

#### Track A

### Jutland

#### 10:30–12:10 Session 1A: Syntax 1, Room: Jutland, Chair: Joakim Nivre, Uppsala University

| 10:30–10:55 | Monolingual Phrase Alignment on Parse Forests<br>Yuki Arase, Jun'ichi Tsujii  |
|-------------|---|
| 10:55–11:20 | Fast(er) Exact Decoding and Global Training for Transition-Based Dependency Parsing via a Minimal Feature Set <i>Tianze Shi, Liang Huang, Lillian Lee</i> |
| 11:20–11:45 | Parsing with Traces: An $O(n^4)$ Algorithm and a Structural Representation <i>Jonathan K. Kummerfeld, Dan Klein</i>                                       |
| 11:45–12:10 | Quasi-Second-Order Parsing for 1-Endpoint-Crossing, Pagenumber-2 Graphs Junjie Cao, Sheng Huang, Weiwei Sun, Xiaojun Wan                                  |

## 13:40–15:20 Session 2A: Machine Translation 1, Room: Jutland, Chair: Graham Neubig, Carnegie Mellon University

| 13:40–14:05 | Neural Machine Translation with Source-Side Latent Graph Parsing Kazuma Hashimoto, Yoshimasa Tsuruoka  |
|-------------|--|
| 14:05–14:30 | Neural Machine Translation with Word Predictions Rongxiang Weng, Shujian Huang, Zaixiang Zheng, XIN-YU DAI, Jiajun CHEN  |
| 14:30–14:55 | Towards Decoding as Continuous Optimisation in Neural Machine Translation Cong Duy Vu Hoang, Gholamreza Haffari, Trevor Cohn   |
| 14:55–15:20 | Google's Multilingual Neural Machine Translation System: Enabling Zero-Shot Translation Melvin Johnson, Mike Schuster, Quoc V. Le, Maxim Krikun, Yonghui Wu, Zhifeng Chen, Nikhil Thorat, Fernanda Viégas, Martin Wattenberg, Greg Corrado, Macduff Hughes, Jeffrey Dean |

# 15:50–17:30 Session 3A: Machine Learning 2, Room: Jutland, Chair: Karl Moritz Hermann, DeepMind

| 15:50–16:15 | DeepPath: A Reinforcement Learning Method for Knowledge Graph Reasoning Wenhan Xiong, Thien Hoang, William Yang Wang |
|-------------|--|
| 16:15–16:40 | Task-Oriented Query Reformulation with Reinforcement Learning Rodrigo Nogueira, Kyunghyun Cho                        |
| 16:40–17:05 | Sentence Simplification with Deep Reinforcement Learning Xingxing Zhang, Mirella Lapata                              |
| 17:05–17:30 | Learning how to Active Learn: A Deep Reinforcement Learning Approach Meng Fang, Yuan Li, Trevor Cohn                 |



#### Track B

### Funen

| 10:30–12:10 Session 1B: Information | Extraction 1, Ro | om: Funen, Ch | nair: Ming-Wei | Chang, |
|-------------------------------------|------------------|---------------|----------------|--------|
| Google                              |                  |               |                |        |

| 10:30–10:55 | Position-aware Attention and Supervised Data Improve Slot Filling<br>Yuhao Zhang, Victor Zhong, Danqi Chen, Gabor Angeli, Christopher D. Manning            |
|-------------|---|
| 10:55–11:20 | Heterogeneous Supervision for Relation Extraction: A Representation Learning Approach Liyuan Liu, Xiang Ren, Qi Zhu, Shi Zhi, Huan Gui, Heng Ji, Jiawei Han |
| 11:20–11:45 | Integrating Order Information and Event Relation for Script Event Prediction Zhongqing Wang, Yue Zhang, Ching-Yun Chang                                     |
| 11:45–12:10 | Entity Linking for Queries by Searching Wikipedia Sentences<br>Chuanqi Tan, Furu Wei, Pengjie Ren, Weifeng Lv, Ming Zhou                                    |

# 13:40–15:20 Session 2B: Language Grounding, Room: Funen, Chair: Yejin Choi, University of Washington

| 13:40–14:05 | Where is Misty? Interpreting Spatial Descriptors by Modeling Regions in Space Nikita Kitaev, Dan Klein   |
|-------------|--|
| 14:05–14:30 | Continuous Representation of Location for Geolocation and Lexical Dialectology using Mixture Density Networks  Afshin Rahimi, Timothy Baldwin, Trevor Cohn |
| 14:30–14:55 | Colors in Context: A Pragmatic Neural Model for Grounded Language Understanding Will Monroe, Robert X. D. Hawkins, Noah D. Goodman, Christopher Potts      |
| 14:55–15:20 | Obj2Text: Generating Visually Descriptive Language from Object Layouts Xuwang Yin, Vicente Ordonez   |

#### 15:50–17:30 Session 3B: Generation, Room: Funen, Chair: Wei Xu, Ohio State University

| 15:50–16:15 | Split and Rephrase<br>Shashi Narayan, Claire Gardent, Shay B. Cohen, Anastasia Shimorina  |
|-------------|---|
| 16:15–16:40 | Neural Response Generation via GAN with an Approximate Embedding Layer Zhen Xu, Bingquan Liu, Baoxun Wang, Chengjie SUN, Xiaolong Wang, Zhuoran Wang, Chao Qi |
| 16:40–17:05 | A Hybrid Convolutional Variational Autoencoder for Text Generation Stanislau Semeniuta, Aliaksei Severyn, Erhardt Barth                                       |
| 17:05–17:30 | Filling the Blanks (hint: plural noun) for Mad Libs Humor Nabil Hossain, John Krumm, Lucy Vanderwende, Eric Horvitz, Henry Kautz                              |



#### Track C

#### Zealand

# 10:30–12:10 Session 1C: Multilingual NLP, Room: Zealand, Chair: Ivan Titov, University of Edinburgh

| 10:30–10:55 | Train-O-Matic: Large-Scale Supervised Word Sense Disambiguation in Multiple Languages without Manual Training Data Tommaso Pasini, Roberto Navigli |
|-------------|--|
| 10:55–11:20 | Universal Semantic Parsing<br>Siva Reddy, Oscar Täckström, Slav Petrov, Mark Steedman, Mirella Lapata  |
| 11:20–11:45 | Mimicking Word Embeddings using Subword RNNs<br>Yuval Pinter, Robert Guthrie, Jacob Eisenstein   |
| 11:45–12:10 | Past, Present, Future: A Computational Investigation of the Typology of Tense in 1000 Languages <i>Ehsaneddin Asgari, Hinrich Schütze</i>          |

## 13:40–15:20 Session 2C: Discourse and Summarization, Room: Zealand, Chair: Lu Wang, Northeastern University

| 13:40–14:05 | End-to-end Neural Coreference Resolution<br>Kenton Lee, Luheng He, Mike Lewis, Luke Zettlemoyer                         |
|-------------|---|
| 14:05–14:30 | Neural Net Models of Open-domain Discourse Coherence<br>Jiwei Li, Dan Jurafsky  |
| 14:30–14:55 | Affinity-Preserving Random Walk for Multi-Document Summarization<br>Kexiang Wang, Tianyu Liu, Zhifang Sui, Baobao Chang |
| 14:55–15:20 | A Mention-Ranking Model for Abstract Anaphora Resolution<br>Ana Marasovic, Leo Born, Juri Opitz, Anette Frank           |
|             |   |

#### 15:50–17:30 Session 3C: Semantics 1, Room: Zealand, Chair: Felix Hill, DeepMind

| 15:50–16:15 | Measuring Thematic Fit with Distributional Feature Overlap<br>Enrico Santus, Emmanuele Chersoni, Alessandro Lenci, Philippe Blache   |
|-------------|--|
| 16:15–16:40 | SCDV : Sparse Composite Document Vectors using soft clustering over distributional representations  Dheeraj Mekala, Vivek Gupta, Bhargavi Paranjape, Harish Karnick              |
| 16:40–17:05 | Supervised Learning of Universal Sentence Representations from Natural Language Inference Data <i>Alexis Conneau, Douwe Kiela, Holger Schwenk, Loïc Barrault, Antoine Bordes</i> |
| 17:05–17:30 | Determining Semantic Textual Similarity using Natural Deduction Proofs Hitomi Yanaka, Koji Mineshima, Pascual Martínez-Gómez, Daisuke Bekki                                      |



#### Track D

### Aarhus

#### 10:30-12:10 Session 1D: Demo Session (Posters), Chair: Paul, Michael

The NLTK FrameNet API: Designing for Discoverability with a Rich Linguistic Resource *Nathan Schneider, Chuck Wooters* 

Argotario: Computational Argumentation Meets Serious Games

Ivan Habernal, Raffael Hannemann, Christian Pollak, Christopher Klamm, Patrick Pauli, Iryna Gurevych

An Analysis and Visualization Tool for Case Study Learning of Linguistic Concepts *Cecilia Ovesdotter Alm, Benjamin Meyers, Emily Prud'hommeaux* 

GraphDocExplore: A Framework for the Experimental Comparison of Graph-based Document Exploration Techniques

Tobias Falke, Iryna Gurevych

SGNMT – A Flexible NMT Decoding Platform for Quick Prototyping of New Models and Search Strategies

Felix Stahlberg, Eva Hasler, Danielle Saunders, Bill Byrne

StruAP: A Tool for Bundling Linguistic Trees through Structure-based Abstract Pattern Kohsuke Yanai, Misa Sato, Toshihiko Yanase, Kenzo Kurotsuchi, Yuta Koreeda, Yoshiki Niwa

Know Your Nyms? A Game of Semantic Relationships

Ross Mechanic, Dean Fulgoni, Hannah Cutler, Sneha Rajana, Zheyuan Liu, Bradley Jackson, Anne Cocos, Chris Callison-Burch, Marianna Apidianaki

The Projector: An Interactive Annotation Projection Visualization Tool *Alan Akbik, Roland Vollgraf* 

Interactive Visualization for Linguistic Structure

Aaron Sarnat, Vidur Joshi, Cristian Petrescu-Prahova, Alvaro Herrasti, Brandon Stilson, Mark Hopkins

DLATK: Differential Language Analysis ToolKit

H. Andrew Schwartz, Salvatore Giorgi, Maarten Sap, Patrick Crutchley, Lyle Ungar, Johannes Eichstaedt

QUINT: Interpretable Question Answering over Knowledge Bases *Abdalghani Abujabal, Rishiraj Saha Roy, Mohamed Yahya, Gerhard Weikum* 

Function Assistant: A Tool for NL Querying of APIs

Kyle Richardson, Jonas Kuhn

MoodSwipe: A Soft Keyboard that Suggests MessageBased on User-Specified Emotions

Chieh-Yang Huang, Tristan Labetoulle, Ting-Hao Huang, Yi-Pei Chen, Hung-Chen Chen, Vallari Srivastava, Lun-Wei Ku

ParlAI: A Dialog Research Software Platform

Alexander Miller, Will Feng, Dhruv Batra, Antoine Bordes, Adam Fisch, Jiasen Lu, Devi Parikh, Jason Weston

HeidelPlace: An Extensible Framework for Geoparsing Ludwig Richter, Johanna Geiß, Andreas Spitz, Michael Gertz Unsupervised, Knowledge-Free, and Interpretable Word Sense Disambiguation

Alexander Panchenko, Fide Marten, Eugen Ruppert, Stefano Faralli, Dmitry Ustalov, Simone Paolo Ponzetto, Chris Biemann

NeuroNER: an easy-to-use program for named-entity recognition based on neural networks Franck Dernoncourt, Ji Young Lee, Peter Szolovits

SupWSD: A Flexible Toolkit for Supervised Word Sense Disambiguation Simone Papandrea, Alessandro Raganato, Claudio Delli Bovi

Interactive Abstractive Summarization for Event News Tweets Ori Shapira, Hadar Ronen, Meni Adler, Yael Amsterdamer, Judit Bar-Ilan, Ido Dagan

LangPro: Natural Language Theorem Prover Lasha Abzianidze

Interactive Visualization and Manipulation of Attention-based Neural Machine Translation *Jaesong Lee, Joong-Hwi Shin, Jun-Seok Kim* 

### 13:40–15:20 Session 2D: Poster Session. Embeddings, Room: Aarhus, Chair: Heike Adel, LMU Munich

Hierarchical Embeddings for Hypernymy Detection and Directionality Kim Anh Nguyen, Maximilian Köper, Sabine Schulte im Walde, Ngoc Thang Vu

Ngram2vec: Learning Improved Word Representations from Ngram Co-occurrence Statistics *Zhe Zhao, Tao Liu, Shen Li, Bofang Li, Xiaoyong Du* 

Dict2vec: Learning Word Embeddings using Lexical Dictionaries *Julien Tissier, Christopher Gravier, Amaury Habrard* 

Learning Chinese Word Representations From Glyphs Of Characters *Tzu-ray Su, Hung-yi Lee* 

Learning Paraphrastic Sentence Embeddings from Back-Translated Bitext John Wieting, Jonathan Mallinson, Kevin Gimpel

Joint Embeddings of Chinese Words, Characters, and Fine-grained Subcharacter Components *Jinxing Yu, Xun Jian, Hao Xin, Yangqiu Song* 

Exploiting Morphological Regularities in Distributional Word Representations

Arihant Gupta, Syed Sarfaraz Akhtar, Avijit Vajpayee, Arjit Srivastava, Madan Gopal Jhanwar, Manish Shrivastava

Exploiting Word Internal Structures for Generic Chinese Sentence Representation Shaonan Wang, Jiajun Zhang, Chengqing Zong

High-risk learning: acquiring new word vectors from tiny data *Aurélie Herbelot, Marco Baroni* 

Word Embeddings based on Fixed-Size Ordinally Forgetting Encoding *Joseph Sanu, Mingbin Xu, Hui Jiang, Quan Liu* 

VecShare: A Framework for Sharing Word Representation Vectors Jared Fernandez, Zhaocheng Yu, Doug Downey

Word Re-Embedding via Manifold Dimensionality Retention Souleiman Hasan, Edward Curry MUSE: Modularizing Unsupervised Sense Embeddings Guang-He Lee, Yun-Nung Chen

## 15:50–17:30 Session 3D: Poster Session. Syntax 2, Room: Aarhus, Chair: Yuval Pinter, Georgia Tech

Multi-Grained Chinese Word Segmentation Chen Gong, Zhenghua Li, Min Zhang, Xinzhou Jiang

Don't Throw Those Morphological Analyzers Away Just Yet: Neural Morphological Disambiguation for Arabic

Nasser Zalmout, Nizar Habash

Paradigm Completion for Derivational Morphology Ryan Cotterell, Ekaterina Vylomova, Huda Khayrallah, Christo Kirov, David Yarowsky

A Sub-Character Architecture for Korean Language Processing Karl Stratos

Do LSTMs really work so well for PoS tagging? – A replication study *Tobias Horsmann, Torsten Zesch* 

The Labeled Segmentation of Printed Books Lara McConnaughey, Jennifer Dai, David Bamman

Cross-lingual Character-Level Neural Morphological Tagging Ryan Cotterell, Georg Heigold

Word-Context Character Embeddings for Chinese Word Segmentation Hao Zhou, Zhenting Yu, Yue Zhang, Shujian Huang, XIN-YU DAI, Jiajun Chen

Segmentation-Free Word Embedding for Unsegmented Languages Takamasa Oshikiri



#### Track E

#### Odense

13:40–15:20 Session 2E: Poster Session. Machine Learning 1, Room: Odense, Chair: Pontus Stenetorp, University College London

Reporting Score Distributions Makes a Difference: Performance Study of LSTM-networks for Sequence Tagging

Nils Reimers, Iryna Gurevych

Learning What's Easy: Fully Differentiable Neural Easy-First Taggers

André F. T. Martins, Julia Kreutzer

Incremental Skip-gram Model with Negative Sampling *Nobuhiro Kaji, Hayato Kobayashi* 

Learning to select data for transfer learning with Bayesian Optimization Sebastian Ruder, Barbara Plank

Unsupervised Pretraining for Sequence to Sequence Learning *Prajit Ramachandran, Peter Liu, Quoc Le* 

Efficient Attention using a Fixed-Size Memory Representation Denny Britz, Melody Guan, Minh-Thang Luong

Rotated Word Vector Representations and their Interpretability Sungjoon Park, Jin Yeong Bak, Alice Oh

A causal framework for explaining the predictions of black-box sequence-to-sequence models *David Alvarez-Melis, Tommi Jaakkola* 

Piecewise Latent Variables for Neural Variational Text Processing *Iulian Vlad Serban, Alexander G. Ororbia, Joelle Pineau, Aaron Courville* 

Learning the Structure of Variable-Order CRFs: a finite-state perspective *Thomas Lavergne, François Yvon* 

Sparse Communication for Distributed Gradient Descent Alham Fikri Aji, Kenneth Heafield

A Joint Many-Task Model: Growing a Neural Network for Multiple NLP Tasks Kazuma Hashimoto, caiming xiong, Yoshimasa Tsuruoka, Richard Socher

Why ADAGRAD Fails for Online Topic Modeling You Lu, Jeffrey Lund, Jordan Boyd-Graber

15:50–17:30 Session 3E: Poster Session. Question Answering and Machine Comprehension, Room: Odense, Chair: Jay Pujara, University of Maryland

From Textbooks to Knowledge: A Case Study in Harvesting Axiomatic Knowledge from Textbooks to Solve Geometry Problems

Mrinmaya Sachan, Kumar Dubey, Eric Xing

## RACE: Large-scale ReAding Comprehension Dataset From Examinations Guokun Lai, Qizhe Xie, Hanxiao Liu, Yiming Yang, Eduard Hovy

Beyond Sentential Semantic Parsing: Tackling the Math SAT with a Cascade of Tree Transducers Mark Hopkins, Cristian Petrescu-Prahova, Roie Levin, Ronan Le Bras, Alvaro Herrasti, Vidur Joshi

Learning Fine-Grained Expressions to Solve Math Word Problems Danqing Huang, Shuming Shi, Chin-Yew Lin, Jian Yin

Structural Embedding of Syntactic Trees for Machine Comprehension Rui Liu, Junjie Hu, Wei Wei, Zi Yang, Eric Nyberg

World Knowledge for Reading Comprehension: Rare Entity Prediction with Hierarchical LSTMs Using External Descriptions

Teng Long, Emmanuel Bengio, Ryan Lowe, Jackie Chi Kit Cheung, Doina Precup

Two-Stage Synthesis Networks for Transfer Learning in Machine Comprehension David Golub, Po-Sen Huang, Xiaodong He, Li Deng

Deep Neural Solver for Math Word Problems Yan Wang, Xiaojiang Liu, Shuming Shi

Latent Space Embedding for Retrieval in Question-Answer Archives Deepak P, Dinesh Garg, Shirish Shevade

Question Generation for Question Answering Nan Duan, Duyu Tang, Peng Chen, Ming Zhou

Learning to Paraphrase for Question Answering Li Dong, Jonathan Mallinson, Siva Reddy, Mirella Lapata

Temporal Information Extraction for Question Answering Using Syntactic Dependencies in an LSTM-based Architecture

Yuanliang Meng, Anna Rumshisky, Alexey Romanov

Ranking Kernels for Structures and Embeddings: A Hybrid Preference and Classification Model *Kateryna Tymoshenko, Daniele Bonadiman, Alessandro Moschitti* 

Recovering Question Answering Errors via Query Revision Semih Yavuz, Izzeddin Gur, Yu Su, Xifeng Yan



## Track F Copenhagen

## 13:40–15:20 Session 2F: Poster Session. Sentiment Analysis 1, Room: Copenhagen, Chair: Diyi Yang, Carnegie Mellon University

Recurrent Attention Network on Memory for Aspect Sentiment Analysis *Peng Chen, Zhongqian Sun, Lidong Bing, Wei Yang* 

A Cognition Based Attention Model for Sentiment Analysis Yunfei Long, Lu Qin, Rong Xiang, Minglei Li, Chu-Ren Huang

Author-aware Aspect Topic Sentiment Model to Retrieve Supporting Opinions from Reviews Lahari Poddar, Wynne Hsu, Mong Li Lee

Magnets for Sarcasm: Making Sarcasm Detection Timely, Contextual and Very Personal Aniruddha Ghosh, Tony Veale

Identifying Humor in Reviews using Background Text Sources *Alex Morales, Chengxiang Zhai* 

Sentiment Lexicon Construction with Representation Learning Based on Hierarchical Sentiment Supervision

Leyi Wang, Rui Xia

Towards a Universal Sentiment Classifier in Multiple languages Kui Xu, Xiaojun Wan

Capturing User and Product Information for Document Level Sentiment Analysis with Deep Memory Network

Zi-Yi Dou

Identifying and Tracking Sentiments and Topics from Social Media Texts during Natural Disasters Min Yang, Jincheng Mei, Heng Ji, zhao wei, Zhou Zhao, Xiaojun Chen

Refining Word Embeddings for Sentiment Analysis Liang-Chih Yu, Jin Wang, K. Robert Lai, Xuejie Zhang

A Multilayer Perceptron based Ensemble Technique for Fine-grained Financial Sentiment Analysis Md Shad Akhtar, Abhishek Kumar, Deepanway Ghosal, Asif Ekbal, Pushpak Bhattacharyya

Sentiment Intensity Ranking among Adjectives Using Sentiment Bearing Word Embeddings Raksha Sharma, Arpan Somani, Lakshya Kumar, Pushpak Bhattacharyya

Sentiment Lexicon Expansion Based on Neural PU Learning, Double Dictionary Lookup, and Polarity Association

Yasheng Wang, Yang Zhang, Bing Liu

## 15:50–17:30 Session 3F: Poster Session. Multimodal NLP 1, Room: Copenhagen, Chair: Tianze Shi, Cornell University

An empirical study on the effectiveness of images in Multimodal Neural Machine Translation *Jean-Benoit Delbrouck, Stéphane Dupont* 

Sound-Word2Vec: Learning Word Representations Grounded in Sounds Ashwin Vijayakumar, Ramakrishna Vedantam, Devi Parikh

The Promise of Premise: Harnessing Question Premises in Visual Question Answering *Aroma Mahendru, Viraj Prabhu, Akrit Mohapatra, Dhruv Batra, Stefan Lee* 

Guided Open Vocabulary Image Captioning with Constrained Beam Search Peter Anderson, Basura Fernando, Mark Johnson, Stephen Gould

Zero-Shot Activity Recognition with Verb Attribute Induction Rowan Zellers, Yejin Choi

Deriving continous grounded meaning representations from referentially structured multimodal contexts Sina Zarrieß, David Schlangen

Hierarchically-Attentive RNN for Album Summarization and Storytelling Licheng Yu, Mohit Bansal, Tamara Berg

Video Highlight Prediction Using Audience Chat Reactions Cheng-Yang Fu, Joon Lee, Mohit Bansal, Alexander Berg

Reinforced Video Captioning with Entailment Rewards Ramakanth Pasunuru, Mohit Bansal

Evaluating Hierarchies of Verb Argument Structure with Hierarchical Clustering *Jesse Mu, Joshua K. Hartshorne, Timothy O'Donnell* 

Incorporating Global Visual Features into Attention-based Neural Machine Translation. *Iacer Calixto, Qun Liu* 

Mapping Instructions and Visual Observations to Actions with Reinforcement Learning Dipendra Misra, John Langford, Yoav Artzi

An analysis of eye-movements during reading for the detection of mild cognitive impairment *Kathleen C. Fraser, Kristina Lundholm Fors, Dimitrios Kokkinakis, Arto Nordlund* 

Evaluating Low-Level Speech Features Against Human Perceptual Data Naomi H Feldman, Caitlin Richter, Harini Salgado, Aren Jansen



#### Track A

### Jutland

# 10:30–12:10 Session 4A: Reading and Retrieving, Room: Jutland, Chair: Heng Ji, Rensselaer Polytechnic Institute

| 10:30–10:55 | A Structured Learning Approach to Temporal Relation Extraction Qiang Ning, Zhili Feng, Dan Roth   |
|-------------|---|
| 10:55–11:20 | Importance sampling for unbiased on-demand evaluation of knowledge base population Arun Chaganty, Ashwin Paranjape, Percy Liang, Christopher D. Manning |
| 11:20–11:45 | PACRR: A Position-Aware Neural IR Model for Relevance Matching Kai Hui, Andrew Yates, Klaus Berberich, Gerard de Melo                                   |
| 11:45–12:10 | Globally Normalized Reader<br>Jonathan Raiman, John Miller  |

## 13:40–15:20 Session 5A: Semantics 3, Room: Jutland, Chair: Roberto Navigli, Sapienza University of Rome

| 13:40–14:05 | Encoding Sentences with Graph Convolutional Networks for Semantic Role Labeling  Diego Marcheggiani, Ivan Titov                          |
|-------------|--|
| 14:05–14:30 | Neural Semantic Parsing with Type Constraints for Semi-Structured Tables <i>Jayant Krishnamurthy, Pradeep Dasigi, Matt Gardner</i>       |
| 14:30–14:55 | Joint Concept Learning and Semantic Parsing from Natural Language Explanations Shashank Srivastava, Igor Labutov, Tom Mitchell           |
| 14:55–15:20 | Grasping the Finer Point: A Supervised Similarity Network for Metaphor Detection  Marek Rei, Luana Bulat, Douwe Kiela, Ekaterina Shutova |

## 15:50–17:30 Session 6A: Machine Translation 2, Room: Jutland, Chair: Timothy Baldwin, University of Melbourne

| 15:50–16:15 | Earth Mover's Distance Minimization for Unsupervised Bilingual Lexicon Induction  Meng Zhang, Yang Liu, Huanbo Luan, Maosong Sun                           |
|-------------|--|
| 16:15–16:40 | Unfolding and Shrinking Neural Machine Translation Ensembles Felix Stahlberg, Bill Byrne   |
| 16:40–17:05 | Graph Convolutional Encoders for Syntax-aware Neural Machine Translation <i>Joost Bastings, Ivan Titov, Wilker Aziz, Diego Marcheggiani, Khalil Simaan</i> |
| 17:05–17:30 | Trainable Greedy Decoding for Neural Machine Translation<br>Jiatao Gu, Kyunghyun Cho, Victor O.K. Li   |



#### Track B

#### Funen

| 10:30-12:10                | Session 4B: Multimodal NLP 2, Room: Funen, Chair: Brian Roark, Google   |
|----------------------------|---|
| 10:30–10:55                | Speech segmentation with a neural encoder model of working memory <i>Micha Elsner, Cory Shain</i>   |
| 10:55–11:20                | Speaking, Seeing, Understanding: Correlating semantic models with conceptual representation in the brain Luana Bulat, Stephen Clark, Ekaterina Shutova  |
| 11:20–11:45                | Multi-modal Summarization for Asynchronous Collection of Text, Image, Audio and Video Haoran Li, Junnan Zhu, Cong Ma, Jiajun Zhang, Chengqing Zong  |
| 11:45–12:10                | Tensor Fusion Network for Multimodal Sentiment Analysis  Amir Zadeh, Minghai Chen, Soujanya Poria, Erik Cambria, Louis-Philippe Morency   |
|                            | Session 5B: Computational Social Science 1, Room: Funen, Chair: Smith, Noah<br>ity of Washington  |
| 13:40–14:05                | Identifying civilians killed by police with distantly supervised entity-event extraction  Katherine Keith, Abram Handler, Michael Pinkham, Cara Magliozzi, Joshua McDuffie,  Brendan O'Connor |
| 14:05–14:30                | Asking too much? The rhetorical role of questions in political discourse Justine Zhang, Arthur Spirling, Cristian Danescu-Niculescu-Mizil   |
| 14:30–14:55                | Detecting Perspectives in Political Debates  David Vilares, Yulan He  |
| 14:55–15:20                | "i have a feeling trump will win": Forecasting Winners and Losers from User Predictions on Twitter Sandesh Swamy, Alan Ritter, Marie-Catherine de Marneffe                                    |
| 15:50–17:30<br>Burstein, E | Session 6B: Text Mining and NLP applications, Room: Funen, Chair: Jill  |
| 15:50–16:15                | Satirical News Detection and Analysis using Attention Mechanism and Linguistic Features Fan Yang, Arjun Mukherjee, Eduard Dragut  |
| 16:15–16:40                | Fine Grained Citation Span for References in Wikipedia Besnik Fetahu, Katja Markert, Avishek Anand  |
|                            |   |

Joint Modeling of Topics, Citations, and Topical Authority in Academic Corpora

Identifying Semantic Edit Intentions from Revisions in Wikipedia

Diyi Yang, Aaron Halfaker, Robert Kraut, Eduard Hovy

Jooyeon Kim, Dongwoo Kim, Alice Oh

16:40–17:05

17:05–17:30



#### Track C

#### Zealand

## 10:30–12:10 Session 4C: Human Centered NLP and Linguistic Theory, Room: Zealand, Chair: Alan Ritter, Ohio State University

| 10:30–10:55 | ConStance: Modeling Annotation Contexts to Improve Stance Classification Kenneth Joseph, Lisa Friedland, William Hobbs, David Lazer, Oren Tsur |
|-------------|--|
| 10:55–11:20 | Deeper Attention to Abusive User Content Moderation<br>John Pavlopoulos, Prodromos Malakasiotis, Ion Androutsopoulos                           |
| 11:20–11:45 | Outta Control: Laws of Semantic Change and Inherent Biases in Word Representation Models haim dubossarsky, Daphna Weinshall, Eitan Grossman    |
| 11:45–12:10 | Human Centered NLP with User-Factor Adaptation Veronica Lynn, Youngseo Son, Vivek Kulkarni, Niranjan Balasubramanian, H. Andrew Schwartz       |

## 13:40–15:20 Session 5C: Sentiment Analysis 2, Room: Zealand, Chair: Pascale Fung, Hong Kong University of Science & Technology

| 13:40–14:05 | A Question Answering Approach for Emotion Cause Extraction Lin Gui, Jiannan Hu, Yulan He, Ruifeng Xu, Lu Qin, Jiachen Du  |
|-------------|---|
| 14:05–14:30 | Story Comprehension for Predicting What Happens Next Snigdha Chaturvedi, Haoruo Peng, Dan Roth  |
| 14:30–14:55 | Using millions of emoji occurrences to learn any-domain representations for detecting sentiment, emotion and sarcasm <i>Bjarke Felbo, Alan Mislove, Anders Søgaard, Iyad Rahwan, Sune Lehmann</i> |
| 14:55–15:20 | Opinion Recommendation Using A Neural Model Zhongqing Wang, Yue Zhang   |

## 15:50–17:30 Session 6C: Machine Comprehension, Room: Zealand, Chair: Ndapa Nakashole, University of California, San Diego

| 15:50–16:15 | Accurate Supervised and Semi-Supervised Machine Reading for Long Documents Daniel Hewlett, Llion Jones, Alexandre Lacoste, izzeddin gur |
|-------------|---|
| 16:15–16:40 | Adversarial Examples for Evaluating Reading Comprehension Systems <i>Robin Jia, Percy Liang</i>   |
| 16:40–17:05 | Reasoning with Heterogeneous Knowledge for Commonsense Machine Comprehension  Hongyu Lin, Le Sun, Xianpei Han                           |
| 17:05–17:30 | Document-Level Multi-Aspect Sentiment Classification as Machine Comprehension <i>Yichun Yin, Yangqiu Song, Ming Zhang</i>               |



#### Track D

### Aarhus

## 10:30–12:10 Session 4D: Poster Session. Semantics 2, Room: Aarhus, Chair: Ivan Vulić, University of Cambridge

Neural Sequence Learning Models for Word Sense Disambiguation *Alessandro Raganato, Claudio Delli Bovi, Roberto Navigli* 

Learning Word Relatedness over Time Guy D. Rosin, Eytan Adar, Kira Radinsky

Inter-Weighted Alignment Network for Sentence Pair Modeling Gehui Shen, Yunlun Yang, Zhi-Hong Deng

A Short Survey on Taxonomy Learning from Text Corpora: Issues, Resources and Recent Advances Chengyu Wang, Xiaofeng He, Aoying Zhou

Idiom-Aware Compositional Distributed Semantics Pengfei Liu, Kaiyu Qian, Xipeng Qiu, Xuanjing Huang

Macro Grammars and Holistic Triggering for Efficient Semantic Parsing Yuchen Zhang, Panupong Pasupat, Percy Liang

A Continuously Growing Dataset of Sentential Paraphrases Wuwei Lan, Siyu Qiu, Hua He, Wei Xu

Cross-domain Semantic Parsing via Paraphrasing *Yu Su, Xifeng Yan* 

A Joint Sequential and Relational Model for Frame-Semantic Parsing Bishan Yang, Tom Mitchell

Getting the Most out of AMR Parsing Chuan Wang, Nianwen Xue

AMR Parsing using Stack-LSTMs Miguel Ballesteros, Yaser Al-Onaizan

An End-to-End Deep Framework for Answer Triggering with a Novel Group-Level Objective Jie Zhao, Yu Su, Ziyu Guan, Huan Sun

Predicting Word Association Strengths *Andrew Cattle, Xiaojuan Ma* 

## 13:40–15:20 Session 5D: Poster Session. Syntax 3, Room: Aarhus, Chair: Ryan Cotterell, Johns Hopkins University

CRF Autoencoder for Unsupervised Dependency Parsing Jiong Cai, Yong Jiang, Kewei Tu

Efficient Discontinuous Phrase-Structure Parsing via the Generalized Maximum Spanning Arborescence Caio Corro, Joseph Le Roux, Mathieu Lacroix

## Incremental Graph-based Neural Dependency Parsing Xiaoqing Zheng

### Neural Discontinuous Constituency Parsing Miloš Stanojević, Raquel Garrido Alhama

Stack-based Multi-layer Attention for Transition-based Dependency Parsing Zhirui Zhang, Shujie Liu, Mu Li, Ming Zhou, Enhong Chen

Dependency Grammar Induction with Neural Lexicalization and Big Training Data Wenjuan Han, Yong Jiang, Kewei Tu

Combining Generative and Discriminative Approaches to Unsupervised Dependency Parsing via Dual Decomposition

Yong Jiang, Wenjuan Han, Kewei Tu

Effective Inference for Generative Neural Parsing Mitchell Stern, Daniel Fried, Dan Klein

Semi-supervised Structured Prediction with Neural CRF Autoencoder Xiao Zhang, Yong Jiang, Hao Peng, Kewei Tu, Dan Goldwasser

TAG Parsing with Neural Networks and Vector Representations of Supertags Jungo Kasai, Bob Frank, Tom McCoy, Owen Rambow, Alexis Nasr

## 15:50–17:30 Session 6D: Poster Session. Summarization, Generation, Dialog, and Discourse 1, Room: Aarhus, Chair: Yangfeng Ji, University of Washington

What is the Essence of a Claim? Cross-Domain Claim Identification *Johannes Daxenberger, Steffen Eger, Ivan Habernal, Christian Stab, Iryna Gurevych* 

Identifying Where to Focus in Reading Comprehension for Neural Question Generation *Xinya Du, Claire Cardie* 

Break it Down for Me: A Study in Automated Lyric Annotation Lucas Sterckx, Jason Naradowsky, Bill Byrne, Thomas Demeester, Chris Develder

Cascaded Attention based Unsupervised Information Distillation for Compressive Summarization *Piji Li, Wai Lam, Lidong Bing, Weiwei Guo, Hang Li* 

Deep Recurrent Generative Decoder for Abstractive Text Summarization *Piji Li, Wai Lam, Lidong Bing, Zihao Wang* 

Extractive Summarization Using Multi-Task Learning with Document Classification *Masaru Isonuma, Toru Fujino, Junichiro Mori, Yutaka Matsuo, Ichiro Sakata* 

Towards Automatic Construction of News Overview Articles by News Synthesis *Jianmin Zhang, Xiaojun Wan* 

Joint Syntacto-Discourse Parsing and the Syntacto-Discourse Treebank *Kai Zhao, Liang Huang* 

Event Coreference Resolution by Iteratively Unfolding Inter-dependencies among Events *Prafulla Kumar Choubey, Ruihong Huang* 

When to Finish? Optimal Beam Search for Neural Text Generation (modulo beam size) *Liang Huang, Kai Zhao, Mingbo Ma* 

| teering Output Style and Topic in Neural Response Generation<br>Di Wang, Nebojsa Jojic, Chris Brockett, Eric Nyberg |  |  |  |  |  |
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#### Track E

#### Odense

## 10:30–12:10 Session 4E: Poster Session. Discourse, Room: Odense, Chair: Sam Wiseman, Harvard University

Learning Contextually Informed Representations for Linear-Time Discourse Parsing Yang Liu, Mirella Lapata

Multi-task Attention-based Neural Networks for Implicit Discourse Relationship Representation and Identification

Man Lan, Jianxiang Wang, Yuanbin Wu, Zheng-Yu Niu, Haifeng Wang

Chinese Zero Pronoun Resolution with Deep Memory Network Qingyu Yin, Yu Zhang, Weinan Zhang, Ting Liu

How much progress have we made on RST discourse parsing? A replication study of recent results on the RST-DT

Mathieu Morey, Philippe Muller, Nicholas Asher

What is it? Disambiguating the different readings of the pronoun 'it' Sharid Loáiciga, Liane Guillou, Christian Hardmeier

Revisiting Selectional Preferences for Coreference Resolution Benjamin Heinzerling, Nafise Sadat Moosavi, Michael Strube

Learning to Rank Semantic Coherence for Topic Segmentation Liang Wang, Sujian Li, Yajuan Lv, Houfeng WANG

GRASP: Rich Patterns for Argumentation Mining Eyal Shnarch, Ran Levy, Vikas Raykar, Noam Slonim

Patterns of Argumentation Strategies across Topics Khalid Al Khatib, Henning Wachsmuth, Matthias Hagen, Benno Stein

Using Argument-based Features to Predict and Analyse Review Helpfulness Haijing Liu, Yang Gao, Pin Lv, Mengxue Li, Shiqiang Geng, Minglan Li, Hao Wang

Here's My Point: Joint Pointer Architecture for Argument Mining Peter Potash, Alexey Romanov, Anna Rumshisky

Identifying attack and support argumentative relations using deep learning Oana Cocarascu, Francesca Toni

## 13:40–15:20 Session 5E: Poster Session. Relations, Room: Odense, Chair: Bishan Yang, Carnegie Mellon University

Global Normalization of Convolutional Neural Networks for Joint Entity and Relation Classification Heike Adel, Hinrich Schütze

End-to-End Neural Relation Extraction with Global Optimization *Meishan Zhang, Yue Zhang, Guohong Fu* 

KGEval: Accuracy Estimation of Automatically Constructed Knowledge Graphs *Prakhar Ojha, Partha Talukdar* 

Sparsity and Noise: Where Knowledge Graph Embeddings Fall Short *Jay Pujara, Eriq Augustine, Lise Getoor* 

Dual Tensor Model for Detecting Asymmetric Lexico-Semantic Relations *Goran Glavaš, Simone Paolo Ponzetto* 

Incorporating Relation Paths in Neural Relation Extraction Wenyuan Zeng, Yankai Lin, Zhiyuan Liu, Maosong Sun

Adversarial Training for Relation Extraction *Yi Wu, David Bamman, Stuart Russell* 

Context-Aware Representations for Knowledge Base Relation Extraction Daniil Sorokin, Iryna Gurevych

A Soft-label Method for Noise-tolerant Distantly Supervised Relation Extraction Tianyu Liu, Kexiang Wang, Baobao Chang, Zhifang Sui

A Sequential Model for Classifying Temporal Relations between Intra-Sentence Events *Prafulla Kumar Choubey, Ruihong Huang* 

Deep Residual Learning for Weakly-Supervised Relation Extraction *YiYao Huang, William Yang Wang* 

Noise-Clustered Distant Supervision for Relation Extraction: A Nonparametric Bayesian Perspective Qing Zhang, Houfeng Wang

Exploring Vector Spaces for Semantic Relations Kata Gábor, Haifa Zargayouna, Isabelle Tellier, Davide Buscaldi, Thierry Charnois

Temporal dynamics of semantic relations in word embeddings: an application to predicting armed conflict participants

Andrey Kutuzov, Erik Velldal, Lilja Øvrelid

# 15:50–17:30 Session 6E: Poster Session. Summarization, Generation, Dialog, and Discourse 2, Room: Odense, Chair: Natalie Schluter, IT University of Copenhagen, Chair: 2 Elkin Dario Gutierrez

Preserving Distributional Information in Dialogue Act Classification Quan Hung Tran, Ingrid Zukerman, Gholamreza Haffari

Adversarial Learning for Neural Dialogue Generation *Jiwei Li, Will Monroe, Tianlin Shi, Sébastien Jean, Alan Ritter, Dan Jurafsky* 

Using Context Information for Dialog Act Classification in DNN Framework Yang Liu, Kun Han, Zhao Tan, Yun Lei

Modeling Dialogue Acts with Content Word Filtering and Speaker Preferences Yohan Jo, Michael Yoder, Hyeju Jang, Carolyn Rose

Towards Implicit Content-Introducing for Generative Short-Text Conversation Systems Lili Yao, Yaoyuan Zhang, Yansong Feng, Dongyan Zhao, Rui Yan

Affordable On-line Dialogue Policy Learning Cheng Chang, Runzhe Yang, Lu Chen, Xiang Zhou, Kai Yu Generating High-Quality and Informative Conversation Responses with Sequence-to-Sequence Models Yuanlong Shao, Stephan Gouws, Denny Britz, Anna Goldie, Brian Strope, Ray Kurzweil

Bootstrapping incremental dialogue systems from minimal data: the generalisation power of dialogue grammars

Arash Eshghi, Igor Shalyminov, Oliver Lemon

Composite Task-Completion Dialogue Policy Learning via Hierarchical Deep Reinforcement Learning Baolin Peng, Xiujun Li, Lihong Li, Jianfeng Gao, Asli Celikyilmaz, Sungjin Lee, Kam-Fai Wong

Why We Need New Evaluation Metrics for NLG *Jekaterina Novikova, Ondřej Dušek, Amanda Cercas Curry, Verena Rieser* 

Challenges in Data-to-Document Generation Sam Wiseman, Stuart Shieber, Alexander Rush



## Track F Copenhagen

10:30–12:10 Session 4F: Poster Session. Machine Translation and Multilingual NLP 1, Room: Copenhagen, Chair: Anahita Mansouri Bigvand, Simon Fraser University

Neural Lattice-to-Sequence Models for Uncertain Inputs *Matthias Sperber, Graham Neubig, Jan Niehues, Alex Waibel* 

Memory-augmented Neural Machine Translation Yang Feng, Shiyue Zhang, Andi Zhang, Dong Wang, Andrew Abel

Dynamic Data Selection for Neural Machine Translation *Marlies van der Wees, Arianna Bisazza, Christof Monz* 

Neural Machine Translation Leveraging Phrase-based Models in a Hybrid Search Leonard Dahlmann, Evgeny Matusov, Pavel Petrushkov, Shahram Khadivi

Translating Phrases in Neural Machine Translation Xing Wang, Zhaopeng Tu, Deyi Xiong, Min Zhang

Towards Bidirectional Hierarchical Representations for Attention-based Neural Machine Translation *Baosong Yang, Derek F. Wong, Tong Xiao, Lidia S. Chao, Jingbo Zhu* 

Exploring Hyperparameter Sensitivity in Neural Machine Translation Architectures Denny Britz, Anna Goldie, Minh-Thang Luong, Quoc Le

Learning Translations via Matrix Completion

Derry Tanti Wijaya, Brendan Callahan, John Hewitt, Jie Gao, Xiao Ling, Marianna Apidianaki, Chris Callison-Burch

Reinforcement Learning for Bandit Neural Machine Translation with Simulated Human Feedback Khanh Nguyen, Hal Daumé III, Jordan Boyd-Graber

Towards Compact and Fast Neural Machine Translation Using a Combined Method Xiaowei Zhang, Wei Chen, Feng Wang, Shuang Xu, Bo Xu

Instance Weighting for Neural Machine Translation Domain Adaptation Rui Wang, Masao Utiyama, Lemao Liu, Kehai Chen, Eiichiro Sumita

Regularization techniques for fine-tuning in neural machine translation *Antonio Valerio Miceli Barone, Barry Haddow, Ulrich Germann, Rico Sennrich* 

Source-Side Left-to-Right or Target-Side Left-to-Right? An Empirical Comparison of Two Phrase-Based Decoding Algorithms

Yin-Wen Chang, Michael Collins

Using Target-side Monolingual Data for Neural Machine Translation through Multi-task Learning *Tobias Domhan, Felix Hieber* 

13:40–15:20 Session 5F: Poster Session. Language Models, Text Mining, and Crowd Sourcing, Room: Copenhagen, Chair: Allen Schmaltz, Harvard University

## Dynamic Entity Representations in Neural Language Models Yangfeng Ji, Chenhao Tan, Sebastian Martschat, Yejin Choi, Noah A. Smith

Towards Quantum Language Models Ivano Basile, Fabio Tamburini

Reference-Aware Language Models Zichao Yang, Phil Blunsom, Chris Dyer, Wang Ling

A Simple Language Model based on PMI Matrix Approximations *Oren Melamud, Ido Dagan, Jacob Goldberger* 

Syllable-aware Neural Language Models: A Failure to Beat Character-aware Ones Zhenisbek Assylbekov, Rustem Takhanov, Bagdat Myrzakhmetov, Jonathan N. Washington

Inducing Semantic Micro-Clusters from Deep Multi-View Representations of Novels Lea Frermann, György Szarvas

Initializing Convolutional Filters with Semantic Features for Text Classification Shen Li, Zhe Zhao, Tao Liu, Renfen Hu, Xiaoyong Du

Shortest-Path Graph Kernels for Document Similarity Giannis Nikolentzos, Polykarpos Meladianos, Francois Rousseau, Yannis Stavrakas, Michalis Vazirgiannis

Adapting Topic Models using Lexical Associations with Tree Priors Weiwei Yang, Jordan Boyd-Graber, Philip Resnik

Finding Patterns in Noisy Crowds: Regression-based Annotation Aggregation for Crowdsourced Data Natalie Parde, Rodney Nielsen

CROWD-IN-THE-LOOP: A Hybrid Approach for Annotating Semantic Roles Chenguang Wang, Alan Akbik, laura chiticariu, Yunyao Li, Fei Xia, Anbang Xu

## 15:50–17:30 Session 6F: Poster Session. Computational Social Science 2, Room: Copenhagen, Chair: Afshin Rahimi, University of Melbourne

All that is English may be Hindi: Enhancing language identification through automatic ranking of the likeliness of word borrowing in social media

Jasabanta Patro, Bidisha Samanta, Saurabh Singh, Abhipsa Basu, Prithwish Mukherjee, Monojit Choudhury, Animesh Mukherjee

Multi-View Unsupervised User Feature Embedding for Social Media-based Substance Use Prediction *Tao Ding, Warren K. Bickel, Shimei Pan* 

Demographic-aware word associations Aparna Garimella, Carmen Banea, Rada Mihalcea

A Factored Neural Network Model for Characterizing Online Discussions in Vector Space Hao Cheng, Hao Fang, Mari Ostendorf

Dimensions of Interpersonal Relationships: Corpus and Experiments *Farzana Rashid, Eduardo Blanco* 

Argument Mining on Twitter: Arguments, Facts and Sources *Mihai Dusmanu, Elena Cabrio, Serena Villata* 

Distinguishing Japanese Non-standard Usages from Standard Ones *Tatsuya Aoki, Ryohei Sasano, Hiroya Takamura, Manabu Okumura* 

Connotation Frames of Power and Agency in Modern Films Maarten Sap, Marcella Cindy Prasettio, Ari Holtzman, Hannah Rashkin, Yejin Choi

Controlling Human Perception of Basic User Traits

Daniel Preoţiuc-Pietro, Sharath Chandra Guntuku, Lyle Ungar

Topic Signatures in Political Campaign Speeches Clément Gautrais, Peggy Cellier, René Quiniou, Alexandre Termier

Assessing Objective Recommendation Quality through Political Forecasting H. Andrew Schwartz, Masoud Rouhizadeh, Michael Bishop, Philip Tetlock, Barbara Mellers, Lyle Ungar

Never Abandon Minorities: Exhaustive Extraction of Bursty Phrases on Microblogs Using Set Cover Problem

Masumi Shirakawa, Takahiro Hara, Takuya Maekawa



#### Track A

### Jutland

# 10:30–12:10 Session 7A: Machine Learning 3, Room: Jutland, Chair: Barbara Plank, University of Groningen

| 10:30–10:55 | Maximum Margin Reward Networks for Learning from Explicit and Implicit Supervision  Haoruo Peng, Ming-Wei Chang, Wen-tau Yih                                |
|-------------|---|
| 10:55–11:20 | The Impact of Modeling Overall Argumentation with Tree Kernels Henning Wachsmuth, Giovanni Da San Martino, Dora Kiesel, Benno Stein                         |
| 11:20–11:45 | Learning Generic Sentence Representations Using Convolutional Neural Networks  Zhe Gan, Yunchen Pu, Ricardo Henao, Chunyuan Li, Xiaodong He, Lawrence Carin |
| 11:45–12:10 | Repeat before Forgetting: Spaced Repetition for Efficient and Effective Training of Neural Networks  Hadi Amiri, Timothy Miller, Guergana Savova            |

# 13:40–15:25 Session 8A: Machine Translation and Multilingual/Multimodal NLP (Short), Room: Jutland, Chair: Yulia Tsvetkov, Carnegie Mellon University

| 13:40–13:55 | A Study of Style in Machine Translation: Controlling the Formality of Machine Translation Output Xing Niu, Marianna Martindale, Marine Carpuat                       |
|-------------|--|
| 13:55–14:10 | Sharp Models on Dull Hardware: Fast and Accurate Neural Machine Translation Decoding on the CPU <i>Jacob Devlin</i>  |
| 14:10–14:25 | Exploiting Cross-Sentence Context for Neural Machine Translation Longyue Wang, Zhaopeng Tu, Andy Way, Qun Liu  |
| 14:25–14:40 | Cross-Lingual Transfer Learning for POS Tagging without Cross-Lingual Resources  Joo-Kyung Kim, Young-Bum Kim, Ruhi Sarikaya, Eric Fosler-Lussier                    |
| 14:40–14:55 | Image Pivoting for Learning Multilingual Multimodal Representations Spandana Gella, Rico Sennrich, Frank Keller, Mirella Lapata                                      |
| 14:55–15:10 | Neural Machine Translation with Source Dependency Representation <i>Kehai Chen, Rui Wang, Masao Utiyama, Lemao Liu, Akihiro Tamura, Eiichiro Sumita, Tiejun Zhao</i> |
| 15:10–15:25 | Visual Denotations for Recognizing Textual Entailment<br>Dan Han, Pascual Martínez-Gómez, Koji Mineshima   |
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#### Track B

#### Funen

# 10:30–12:10 Session 7B: Syntax 4, Room: Funen, Chair: Zeljko Agic, IT University of Copenhagen

| 10:30–10:55 | Part-of-Speech Tagging for Twitter with Adversarial Neural Networks<br>Tao Gui, Qi Zhang, Haoran Huang, Minlong Peng, Xuanjing Huang  |
|-------------|---|
| 10:55–11:20 | Investigating Different Syntactic Context Types and Context Representations for Learning Word Embeddings Bofang Li, Tao Liu, Zhe Zhao, Buzhou Tang, Aleksandr Drozd, Anna Rogers, Xiaoyong Du |
| 11:20–11:45 | Does syntax help discourse segmentation? Not so much Chloé Braud, Ophélie Lacroix, Anders Søgaard   |
| 11:45–12:10 | Nonparametric Bayesian Semi-supervised Word Segmentation<br>Daichi Mochihashi, Ryo Fujii, Ryo Domoto  |

## 13:40–15:25 Session 8B: Machine Learning (Short), Room: Funen, Chair: Bowman, Samuel R., NYU

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| 13:40–13:55 | Sequence Effects in Crowdsourced Annotations<br>Nitika Mathur, Timothy Baldwin, Trevor Cohn   |
| 13:55–14:10 | No Need to Pay Attention: Simple Recurrent Neural Networks Work! Ferhan Ture, Oliver Jojic  |
| 14:10–14:25 | The strange geometry of skip-gram with negative sampling David Mimno, Laure Thompson  |
| 14:25–14:40 | Natural Language Processing with Small Feed-Forward Networks Jan A. Botha, Emily Pitler, Ji Ma, Anton Bakalov, Alex Salcianu, David Weiss, Ryan McDonald, Slav Petrov |
| 14:40–14:55 | Deep Multi-Task Learning for Aspect Term Extraction with Memory Interaction Xin Li, Wai Lam   |
| 14:55–15:10 | Analogs of Linguistic Structure in Deep Representations <i>Jacob Andreas, Dan Klein</i>   |
| 15:10–15:25 | A Simple Regularization-based Algorithm for Learning Cross-Domain Word Embeddings Wei Yang, Wei Lu, Vincent Zheng   |
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#### Track C

### Zealand

#### 10:30–12:10 Session 7C: Dialogue, Room: Zealand, Chair: Amanda Stent, Bloomberg

| 10:30–10:55 | Deal or No Deal? End-to-End Learning of Negotiation Dialogues<br>Mike Lewis, Denis Yarats, Yann Dauphin, Devi Parikh, Dhruv Batra     |
|-------------|---|
| 10:55–11:20 | Agent-Aware Dropout DQN for Safe and Efficient On-line Dialogue Policy Learning Lu Chen, Xiang Zhou, Cheng Chang, Runzhe Yang, Kai Yu |
| 11:20–11:45 | Towards Debate Automation: a Recurrent Model for Predicting Debate Winners Peter Potash, Anna Rumshisky                               |
| 11:45–12:10 | Conversation Modeling on Reddit Using a Graph-Structured LSTM Victoria Zayats, Mari Ostendorf   |

## 13:40–15:25 Session 8C: NLP Applications (Short), Room: Zealand, Chair: Joel Tetreault, Grammarly

| Grammarry   |  |
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| 13:40–13:55 | Learning what to read: Focused machine reading Enrique Noriega-Atala, Marco A. Valenzuela-Escárcega, Clayton Morrison, Mihai Surdeanu  |
| 13:55–14:10 | DOC: Deep Open Classification of Text Documents<br>Lei Shu, Hu Xu, Bing Liu  |
| 14:10–14:25 | Charmanteau: Character Embedding Models For Portmanteau Creation Varun Gangal, Harsh Jhamtani, Graham Neubig, Eduard Hovy, Eric Nyberg   |
| 14:25–14:40 | Using Automated Metaphor Identification to Aid in Detection and Prediction of First-Episode Schizophrenia <i>E. Dario Gutierrez, Guillermo Cecchi, Cheryl Corcoran, Philip Corlett</i> |
| 14:40-14:55 | Truth of Varying Shades: Analyzing Language in Fake News and Political Fact-Checking  Hannah Rashkin, Eunsol Choi, Jin Yea Jang, Svitlana Volkova, Yejin Choi                          |
| 14:55–15:10 | Topic-Based Agreement and Disagreement in US Electoral Manifestos Stefano Menini, Federico Nanni, Simone Paolo Ponzetto, Sara Tonelli  |
| 15:10–15:25 | Zipporah: a Fast and Scalable Data Cleaning System for Noisy Web-Crawled Parallel Corpora Hainan Xu, Philipp Koehn   |
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#### Track D

### Aarhus

10:30–12:10 Session 7D: Poster Session. Machine Translation and Multilingual NLP 2, Room: Aarhus, Chair: Marianna Apidianaki, LIMSI, CNRS and University of Pennsylvania

Joint Prediction of Word Alignment with Alignment Types Anahita Mansouri Bigvand, Te Bu, Anoop Sarkar

Further Investigation into Reference Bias in Monolingual Evaluation of Machine Translation *Qingsong Ma, Yvette Graham, Timothy Baldwin, Qun Liu* 

A Challenge Set Approach to Evaluating Machine Translation *Pierre Isabelle, Colin Cherry, George Foster* 

Knowledge Distillation for Bilingual Dictionary Induction *Ndapandula Nakashole, Raphael Flauger* 

Machine Translation, it's a question of style, innit? The case of English tag questions *Rachel Bawden* 

Deciphering Related Languages Nima Pourdamghani, Kevin Knight

Identifying Cognate Sets Across Dictionaries of Related Languages *Adam St Arnaud, David Beck, Grzegorz Kondrak* 

Learning Language Representations for Typology Prediction Chaitanya Malaviya, Graham Neubig, Patrick Littell

Cheap Translation for Cross-Lingual Named Entity Recognition Stephen Mayhew, Chen-Tse Tsai, Dan Roth

Cross-Lingual Induction and Transfer of Verb Classes Based on Word Vector Space Specialisation Ivan Vulić, Nikola Mrkšić, Anna Korhonen

Classification of telicity using cross-linguistic annotation projection *Annemarie Friedrich, Damyana Gateva* 

Semantic Specialisation of Distributional Word Vector Spaces using Monolingual and Cross-Lingual Constraints

Nikola Mrkšić, Ivan Vulić, Diarmuid Ó Séaghdha, Roi Reichart, Ira Leviant, Milica Gašić, Anna Korhonen, Steve Young

Counterfactual Learning from Bandit Feedback under Deterministic Logging : A Case Study in Statistical Machine Translation

Carolin Lawrence, Artem Sokolov, Stefan Riezler



#### Track E

Odense

10:30–12:10 Session 7E: Poster Session. Information Extraction 2, Room: Odense, Chair: Isabelle Augenstein, University of Copenhagen

Learning Fine-grained Relations from Chinese User Generated Categories Chengyu Wang, Yan Fan, Xiaofeng He, Aoying Zhou

Improving Slot Filling Performance with Attentive Neural Networks on Dependency Structures Lifu Huang, Avirup Sil, Heng Ji, Radu Florian

Identifying Products in Online Cybercrime Marketplaces: A Dataset for Fine-grained Domain Adaptation

Greg Durrett, Jonathan K. Kummerfeld, Taylor Berg-Kirkpatrick, Rebecca Portnoff, Sadia Afroz, Damon McCoy, Kirill Levchenko, Vern Paxson

Labeling Gaps Between Words: Recognizing Overlapping Mentions with Mention Separators *Aldrian Obaja Muis, Wei Lu* 

Deep Joint Entity Disambiguation with Local Neural Attention Octavian-Eugen Ganea, Thomas Hofmann

MinIE: Minimizing Facts in Open Information Extraction *Kiril Gashteovski, Rainer Gemulla, Luciano Del Corro* 

Scientific Information Extraction with Semi-supervised Neural Tagging Yi Luan, Mari Ostendorf, Hannaneh Hajishirzi

NITE: A Neural Inductive Teaching Framework for Domain Specific NER Siliang Tang, Ning Zhang, Jinjiang Zhang, Fei Wu, Yueting Zhuang

Speeding up Reinforcement Learning-based Information Extraction Training using Asynchronous Methods

Aditya Sharma, Zarana Parekh, Partha Talukdar

Leveraging Linguistic Structures for Named Entity Recognition with Bidirectional Recursive Neural Networks

Peng-Hsuan Li, Ruo-Ping Dong, Yu-Siang Wang, Ju-Chieh Chou, Wei-Yun Ma

Fast and Accurate Entity Recognition with Iterated Dilated Convolutions *Emma Strubell, Patrick Verga, David Belanger, Andrew McCallum* 

Entity Linking via Joint Encoding of Types, Descriptions, and Context Nitish Gupta, Sameer Singh, Dan Roth

An Insight Extraction System on BioMedical Literature with Deep Neural Networks Hua He, Kris Ganjam, Navendu Jain, Jessica Lundin, Ryen White, Jimmy Lin



## Track F Copenhagen

10:30–12:10 Session 7F: Poster Session. NLP Applications, Room: Copenhagen, Chair: Courtney Napoles, Johns Hopkins University

Word Etymology as Native Language Interference Vivi Nastase, Carlo Strapparava

A Simpler and More Generalizable Story Detector using Verb and Character Features *Joshua Eisenberg, Mark Finlayson* 

Multi-modular domain-tailored OCR post-correction Sarah Schulz, Jonas Kuhn

Learning to Predict Charges for Criminal Cases with Legal Basis Bingfeng Luo, Yansong Feng, Jianbo Xu, Xiang Zhang, Dongyan Zhao

Quantifying the Effects of Text Duplication on Semantic Models *Alexandra Schofield, Laure Thompson, David Mimno* 

Identifying Semantically Deviating Outlier Documents
Honglei Zhuang, Chi Wang, Fangbo Tao, Lance Kaplan, Jiawei Han

Detecting and Explaining Causes From Text For a Time Series Event Dongyeop Kang, Varun Gangal, Ang Lu, Zheng Chen, Eduard Hovy

A Novel Cascade Model for Learning Latent Similarity from Heterogeneous Sequential Data of MOOC Zhuoxuan Jiang, Shanshan Feng, Gao Cong, Chunyan Miao, Xiaoming Li

Identifying the Provision of Choices in Privacy Policy Text Kanthashree Mysore Sathyendra, Shomir Wilson, Florian Schaub, Sebastian Zimmeck, Norman Sadeh

An Empirical Analysis of Edit Importance between Document Versions Tanya Goyal, Sachin Kelkar, Manas Agarwal, Jeenu Grover

Transition-Based Disfluency Detection using LSTMs Shaolei Wang, Wanxiang Che, Yue Zhang, Meishan Zhang, Ting Liu

Neural Sequence-Labelling Models for Grammatical Error Correction Helen Yannakoudakis, Marek Rei, Øistein E. Andersen, Zheng Yuan

Adapting Sequence Models for Sentence Correction *Allen Schmaltz, Yoon Kim, Alexander Rush, Stuart Shieber*