *Integer Linear Programming for Discourse Parsing*
Jérémy Perret, Stergos Afantenos, Nicholas Asher and Mathieu Morey

11:20–11:40 *A Diversity-Promoting Objective Function for Neural Conversation Models*
Jiwei Li, Michel Galley, Chris Brockett, Jianfeng Gao and Bill Dolan

11:40–12:00 *Multi-domain Neural Network Language Generation for Spoken Dialogue Systems*
Tsung-Hsien Wen, Milica Gašić, Nikola Mrkšić, Lina M. Rojas-Barahona, Pei-Hao Su, David Vandyke and Steve Young

12:00–12:10 *A Long Short-Term Memory Framework for Predicting Humor in Dialogues*
Dario Bertero and Pascale Fung

Monday, June 13, 2016 (continued)

- 12:10–12:20 *Conversational Flow in Oxford-style Debates*
Justine Zhang, Ravi Kumar, Sujith Ravi and Cristian Danescu-Niculescu-Mizil
- 12:20–12:30 *Counter-fitting Word Vectors to Linguistic Constraints*
Nikola Mrkšić, Diarmuid Ó Séaghdha, Blaise Thomson, Milica Gašić, Lina M. Rojas-Barahona, Pei-Hao Su, David Vandyke, Tsung-Hsien Wen and Steve Young

12:30–2:00 *Lunch break*

2:00–3:30 *Session 2*

2A. Language and Vision

- 2:00–2:20 *Grounded Semantic Role Labeling*
Shaohua Yang, Qiaozi Gao, Changsong Liu, Caiming Xiong, Song-Chun Zhu and Joyce Y. Chai
- 2:20–2:40 *Black Holes and White Rabbits: Metaphor Identification with Visual Features*
Ekaterina Shutova, Douwe Kiela and Jean Maillard
- 2:40–3:00 *Bridge Correlational Neural Networks for Multilingual Multimodal Representation Learning*
Janarthanan Rajendran, Mitesh M. Khapra, Sarath Chandar and Balaraman Ravindran
- 3:00–3:20 *Unsupervised Visual Sense Disambiguation for Verbs using Multimodal Embeddings*
Spandana Gella, Mirella Lapata and Frank Keller
- 3:20–3:30 *Stating the Obvious: Extracting Visual Common Sense Knowledge*
Mark Yatskar, Vicente Ordonez and Ali Farhadi

Monday, June 13, 2016 (continued)

2B. Parsing

- 2:00–2:20 *Efficient Structured Inference for Transition-Based Parsing with Neural Networks and Error States [TACL]*
Ashish Vaswani and Kenji Sagae
- 2:20–2:40 *Recurrent Neural Network Grammars*
Chris Dyer, Adhiguna Kuncoro, Miguel Ballesteros and Noah A. Smith
- 2:40–3:00 *Expected F-Measure Training for Shift-Reduce Parsing with Recurrent Neural Networks*
Wenduan Xu, Michael Auli and Stephen Clark
- 3:00–3:20 *LSTM CCG Parsing*
Mike Lewis, Kenton Lee and Luke Zettlemoyer
- 3:20–3:30 *Supertagging With LSTMs*
Ashish Vaswani, Yonatan Bisk, Kenji Sagae and Ryan Musa

2C. Named Entity Recognition

- 2:00–2:20 *An Empirical Study of Automatic Chinese Word Segmentation for Spoken Language Understanding and Named Entity Recognition*
Wencan Luo and Fan Yang
- 2:20–2:40 *Name Tagging for Low-resource Incident Languages based on Expectation-driven Learning*
Boliang Zhang, Xiaoman Pan, Tianlu Wang, Ashish Vaswani, Heng Ji, Kevin Knight and Daniel Marcu
- 2:40–3:00 *Neural Architectures for Named Entity Recognition*
Guillaume Lample, Miguel Ballesteros, Sandeep Subramanian, Kazuya Kawakami and Chris Dyer
- 3:00–3:20 *Dynamic Feature Induction: The Last Gist to the State-of-the-Art*
Jinho D. Choi
- 3:20–3:30 *Drop-out Conditional Random Fields for Twitter with Huge Mined Gazetteer*
Eunsuk Yang, Young-Bum Kim, Ruhi Sarikaya and Yu-Seop Kim
- 3:30–4:00** *Coffee break, Pavilion*

Monday, June 13, 2016 (continued)

4:00–5:00 *Session 3*

3A. Event detection

4:00–4:20 *Joint Extraction of Events and Entities within a Document Context*
Bishan Yang and Tom M. Mitchell

4:20–4:40 *A Hierarchical Distance-dependent Bayesian Model for Event Coreference Resolution [TACL]*
Bishan Yang, Claire Cardie, and Peter Frazier

4:40–5:00 *Joint Event Extraction via Recurrent Neural Networks*
Thien Huu Nguyen, Kyunghyun Cho and Ralph Grishman

3B. Language Models

4:00–4:20 *Top-down Tree Long Short-Term Memory Networks*
Xingxing Zhang, Liang Lu and Mirella Lapata

4:20–4:40 *Recurrent Memory Networks for Language Modeling*
Ke Tran, Arianna Bisazza and Christof Monz

4:40–5:00 *A Latent Variable Recurrent Neural Network for Discourse-Driven Language Models*
Yangfeng Ji, Gholamreza Haffari and Jacob Eisenstein

Monday, June 13, 2016 (continued)

3C. Non Literal Language

- 4:00–4:20 *Questioning Arbitrariness in Language: a Data-Driven Study of Conventional Iconicity*
Ekaterina Abramova and Raquel Fernández
- 4:20–4:40 *Distinguishing Literal and Non-Literal Usage of German Particle Verbs*
Maximilian Köper and Sabine Schulte im Walde
- 4:40–5:00 *Phrasal Substitution of Idiomatic Expressions*
Changsheng Liu and Rebecca Hwa
- 5:00–5:15** *Break*
- 5:15–6:00** *One Minute Madness*
- 6:00–8:00** *Posters and Dinner*

Posters

- Leverage Financial News to Predict Stock Price Movements Using Word Embeddings and Deep Neural Networks*
Yangtuo Peng and Hui Jiang
- Grammatical error correction using neural machine translation*
Zheng Yuan and Ted Briscoe
- Multimodal Semantic Learning from Child-Directed Input*
Angeliki Lazaridou, Grzegorz Chrupała, Raquel Fernández and Marco Baroni
- Recurrent Support Vector Machines For Slot Tagging In Spoken Language Understanding*
Yangyang Shi, Kaisheng Yao, Hu Chen, Dong Yu, Yi-Cheng Pan and Mei-Yuh Hwang
- Expectation-Regulated Neural Model for Event Mention Extraction*
Ching-Yun Chang, Zhiyang Teng and Yue Zhang

Monday, June 13, 2016 (continued)

Agreement on Target-bidirectional Neural Machine Translation

Lemao Liu, Masao Utiyama, Andrew Finch and Eiichiro Sumita

Psycholinguistic Features for Deceptive Role Detection in Werewolf

Codruta Girlea, Roxana Girju and Eyal Amir

Individual Variation in the Choice of Referential Form

Thiago Castro Ferreira, Emiel Krahmer and Sander Wubben

Joint Learning Templates and Slots for Event Schema Induction

Lei Sha, Sujian Li, Baobao Chang and Zhifang Sui

Inferring Psycholinguistic Properties of Words

Gustavo Paetzold and Lucia Specia

Intra-Topic Variability Normalization based on Linear Projection for Topic Classification

Quan Liu, Wu Guo, Zhen-Hua Ling, Hui Jiang and Yu Hu

Shift-Reduce CCG Parsing using Neural Network Models

Bharat Ram Ambati, Tejaswini Deoskar and Mark Steedman

Online Multilingual Topic Models with Multi-Level Hyperpriors

Kriste Krstovski, David Smith and Michael J. Kurtz

STransE: a novel embedding model of entities and relationships in knowledge bases

Dat Quoc Nguyen, Kairit Sirts, Lizhen Qu and Mark Johnson

An Unsupervised Model of Orthographic Variation for Historical Document Transcription

Dan Garrette and Hannah Alpert-Abrams

Bidirectional RNN for Medical Event Detection in Electronic Health Records

Abhyuday N Jagannatha and Hong Yu

The Sensitivity of Topic Coherence Evaluation to Topic Cardinality

Jey Han Lau and Timothy Baldwin

Transition-Based Syntactic Linearization with Lookahead Features

Ratish Puduppully, Yue Zhang and Manish Shrivastava

Monday, June 13, 2016 (continued)

A Recurrent Neural Networks Approach for Estimating the Quality of Machine Translation Output

Hyun Kim and Jong-Hyeok Lee

Symmetric Patterns and Coordinations: Fast and Enhanced Representations of Verbs and Adjectives

Roy Schwartz, Roi Reichart and Ari Rappoport

Breaking the Closed World Assumption in Text Classification

Geli Fei and Bing Liu

Sequential Short-Text Classification with Recurrent and Convolutional Neural Networks

Ji Young Lee and Franck Dernoncourt

Improved Neural Network-based Multi-label Classification with Better Initialization Leveraging Label Co-occurrence

Gakuto Kurata, Bing Xiang and Bowen Zhou

Learning Distributed Word Representations For Bidirectional LSTM Recurrent Neural Network

Peilu Wang, Yao Qian, Frank K. Soong, Lei He and Hai Zhao

Combining Recurrent and Convolutional Neural Networks for Relation Classification

Ngoc Thang Vu, Heike Adel, Pankaj Gupta and Hinrich Schütze

Building Chinese Affective Resources in Valence-Arousal Dimensions

Liang-Chih Yu, Lung-Hao Lee, Shuai Hao, Jin Wang, Yunchao He, Jun Hu, K. Robert Lai and Xuejie Zhang

Improving event prediction by representing script participants

Simon Ahrendt and Vera Demberg

Structured Prediction with Output Embeddings for Semantic Image Annotation

Ariadna Quattoni, Arnau Ramisa, Pranava Swaroop Madhyastha, Edgar Simo-Serra and Francesc Moreno-Noguer

Large-scale Multitask Learning for Machine Translation Quality Estimation

Kashif Shah and Lucia Specia

Conversational Markers of Constructive Discussions

Vlad Niculae and Cristian Danescu-Niculescu-Mizil

Vision and Feature Norms: Improving automatic feature norm learning through cross-modal maps

Luana Bulat, Douwe Kiela and Stephen Clark

Monday, June 13, 2016 (continued)

Cross-lingual Wikification Using Multilingual Embeddings

Chen-Tse Tsai and Dan Roth

Deconstructing Complex Search Tasks: a Bayesian Nonparametric Approach for Extracting Sub-tasks

Rishabh Mehrotra, Prasanta Bhattacharya and Emine Yilmaz

6:00–8:00 ***System Demonstrations***

rstWeb - A Browser-based Annotation Interface for Rhetorical Structure Theory and Discourse Relations

Amir Zeldes

Instant Feedback for Increasing the Presence of Solutions in Peer Reviews

Huy Nguyen, Wenting Xiong and Diane Litman

Farasa: A Fast and Furious Segmenter for Arabic

Ahmed Abdelali, Kareem Darwish, Nadir Durrani and Hamdy Mubarak

iAppraise: A Manual Machine Translation Evaluation Environment Supporting Eye-tracking

Ahmed Abdelali, Nadir Durrani and Francisco Guzmán

Linguistica 5: Unsupervised Learning of Linguistic Structure

Jackson Lee and John Goldsmith

TransRead: Designing a Bilingual Reading Experience with Machine Translation Technologies

François Yvon, Yong Xu, Marianna Apidianaki, Clément Pillias and Pierre Cubaud

New Dimensions in Testimony Demonstration

Ron Artstein, Alesia Gainer, Kallirroi Georgila, Anton Leuski, Ari Shapiro and David Traum

ArgRewrite: A Web-based Revision Assistant for Argumentative Writings

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

Scaling Up Word Clustering

Jon Dehdari, Liling Tan and Josef van Genabith

Task Completion Platform

A self-serve multi-domain goal oriented dialogue platform: Paul Crook, Alex Marin, Vipul Agarwal, Khushboo Aggarwal, Tasos Anastasakos, Ravi Bikkula, Daniel Boies, Asli Celikyilmaz, Senthilkumar Chandramohan, Zhaleh Feizollahi, Roman Holenstein, Minwoo Jeong, Omar Khan, Young-Bum Kim, Elizabeth Krawczyk, Xiaohu Liu, Danko Panic, Vasiliy Radostev, Nikhil Ramesh, Jean-Phillipe Robichaud, Alexandre Rochette, Logan Stromberg and Ruhi Sarikaya

Monday, June 13, 2016 (continued)

Student Workshop Posters

An End-to-end Approach to Learning Semantic Frames with Feedforward Neural Network

Yukun Feng, Yipei Xu and Dong Yu

Analogy-based detection of morphological and semantic relations with word embeddings

what works and what doesn't: Anna Gladkova, Aleksandr Drozd and Satoshi Matsuka

Argument Identification in Chinese Editorials

Marisa Chow

Automatic tagging and retrieval of E-Commerce products based on visual features

Vasu Sharma and Harish Karnick

Combining syntactic patterns and Wikipedia's hierarchy of hyperlinks to extract relations: The case of meronymy extraction

Debela Tesfaye Gemechu, Michael Zock and Solomon Teferra

Cross-Lingual Question Answering Using Profile HMM & Unified Semantic Space

Amir Pouran Ben Veyseh

Data-driven Paraphrasing and Stylistic Harmonization

Gerold Hintz

Detecting "Smart" Spammers on Social Network

A Topic Model Approach: Linqing Liu, Yao Lu, Ye Luo, Renxian Zhang, Laurent Itti and Jianwei Lu

Developing language technology tools and resources for a resource-poor language: Sindhi

Raveesh Motlani

Tuesday, June 14, 2016

7:30–8:45 *Breakfast, Pavilion*

9:00–10:30 *Session 4*

4A. Semantic Parsing

9:00–9:20 *Transforming Dependency Structures to Logical Forms for Semantic Parsing [TACL]*
Siva Reddy, Oscar Täckström, Michael Collins, Tom Kwiatkowski, Dipanjan Das, Mark Steedman, and Mirella Lapata

9:20–9:40 *Imitation Learning of Agenda-based Semantic Parsers [TACL]*
Jonathan Berant and Percy Liang

9:40–10:00 *Probabilistic Models for Learning a Semantic Parser Lexicon*
Jayant Krishnamurthy

10:00–10:20 *Semantic Parsing of Ambiguous Input through Paraphrasing and Verification [TACL]*
Philip Arthur, Graham Neubig, Sakriani Sakti, Tomoki Toda, and Satoshi Nakamura

10:20–10:30 *Unsupervised Compound Splitting With Distributional Semantics Rivals Supervised Methods*
Martin Riedl and Chris Biemann

4B. Morphology and Phonology

9:00–9:20 *Weighting Finite-State Transductions With Neural Context*
Pushpendre Rastogi, Ryan Cotterell and Jason Eisner

9:20–9:40 *Morphological Inflection Generation Using Character Sequence to Sequence Learning*
Manaal Faruqui, Yulia Tsvetkov, Graham Neubig and Chris Dyer

9:40–10:00 *Towards Unsupervised and Language-independent Compound Splitting using Inflectional Morphological Transformations*
Patrick Ziering and Lonneke van der Plas

10:00–10:20 *Phonological Pun-derstanding*
Aaron Jaech, Rik Koncel-Kedziorski and Mari Ostendorf

Tuesday, June 14, 2016 (continued)

10:20–10:30 *A Joint Model of Orthography and Morphological Segmentation*
Ryan Cotterell, Tim Vieira and Hinrich Schütze

4C. Various

9:00–9:20 *Syntactic Parsing of Web Queries with Question Intent*
Yuval Pinter, Roi Reichart and Idan Szpektor

9:20–9:40 *Visualizing and Understanding Neural Models in NLP*
Jiwei Li, Xinlei Chen, Eduard Hovy and Dan Jurafsky

9:40–10:00 *Bilingual Word Embeddings from Parallel and Non-parallel Corpora for Cross-Language Text Classification*
Aditya Mogadala and Achim Rettinger

10:00–10:20 *Joint Learning with Global Inference for Comment Classification in Community Question Answering*
Shafiq Joty, Lluís Màrquez and Preslav Nakov

10:20–10:30 *Weak Semi-Markov CRFs for Noun Phrase Chunking in Informal Text*
Aldrian Obaja Muis and Wei Lu

10:30–11:00 *Coffee break, Pavilion*

11:00–12:30 *Session 5*

Tuesday, June 14, 2016 (continued)

5A. Generation

- 11:00–11:20 *What to talk about and how? Selective Generation using LSTMs with Coarse-to-Fine Alignment*
Hongyuan Mei, Mohit Bansal and Matthew R. Walter
- 11:20–11:40 *Generation from Abstract Meaning Representation using Tree Transducers*
Jeffrey Flanigan, Chris Dyer, Noah A. Smith and Jaime Carbonell
- 11:40–12:00 *A Corpus and Semantic Parser for Multilingual Natural Language Querying of OpenStreetMap*
Carolin Haas and Stefan Riezler
- 12:00–12:20 *Natural Language Communication with Robots*
Yonatan Bisk, Deniz Yuret and Daniel Marcu
- 12:20–12:30 *Inter-document Contextual Language model*
Quan Hung Tran, Ingrid Zukerman and Gholamreza Haffari

5B. Sentiment

- 11:00–11:20 *Ultradense Word Embeddings by Orthogonal Transformation*
Sascha Rothe, Sebastian Ebert and Hinrich Schütze
- 11:20–11:40 *Separating Actor-View from Speaker-View Opinion Expressions using Linguistic Features*
Michael Wiegand, Marc Schulder and Josef Ruppenhofer
- 11:40–12:00 *Clustering for Simultaneous Extraction of Aspects and Features from Reviews*
Lu Chen, Justin Martineau, Doreen Cheng and Amit Sheth
- 12:00–12:20 *Opinion Holder and Target Extraction on Opinion Compounds – A Linguistic Approach*
Michael Wiegand, Christine Bocionek and Josef Ruppenhofer
- 12:20–12:30 *Capturing Reliable Fine-Grained Sentiment Associations by Crowdsourcing and Best–Worst Scaling*
Svetlana Kiritchenko and Saif M. Mohammad

Tuesday, June 14, 2016 (continued)

5C. Knowledge Acquisition

- 11:00–11:20 *Concept Grounding to Multiple Knowledge Bases via Indirect Supervision [TACL]*
Chen-Tse Tsai and Dan Roth
- 11:20–11:40 *Mapping Verbs in Different Languages to Knowledge Base Relations using Web Text as Interlingua*
Derry Tanti Wijaya and Tom M. Mitchell
- 11:40–12:00 *Comparing Convolutional Neural Networks to Traditional Models for Slot Filling*
Heike Adel, Benjamin Roth and Hinrich Schütze
- 12:00–12:20 *A Corpus and Cloze Evaluation for Deeper Understanding of Commonsense Stories*
Nasrin Mostafazadeh, Nathanael Chambers, Xiaodong He, Devi Parikh, Dhruv Batra, Lucy Vanderwende, Pushmeet Kohli and James Allen
- 12:20–12:30 *Dynamic Entity Representation with Max-pooling Improves Machine Reading*
Sosuke Kobayashi, Ran Tian, Naoaki Okazaki and Kentaro Inui
- 12:30–1:15** *Lunch*
- 1:15–2:15** *Panel Discussion: How Will Deep Learning Change Computational Linguistics?*
- 2:30–3:30** *Session 6*

Tuesday, June 14, 2016 (continued)

6A. Machine Translation II

- 2:30–2:50 *Speed-Constrained Tuning for Statistical Machine Translation Using Bayesian Optimization*
Daniel Beck, Adrià de Gispert, Gonzalo Iglesias, Aurelien Waite and Bill Byrne
- 2:50–3:10 *Multi-Way, Multilingual Neural Machine Translation with a Shared Attention Mechanism*
Orhan Firat, Kyunghyun Cho and Yoshua Bengio
- 3:10–3:30 *Incorporating Structural Alignment Biases into an Attentional Neural Translation Model*
Trevor Cohn, Cong Duy Vu Hoang, Ekaterina Vymolova, Kaisheng Yao, Chris Dyer and Gholamreza Haffari

6B. Relation Extraction

- 2:30–2:50 *Multilingual Relation Extraction using Compositional Universal Schema*
Patrick Verga, David Belanger, Emma Strubell, Benjamin Roth and Andrew McCallum
- 2:50–3:10 *Effective Crowd Annotation for Relation Extraction*
Angli Liu, Stephen Soderland, Jonathan Bragg, Christopher H. Lin, Xiao Ling and Daniel S. Weld
- 3:10–3:30 *A Translation-Based Knowledge Graph Embedding Preserving Logical Property of Relations*
Hee-Geun Yoon, Hyun-Je Song, Seong-Bae Park and Se-Young Park

6C. Semantic Similarity

- 2:30–2:50 *DAG-Structured Long Short-Term Memory for Semantic Compositionality*
Xiaodan Zhu, Parinaz Sobhani and Hongyu Guo
- 2:50–3:10 *Bayesian Supervised Domain Adaptation for Short Text Similarity*
Md Arafat Sultan, Jordan Boyd-Graber and Tamara Sumner
- 3:10–3:30 *Pairwise Word Interaction Modeling with Deep Neural Networks for Semantic Similarity Measurement*
Hua He and Jimmy Lin

3:30–4:00 *Break*

Tuesday, June 14, 2016 (continued)

4:00–5:00 *Session 7*

7A. Machine Translation III

- 4:00–4:20 *An Attentional Model for Speech Translation Without Transcription*
Long Duong, Antonios Anastasopoulos, David Chiang, Steven Bird and Trevor Cohn
- 4:20–4:40 *Information Density and Quality Estimation Features as Translationese Indicators for Human Translation Classification*
Raphael Rubino, Ekaterina Lapshinova-Koltunski and Josef van Genabith
- 4:40–4:50 *Interpretese vs. Translationese: The Uniqueness of Human Strategies in Simultaneous Interpretation*
He He, Jordan Boyd-Graber and Hal Daumé III
- 4:50–5:00 *LSTM Neural Reordering Feature for Statistical Machine Translation*
Yiming Cui, Shijin Wang and Jianfeng Li

7B. Anaphora Resolution

- 4:00–4:20 *A Novel Approach to Dropped Pronoun Translation*
Longyue Wang, Zhaopeng Tu, Xiaojun Zhang, Hang Li, Andy Way and Qun Liu
- 4:20–4:40 *Learning Global Features for Coreference Resolution*
Sam Wiseman, Alexander M. Rush and Stuart M. Shieber
- 4:40–4:50 *Search Space Pruning: A Simple Solution for Better Coreference Resolvers*
Nafise Sadat Moosavi and Michael Strube
- 4:50–5:00 *Unsupervised Ranking Model for Entity Coreference Resolution*
Xuezhe Ma, Zhengzhong Liu and Eduard Hovy

Tuesday, June 14, 2016 (continued)

7C. Word Embeddings I

- 4:00–4:20 *Embedding Lexical Features via Low-Rank Tensors*
Mo Yu, Mark Dredze, Raman Arora and Matthew R. Gormley
- 4:20–4:40 *The Role of Context Types and Dimensionality in Learning Word Embeddings*
Oren Melamud, David McClosky, Siddharth Patwardhan and Mohit Bansal
- 4:40–5:00 *Improve Chinese Word Embeddings by Exploiting Internal Structure*
Jian Xu, Jiawei Liu, Liangang Zhang, Zhengyu Li and Huanhuan Chen
- 5:00–5:15** *Break*
- 5:15–6:00** *One-Minute Madness*
- 6:00–8:00** *Posters, Demos, and Snacks*

Posters

- Assessing Relative Sentence Complexity using an Incremental CCG Parser*
Bharat Ram Ambati, Siva Reddy and Mark Steedman
- Frustratingly Easy Cross-Lingual Transfer for Transition-Based Dependency Parsing*
Ophélie Lacroix, Lauriane Aufrant, Guillaume Wisniewski and François Yvon
- Geolocation for Twitter: Timing Matters*
Mark Dredze, Miles Osborne and Prabhanjan Kambadur
- Fast and Easy Short Answer Grading with High Accuracy*
Md Arafat Sultan, Cristobal Salazar and Tamara Sumner
- Interlocking Phrases in Phrase-based Statistical Machine Translation*
Ye Kyaw Thu, Andrew Finch and Eiichiro Sumita

Tuesday, June 14, 2016 (continued)

Eyes Don't Lie: Predicting Machine Translation Quality Using Eye Movement

Hassan Sajjad, Francisco Guzmán, Nadir Durrani, Ahmed Abdelali, Houda Bouamor, Irina Temnikova and Stephan Vogel

Making Dependency Labeling Simple, Fast and Accurate

Tianxiao Shen, Tao Lei and Regina Barzilay

Deep Lexical Segmentation and Syntactic Parsing in the Easy-First Dependency Framework

Matthieu Constant, Joseph Le Roux and Nadi Tomeh

Sentiment Composition of Words with Opposing Polarities

Svetlana Kiritchenko and Saif M. Mohammad

Learning to Recognize Ancillary Information for Automatic Paraphrase Identification

Simone Filice and Alessandro Moschitti

Learning a POS tagger for AAVE-like language

Anna Jørgensen, Dirk Hovy and Anders Søgaard

PIC a Different Word: A Simple Model for Lexical Substitution in Context

Stephen Roller and Katrin Erk

Bootstrapping Translation Detection and Sentence Extraction from Comparable Corpora

Kriste Krstovski and David Smith

Discriminative Reranking for Grammatical Error Correction with Statistical Machine Translation

Tomoya Mizumoto and Yuji Matsumoto

Patterns of Wisdom: Discourse-Level Style in Multi-Sentence Quotations

Kyle Booten and Marti A. Hearst

Right-truncatable Neural Word Embeddings

Jun Suzuki and Masaaki Nagata

MAWPS: A Math Word Problem Repository

Rik Koncel-Kedziorski, Subhro Roy, Aida Amini, Nate Kushman and Hannaneh Hajishirzi

Cross-genre Event Extraction with Knowledge Enrichment

Hao Li and Heng Ji

Tuesday, June 14, 2016 (continued)

Emergent: a novel data-set for stance classification

William Ferreira and Andreas Vlachos

BIRA: Improved Predictive Exchange Word Clustering

Jon Dehdari, Liling Tan and Josef van Genabith

Integrating Morphological Desegmentation into Phrase-based Decoding

Mohammad Salameh, Colin Cherry and Grzegorz Kondrak

The Instantiation Discourse Relation: A Corpus Analysis of Its Properties and Improved Detection

Junyi Jessy Li and Ani Nenkova

Sparse Bilingual Word Representations for Cross-lingual Lexical Entailment

Yogarshi Vyas and Marine Carpuat

Automatic Prediction of Linguistic Decline in Writings of Subjects with Degenerative Dementia

Davy Weissenbacher, Travis A. Johnson, Laura Wojtulewicz, Amylou Dueck, Dona Locke, Richard Caselli and Graciela Gonzalez

Consensus Maximization Fusion of Probabilistic Information Extractors

Miguel Rodríguez, Sean Goldberg and Daisy Zhe Wang

Simple, Fast Noise-Contrastive Estimation for Large RNN Vocabularies

Barret Zoph, Ashish Vaswani, Jonathan May and Kevin Knight

Automatically Inferring Implicit Properties in Similes

Ashequl Qadir, Ellen Riloff and Marilyn A. Walker

Visual Storytelling

Ting-Hao (Kenneth) Huang, Francis Ferraro, Nasrin Mostafazadeh, Ishan Misra, Aishwarya Agrawal, Jacob Devlin, Ross Girshick, Xiaodong He, Pushmeet Kohli, Dhruv Batra, C. Lawrence Zitnick, Devi Parikh, Lucy Vanderwende, Michel Galley and Margaret Mitchell

PRIMT: A Pick-Revise Framework for Interactive Machine Translation

Shanbo Cheng, Shujian Huang, Huadong Chen, Xin-Yu Dai and Jiajun Chen

Incorporating Side Information into Recurrent Neural Network Language Models

Cong Duy Vu Hoang, Trevor Cohn and Gholamreza Haffari

Capturing Semantic Similarity for Entity Linking with Convolutional Neural Networks

Matthew Francis-Landau, Greg Durrett and Dan Klein

Tuesday, June 14, 2016 (continued)

K-Embeddings: Learning Conceptual Embeddings for Words using Context

Thuy Vu and D. Stott Parker

Learning Composition Models for Phrase Embeddings [TACL]

Mo Yu and Mark Dredze

System Demonstrations

Illinois Math Solver: Math Reasoning on the Web

Subhro Roy and Dan Roth

LingoTurk: managing crowdsourced tasks for psycholinguistics

Florian Pusse, Asad Sayeed and Vera Demberg

Sentential Paraphrasing as Black-Box Machine Translation

Courtney Napoles, Chris Callison-Burch and Matt Post

A Tag-based English Math Word Problem Solver with Understanding, Reasoning and Explanation

Chao-Chun Liang, Kuang-Yi Hsu, Chien-Tsung Huang, Chung-Min Li, Shen-Yu Miao and Keh-Yih Su

Cross-media Event Extraction and Recommendation

Di Lu, Clare Voss, Fangbo Tao, Xiang Ren, Rachel Guan, Rostyslav Korolov, Tongtao Zhang, Dongang Wang, Hongzhi Li, Taylor Cassidy, Heng Ji, Shih-fu Chang, Jiawei Han, William Wallace, James Hendler, Mei Si and Lance Kaplan

SODA: Service Oriented Domain Adaptation Architecture for Microblog Categorization

Himanshu Sharad Bhatt, Sandipan Dandapat, Peddamuthu Balaji, Shourya Roy, Sharmistha Jat and Deepali Semwal

Lecture Translator - Speech translation framework for simultaneous lecture translation

Markus Müller, Thai Son Nguyen, Jan Niehues, Eunah Cho, Bastian Krüger, Thanh-Le Ha, Kevin Kilgour, Matthias Sperber, Mohammed Mediani, Sebastian Stüker and Alex Waibel

Zara The Supergirl: An Empathetic Personality Recognition System

Pascale Fung, Anik Dey, Farhad Bin Siddique, Ruixi Lin, Yang Yang, Yan Wan and Ho Yin Ricky Chan

Kathaa: A Visual Programming Framework for NLP Applications

Sharada Prasanna Mohanty, Nehal J Wani, Manish Srivastava and Dipti Misra Sharma

Tuesday, June 14, 2016 (continued)

Student Workshop Posters

Effects of Communicative Pressures on Novice L2 Learners' Use of Optional Formal Devices

Yoav Binoun

Explicit Argument Identification for Discourse Parsing In Hindi: A Hybrid Pipeline

Rohit Jain and Dipti Sharma

Exploring Fine-Grained Emotion Detection in Tweets

Jasy Suet Yan Liew and Howard Turtle

Extraction of Bilingual Technical Terms for Chinese-Japanese Patent Translation

Wei Yang, Jinghui Yan and Yves Lepage

Hateful Symbols or Hateful People? Predictive Features for Hate Speech Detection on Twitter

Zeerak Waseem and Dirk Hovy

Non-decreasing Sub-modular Function for Comprehensible Summarization

Litton JKurisinkel, Pruthwik Mishra, Vigneshwaran Muralidaran, Vasudeva Varma and Dipti Misra Sharma

Phylogenetic simulations over constraint-based grammar formalisms

Andrew Lamont and Jonathan Washington

Question Answering over Knowledge Base using Weakly Supervised Memory Networks

Sarthak Jain

Using Related Languages to Enhance Statistical Language Models

Anna Currey, Alina Karakanta and Jon Dehdari

8:00–10:00 ***Bayview Lawn Beach Social***

Wednesday, June 15, 2016

7:30–8:45 *Breakfast, Pavilion*

9:00–10:15 *Invited talk: "Human-based evaluations of language generation systems"*
Ehud Reiter

10:15–10:45 *Coffee break, Pavilion*

10:45–12:15 *Session 8*

8A. Question Answering

10:45–11:05 *A Joint Model for Answer Sentence Ranking and Answer Extraction [TACL]*
Md Arafat Sultan, Vittorio Castelli, and Radu Florian

11:05–11:25 *Convolutional Neural Networks vs. Convolution Kernels: Feature Engineering for Answer Sentence Reranking*
Kateryna Tymoshenko, Daniele Bonadiman and Alessandro Moschitti

11:25–11:45 *Semi-supervised Question Retrieval with Gated Convolutions*
Tao Lei, Hrishikesh Joshi, Regina Barzilay, Tommi Jaakkola, Kateryna Tymoshenko, Alessandro Moschitti and Lluís Màrquez

11:45–12:05 *Parsing Algebraic Word Problems into Equations [TACL]*
Rik Koncel-Kedziorski, Hannaneh Hajishirzi, Ashish Sabharwal, Oren Etzioni, and Siena Dumas Ang

12:05–12:15 *This is how we do it: Answer Reranking for Open-domain How Questions with Paragraph Vectors and Minimal Feature Engineering*
Dasha Bogdanova and Jennifer Foster

Wednesday, June 15, 2016 (continued)

8B. Multilingual Processing

- 10:45–11:05 *Multilingual Language Processing From Bytes*
Dan Gillick, Cliff Brunk, Oriol Vinyals and Amarnag Subramanya
- 11:05–11:25 *Ten Pairs to Tag – Multilingual POS Tagging via Coarse Mapping between Embeddings*
Yuan Zhang, David Gaddy, Regina Barzilay and Tommi Jaakkola
- 11:25–11:45 *Part-of-Speech Tagging for Historical English*
Yi Yang and Jacob Eisenstein
- 11:45–12:05 *Statistical Modeling of Creole Genesis*
Yugo Murawaki
- 12:05–12:15 *Shallow Parsing Pipeline - Hindi-English Code-Mixed Social Media Text*
Arnav Sharma, Sakshi Gupta, Raveesh Motlani, Piyush Bansal, Manish Shrivastava, Radhika Mamidi and Dipti M. Sharma

8C. Word Embeddings II

- 10:45–11:05 *Bilingual Learning of Multi-sense Embeddings with Discrete Autoencoders*
Simon Šuster, Ivan Titov and Gertjan van Noord
- 11:05–11:25 *Polyglot Neural Language Models: A Case Study in Cross-Lingual Phonetic Representation Learning*
Yulia Tsvetkov, Sunayana Sitaram, Manaal Faruqui, Guillaume Lample, Patrick Littell, David Mortensen, Alan W Black, Lori Levin and Chris Dyer
- 11:25–11:45 *Learning Distributed Representations of Sentences from Unlabelled Data*
Felix Hill, Kyunghyun Cho and Anna Korhonen
- 11:45–12:05 *Learning to Understand Phrases by Embedding the Dictionary [TACL]*
Felix Hill, KyungHyun Cho, Anna Korhonen, and Yoshua Bengio
- 12:05–12:15 *Retrofitting Sense-Specific Word Vectors Using Parallel Text*
Allyson Ettinger, Philip Resnik and Marine Carpuat
- 12:15–1:00** *Lunch*

Wednesday, June 15, 2016 (continued)

1:00–2:00 *NAACL business meeting, Grande Ballroom A*

2:15–3:45 *Session 9*

9A. Argumentation and Discourse

2:15–2:35 *End-to-End Argumentation Mining in Student Essays*
Isaac Persing and Vincent Ng

2:35–2:55 *Cross-Domain Mining of Argumentative Text through Distant Supervision*
Khalid Al-Khatib, Henning Wachsmuth, Matthias Hagen, Jonas Köhler and Benno Stein

2:55–3:15 *A Study of the Impact of Persuasive Argumentation in Political Debates*
Amparo Elizabeth Cano-Basave and Yulan He

3:15–3:35 *Lexical Coherence Graph Modeling Using Word Embeddings*
Mohsen Mesgar and Michael Strube

3:35–3:45 *Using Context to Predict the Purpose of Argumentative Writing Revisions*
Fan Zhang and Diane Litman

9B. Misc Semantics

2:15–2:35 *Automatic Generation and Scoring of Positive Interpretations from Negated Statements*
Eduardo Blanco and Zahra Sarabi

2:35–2:55 *Learning Natural Language Inference with LSTM*
Shuohang Wang and Jing Jiang

2:55–3:15 *Activity Modeling in Email*
Ashequl Qadir, Michael Gamon, Patrick Pantel and Ahmed Hassan Awadallah

3:15–3:35 *Clustering Paraphrases by Word Sense*
Anne Cocos and Chris Callison-Burch

Wednesday, June 15, 2016 (continued)

3:35–3:45 *Unsupervised Learning of Prototypical Fillers for Implicit Semantic Role Labeling*
Niko Schenk and Christian Chiarcos

9C. Text Categorization

2:15–2:35 *Hierarchical Attention Networks for Document Classification*
Zichao Yang, Diyi Yang, Chris Dyer, Xiaodong He, Alex Smola and Eduard Hovy

2:35–2:55 *Dependency Based Embeddings for Sentence Classification Tasks*
Alexandros Komninos and Suresh Manandhar

2:55–3:15 *Deep LSTM based Feature Mapping for Query Classification*
Yangyang Shi, Kaisheng Yao, Le Tian and Daxin Jiang

3:15–3:35 *Dependency Sensitive Convolutional Neural Networks for Modeling Sentences and Documents*
Rui Zhang, Honglak Lee and Dragomir R. Radev

3:35–3:45 *MGNC-CNN: A Simple Approach to Exploiting Multiple Word Embeddings for Sentence Classification*
Ye Zhang, Stephen Roller and Byron C. Wallace

3:45–4:15 *Coffee break, Pavilion*

4:15–5:45 *Best paper awards*

4:15–4:35 *Improving sentence compression by learning to predict gaze*
Sigrid Klerke, Yoav Goldberg and Anders Søgaard

4:35–5:05 *Feuding Families and Former Friends: Unsupervised Learning for Dynamic Fictional Relationships*
Mohit Iyyer, Anupam Guha, Snigdha Chaturvedi, Jordan Boyd-Graber and Hal Daumé III

5:05–5:35 *Learning to Compose Neural Networks for Question Answering*
Jacob Andreas, Marcus Rohrbach, Trevor Darrell and Dan Klein

5:35–5:45 *Closing remarks*

Wednesday, June 15, 2016 (continued)