

**Conference on Empirical
Methods in Natural Language
Processing 2019 and 9th
International Joint Conference
on Natural Language Processing
(EMNLP-IJCNLP 2019)**

Hong Kong, China
3-7 November 2019

Volume 1 of 10

ISBN: 978-1-7138-0067-5

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2019) by the Association for Computational Linguistics
All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact the Association for Computational Linguistics
at the address below.

Association for Computational Linguistics
209 N. Eighth Street
Stroudsburg, Pennsylvania 18360

Phone: 1-570-476-8006
Fax: 1-570-476-0860

acl@aclweb.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2633
Email: curran@proceedings.com
Web: www.proceedings.com

Table of Contents

<i>Attending to Future Tokens for Bidirectional Sequence Generation</i> Carolin Lawrence, Bhushan Kotnis and Mathias Niepert	1
<i>Attention is not not Explanation</i> Sarah Wiegrefe and Yuval Pinter	11
<i>Practical Obstacles to Deploying Active Learning</i> David Lowell, Zachary C. Lipton and Byron C. Wallace	21
<i>Transfer Learning Between Related Tasks Using Expected Label Proportions</i> Matan Ben Noach and Yoav Goldberg	31
<i>Knowledge Enhanced Contextual Word Representations</i> Matthew E. Peters, Mark Neumann, Robert Logan, Roy Schwartz, Vidur Joshi, Sameer Singh and Noah A. Smith	43
<i>How Contextual are Contextualized Word Representations? Comparing the Geometry of BERT, ELMo, and GPT-2 Embeddings</i> Kawin Ethayarajh	55
<i>Room to Glo: A Systematic Comparison of Semantic Change Detection Approaches with Word Embeddings</i> Philippa Shoemark, Farhana Ferdousi Liza, Dong Nguyen, Scott Hale and Barbara McGillivray	66
<i>Correlations between Word Vector Sets</i> Vitalii Zhelezniak, April Shen, Daniel Busbridge, Aleksandar Savkov and Nils Hammerla	77
<i>Game Theory Meets Embeddings: a Unified Framework for Word Sense Disambiguation</i> Rocco Tripodi and Roberto Navigli	88
<i>Guided Dialog Policy Learning: Reward Estimation for Multi-Domain Task-Oriented Dialog</i> Ryuichi Takanobu, Hanlin Zhu and Minlie Huang	100
<i>Multi-hop Selector Network for Multi-turn Response Selection in Retrieval-based Chatbots</i> Chunyan Yuan, Wei Zhou, Mingming Li, Shangwen Lv, Fuqing Zhu, Jizhong Han and Songlin Hu	111
<i>MoEL: Mixture of Empathetic Listeners</i> Zhaojiang Lin, Andrea Madotto, Jamin Shin, Peng Xu and Pascale Fung	121
<i>Entity-Consistent End-to-end Task-Oriented Dialogue System with KB Retriever</i> Libo Qin, Yijia Liu, Wanxiang Che, Haoyang Wen, Yangming Li and Ting Liu	133
<i>Building Task-Oriented Visual Dialog Systems Through Alternative Optimization Between Dialog Policy and Language Generation</i> Mingyang Zhou, Josh Arnold and Zhou Yu	143
<i>DialogueGCN: A Graph Convolutional Neural Network for Emotion Recognition in Conversation</i> Deejanway Ghosal, Navonil Majumder, Soujanya Poria, Niyati Chhaya and Alexander Gelbukh	154

<i>Knowledge-Enriched Transformer for Emotion Detection in Textual Conversations</i>	
Peixiang Zhong, Di Wang and Chunyan Miao	165
<i>Interpretable Relevant Emotion Ranking with Event-Driven Attention</i>	
Yang Yang, Deyu ZHOU, Yulan He and Meng Zhang	177
<i>Justifying Recommendations using Distantly-Labeled Reviews and Fine-Grained Aspects</i>	
Jianmo Ni, Jiacheng Li and Julian McAuley	188
<i>Using Customer Service Dialogues for Satisfaction Analysis with Context-Assisted Multiple Instance Learning</i>	
Kaisong Song, Lidong Bing, Wei Gao, Jun Lin, Lujun Zhao, Jiancheng Wang, Changlong Sun, Xiaozhong Liu and Qiong Zhang	198
<i>Leveraging Dependency Forest for Neural Medical Relation Extraction</i>	
Lin Feng Song, Yue Zhang, Daniel Gildea, Mo Yu, Zhiguo Wang and jinsong su	208
<i>Open Relation Extraction: Relational Knowledge Transfer from Supervised Data to Unsupervised Data</i>	
Ruidong Wu, Yuan Yao, Xu Han, Ruobing Xie, Zhiyuan Liu, Fen Lin, Leyu Lin and Maosong Sun	219
<i>Improving Relation Extraction with Knowledge-attention</i>	
Pengfei Li, Kezhi Mao, Xuefeng Yang and Qi Li	229
<i>Jointly Learning Entity and Relation Representations for Entity Alignment</i>	
Yuting Wu, Xiao Liu, Yansong Feng, Zheng Wang and Dongyan Zhao	240
<i>Tackling Long-Tailed Relations and Uncommon Entities in Knowledge Graph Completion</i>	
Zihao Wang, Kwunping Lai, Piji Li, Lidong Bing and Wai Lam	250
<i>Low-Resource Name Tagging Learned with Weakly Labeled Data</i>	
Yixin Cao, Zikun Hu, Tat-seng Chua, Zhiyuan Liu and Heng Ji	261
<i>Learning Dynamic Context Augmentation for Global Entity Linking</i>	
Xiyuan Yang, Xiaotao Gu, Sheng Lin, Siliang Tang, Yueting Zhuang, Fei Wu, Zhigang Chen, Guoping Hu and Xiang Ren	271
<i>Open Event Extraction from Online Text using a Generative Adversarial Network</i>	
Rui Wang, Deyu ZHOU and Yulan He	282
<i>Learning to Bootstrap for Entity Set Expansion</i>	
Lingyong Yan, Xianpei Han, Le Sun and Ben He	292
<i>Multi-Input Multi-Output Sequence Labeling for Joint Extraction of Fact and Condition Tuples from Scientific Text</i>	
Tianwen Jiang, Tong Zhao, Bing Qin, Ting Liu, Nitesh Chawla and Meng Jiang	302
<i>Cross-lingual Structure Transfer for Relation and Event Extraction</i>	
Ananya Subburathinam, Di Lu, Heng Ji, Jonathan May, Shih-Fu Chang, Avirup Sil and Clare Voss	313
<i>Uncover the Ground-Truth Relations in Distant Supervision: A Neural Expectation-Maximization Framework</i>	
Junfan Chen, Richong Zhang, Yongyi Mao, Hongyu Guo and Jie Xu	326

<i>Doc2EDAG: An End-to-End Document-level Framework for Chinese Financial Event Extraction</i> Shun Zheng, Wei Cao, Wei Xu and Jiang Bian	337
<i>Event Detection with Trigger-Aware Lattice Neural Network</i> Ning Ding, Ziran Li, Zhiyuan Liu, Haitao Zheng and Zibo Lin	347
<i>A Boundary-aware Neural Model for Nested Named Entity Recognition</i> Changmeng Zheng, Yi Cai, Jingyun Xu, Ho-fung Leung and Guandong Xu	357
<i>Learning the Extraction Order of Multiple Relational Facts in a Sentence with Reinforcement Learning</i> Xiangrong Zeng, Shizhu He, Daojian Zeng, Kang Liu, Shengping Liu and Jun Zhao	367
<i>CaRe: Open Knowledge Graph Embeddings</i> Swapnil Gupta, Sreyash Kenkre and Partha Talukdar	378
<i>Self-Attention Enhanced CNNs and Collaborative Curriculum Learning for Distantly Supervised Relation Extraction</i> Yuyun Huang and Jinhua Du	389
<i>Neural Cross-Lingual Relation Extraction Based on Bilingual Word Embedding Mapping</i> Jian Ni and Radu Florian	399
<i>Leveraging 2-hop Distant Supervision from Table Entity Pairs for Relation Extraction</i> xiang deng and Huan Sun	410
<i>EntEval: A Holistic Evaluation Benchmark for Entity Representations</i> Mingda Chen, Zewei Chu, Yang Chen, Karl Stratos and Kevin Gimpel	421
<i>Joint Event and Temporal Relation Extraction with Shared Representations and Structured Prediction</i> Rujun Han, Qiang Ning and Nanyun Peng	434
<i>Hierarchical Text Classification with Reinforced Label Assignment</i> Yuning Mao, Jingjing Tian, Jiawei Han and Xiang Ren	445
<i>Investigating Capsule Network and Semantic Feature on Hyperplanes for Text Classification</i> Chunning Du, Haifeng Sun, Jingyu Wang, Qi Qi, Jianxin Liao, Chun Wang and Bing Ma	456
<i>Label-Specific Document Representation for Multi-Label Text Classification</i> Lin Xiao, Xin Huang, Boli Chen and Liping Jing	466
<i>Hierarchical Attention Prototypical Networks for Few-Shot Text Classification</i> Shengli Sun, Qingfeng Sun, Kevin Zhou and Tengchao Lv	476
<i>Many Faces of Feature Importance: Comparing Built-in and Post-hoc Feature Importance in Text Classification</i> Vivian Lai, Zheng Cai and Chenhao Tan	486
<i>Enhancing Local Feature Extraction with Global Representation for Neural Text Classification</i> Guocheng Niu, Hengru Xu, Bolei He, Xinyan Xiao, Hua Wu and Sheng GAO	496
<i>Latent-Variable Generative Models for Data-Efficient Text Classification</i> Xiaoan Ding and Kevin Gimpel	507
<i>PaRe: A Paper-Reviewer Matching Approach Using a Common Topic Space</i> Omer Anjum, Hongyu Gong, Suma Bhat, Wen-Mei Hwu and JinJun Xiong	518

<i>Linking artificial and human neural representations of language</i> Jon Gauthier and Roger Levy	529
<i>Neural Text Summarization: A Critical Evaluation</i> Wojciech Kryscinski, Nitish Shirish Keskar, Bryan McCann, Caiming Xiong and Richard Socher	540
<i>Neural data-to-text generation: A comparison between pipeline and end-to-end architectures</i> Thiago Castro Ferreira, Chris van der Lee, Emiel van Miltenburg and Emiel Kraemer	552
<i>MoverScore: Text Generation Evaluating with Contextualized Embeddings and Earth Mover Distance</i> Wei Zhao, Maxime Peyrard, Fei Liu, Yang Gao, Christian M. Meyer and Steffen Eger	563
<i>Select and Attend: Towards Controllable Content Selection in Text Generation</i> Xiaoyu Shen, Jun Suzuki, Kentaro Inui, Hui Su, Dietrich Klakow and Satoshi Sekine	579
<i>Sentence-Level Content Planning and Style Specification for Neural Text Generation</i> Xinyu Hua and Lu Wang	591
<i>Translate and Label! An Encoder-Decoder Approach for Cross-lingual Semantic Role Labeling</i> Angel Daza and Anette Frank	603
<i>Syntax-Enhanced Self-Attention-Based Semantic Role Labeling</i> Yue Zhang, Rui Wang and Luo Si	616
<i>VerbAtlas: a Novel Large-Scale Verbal Semantic Resource and Its Application to Semantic Role Labeling</i> Andrea Di Fabio, Simone Conia and Roberto Navigli	627
<i>Parameter-free Sentence Embedding via Orthogonal Basis</i> Ziyi Yang, Chenguang Zhu and Weizhu Chen	638
<i>Evaluation Benchmarks and Learning Criteria for Discourse-Aware Sentence Representations</i> Mingda Chen, Zewei Chu and Kevin Gimpel	649
<i>Extracting Possessions from Social Media: Images Complement Language</i> Dhivya Chinnappa, Srikala Murugan and Eduardo Blanco	663
<i>Learning to Speak and Act in a Fantasy Text Adventure Game</i> Jack Urbanek, Angela Fan, Siddharth Karamcheti, Saachi Jain, Samuel Humeau, Emily Dinan, Tim Rocktäschel, Douwe Kiela, Arthur Szlam and Jason Weston	673
<i>Help, Anna! Visual Navigation with Natural Multimodal Assistance via Retrospective Curiosity-Encouraging Imitation Learning</i> Khanh Nguyen and Hal Daumé III	684
<i>Incorporating Visual Semantics into Sentence Representations within a Grounded Space</i> Patrick Bordes, Eloi Zablocki, Laure Soulier, Benjamin Piwowarski and patrick Gallinari	696
<i>Neural Naturalist: Generating Fine-Grained Image Comparisons</i> Maxwell Forbes, Christine Kaeser-Chen, Piyush Sharma and Serge Belongie	708
<i>Fine-Grained Evaluation for Entity Linking</i> Henry Rosales-Méndez, Aidan Hogan and Barbara Poblete	718
<i>Supervising Unsupervised Open Information Extraction Models</i> Arpita Roy, Youngja Park, Taesung Lee and Shimei Pan	728

<i>Neural Cross-Lingual Event Detection with Minimal Parallel Resources</i> Jian Liu, Yubo Chen, Kang Liu and Jun Zhao	738
<i>KnowledgeNet: A Benchmark Dataset for Knowledge Base Population</i> Filipe Mesquita, Matteo Cannaviccio, Jordan Schmeidek, Paramita Mirza and Denilson Barbosa	749
<i>Effective Use of Transformer Networks for Entity Tracking</i> Aditya Gupta and Greg Durrett	759
<i>Explicit Cross-lingual Pre-training for Unsupervised Machine Translation</i> Shuo Ren, Yu Wu, Shujie Liu, Ming Zhou and Shuai Ma	770
<i>Latent Part-of-Speech Sequences for Neural Machine Translation</i> Xuewen Yang, Yingru Liu, Dongliang Xie, Xin Wang and Niranjan Balasubramanian	780
<i>Improving Back-Translation with Uncertainty-based Confidence Estimation</i> Shuo Wang, Yang Liu, Chao Wang, Huanbo Luan and Maosong Sun	791
<i>Towards Linear Time Neural Machine Translation with Capsule Networks</i> Mingxuan Wang	803
<i>Modeling Multi-mapping Relations for Precise Cross-lingual Entity Alignment</i> Xiaofei Shi and Yanghua Xiao	813
<i>Supervised and Nonlinear Alignment of Two Embedding Spaces for Dictionary Induction in Low Resourced Languages</i> Masud Moshtaghi	823
<i>Beto, Bentz, Becas: The Surprising Cross-Lingual Effectiveness of BERT</i> Shijie Wu and Mark Dredze	833
<i>Iterative Dual Domain Adaptation for Neural Machine Translation</i> Jiali Zeng, Yang Liu, Jinsong SU, yubing Ge, Yaojie Lu, Yongjing Yin and jiebo luo	845
<i>Multi-agent Learning for Neural Machine Translation</i> tianchi bi, hao xiong, Zhongjun He, Hua Wu and Haifeng Wang	856
<i>Pivot-based Transfer Learning for Neural Machine Translation between Non-English Languages</i> Yunsu Kim, Petre Petrov, Pavel Petrushkov, Shahram Khadivi and Hermann Ney	866
<i>Context-Aware Monolingual Repair for Neural Machine Translation</i> Elena Voita, Rico Sennrich and Ivan Titov	877
<i>Multi-Granularity Self-Attention for Neural Machine Translation</i> Jie Hao, Xing Wang, Shuming Shi, Jinfeng Zhang and Zhaopeng Tu	887
<i>Improving Deep Transformer with Depth-Scaled Initialization and Merged Attention</i> Biao Zhang, Ivan Titov and Rico Sennrich	898
<i>A Discriminative Neural Model for Cross-Lingual Word Alignment</i> Elias Stengel-Eskin, Tzu-ray Su, Matt Post and Benjamin Van Durme	910
<i>One Model to Learn Both: Zero Pronoun Prediction and Translation</i> Longyue Wang, Zhaopeng Tu, Xing Wang and Shuming Shi	921

<i>Dynamic Past and Future for Neural Machine Translation</i>	
Zaixiang Zheng, Shujian Huang, Zhaopeng Tu, XIN-YU DAI and Jiajun CHEN	931
<i>Revisit Automatic Error Detection for Wrong and Missing Translation – A Supervised Approach</i>	
Wenqiang Lei, Weiwen Xu, Ai Ti Aw, Yuanxin Xiang and Tat Seng Chua	942
<i>Towards Understanding Neural Machine Translation with Word Importance</i>	
Shilin He, Zhaopeng Tu, Xing Wang, Longyue Wang, Michael Lyu and Shuming Shi	953
<i>Multilingual Neural Machine Translation with Language Clustering</i>	
Xu Tan, Jiale Chen, Di He, Yingce Xia, Tao QIN and Tie-Yan Liu	963
<i>Don't Forget the Long Tail! A Comprehensive Analysis of Morphological Generalization in Bilingual Lexicon Induction</i>	
Paula Czarowska, Sebastian Ruder, Edouard Grave, Ryan Cotterell and Ann Copestake	974
<i>Pushing the Limits of Low-Resource Morphological Inflection</i>	
Antonios Anastasopoulos and Graham Neubig	984
<i>Cross-Lingual Dependency Parsing Using Code-Mixed TreeBank</i>	
Meishan Zhang, Yue Zhang and Guohong Fu	997
<i>Hierarchical Pointer Net Parsing</i>	
Linlin Liu, Xiang Lin, Shafiq Joty, Simeng Han and Lidong Bing	1007
<i>Semi-Supervised Semantic Role Labeling with Cross-View Training</i>	
Rui Cai and Mirella Lapata	1018
<i>Low-Resource Sequence Labeling via Unsupervised Multilingual Contextualized Representations</i>	
Zuyi Bao, Rui Huang, Chen Li and Kenny Zhu	1028
<i>A Lexicon-Based Graph Neural Network for Chinese NER</i>	
Tao Gui, Yicheng Zou, Qi Zhang, Minlong Peng, Jinlan Fu, Zhongyu Wei and Xuanjing Huang	1040
<i>CM-Net: A Novel Collaborative Memory Network for Spoken Language Understanding</i>	
Yijin Liu, Fandong Meng, Jinchao Zhang, Jie Zhou, Yufeng Chen and Jinan Xu	1051
<i>Tree Transformer: Integrating Tree Structures into Self-Attention</i>	
Yaoshian Wang, Hung-Yi Lee and Yun-Nung Chen	1061
<i>Semantic Role Labeling with Iterative Structure Refinement</i>	
Chunchuan Lyu, Shay B. Cohen and Ivan Titov	1071
<i>Entity Projection via Machine Translation for Cross-Lingual NER</i>	
Alankar Jain, Bhargavi Paranjape and Zachary C. Lipton	1083
<i>A Bayesian Approach for Sequence Tagging with Crowds</i>	
Edwin D. Simpson and Iryna Gurevych	1093
<i>A systematic comparison of methods for low-resource dependency parsing on genuinely low-resource languages</i>	
Clara Vania, Yova Kementchedjheva, Anders Søgaard and Adam Lopez	1105
<i>Target Language-Aware Constrained Inference for Cross-lingual Dependency Parsing</i>	
Tao Meng, Nanyun Peng and Kai-Wei Chang	1117

<i>Look-up and Adapt: A One-shot Semantic Parser</i>	
Zhichu Lu, Forough Arabshahi, Igor Labutov and Tom Mitchell	1129
<i>Similarity Based Auxiliary Classifier for Named Entity Recognition</i>	
Shiyuan Xiao, Yuanxin Ouyang, Wenge Rong, Jianxin Yang and Zhang Xiong	1140
<i>Variable beam search for generative neural parsing and its relevance for the analysis of neuro-imaging signal</i>	
Benoit Crabbé, Murielle Fabre and Christophe Pallier	1150
<i>Are We Modeling the Task or the Annotator? An Investigation of Annotator Bias in Natural Language Understanding Datasets</i>	
Mor Geva, Yoav Goldberg and Jonathan Berant	1161
<i>Robust Text Classifier on Test-Time Budgets</i>	
Md Rizwan Parvez, Tolga Bolukbasi, Kai-Wei Chang and Venkatesh Saligrama	1167
<i>Commonsense Knowledge Mining from Pretrained Models</i>	
Joe Davison, Joshua Feldman and Alexander Rush	1173
<i>RNN Architecture Learning with Sparse Regularization</i>	
Jesse Dodge, Roy Schwartz, Hao Peng and Noah A. Smith	1179
<i>Analytical Methods for Interpretable Ultradense Word Embeddings</i>	
Philipp Dufter and Hinrich Schütze	1185
<i>Investigating Meta-Learning Algorithms for Low-Resource Natural Language Understanding Tasks</i>	
Zi-Yi Dou, Keyi Yu and Antonios Anastasopoulos	1192
<i>Retrofitting Contextualized Word Embeddings with Paraphrases</i>	
Weijia Shi, Muhao Chen, Pei Zhou and Kai-Wei Chang	1198
<i>Incorporating Contextual and Syntactic Structures Improves Semantic Similarity Modeling</i>	
Linqing Liu, Wei Yang, Jinfeng Rao, Raphael Tang and Jimmy Lin	1204
<i>Neural Linguistic Steganography</i>	
Zachary Ziegler, Yuntian Deng and Alexander Rush	1210
<i>The Feasibility of Embedding Based Automatic Evaluation for Single Document Summarization</i>	
Simeng Sun and Ani Nenkova	1216
<i>Attention Optimization for Abstractive Document Summarization</i>	
Min Gui, Junfeng Tian, Rui Wang and Zhenglu Yang	1222
<i>Rewarding Coreference Resolvers for Being Consistent with World Knowledge</i>	
Rahul Aralikkatte, Heather Lent, Ana Valeria Gonzalez, Daniel Hershcovich, Chen Qiu, Anders Sandholm, Michael Ringgaard and Anders Søgaard	1229
<i>An Empirical Study of Incorporating Pseudo Data into Grammatical Error Correction</i>	
Shun Kiyono, Jun Suzuki, Masato Mita, Tomoya Mizumoto and Kentaro Inui	1236
<i>A Multilingual Topic Model for Learning Weighted Topic Links Across Corpora with Low Comparability</i>	
Weiwei Yang, Jordan Boyd-Graber and Philip Resnik	1243
<i>Measure Country-Level Socio-Economic Indicators with Streaming News: An Empirical Study</i>	
Bonan Min and Xiaoxi Zhao	1249

<i>Towards Extracting Medical Family History from Natural Language Interactions: A New Dataset and Baselines</i>	
Mahmoud Azab, Stephane Dadian, Vivi Nastase, Larry An and Rada Mihalcea	1255
<i>Multi-task Learning for Natural Language Generation in Task-Oriented Dialogue</i>	
Chenguang Zhu, Michael Zeng and Xuedong Huang	1261
<i>Dirichlet Latent Variable Hierarchical Recurrent Encoder-Decoder in Dialogue Generation</i>	
Min Zeng, Yisen Wang and Yuan Luo	1267
<i>Semi-Supervised Bootstrapping of Dialogue State Trackers for Task-Oriented Modelling</i>	
Bo-Hsiang Tseng, Marek Rei, Paweł Budzianowski, Richard Turner, Bill Byrne and Anna Korhonen	1273
<i>A Progressive Model to Enable Continual Learning for Semantic Slot Filling</i>	
Yilin Shen, Xiangyu Zeng and Hongxia Jin	1279
<i>CASA-NLU: Context-Aware Self-Attentive Natural Language Understanding for Task-Oriented Chatbots</i>	
Arshit Gupta, Peng Zhang, Garima Lalwani and Mona Diab	1285
<i>Sampling Matters! An Empirical Study of Negative Sampling Strategies for Learning of Matching Models in Retrieval-based Dialogue Systems</i>	
Jia Li, Chongyang Tao, wei wu, Yansong Feng, Dongyan Zhao and Rui Yan	1291
<i>Zero-shot Cross-lingual Dialogue Systems with Transferable Latent Variables</i>	
Zihan Liu, Jamin Shin, Yan Xu, Genta Indra Winata, Peng Xu, Andrea Madotto and Pascale Fung	1297
<i>Modeling Multi-Action Policy for Task-Oriented Dialogues</i>	
Lei Shu, Hu Xu, Bing Liu and Piero Molino	1304
<i>An Evaluation Dataset for Intent Classification and Out-of-Scope Prediction</i>	
Stefan Larson, Anish Mahendran, Joseph J. Peper, Christopher Clarke, Andrew Lee, Parker Hill, Jonathan K. Kummerfeld, Kevin Leach, Michael A. Laurenzano, Lingjia Tang and Jason Mars	1311
<i>Automatically Learning Data Augmentation Policies for Dialogue Tasks</i>	
Tong Niu and Mohit Bansal	1317
<i>uniblock: Scoring and Filtering Corpus with Unicode Block Information</i>	
Yingbo Gao, Weiyue Wang and Hermann Ney	1324
<i>Multilingual word translation using auxiliary languages</i>	
Hagai Taitelbaum, Gal Chechik and Jacob Goldberger	1330
<i>Towards Better Modeling Hierarchical Structure for Self-Attention with Ordered Neurons</i>	
Jie Hao, Xing Wang, Shuming Shi, Jinfeng Zhang and Zhaopeng Tu	1336
<i>Vecalign: Improved Sentence Alignment in Linear Time and Space</i>	
Brian Thompson and Philipp Koehn	1342
<i>Simpler and Faster Learning of Adaptive Policies for Simultaneous Translation</i>	
Baigong Zheng, Renjie Zheng, Mingbo Ma and Liang Huang	1349
<i>Adversarial Learning with Contextual Embeddings for Zero-resource Cross-lingual Classification and NER</i>	
Phillip Keung, yichao lu and Vikas Bhardwaj	1355

<i>Recurrent Positional Embedding for Neural Machine Translation</i>	
Kehai Chen, Rui Wang, Masao Utiyama and Eiichiro Sumita	1361
<i>Machine Translation for Machines: the Sentiment Classification Use Case</i>	
amirhossein tebbifakhr, Luisa Bentivogli, Matteo Negri and Marco Turchi	1368
<i>Investigating the Effectiveness of BPE: The Power of Shorter Sequences</i>	
Matthias Gallé	1375
<i>HABLex: Human Annotated Bilingual Lexicons for Experiments in Machine Translation</i>	
Brian Thompson, Rebecca Knowles, Xuan Zhang, Huda Khayrallah, Kevin Duh and Philipp Koehn	1382
<i>Handling Syntactic Divergence in Low-resource Machine Translation</i>	
Chunting Zhou, Xuezhe Ma, Junjie Hu and Graham Neubig	1388
<i>Speculative Beam Search for Simultaneous Translation</i>	
Renjie Zheng, Mingbo Ma, Baigong Zheng and Liang Huang	1395
<i>Self-Attention with Structural Position Representations</i>	
Xing Wang, Zhaopeng Tu, Longyue Wang and Shuming Shi	1403
<i>Exploiting Multilingualism through Multistage Fine-Tuning for Low-Resource Neural Machine Translation</i>	
Raj Dabre, Atsushi Fujita and Chenhui Chu	1410
<i>Unsupervised Domain Adaptation for Neural Machine Translation with Domain-Aware Feature Embeddings</i>	
Zi-Yi Dou, Junjie Hu, Antonios Anastasopoulos and Graham Neubig	1417
<i>A Regularization-based Framework for Bilingual Grammar Induction</i>	
Yong Jiang, Wenjuan Han and Kewei Tu	1423
<i>Encoders Help You Disambiguate Word Senses in Neural Machine Translation</i>	
Gongbo Tang, Rico Sennrich and Joakim Nivre	1429
<i>Korean Morphological Analysis with Tied Sequence-to-Sequence Multi-Task Model</i>	
Hyun-Je Song and Seong-Bae Park	1436
<i>Efficient Convolutional Neural Networks for Diacritic Restoration</i>	
Sawsan Alqahtani, Ajay Mishra and Mona Diab	1442
<i>Improving Generative Visual Dialog by Answering Diverse Questions</i>	
Vishvak Murahari, Prithvijit Chattopadhyay, Dhruv Batra, Devi Parikh and Abhishek Das ...	1449
<i>Cross-lingual Transfer Learning with Data Selection for Large-Scale Spoken Language Understanding</i>	
Quynh Do and Judith Gaspers	1455
<i>Multi-Head Attention with Diversity for Learning Grounded Multilingual Multimodal Representations</i>	
Po-Yao Huang, Xiaojun Chang and Alexander Hauptmann	1461
<i>Decoupled Box Proposal and Featurization with Ultrafine-Grained Semantic Labels Improve Image Captioning and Visual Question Answering</i>	
Soravit Changpinyo, Bo Pang, Piyush Sharma and Radu Soricut	1468

<i>REO-Relevance, Extraness, Omission: A Fine-grained Evaluation for Image Captioning</i>	
Ming Jiang, Junjie Hu, Qiuyuan Huang, Lei Zhang, Jana Diesner and Jianfeng Gao	1475
<i>WSLLN:Weakly Supervised Natural Language Localization Networks</i>	
Mingfei Gao, Larry Davis, Richard Socher and Caiming Xiong	1481
<i>Grounding learning of modifier dynamics: An application to color naming</i>	
Xudong Han, Philip Schulz and Trevor Cohn	1488
<i>Robust Navigation with Language Pretraining and Stochastic Sampling</i>	
Xiujun Li, Chunyuan Li, Qiaolin Xia, Yonatan Bisk, Asli Celikyilmaz, Jianfeng Gao, Noah A. Smith and Yejin Choi	1494
<i>Towards Making a Dependency Parser See</i>	
Michalina Strzyz, David Vilares and Carlos Gómez-Rodríguez	1500
<i>Unsupervised Labeled Parsing with Deep Inside-Outside Recursive Autoencoders</i>	
Andrew Drozdov, Patrick Verga, Yi-Pei Chen, Mohit Iyyer and Andrew McCallum	1507
<i>Dependency Parsing for Spoken Dialog Systems</i>	
Sam Davidson, Dian Yu and Zhou Yu	1513
<i>Span-based Hierarchical Semantic Parsing for Task-Oriented Dialog</i>	
Panupong Pasupat, Sonal Gupta, Karishma Mandyam, Rushin Shah, Mike Lewis and Luke Zettlemoyer	1520
<i>Enhancing Context Modeling with a Query-Guided Capsule Network for Document-level Translation</i>	
Zhengxin Yang, Jinchao Zhang, Fandong Meng, Shuhao Gu, Yang Feng and Jie Zhou	1527
<i>Simple, Scalable Adaptation for Neural Machine Translation</i>	
Ankur Bapna and Orhan Firat	1538
<i>Controlling Text Complexity in Neural Machine Translation</i>	
Sweta Agrawal and Marine Carpuat	1549
<i>Investigating Multilingual NMT Representations at Scale</i>	
Sneha Kudugunta, Ankur Bapna, Isaac Caswell and Orhan Firat	1565
<i>Hierarchical Modeling of Global Context for Document-Level Neural Machine Translation</i>	
Xin Tan, Longyin Zhang, Deyi Xiong and Guodong Zhou	1576
<i>Cross-Lingual Machine Reading Comprehension</i>	
Yiming Cui, Wanxiang Che, Ting Liu, Bing Qin, Shijin Wang and Guoping Hu	1586
<i>A Multi-Type Multi-Span Network for Reading Comprehension that Requires Discrete Reasoning</i>	
Minghao Hu, Yuxing Peng, Zhen Huang and Dongsheng Li	1596
<i>Neural Duplicate Question Detection without Labeled Training Data</i>	
Andreas Rücklé, Nafise Sadat Moosavi and Iryna Gurevych	1607
<i>Asking Clarification Questions in Knowledge-Based Question Answering</i>	
Jingjing Xu, Yuechen Wang, Duyu Tang, Nan Duan, Pengcheng Yang, Qi Zeng, Ming Zhou and Xu SUN	1618

<i>Multi-View Domain Adapted Sentence Embeddings for Low-Resource Unsupervised Duplicate Question Detection</i>	
Nina Poerner and Hinrich Schütze	1630
<i>Multi-label Categorization of Accounts of Sexism using a Neural Framework</i>	
Pulkit Parikh, Harika Abburi, Pinkesh Badjatiya, Radhika Krishnan, Niyati Chhaya, Manish Gupta and Vasudeva Varma	1642
<i>The Trumpiest Trump? Identifying a Subject’s Most Characteristic Tweets</i>	
Charuta Pethe and Steve Skiena	1653
<i>Finding Microaggressions in the Wild: A Case for Locating Elusive Phenomena in Social Media Posts</i>	
Luke Breitfeller, Emily Ahn, David Jurgens and Yulia Tsvetkov	1664
<i>Reinforced Product Metadata Selection for Helpfulness Assessment of Customer Reviews</i>	
Miao Fan, Chao Feng, Mingming Sun and Ping Li	1675
<i>Learning Invariant Representations of Social Media Users</i>	
Nicholas Andrews and Marcus Bishop	1684
<i>(Male, Bachelor) and (Female, Ph.D) have different connotations: Parallely Annotated Stylistic Language Dataset with Multiple Personas</i>	
Dongyeop Kang, Varun Gangal and Eduard Hovy	1696
<i>Movie Plot Analysis via Turning Point Identification</i>	
Pinelopi Papalampidi, Frank Keller and Mirella Lapata	1707
<i>Latent Suicide Risk Detection on Microblog via Suicide-Oriented Word Embeddings and Layered Attention</i>	
Lei Cao, Huijun Zhang, Ling Feng, Zihan Wei, Xin Wang, Ningyun Li and Xiaohao He	1718
<i>Deep Ordinal Regression for Pledge Specificity Prediction</i>	
Shivashankar Subramanian, Trevor Cohn and Timothy Baldwin	1729
<i>Data-Efficient Goal-Oriented Conversation with Dialogue Knowledge Transfer Networks</i>	
Igor Shalyminov, Sungjin Lee, Arash Eshghi and Oliver Lemon	1741
<i>Multi-Granularity Representations of Dialog</i>	
Shikib Mehri and Maxine Eskenazi	1752
<i>Are You for Real? Detecting Identity Fraud via Dialogue Interactions</i>	
Weikang Wang, Jiajun Zhang, Qian Li, Chengqing Zong and Zhifei Li	1762
<i>Hierarchy Response Learning for Neural Conversation Generation</i>	
Bo Zhang and Xiaoming Zhang	1772
<i>Knowledge Aware Conversation Generation with Explainable Reasoning over Augmented Graphs</i>	
zhibin liu, Zheng-Yu Niu, Hua Wu and Haifeng Wang	1782
<i>Adaptive Parameterization for Neural Dialogue Generation</i>	
Hengyi Cai, Hongshen Chen, Cheng Zhang, Yonghao Song, Xiaofang Zhao and Dawei Yin ..	1793
<i>Towards Knowledge-Based Recommender Dialog System</i>	
Qibin Chen, Junyang Lin, Yichang Zhang, Ming Ding, Yukuo Cen, Hongxia Yang and Jie Tang	1803

<i>Structuring Latent Spaces for Stylized Response Generation</i>	
Xiang Gao, Yizhe Zhang, Sungjin Lee, Michel Galley, Chris Brockett, Jianfeng Gao and Bill Dolan	
1814	
<i>Improving Open-Domain Dialogue Systems via Multi-Turn Incomplete Utterance Restoration</i>	
Zhufeng Pan, Kun Bai, Yan Wang, Lianqiang Zhou and Xiaojiang Liu	1824
<i>Unsupervised Context Rewriting for Open Domain Conversation</i>	
Kun Zhou, Kai Zhang, Yu Wu, Shujie Liu and Jingsong Yu	1834
<i>Dually Interactive Matching Network for Personalized Response Selection in Retrieval-Based Chatbots</i>	
Jia-Chen Gu, Zhen-Hua Ling, Xiaodan Zhu and Quan Liu	1845
<i>DyKgChat: Benchmarking Dialogue Generation Grounding on Dynamic Knowledge Graphs</i>	
Yi-Lin Tuan, Yun-Nung Chen and Hung-yi Lee	1855
<i>Retrieval-guided Dialogue Response Generation via a Matching-to-Generation Framework</i>	
Deng Cai, Yan Wang, Wei Bi, Zhaopeng Tu, Xiaojiang Liu and Shuming Shi	1866
<i>Scalable and Accurate Dialogue State Tracking via Hierarchical Sequence Generation</i>	
Liliang Ren, Jianmo Ni and Julian McAuley	1876
<i>Low-Resource Response Generation with Template Prior</i>	
Ze Yang, wei wu, Jian Yang, Can Xu and zhoujun li	1886
<i>A Discrete CVAE for Response Generation on Short-Text Conversation</i>	
Jun Gao, Wei Bi, Xiaojiang Liu, Junhui Li, Guodong Zhou and Shuming Shi	1898
<i>Who Is Speaking to Whom? Learning to Identify Utterance Addressee in Multi-Party Conversations</i>	
Ran Le, Wenpeng Hu, Mingyue Shang, Zhenjun You, Lidong Bing, Dongyan Zhao and Rui Yan	
1909	
<i>A Semi-Supervised Stable Variational Network for Promoting Replier-Consistency in Dialogue Generation</i>	
Jinxin Chang, Ruifang He, Longbiao Wang, Xiangyu Zhao, Ting Yang and Ruifang Wang ...	1920
<i>Modeling Personalization in Continuous Space for Response Generation via Augmented Wasserstein Autoencoders</i>	
Zhangming Chan, Juntao Li, Xiaopeng Yang, Xiuying Chen, Wenpeng Hu, Dongyan Zhao and Rui Yan	1931
<i>Variational Hierarchical User-based Conversation Model</i>	
JinYeong Bak and Alice Oh	1941
<i>Recommendation as a Communication Game: Self-Supervised Bot-Play for Goal-oriented Dialogue</i>	
Dongyeop Kang, Anusha Balakrishnan, Pararth Shah, Paul Crook, Y-Lan Boureau and Jason Weston	1951
<i>CoSQL: A Conversational Text-to-SQL Challenge Towards Cross-Domain Natural Language Interfaces to Databases</i>	
Tao Yu, Rui Zhang, Heyang Er, Suyi Li, Eric Xue, Bo Pang, Xi Victoria Lin, Yi Chern Tan, Tianze Shi, Zihan Li, Youxuan Jiang, Michihiro Yasunaga, Sungrok Shim, Tao Chen, Alexander Fabbri, Zifan Li, Luyao Chen, Yuwen Zhang, Shreya Dixit, Vincent Zhang, Caiming Xiong, Richard Socher, Walter Lasecki and Dragomir Radev	1962

<i>A Practical Dialogue-Act-Driven Conversation Model for Multi-Turn Response Selection</i>	
Harshit Kumar, Arvind Agarwal and Sachindra Joshi	1980
<i>How to Build User Simulators to Train RL-based Dialog Systems</i>	
Weiyan Shi, Kun Qian, Xuwei Wang and Zhou Yu	1990
<i>Low-Rank HOCA: Efficient High-Order Cross-Modal Attention for Video Captioning</i>	
Tao Jin, Siyu Huang, Yingming Li and Zhongfei Zhang	2001
<i>Image Captioning with Very Scarce Supervised Data: Adversarial Semi-Supervised Learning Approach</i>	
Dong-Jin Kim, Jinsoo Choi, Tae-Hyun Oh and In So Kweon	2012
<i>Dual Attention Networks for Visual Reference Resolution in Visual Dialog</i>	
Gi-Cheon Kang, Jaeseo Lim and Byoung-Tak Zhang	2024
<i>Unsupervised Discovery of Multimodal Links in Multi-image, Multi-sentence Documents</i>	
Jack Hessel, Lillian Lee and David Mimno	2034
<i>UR-FUNNY: A Multimodal Language Dataset for Understanding Humor</i>	
Md Kamrul Hasan, Wasifur Rahman, AmirAli Bagher Zadeh, Jianyuan Zhong, Md Iftekhar Tanveer, Louis-Philippe Morency and Mohammed (Ehsan) Hoque	2046
<i>Partners in Crime: Multi-view Sequential Inference for Movie Understanding</i>	
Nikos Papasarrantopoulos, Lea Frermann, Mirella Lapata and Shay B. Cohen	2057
<i>Guiding the Flowing of Semantics: Interpretable Video Captioning via POS Tag</i>	
Xinyu Xiao, Lingfeng Wang, Bin Fan, Shinming Xiang and Chunhong Pan	2068
<i>A Stack-Propagation Framework with Token-Level Intent Detection for Spoken Language Understanding</i>	
Libo Qin, Wanxiang Che, Yangming Li, Haoyang Wen and Ting Liu	2078
<i>Talk2Car: Taking Control of Your Self-Driving Car</i>	
Thierry Deruyttere, Simon Vandenhende, Dusan Grujicic, Luc Van Gool and Marie-Francine Moens	2088
<i>Fact-Checking Meets Fauxtography: Verifying Claims About Images</i>	
Dimitrina Zlatkova, Preslav Nakov and Ivan Koychev	2099
<i>Video Dialog via Progressive Inference and Cross-Transformer</i>	
Weike Jin, Zhou Zhao, Mao Gu, Jun Xiao, Furu Wei and Yueting Zhuang	2109
<i>Executing Instructions in Situated Collaborative Interactions</i>	
Alane Suhr, Claudia Yan, Jack Schluger, Stanley Yu, Hadi Khader, Marwa Mouallem, Iris Zhang and Yoav Artzi	2119
<i>Fusion of Detected Objects in Text for Visual Question Answering</i>	
Chris Alberti, Jeffrey Ling, Michael Collins and David Reitter	2131
<i>TIGER: Text-to-Image Grounding for Image Caption Evaluation</i>	
Ming Jiang, Qiuyuan Huang, Lei Zhang, Xin Wang, Pengchuan Zhang, Zhe Gan, Jana Diesner and Jianfeng Gao	2141
<i>Universal Adversarial Triggers for Attacking and Analyzing NLP</i>	
Eric Wallace, Shi Feng, Nikhil Kandpal, Matt Gardner and Sameer Singh	2153

<i>To Annotate or Not? Predicting Performance Drop under Domain Shift</i>	
Hady Elsahar and Matthias Gallé	2163
<i>Adaptively Sparse Transformers</i>	
Gonçalo M. Correia, Vlad Niculae and André F. T. Martins	2174
<i>Show Your Work: Improved Reporting of Experimental Results</i>	
Jesse Dodge, Suchin Gururangan, Dallas Card, Roy Schwartz and Noah A. Smith	2185
<i>A Deep Factorization of Style and Structure in Fonts</i>	
Akshay Srivatsan, Jonathan Barron, Dan Klein and Taylor Berg-Kirkpatrick	2195
<i>Cross-lingual Semantic Specialization via Lexical Relation Induction</i>	
Edoardo Maria Ponti, Ivan Vulić, Goran Glavaš, Roi Reichart and Anna Korhonen	2206
<i>Modelling the interplay of metaphor and emotion through multitask learning</i>	
Verna Dankers, Marek Rei, Martha Lewis and Ekaterina Shutova	2218
<i>How well do NLI models capture verb veridicality?</i>	
Alexis Ross and Ellie Pavlick	2230
<i>Modeling Color Terminology Across Thousands of Languages</i>	
Arya D. McCarthy, Winston Wu, Aaron Mueller, William Watson and David Yarowsky	2241
<i>Negative Focus Detection via Contextual Attention Mechanism</i>	
Longxiang Shen, Bowei Zou, Yu Hong, Guodong Zhou, Qiaoming Zhu and AiTi Aw	2251
<i>A Unified Neural Coherence Model</i>	
Han Cheol Moon, Tasnim Mohiuddin, Shafiq Joty and Chi Xu	2262
<i>Topic-Guided Coherence Modeling for Sentence Ordering by Preserving Global and Local Information</i>	
Byungkook Oh, Seungmin Seo, Cheolheon Shin, Eunju Jo and Kyong-Ho Lee	2273
<i>Neural Generative Rhetorical Structure Parsing</i>	
Amandla Mabona, Laura Rimell, Stephen Clark and Andreas Vlachos	2284
<i>Weak Supervision for Learning Discourse Structure</i>	
Sonia Badene, Kate Thompson, Jean-Pierre Lorré and Nicholas Asher	2296
<i>Predicting Discourse Structure using Distant Supervision from Sentiment</i>	
Patrick Huber and Giuseppe Carenini	2306
<i>The Myth of Double-Blind Review Revisited: ACL vs. EMNLP</i>	
Cornelia Caragea, Ana Uban and Liviu P. Dinu	2317
<i>Uncover Sexual Harassment Patterns from Personal Stories by Joint Key Element Extraction and Categorization</i>	
Yingchi Liu, Quanzhi Li, Marika Cifor, Xiaozhong Liu, Qiong Zhang and Luo Si	2328
<i>Identifying Predictive Causal Factors from News Streams</i>	
Ananth Balashankar, Sunandan Chakraborty, Samuel Fraiberger and Lakshminarayanan Subramanian	2338
<i>Training Data Augmentation for Detecting Adverse Drug Reactions in User-Generated Content</i>	
Sepideh Mesbah, Jie Yang, Robert-Jan Sips, Manuel Valle Torre, Christoph Lofi, Alessandro Bozzon and Geert-Jan Houben	2349

<i>Deep Reinforcement Learning-based Text Anonymization against Private-Attribute Inference</i> Ahmadreza Mosallanezhad, Ghazaleh Beigi and Huan Liu	2360
<i>Tree-structured Decoding for Solving Math Word Problems</i> Qianying Liu, Wenyv Guan, Sujian Li and Daisuke Kawahara	2370
<i>PullNet: Open Domain Question Answering with Iterative Retrieval on Knowledge Bases and Text</i> Haitian Sun, Tania Bedrax-Weiss and William Cohen	2380
<i>Cosmos QA: Machine Reading Comprehension with Contextual Commonsense Reasoning</i> Lifu Huang, Ronan Le Bras, Chandra Bhagavatula and Yejin Choi	2391
<i>Finding Generalizable Evidence by Learning to Convince Q&A Models</i> Ethan Perez, Siddharth Karamcheti, Rob Fergus, Jason Weston, Douwe Kiela and Kyunghyun Cho	2402
<i>Ranking and Sampling in Open-Domain Question Answering</i> Yanfu Xu, Zheng Lin, Yuanxin Liu, Rui Liu, Weiping Wang and Dan Meng	2412
<i>A Non-commutative Bilinear Model for Answering Path Queries in Knowledge Graphs</i> Katsuhiko Hayashi and Masashi Shimbo	2422
<i>Generating Questions for Knowledge Bases via Incorporating Diversified Contexts and Answer-Aware Loss</i> Cao Liu, Kang Liu, Shizhu He, Zaiqing Nie and Jun Zhao	2431
<i>Multi-Task Learning for Conversational Question Answering over a Large-Scale Knowledge Base</i> Tao Shen, Xiubo Geng, Tao QIN, Daya Guo, Duyu Tang, Nan Duan, Guodong Long and Daxin Jiang	2442
<i>BiPaR: A Bilingual Parallel Dataset for Multilingual and Cross-lingual Reading Comprehension on Novels</i> Yimin Jing, Deyi Xiong and Zhen Yan	2452
<i>Language Models as Knowledge Bases?</i> Fabio Petroni, Tim Rocktäschel, Sebastian Riedel, Patrick Lewis, Anton Bakhtin, Yuxiang Wu and Alexander Miller	2463
<i>NumNet: Machine Reading Comprehension with Numerical Reasoning</i> Qiu Ran, Yankai Lin, Peng Li, Jie Zhou and Zhiyuan Liu	2474
<i>Unicoder: A Universal Language Encoder by Pre-training with Multiple Cross-lingual Tasks</i> Haoyang Huang, Yaobo Liang, Nan Duan, Ming Gong, Linjun Shou, Daxin Jiang and Ming Zhou	2485
<i>Addressing Semantic Drift in Question Generation for Semi-Supervised Question Answering</i> Shiyue Zhang and Mohit Bansal	2495
<i>Adversarial Domain Adaptation for Machine Reading Comprehension</i> Huazheng Wang, Zhe Gan, Xiaodong Liu, Jingjing Liu, Jianfeng Gao and Hongning Wang ..	2510
<i>Incorporating External Knowledge into Machine Reading for Generative Question Answering</i> Bin Bi, Chen Wu, Ming Yan, Wei Wang, Jiangnan Xia and Chenliang Li	2521
<i>Answering questions by learning to rank - Learning to rank by answering questions</i> George Sebastian Pirtoaca, Traian Rebedea and Stefan Ruseti	2531

<i>Discourse-Aware Semantic Self-Attention for Narrative Reading Comprehension</i> Todor Mihaylov and Anette Frank	2541
<i>Revealing the Importance of Semantic Retrieval for Machine Reading at Scale</i> Yixin Nie, Songhe Wang and Mohit Bansal	2553
<i>PubMedQA: A Dataset for Biomedical Research Question Answering</i> Qiao Jin, Bhuwan Dhingra, Zhengping Liu, William Cohen and Xinghua Lu	2567
<i>Quick and (not so) Dirty: Unsupervised Selection of Justification Sentences for Multi-hop Question Answering</i> Vikas Yadav, Steven Bethard and Mihai Surdeanu.....	2578
<i>Answering Complex Open-domain Questions Through Iterative Query Generation</i> Peng Qi, Xiaowen Lin, Leo Mehr, Zijian Wang and Christopher D. Manning	2590
<i>NL2pSQL: Generating Pseudo-SQL Queries from Under-Specified Natural Language Questions</i> Fuxiang Chen, Seung-won Hwang, Jaegul Choo, Jung-Woo Ha and Sunghun Kim	2603
<i>Leveraging Frequent Query Substructures to Generate Formal Queries for Complex Question Answering</i> Jiwei Ding, Wei Hu, Qixin Xu and Yuzhong Qu	2614
<i>Incorporating Graph Attention Mechanism into Knowledge Graph Reasoning Based on Deep Reinforcement Learning</i> Heng Wang, Shuangyin Li, Rong Pan and Mingzhi Mao	2623
<i>Learning to Update Knowledge Graphs by Reading News</i> Jizhi Tang, Yansong Feng and Dongyan Zhao	2632
<i>DIVINE: A Generative Adversarial Imitation Learning Framework for Knowledge Graph Reasoning</i> Ruiping Li and Xiang Cheng	2642
<i>Original Semantics-Oriented Attention and Deep Fusion Network for Sentence Matching</i> Mingtong Liu, Yujie Zhang, Jinan Xu and Yufeng Chen	2652
<i>Representation Learning with Ordered Relation Paths for Knowledge Graph Completion</i> Yao Zhu, Hongzhi Liu, Zhonghai Wu, Yang Song and Tao Zhang	2662
<i>Collaborative Policy Learning for Open Knowledge Graph Reasoning</i> Cong Fu, Tong Chen, Meng Qu, Woojeong Jin and Xiang Ren	2672
<i>Modeling Event Background for If-Then Commonsense Reasoning Using Context-aware Variational Autoencoder</i> Li Du, Xiao Ding, Ting Liu and Zhongyang Li	2682
<i>Asynchronous Deep Interaction Network for Natural Language Inference</i> Di Liang, Fubao Zhang, Qi Zhang and Xuanjing Huang	2692
<i>Keep Calm and Switch On! Preserving Sentiment and Fluency in Semantic Text Exchange</i> Steven Y. Feng, Aaron W. Li and Jesse Hoey	2701
<i>Query-focused Scenario Construction</i> Su Wang, Greg Durrett and Katrin Erk	2712
<i>Semi-supervised Entity Alignment via Joint Knowledge Embedding Model and Cross-graph Model</i> Chengjiang Li, Yixin Cao, Lei Hou, Jiaxin Shi, Juanzi Li and Tat-Seng Chua	2723

<i>Designing and Interpreting Probes with Control Tasks</i>	
John Hewitt and Percy Liang	2733
<i>Specializing Word Embeddings (for Parsing) by Information Bottleneck</i>	
Xiang Lisa Li and Jason Eisner	2744
<i>Deep Contextualized Word Embeddings in Transition-Based and Graph-Based Dependency Parsing - A Tale of Two Parsers Revisited</i>	
Artur Kulmizev, Miryam de Lhoneux, Johannes Gontrum, Elena Fano and Joakim Nivre	2755
<i>Semantic graph parsing with recurrent neural network DAG grammars</i>	
Federico Fancellu, Sorcha Gilroy, Adam Lopez and Mirella Lapata	2769
<i>75 Languages, 1 Model: Parsing Universal Dependencies Universally</i>	
Dan Kondratyuk and Milan Straka	2779
<i>Interactive Language Learning by Question Answering</i>	
Xingdi Yuan, Marc-Alexandre Côté, Jie Fu, Zhouhan Lin, Chris Pal, Yoshua Bengio and Adam Trischler	2796
<i>What’s Missing: A Knowledge Gap Guided Approach for Multi-hop Question Answering</i>	
Tushar Khot, Ashish Sabharwal and Peter Clark	2814
<i>KagNet: Knowledge-Aware Graph Networks for Commonsense Reasoning</i>	
Bill Yuchen Lin, Xinyue Chen, Jamin Chen and Xiang Ren	2829
<i>Learning with Limited Data for Multilingual Reading Comprehension</i>	
Kyungjae Lee, Sunghyun Park, Hojae Han, Jinyoung Yeo, Seung-won Hwang and Juho Lee .	2840
<i>A Discrete Hard EM Approach for Weakly Supervised Question Answering</i>	
Sewon Min, Danqi Chen, Hannaneh Hajishirzi and Luke Zettlemoyer	2851
<i>Is the Red Square Big? MAlLeViC: Modeling Adjectives Leveraging Visual Contexts</i>	
Sandro Pezzelle and Raquel Fernández	2865
<i>Investigating BERT’s Knowledge of Language: Five Analysis Methods with NPIs</i>	
Alex Warstadt, Yu Cao, Ioana Grosu, Wei Peng, Hagen Blix, Yining Nie, Anna Alsop, Shikha Bordia, Haokun Liu, Alicia Parrish, Sheng-Fu Wang, Jason Phang, Anhad Mohananey, Phu Mon Htut, Paloma Jeretic and Samuel R. Bowman	2877
<i>Representation of Constituents in Neural Language Models: Coordination Phrase as a Case Study</i>	
Aixiu AN, Peng Qian, Ethan Wilcox and Roger Levy	2888
<i>Towards Zero-shot Language Modeling</i>	
Edoardo Maria Ponti, Ivan Vulić, Ryan Cotterell, Roi Reichart and Anna Korhonen	2900
<i>What Gets Echoed? Understanding the “Pointers” in Explanations of Persuasive Arguments</i>	
David Atkinson, Kumar Bhargav Srinivasan and Chenhao Tan	2911
<i>Modeling Frames in Argumentation</i>	
Yamen Ajjour, Milad Alshomary, Henning Wachsmuth and Benno Stein	2922
<i>AMPERSAND: Argument Mining for PERSuAsive oNline Discussions</i>	
Tuhin Chakrabarty, Christopher Hidey, Smaranda Muresan, Kathy McKeown and Alyssa Hwang	2933

<i>Evaluating adversarial attacks against multiple fact verification systems</i>	
James Thorne, Andreas Vlachos, Christos Christodoulopoulos and Arpit Mittal	2944
<i>Nonsense!: Quality Control via Two-Step Reason Selection for Annotating Local Acceptability and Related Attributes in News Editorials</i>	
Wonsuk Yang, seungwon yoon, Ada Carpenter and Jong Park	2954
<i>Evaluating Pronominal Anaphora in Machine Translation: An Evaluation Measure and a Test Suite</i>	
Prathyusha Jwalapuram, Shafiq Joty, Irina Temnikova and Preslav Nakov	2964
<i>A Regularization Approach for Incorporating Event Knowledge and Coreference Relations into Neural Discourse Parsing</i>	
Zeyu Dai and Ruihong Huang	2974
<i>Weakly Supervised Multilingual Causality Extraction from Wikipedia</i>	
Chikara Hashimoto	2986
<i>Attribute-aware Sequence Network for Review Summarization</i>	
Junjie Li, Xuepeng Wang, Dawei Yin and Chengqing Zong	2998
<i>Extractive Summarization of Long Documents by Combining Global and Local Context</i>	
Wen Xiao and Giuseppe Carenini	3009
<i>Enhancing Neural Data-To-Text Generation Models with External Background Knowledge</i>	
Shuang Chen, Jinpeng Wang, Xiaocheng Feng, Feng Jiang, Bing Qin and Chin-Yew Lin	3020
<i>Reading Like HER: Human Reading Inspired Extractive Summarization</i>	
Ling Luo, Xiang Ao, Yan Song, Feiyang Pan, Min Yang and Qing He	3031
<i>Contrastive Attention Mechanism for Abstractive Sentence Summarization</i>	
Xiangyu Duan, Hongfei Yu, Mingming Yin, Min Zhang, Weihua Luo and Yue Zhang	3042
<i>NCLS: Neural Cross-Lingual Summarization</i>	
Junnan Zhu, Qian Wang, Yining Wang, Yu Zhou, Jiajun Zhang, Shaonan Wang and Chengqing Zong	3052
<i>Clickbait? Sensational Headline Generation with Auto-tuned Reinforcement Learning</i>	
Peng Xu, Chien-Sheng Wu, Andrea Madotto and Pascale Fung	3063
<i>Concept Pointer Network for Abstractive Summarization</i>	
Wenbo Wang, Yang Gao, Heyan Huang and Yuxiang Zhou	3074
<i>Surface Realisation Using Full Delexicalisation</i>	
Anastasia Shimorina and Claire Gardent	3084
<i>IMaT: Unsupervised Text Attribute Transfer via Iterative Matching and Translation</i>	
Zhijing Jin, Di Jin, Jonas Mueller, Nicholas Matthews and Enrico Santus	3095
<i>Better Rewards Yield Better Summaries: Learning to Summarise Without References</i>	
Florian Böhm, Yang Gao, Christian M. Meyer, Ori Shapira, Ido Dagan and Iryna Gurevych	3108
<i>Mixture Content Selection for Diverse Sequence Generation</i>	
Jaemin Cho, Minjoon Seo and Hannaneh Hajishirzi	3119

<i>An End-to-End Generative Architecture for Paraphrase Generation</i>	
Qian Yang, Zhouyuan Huo, Dinghan Shen, Yong Cheng, Wenlin Wang, Guoyin Wang and Lawrence Carin	3130
<i>Table-to-Text Generation with Effective Hierarchical Encoder on Three Dimensions (Row, Column and Time)</i>	
Heng Gong, Xiaocheng Feng, Bing Qin and Ting Liu	3141
<i>Subtopic-driven Multi-Document Summarization</i>	
Xin Zheng, Aixin Sun, Jing Li and Karthik Muthuswamy	3151
<i>Referring Expression Generation Using Entity Profiles</i>	
Meng Cao and Jackie Chi Kit Cheung	3161
<i>Exploring Diverse Expressions for Paraphrase Generation</i>	
Lihua Qian, Lin Qiu, Weinan Zhang, Xin Jiang and Yong Yu	3171
<i>Enhancing AMR-to-Text Generation with Dual Graph Representations</i>	
Leonardo F. R. Ribeiro, Claire Gardent and Iryna Gurevych	3181
<i>Keeping Consistency of Sentence Generation and Document Classification with Multi-Task Learning</i>	
Toru Nishino, Shotaro Misawa, Ryuji Kano, Tomoki Taniguchi, Yasuhide Miura and Tomoko Ohkuma	3193
<i>Toward a Task of Feedback Comment Generation for Writing Learning</i>	
Ryo Nagata	3204
<i>Improving Question Generation With to the Point Context</i>	
Jingjing Li, Yifan Gao, Lidong Bing, Irwin King and Michael R. Lyu	3214
<i>Deep Copycat Networks for Text-to-Text Generation</i>	
Julia Ive, Pranava Madhyastha and Lucia Specia	3225
<i>Towards Controllable and Personalized Review Generation</i>	
Pan Li and Alexander Tuzhilin	3235
<i>Answers Unite! Unsupervised Metrics for Reinforced Summarization Models</i>	
Thomas Scialom, Sylvain Lamprier, Benjamin Piwowarski and Jacopo Staiano	3244
<i>Long and Diverse Text Generation with Planning-based Hierarchical Variational Model</i>	
Zhihong Shao, Minlie Huang, Jiangtao Wen, Wenfei Xu and xiaoyan zhu	3255
<i>“Transforming” Delete, Retrieve, Generate Approach for Controlled Text Style Transfer</i>	
Akhilesh Sudhakar, Bhargav Upadhyay and Arjun Maheswaran	3267
<i>An Entity-Driven Framework for Abstractive Summarization</i>	
Eva Sharma, Luyang Huang, Zhe Hu and Lu Wang	3278
<i>Neural Extractive Text Summarization with Syntactic Compression</i>	
Jiacheng Xu and Greg Durrett	3290
<i>Domain Adaptive Text Style Transfer</i>	
Dianqi Li, Yizhe Zhang, Zhe Gan, Yu Cheng, Chris Brockett, Bill Dolan and Ming-Ting Sun	3302

<i>Let's Ask Again: Refine Network for Automatic Question Generation</i> Preksha Nema, Akash Kumar Mohankumar, Mitesh M. Khapra, Balaji Vasani Srinivasan and Balaraman Ravindran	3312
<i>Earlier Isn't Always Better: Sub-aspect Analysis on Corpus and System Biases in Summarization</i> Taehee Jung, Dongyeop Kang, Lucas Mentch and Eduard Hovy	3322
<i>Lost in Evaluation: Misleading Benchmarks for Bilingual Dictionary Induction</i> Yova Kementchedjheva, Mareike Hartmann and Anders Søgaard	3334
<i>Towards Realistic Practices In Low-Resource Natural Language Processing: The Development Set</i> Katharina Kann, Kyunghyun Cho and Samuel R. Bowman	3340
<i>Synchronously Generating Two Languages with Interactive Decoding</i> Yining Wang, Jiajun Zhang, Long Zhou, Yuchen Liu and Chengqing Zong	3348
<i>On NMT Search Errors and Model Errors: Cat Got Your Tongue?</i> Felix Stahlberg and Bill Byrne	3354
<i>"Going on a vacation" takes longer than "Going for a walk": A Study of Temporal Commonsense Understanding</i> Ben Zhou, Daniel Khashabi, Qiang Ning and Dan Roth	3361
<i>QAInfomax: Learning Robust Question Answering System by Mutual Information Maximization</i> Yi-Ting Yeh and Yun-Nung Chen	3368
<i>Adapting Meta Knowledge Graph Information for Multi-Hop Reasoning over Few-Shot Relations</i> Xin Lv, Yuxian Gu, Xu Han, Lei Hou, Juanzi Li and Zhiyuan Liu	3374
<i>How Reasonable are Common-Sense Reasoning Tasks: A Case-Study on the Winograd Schema Challenge and SWAG</i> Paul Trichelair, Ali Emami, Adam Trischler, Kaheer Suleman and Jackie Chi Kit Cheung	3380
<i>Pun-GAN: Generative Adversarial Network for Pun Generation</i> Fuli Luo, Shun Yao Li, Pengcheng Yang, Lei Li, Baobao Chang, Zhifang Sui and Xu SUN	3386
<i>Multi-Task Learning with Language Modeling for Question Generation</i> Wenjie Zhou, Minghua Zhang and Yunfang Wu	3392
<i>Autoregressive Text Generation Beyond Feedback Loops</i> Florian Schmidt, Stephan Mandt and Thomas Hofmann	3398
<i>The Woman Worked as a Babysitter: On Biases in Language Generation</i> Emily Sheng, Kai-Wei Chang, Premkumar Natarajan and Nanyun Peng	3405
<i>On the Importance of Delexicalization for Fact Verification</i> Sandeep Sunawal, Mithun Paul, Rebecca Sharp and Mihai Surdeanu	3411
<i>Towards Debiasing Fact Verification Models</i> Tal Schuster, Darsh Shah, Yun Jie Serene Yeo, Daniel Roberto Filizzola Ortiz, Enrico Santus and Regina Barzilay	3417
<i>Recognizing Conflict Opinions in Aspect-level Sentiment Classification with Dual Attention Networks</i> Xingwei Tan, Yi Cai and Changxi Zhu	3424

<i>Investigating Dynamic Routing in Tree-Structured LSTM for Sentiment Analysis</i> Jin Wang, Liang-Chih Yu, K. Robert Lai and Xuejie Zhang	3430
<i>A Label Informative Wide & Deep Classifier for Patents and Papers</i> Muyao Niu and Jie Cai	3436
<i>Text Level Graph Neural Network for Text Classification</i> Lianzhe Huang, Dehong Ma, Sujian Li, Xiaodong Zhang and Houfeng WANG	3442
<i>Semantic Relatedness Based Re-ranker for Text Spotting</i> Ahmed Sabir, Francesc Moreno and Lluís Padró	3449
<i>Delta-training: Simple Semi-Supervised Text Classification using Pretrained Word Embeddings</i> Hwiyeol Jo and Ceyda Cınarel	3456
<i>Visual Detection with Context for Document Layout Analysis</i> Carlos Soto and Shinjae Yoo	3462
<i>Evaluating Topic Quality with Posterior Variability</i> Linzi Xing, Michael J. Paul and Giuseppe Carenini	3469
<i>Neural Topic Model with Reinforcement Learning</i> Lin Gui, Jia Leng, Gabriele Pergola, yu zhou, Ruifeng Xu and Yulan He	3476
<i>Modelling Stopping Criteria for Search Results using Poisson Processes</i> Alison Sneyd and Mark Stevenson	3482
<i>Cross-Domain Modeling of Sentence-Level Evidence for Document Retrieval</i> Zeynep Akkalyoncu Yilmaz, Wei Yang, Haotian Zhang and Jimmy Lin	3488
<i>The Challenges of Optimizing Machine Translation for Low Resource Cross-Language Information Retrieval</i> Constantine Lignos, Daniel Cohen, Yen-Chieh Lien, Pratik Mehta, W. Bruce Croft and Scott Miller	3495
<i>Rotate King to get Queen: Word Relationships as Orthogonal Transformations in Embedding Space</i> Kawin Ethayarajh	3501
<i>GlossBERT: BERT for Word Sense Disambiguation with Gloss Knowledge</i> Luyao Huang, Chi Sun, Xipeng Qiu and Xuanjing Huang	3507
<i>Leveraging Adjective-Noun Phrasing Knowledge for Comparison Relation Prediction in Text-to-SQL</i> Haoyan Liu, Lei Fang, Qian Liu, Bei Chen, Jian-Guang LOU and Zhoujun Li	3513
<i>Bridging the Defined and the Defining: Exploiting Implicit Lexical Semantic Relations in Definition Modeling</i> Koki Washio, Satoshi Sekine and Tsuneaki Kato	3519
<i>Don't Just Scratch the Surface: Enhancing Word Representations for Korean with Hanja</i> Kang Min Yoo, Taeuk Kim and Sang-goo Lee	3526
<i>SyntagNet: Challenging Supervised Word Sense Disambiguation with Lexical-Semantic Combinations</i> Marco Maru, Federico Scozzafava, Federico Martelli and Roberto Navigli	3532
<i>Hierarchical Meta-Embeddings for Code-Switching Named Entity Recognition</i> Genta Indra Winata, Zhaojiang Lin, Jamin Shin, Zihan Liu and Pascale Fung	3539

<i>Fine-tune BERT with Sparse Self-Attention Mechanism</i>	
Baiyun Cui, Yingming Li, Ming Chen and Zhongfei Zhang	3546
<i>Feature-Dependent Confusion Matrices for Low-Resource NER Labeling with Noisy Labels</i>	
Lukas Lange, Michael A. Hedderich and Dietrich Klakow	3552
<i>A Multi-Pairwise Extension of Procrustes Analysis for Multilingual Word Translation</i>	
Hagai Taitelbaum, Gal Chechik and Jacob Goldberger	3558
<i>Out-of-Domain Detection for Low-Resource Text Classification Tasks</i>	
Ming Tan, Yang Yu, Haoyu Wang, Dakuo Wang, Saloni Potdar, Shiyu Chang and Mo Yu	3564
<i>Harnessing Pre-Trained Neural Networks with Rules for Formality Style Transfer</i>	
Yunli Wang, Yu Wu, Lili Mou, Zhoujun Li and Wenhan Chao	3571
<i>Multiple Text Style Transfer by using Word-level Conditional Generative Adversarial Network with Two-Phase Training</i>	
Chih-Te Lai, Yi-Te Hong, Hong-You Chen, Chi-Jen Lu and Shou-De Lin	3577
<i>Improved Differentiable Architecture Search for Language Modeling and Named Entity Recognition</i>	
Yufan Jiang, Chi Hu, Tong Xiao, Chunliang Zhang and Jingbo Zhu	3583
<i>Using Pairwise Occurrence Information to Improve Knowledge Graph Completion on Large-Scale Datasets</i>	
Esmā Balkir, Masha Naslidnyk, Dave Palfrey and Arpit Mittal	3589
<i>Single Training Dimension Selection for Word Embedding with PCA</i>	
Yu Wang	3595
<i>A Surprisingly Effective Fix for Deep Latent Variable Modeling of Text</i>	
Bohan Li, Junxian He, Graham Neubig, Taylor Berg-Kirkpatrick and Yiming Yang	3601
<i>SciBERT: A Pretrained Language Model for Scientific Text</i>	
Iz Beltagy, Kyle Lo and Arman Cohan	3613
<i>Humor Detection: A Transformer Gets the Last Laugh</i>	
Orion Weller and Kevin Seppi	3619
<i>Combining Global Sparse Gradients with Local Gradients in Distributed Neural Network Training</i>	
Alham Fikri Aji, Kenneth Heafield and Nikolay Bogoychev	3624
<i>Small and Practical BERT Models for Sequence Labeling</i>	
Henry Tsai, Jason Riesa, Melvin Johnson, Naveen Arivazhagan, Xin Li and Amelia Archer . .	3630
<i>Data Augmentation with Atomic Templates for Spoken Language Understanding</i>	
Zijian Zhao, Su Zhu and Kai Yu	3635
<i>PaLM: A Hybrid Parser and Language Model</i>	
Hao Peng, Roy Schwartz and Noah A. Smith	3642
<i>A Pilot Study for Chinese SQL Semantic Parsing</i>	
Qingkai Min, Yuefeng Shi and Yue Zhang	3650
<i>Global Reasoning over Database Structures for Text-to-SQL Parsing</i>	
Ben Bogin, Matt Gardner and Jonathan Berant	3657

<i>Transductive Learning of Neural Language Models for Syntactic and Semantic Analysis</i> Hiroki Ouchi, Jun Suzuki and Kentaro Inui	3663
<i>Efficient Sentence Embedding using Discrete Cosine Transform</i> Nada Almarwani, Hanan Aldarmaki and Mona Diab	3670
<i>A Search-based Neural Model for Biomedical Nested and Overlapping Event Detection</i> Kurt Junshean Espinosa, Makoto Miwa and Sophia Ananiadou	3677
<i>PAWS-X: A Cross-lingual Adversarial Dataset for Paraphrase Identification</i> Yinfei Yang, Yuan Zhang, Chris Tar and Jason Baldridge	3685
<i>Pretrained Language Models for Sequential Sentence Classification</i> Arman Cohan, Iz Beltagy, Daniel King, Bhavana Dalvi and Dan Weld	3691
<i>Emergent Linguistic Phenomena in Multi-Agent Communication Games</i> Laura Harding Graesser, Kyunghyun Cho and Douwe Kiela	3698
<i>TalkDown: A Corpus for Condescension Detection in Context</i> Zijian Wang and Christopher Potts	3709
<i>Summary Cloze: A New Task for Content Selection in Topic-Focused Summarization</i> Daniel Deutsch and Dan Roth	3718
<i>Text Summarization with Pretrained Encoders</i> Yang Liu and Mirella Lapata	3728
<i>How to Write Summaries with Patterns? Learning towards Abstractive Summarization through Prototype Editing</i> Shen Gao, Xiuying Chen, Piji Li, Zhangming Chan, Dongyan Zhao and Rui Yan	3739
<i>BottleSum: Unsupervised and Self-supervised Sentence Summarization using the Information Bottleneck Principle</i> Peter West, Ari Holtzman, Jan Buys and Yejin Choi	3750
<i>Improving Latent Alignment in Text Summarization by Generalizing the Pointer Generator</i> Xiaoyu Shen, Yang Zhao, Hui Su and Dietrich Klakow	3760
<i>Learning Semantic Parsers from Denotations with Latent Structured Alignments and Abstract Programs</i> Bailin Wang, Ivan Titov and Mirella Lapata	3772
<i>Broad-Coverage Semantic Parsing as Transduction</i> Sheng Zhang, Xutai Ma, Kevin Duh and Benjamin Van Durme	3784
<i>Core Semantic First: A Top-down Approach for AMR Parsing</i> Deng Cai and Wai Lam	3797
<i>Don't paraphrase, detect! Rapid and Effective Data Collection for Semantic Parsing</i> Jonathan Herzig and Jonathan Berant	3808
<i>Improving Distantly-Supervised Relation Extraction with Joint Label Embedding</i> Linmei Hu, Luhao Zhang, Chuan Shi, Liqiang Nie, Weili Guan and Cheng Yang	3819
<i>Leverage Lexical Knowledge for Chinese Named Entity Recognition via Collaborative Graph Network</i> Dianbo Sui, Yubo Chen, Kang Liu, Jun Zhao and Shengping Liu	3828

<i>Looking Beyond Label Noise: Shifted Label Distribution Matters in Distantly Supervised Relation Extraction</i>	
Qinyuan Ye, Liyuan Liu, Maosen Zhang and Xiang Ren	3839
<i>Easy First Relation Extraction with Information Redundancy</i>	
Shuai Ma, Gang Wang, Yansong Feng and Jinpeng Huai	3849
<i>Dependency-Guided LSTM-CRF for Named Entity Recognition</i>	
Zhanming Jie and Wei Lu	3860
<i>Cross-Cultural Transfer Learning for Text Classification</i>	
Dor Ringel, Gal Lavee, Ido Guy and Kira Radinsky	3871
<i>Combining Unsupervised Pre-training and Annotator Rationales to Improve Low-shot Text Classification</i>	
Oren Melamud, Mihaela Bornea and Ken Barker	3882
<i>ProSeqo: Projection Sequence Networks for On-Device Text Classification</i>	
Zornitsa Kozareva and Sujith Ravi	3892
<i>Induction Networks for Few-Shot Text Classification</i>	
Ruiying Geng, Binhua Li, Yongbin Li, Xiaodan Zhu, Ping Jian and Jian Sun	3902
<i>Benchmarking Zero-shot Text Classification: Datasets, Evaluation and Entailment Approach</i>	
Wenpeng Yin, Jamaal Hay and Dan Roth	3912
<i>A Logic-Driven Framework for Consistency of Neural Models</i>	
Tao Li, Vivek Gupta, Maitrey Mehta and Vivek Srikumar	3922
<i>Style Transfer for Texts: Retrain, Report Errors, Compare with Rewrites</i>	
Alexey Tikhonov, Viacheslav Shibaev, Aleksander Nagaev, Aigul Nugmanova and Ivan P. Yamshchikov	3934
<i>Implicit Deep Latent Variable Models for Text Generation</i>	
Le Fang, Chunyuan Li, Jianfeng Gao, Wen Dong and Changyou Chen	3944
<i>Text Emotion Distribution Learning from Small Sample: A Meta-Learning Approach</i>	
Zhenjie Zhao and Xiaojuan Ma	3955
<i>Judge the Judges: A Large-Scale Evaluation Study of Neural Language Models for Online Review Generation</i>	
Cristina Garbacea, Samuel Carton, Shiyan Yan and Qiaozhu Mei	3966
<i>Sentence-BERT: Sentence Embeddings using Siamese BERT-Networks</i>	
Nils Reimers and Iryna Gurevych	3980
<i>Learning Only from Relevant Keywords and Unlabeled Documents</i>	
Nontawat Charoenphakdee, Jongyeong Lee, Yiping Jin, Dittaya Wanvarie and Masashi Sugiyama	3991
<i>Denosing based Sequence-to-Sequence Pre-training for Text Generation</i>	
Liang Wang, Wei Zhao, Ruoyu Jia, Sujian Li and Jingming Liu	4001
<i>Dialog Intent Induction with Deep Multi-View Clustering</i>	
Hugh Perkins and Yi Yang	4014

<i>Nearly-Unsupervised Hashcode Representations for Biomedical Relation Extraction</i> Sahil Garg, Aram Galstyan, Greg Ver Steeg and Guillermo Cecchi	4024
<i>Auditing Deep Learning processes through Kernel-based Explanatory Models</i> Danilo Croce, Daniele Rossini and Roberto Basili	4035
<i>Enhancing Variational Autoencoders with Mutual Information Neural Estimation for Text Generation</i> Dong Qian and William K. Cheung.....	4045
<i>Sampling Bias in Deep Active Classification: An Empirical Study</i> Ameya Prabhu, Charles Dognin and Maneesh Singh	4056
<i>Don't Take the Easy Way Out: Ensemble Based Methods for Avoiding Known Dataset Biases</i> Christopher Clark, Mark Yatskar and Luke Zettlemoyer	4067
<i>Achieving Verified Robustness to Symbol Substitutions via Interval Bound Propagation</i> Po-Sen Huang, Robert Stanforth, Johannes Welbl, Chris Dyer, Dani Yogatama, Sven Gowal, Krishnamurthy Dvijotham and Pushmeet Kohli.....	4081
<i>Rethinking Cooperative Rationalization: Introspective Extraction and Complement Control</i> Mo Yu, Shiyu Chang, Yang Zhang and Tommi Jaakkola	4092
<i>Experimenting with Power Divergences for Language Modeling</i> Mathieu Labeau and Shay B. Cohen	4102
<i>Hierarchically-Refined Label Attention Network for Sequence Labeling</i> Leyang Cui and Yue Zhang.....	4113
<i>Certified Robustness to Adversarial Word Substitutions</i> Robin Jia, Aditi Raghunathan, Kerem Göksel and Percy Liang	4127
<i>Visualizing and Understanding the Effectiveness of BERT</i> Yaru Hao, Li Dong, Furu Wei and Ke Xu	4141
<i>Topics to Avoid: Demoting Latent Confounds in Text Classification</i> Sachin Kumar, Shuly Wintner, Noah A. Smith and Yulia Tsvetkov.....	4151
<i>Learning to Ask for Conversational Machine Learning</i> Shashank Srivastava, Igor Labutov and Tom Mitchell	4162
<i>Language Modeling for Code-Switching: Evaluation, Integration of Monolingual Data, and Discriminative Training</i> Hila Gonen and Yoav Goldberg	4173
<i>Using Local Knowledge Graph Construction to Scale Seq2Seq Models to Multi-Document Inputs</i> Angela Fan, Claire Gardent, Chloé Braud and Antoine Bordes	4184
<i>Fine-grained Knowledge Fusion for Sequence Labeling Domain Adaptation</i> Huiyun Yang, Shujian Huang, XIN-YU DAI and Jiajun CHEN.....	4195
<i>Exploiting Monolingual Data at Scale for Neural Machine Translation</i> Lijun Wu, Yiren Wang, Yingce Xia, Tao QIN, Jianhuang Lai and Tie-Yan Liu	4205
<i>Meta Relational Learning for Few-Shot Link Prediction in Knowledge Graphs</i> Mingyang Chen, Wen Zhang, Wei Zhang, Qiang Chen and Huajun Chen.....	4216

<i>Distributionally Robust Language Modeling</i>	
Yonatan Oren, Shiori Sagawa, Tatsunori Hashimoto and Percy Liang	4226
<i>Unsupervised Domain Adaptation of Contextualized Embeddings for Sequence Labeling</i>	
Xiaochuang Han and Jacob Eisenstein	4237
<i>Learning Latent Parameters without Human Response Patterns: Item Response Theory with Artificial Crowds</i>	
John P. Lalor, Hao Wu and Hong Yu	4248
<i>Parallel Iterative Edit Models for Local Sequence Transduction</i>	
Abhijeet Awasthi, Sunita Sarawagi, Rasna Goyal, Sabyasachi Ghosh and Vihari Piratla	4259
<i>ARAML: A Stable Adversarial Training Framework for Text Generation</i>	
Pei Ke, Fei Huang, Minlie Huang and xiaoyan zhu	4270
<i>FlowSeq: Non-Autoregressive Conditional Sequence Generation with Generative Flow</i>	
Xuezhe Ma, Chunting Zhou, Xian Li, Graham Neubig and Eduard Hovy	4281
<i>Compositional Generalization for Primitive Substitutions</i>	
Yuanpeng Li, Liang Zhao, Jianyu Wang and Joel Hestness	4292
<i>WikiCREM: A Large Unsupervised Corpus for Coreference Resolution</i>	
Vid Kocijan, Oana-Maria Camburu, Ana-Maria Cretu, Yordan Yordanov, Phil Blunsom and Thomas Lukasiewicz	4302
<i>Identifying and Explaining Discriminative Attributes</i>	
Armins Stepanjans and André Freitas	4312
<i>Patient Knowledge Distillation for BERT Model Compression</i>	
Siqi Sun, Yu Cheng, Zhe Gan and Jingjing Liu	4322
<i>Neural Gaussian Copula for Variational Autoencoder</i>	
Prince Zizhuang Wang and William Yang Wang	4332
<i>Transformer Dissection: An Unified Understanding for Transformer’s Attention via the Lens of Kernel</i>	
Yao-Hung Hubert Tsai, Shaojie Bai, Makoto Yamada, Louis-Philippe Morency and Ruslan Salakhutdinov	4343
<i>Learning to Learn and Predict: A Meta-Learning Approach for Multi-Label Classification</i>	
Jiawei Wu, Wenhan Xiong and William Yang Wang	4353
<i>Revealing the Dark Secrets of BERT</i>	
Olga Kovaleva, Alexey Romanov, Anna Rogers and Anna Rumshisky	4364
<i>Machine Translation With Weakly Paired Documents</i>	
Lijun Wu, Jinhua Zhu, Di He, Fei Gao, Tao QIN, Jianhuang Lai and Tie-Yan Liu	4374
<i>Countering Language Drift via Visual Grounding</i>	
Jason Lee, Kyunghyun Cho and Douwe Kiela	4384
<i>The Bottom-up Evolution of Representations in the Transformer: A Study with Machine Translation and Language Modeling Objectives</i>	
Elena Voita, Rico Sennrich and Ivan Titov	4395

<i>Do We Really Need Fully Unsupervised Cross-Lingual Embeddings?</i>	
Ivan Vulić, Goran Glavaš, Roi Reichart and Anna Korhonen	4406
<i>Weakly-Supervised Concept-based Adversarial Learning for Cross-lingual Word Embeddings</i>	
Haozhou Wang, James Henderson and Paola Merlo	4418
<i>Aligning Cross-Lingual Entities with Multi-Aspect Information</i>	
Hsiu-Wei Yang, Yanyan Zou, Peng Shi, Wei Lu, Jimmy Lin and Xu SUN	4430
<i>Contrastive Language Adaptation for Cross-Lingual Stance Detection</i>	
Mitra Mohtarami, James Glass and Preslav Nakov	4441
<i>Jointly Learning to Align and Translate with Transformer Models</i>	
Sarthak Garg, Stephan Peitz, Udhayakumar Nallasamy and Matthias Paulik	4452
<i>Social IQa: Commonsense Reasoning about Social Interactions</i>	
Maarten Sap, Hannah Rashkin, Derek Chen, Ronan Le Bras and Yejin Choi	4462
<i>Self-Assembling Modular Networks for Interpretable Multi-Hop Reasoning</i>	
Yichen Jiang and Mohit Bansal	4473
<i>Posing Fair Generalization Tasks for Natural Language Inference</i>	
Atticus Geiger, Ignacio Cases, Lauri Karttunen and Christopher Potts	4484
<i>Everything Happens for a Reason: Discovering the Purpose of Actions in Procedural Text</i>	
Bhavana Dalvi, Niket Tandon, Antoine Bosselut, Wen-tau Yih and Peter Clark	4495
<i>CLUTRR: A Diagnostic Benchmark for Inductive Reasoning from Text</i>	
Koustuv Sinha, Shagun Sodhani, Jin Dong, Joelle Pineau and William L. Hamilton	4505
<i>Taskmaster-1: Toward a Realistic and Diverse Dialog Dataset</i>	
Bill Byrne, Karthik Krishnamoorthi, Chinnadhurai Sankar, Arvind Neelakantan, Ben Goodrich, Daniel Duckworth, Semih Yavuz, Amit Dubey, Kyu-Young Kim and Andy Cedilnik	4515
<i>Multi-Domain Goal-Oriented Dialogues (MultiDoGO): Strategies toward Curating and Annotating Large Scale Dialogue Data</i>	
Denis Peskov, Nancy Clarke, Jason Krone, Brigi Fodor, Yi Zhang, Adel Youssef and Mona Diab	4525
<i>Build it Break it Fix it for Dialogue Safety: Robustness from Adversarial Human Attack</i>	
Emily Dinan, Samuel Humeau, Bharath Chintagunta and Jason Weston	4536
<i>GECOR: An End-to-End Generative Ellipsis and Co-reference Resolution Model for Task-Oriented Dialogue</i>	
Jun Quan, Deyi Xiong, Bonnie Webber and Changjian Hu	4546
<i>Task-Oriented Conversation Generation Using Heterogeneous Memory Networks</i>	
Zehao Lin, Xinjing Huang, Feng Ji, Haiqing Chen and Yin Zhang	4557
<i>Aspect-based Sentiment Classification with Aspect-specific Graph Convolutional Networks</i>	
Chen Zhang, Qiuchi Li and Dawei Song	4567
<i>Coupling Global and Local Context for Unsupervised Aspect Extraction</i>	
Ming Liao, Jing Li, Haisong Zhang, Lingzhi Wang, Xixin Wu and Kam-Fai Wong	4578

<i>Transferable End-to-End Aspect-based Sentiment Analysis with Selective Adversarial Learning</i>	
Zheng Li, Xin Li, Ying Wei, Lidong Bing, Yu Zhang and Qiang Yang	4589
<i>CAN: Constrained Attention Networks for Multi-Aspect Sentiment Analysis</i>	
Mengting Hu, Shiwan Zhao, Li Zhang, Keke Cai, Zhong Su, Renhong Cheng and Xiaowei Shen	4600
<i>Leveraging Just a Few Keywords for Fine-Grained Aspect Detection Through Weakly Supervised Co-Training</i>	
Giannis Karamanolakis, Daniel Hsu and Luis Gravano	4610
<i>Integrating Text and Image: Determining Multimodal Document Intent in Instagram Posts</i>	
Julia Kruk, Jonah Lubin, Karan Sikka, Xiao Lin, Dan Jurafsky and Ajay Divakaran	4621
<i>Neural Conversation Recommendation with Online Interaction Modeling</i>	
Xingshan Zeng, Jing Li, Lu Wang and Kam-Fai Wong	4632
<i>Different Absorption from the Same Sharing: Sifted Multi-task Learning for Fake News Detection</i>	
Lianwei Wu, Yuan Rao, Haolin Jin, Ambreen Nazir and Ling Sun	4643
<i>Text-based inference of moral sentiment change</i>	
Jing Yi Xie, Renato Ferreira Pinto Junior, Graeme Hirst and Yang Xu	4653
<i>Detecting Causal Language Use in Science Findings</i>	
Bei Yu, Yingya Li and Jun Wang	4663
<i>Multilingual and Multi-Aspect Hate Speech Analysis</i>	
Nedjma Ousidhoum, Zizheng Lin, Hongming Zhang, Yangqiu Song and Dit-Yan Yeung	4674
<i>MultiFC: A Real-World Multi-Domain Dataset for Evidence-Based Fact Checking of Claims</i>	
Isabelle Augenstein, Christina Lioma, Dongsheng Wang, Lucas Chaves Lima, Casper Hansen, Christian Hansen and Jakob Grue Simonsen	4684
<i>A Deep Neural Information Fusion Architecture for Textual Network Embeddings</i>	
Zenan Xu, Qinliang Su, Xiaojun Quan and Weijia Zhang	4697
<i>You Shall Know a User by the Company It Keeps: Dynamic Representations for Social Media Users in NLP</i>	
Marco Del Tredici, Diego Marcheggiani, Sabine Schulte im Walde and Raquel Fernández ...	4706
<i>Adaptive Ensembling: Unsupervised Domain Adaptation for Political Document Analysis</i>	
Shrey Desai, Barea Sinno, Alex Rosenfeld and Junyi Jessy Li	4717
<i>Macrocsm: Social Media Persona Linking for Open Source Intelligence Applications</i>	
Graham Horwood, Ning Yu, Thomas Boggs, Changjiang Yang and Chad Holvenstot	4730
<i>A Hierarchical Location Prediction Neural Network for Twitter User Geolocation</i>	
Binxuan Huang and Kathleen Carley	4731
<i>Trouble on the Horizon: Forecasting the Derailment of Online Conversations as they Develop</i>	
Jonathan P. Chang and Cristian Danescu-Niculescu-Mizil	4742
<i>A Benchmark Dataset for Learning to Intervene in Online Hate Speech</i>	
Jing Qian, Anna Bethke, Yinyin Liu, Elizabeth Belding and William Yang Wang	4754

<i>Detecting and Reducing Bias in a High Stakes Domain</i>	
Ruiqi Zhong, Yanda Chen, Desmond Patton, Charlotte Selous and Kathy McKeown	4764
<i>CodeSwitch-Reddit: Exploration of Written Multilingual Discourse in Online Discussion Forums</i>	
Ella Rabinovich, Masih Sultani and Suzanne Stevenson	4775
<i>Modeling Conversation Structure and Temporal Dynamics for Jointly Predicting Rumor Stance and Veracity</i>	
Penghui Wei, Nan Xu and Wenji Mao	4786
<i>Reconstructing Capsule Networks for Zero-shot Intent Classification</i>	
Han Liu, Xiaotong Zhang, Lu Fan, Xuandi Fu, Qimai Li, Xiao-Ming Wu and Albert Y.S. Lam	4798
<i>Domain Adaptation for Person-Job Fit with Transferable Deep Global Match Network</i>	
Shuqing Bian, Wayne Xin Zhao, Yang Song, Tao Zhang and Ji-Rong Wen	4809
<i>Heterogeneous Graph Attention Networks for Semi-supervised Short Text Classification</i>	
Hu Linmei, Tianchi Yang, Chuan Shi, Houye Ji and Xiaoli Li	4820
<i>Comparing and Developing Tools to Measure the Readability of Domain-Specific Texts</i>	
Elissa Redmiles, Lisa Maszkiewicz, Emily Hwang, Dhruv Kuchhal, Everest Liu, Miraida Morales, Denis Peskov, Sudha Rao, Rock Stevens, Kristina Gligorić, Sean Kross, Michelle Mazurek and Hal Daumé III	4830
<i>News2vec: News Network Embedding with Subnode Information</i>	
Ye Ma, Lu Zong, Yikang Yang and Jionglong Su	4842
<i>Recursive Context-Aware Lexical Simplification</i>	
Sian Gooding and Ekaterina Kochmar	4852
<i>Leveraging Medical Literature for Section Prediction in Electronic Health Records</i>	
Sara Rosenthal, Ken Barker and Zhicheng Liang	4863
<i>Neural News Recommendation with Heterogeneous User Behavior</i>	
Chuhan Wu, Fangzhao Wu, Mingxiao An, Tao Qi, Jianqiang Huang, Yongfeng Huang and Xing Xie	4873
<i>Reviews Meet Graphs: Enhancing User and Item Representations for Recommendation with Hierarchical Attentive Graph Neural Network</i>	
Chuhan Wu, Fangzhao Wu, Tao Qi, Suyu Ge, Yongfeng Huang and Xing Xie	4883
<i>Event Representation Learning Enhanced with External Commonsense Knowledge</i>	
Xiao Ding, Kuo Liao, Ting Liu, Zhongyang Li and Junwen Duan	4893
<i>Learning to Discriminate Perturbations for Blocking Adversarial Attacks in Text Classification</i>	
Yichao Zhou, Jyun-Yu Jiang, Kai-Wei Chang and Wei Wang	4903
<i>A Neural Citation Count Prediction Model based on Peer Review Text</i>	
Siqing Li, Wayne Xin Zhao, Eddy Jing Yin and Ji-Rong Wen	4913
<i>Connecting the Dots: Document-level Neural Relation Extraction with Edge-oriented Graphs</i>	
Fenia Christopoulou, Makoto Miwa and Sophia Ananiadou	4924
<i>Semi-supervised Text Style Transfer: Cross Projection in Latent Space</i>	
Mingyue Shang, Piji Li, Zhenxin Fu, Lidong Bing, Dongyan Zhao, Shuming Shi and Rui Yan	4936

<i>Question Answering for Privacy Policies: Combining Computational and Legal Perspectives</i>	
Abhilasha Ravichander, Alan W Black, Shomir Wilson, Thomas Norton and Norman Sadeh .	4946
<i>Stick to the Facts: Learning towards a Fidelity-oriented E-Commerce Product Description Generation</i>	
Zhangming Chan, Xiuying Chen, Yongliang Wang, Juntao Li, Zhiqiang Zhang, Kun Gai, Dongyan Zhao and Rui Yan	4958
<i>Fine-Grained Entity Typing via Hierarchical Multi Graph Convolutional Networks</i>	
Hailong Jin, Lei Hou, Juanzi Li and Tiansi Dong	4968
<i>Learning to Infer Entities, Properties and their Relations from Clinical Conversations</i>	
Nan Du, Mingqiu Wang, Linh Tran, Gang Lee and Izhak Shafran	4978
<i>Practical Correlated Topic Modeling and Analysis via the Rectified Anchor Word Algorithm</i>	
Moontae Lee, Sungjun Cho, David Bindel and David Mimno	4990
<i>Modeling the Relationship between User Comments and Edits in Document Revision</i>	
Xuchao Zhang, Dheeraj Rajagopal, Michael Gamon, Sujay Kumar Jauhar and ChangTien Lu	5001
<i>PRADO: Projection Attention Networks for Document Classification On-Device</i>	
Karthik Krishnamoorthi, Sujith Ravi and Zornitsa Kozareva	5011
<i>Subword Language Model for Query Auto-Completion</i>	
Gyuwan Kim	5021
<i>Enhancing Dialogue Symptom Diagnosis with Global Attention and Symptom Graph</i>	
Xinzhu Lin, Xiahui He, Qin Chen, Huaixiao Tou, Zhongyu Wei and Ting Chen	5032
<i>Counterfactual Story Reasoning and Generation</i>	
Lianhui Qin, Antoine Bosselut, Ari Holtzman, Chandra Bhagavatula, Elizabeth Clark and Yejin Choi	5042
<i>Encode, Tag, Realize: High-Precision Text Editing</i>	
Eric Malmi, Sebastian Krause, Sascha Rothe, Daniil Mirylenka and Aliaksei Severyn	5053
<i>Answer-guided and Semantic Coherent Question Generation in Open-domain Conversation</i>	
Weichao Wang, Shi Feng, Daling Wang and Yifei Zhang	5065
<i>Read, Attend and Comment: A Deep Architecture for Automatic News Comment Generation</i>	
Ze Yang, Can Xu, wei wu and zhoujun li	5076
<i>A Topic Augmented Text Generation Model: Joint Learning of Semantics and Structural Features</i>	
hongyin tang, Miao Li and Beihong Jin	5089
<i>LXMERT: Learning Cross-Modality Encoder Representations from Transformers</i>	
Hao Tan and Mohit Bansal	5099
<i>Phrase Grounding by Soft-Label Chain Conditional Random Field</i>	
Jiacheng Liu and Julia Hockenmaier	5111
<i>What You See is What You Get: Visual Pronoun Coreference Resolution in Dialogues</i>	
Xintong Yu, Hongming Zhang, Yangqiu Song, Yan Song and Changshui Zhang	5122
<i>YouMakeup: A Large-Scale Domain-Specific Multimodal Dataset for Fine-Grained Semantic Comprehension</i>	
Weiyang Wang, Yongcheng Wang, Shizhe Chen and Qin Jin	5132

<i>DEBUG: A Dense Bottom-Up Grounding Approach for Natural Language Video Localization</i> Chujie Lu, Long Chen, Chile Tan, Xiaolin Li and Jun Xiao	5143
<i>CrossWeigh: Training Named Entity Tagger from Imperfect Annotations</i> Zihan Wang, Jingbo Shang, Liyuan Liu, Lihao Lu, Jiacheng Liu and Jiawei Han	5153
<i>A Little Annotation does a Lot of Good: A Study in Bootstrapping Low-resource Named Entity Recognizers</i> Aditi Chaudhary, Jiateng Xie, Zaid Sheikh, Graham Neubig and Jaime Carbonell	5163
<i>Open Domain Web Keyphrase Extraction Beyond Language Modeling</i> Lee Xiong, Chuan Hu, Chenyan Xiong, Daniel Campos and Arnold Overwijk	5174
<i>Tucker: Tensor Factorization for Knowledge Graph Completion</i> Ivana Balazevic, Carl Allen and Timothy Hospedales	5184
<i>Human-grounded Evaluations of Explanation Methods for Text Classification</i> Piyawat Lertvittayakumjorn and Francesca Toni	5194
<i>A Context-based Framework for Modeling the Role and Function of On-line Resource Citations in Scientific Literature</i> He Zhao, Zhunchen Luo, Chong Feng, Anqing Zheng and Xiaopeng Liu	5205
<i>Adversarial Reprogramming of Text Classification Neural Networks</i> Paarth Neekhara, Shehzeen Hussain, Shlomo Dubnov and Farinaz Koushanfar	5215
<i>Document Hashing with Mixture-Prior Generative Models</i> Wei Dong, Qinliang Su, Dinghan Shen and Changyou Chen	5225
<i>On Efficient Retrieval of Top Similarity Vectors</i> Shulong Tan, Zhixin Zhou, Zhaozhuo Xu and Ping Li	5235
<i>Multiplex Word Embeddings for Selectional Preference Acquisition</i> Hongming Zhang, Jiabin Bai, Yan Song, Kun Xu, Changlong Yu, Yangqiu Song, Wilfred Ng and Dong Yu	5246
<i>MulCode: A Multiplicative Multi-way Model for Compressing Neural Language Model</i> Yukun Ma, Patrick H. Chen and Cho-Jui Hsieh	5256
<i>It's All in the Name: Mitigating Gender Bias with Name-Based Counterfactual Data Substitution</i> Rowan Hall Maudslay, Hila Gonen, Ryan Cotterell and Simone Teufel	5266
<i>Examining Gender Bias in Languages with Grammatical Gender</i> Pei Zhou, Weijia Shi, Jieyu Zhao, Kuan-Hao Huang, Muhao Chen, Ryan Cotterell and Kai-Wei Chang	5275
<i>Weakly Supervised Cross-lingual Semantic Relation Classification via Knowledge Distillation</i> Yogarshi Vyas and Marine Carpuat	5284
<i>Improved Word Sense Disambiguation Using Pre-Trained Contextualized Word Representations</i> Christian Hadiwinoto, Hwee Tou Ng and Wee Chung Gan	5296
<i>Do NLP Models Know Numbers? Probing Numeracy in Embeddings</i> Eric Wallace, Yizhong Wang, Sujian Li, Sameer Singh and Matt Gardner	5306

<i>A Split-and-Recombine Approach for Follow-up Query Analysis</i>	
Qian Liu, Bei Chen, Haoyan Liu, Jian-Guang LOU, Lei Fang, Bin Zhou and Dongmei Zhang	5315
<i>Text2Math: End-to-end Parsing Text into Math Expressions</i>	
Yanyan Zou and Wei Lu	5326
<i>Editing-Based SQL Query Generation for Cross-Domain Context-Dependent Questions</i>	
Rui Zhang, Tao Yu, Heyang Er, Sungrok Shim, Eric Xue, Xi Victoria Lin, Tianze Shi, Caiming Xiong, Richard Socher and Dragomir Radev	5337
<i>Syntax-aware Multilingual Semantic Role Labeling</i>	
Shexia He, Zuchao Li and Hai Zhao	5349
<i>Cloze-driven Pretraining of Self-attention Networks</i>	
Alexei Baevski, Sergey Edunov, Yinhan Liu, Luke Zettlemoyer and Michael Auli	5359
<i>Bridging the Gap between Relevance Matching and Semantic Matching for Short Text Similarity Modeling</i>	
Jinfeng Rao, Linqing Liu, Yi Tay, Wei Yang, Peng Shi and Jimmy Lin	5369
<i>A Syntax-aware Multi-task Learning Framework for Chinese Semantic Role Labeling</i>	
Qingrong Xia, Zhenghua Li and Min Zhang	5381
<i>Transfer Fine-Tuning: A BERT Case Study</i>	
Yuki Arase and Jun'ichi Tsujii	5392
<i>Data-Anonymous Encoding for Text-to-SQL Generation</i>	
Zhen Dong, Shizhao Sun, Hongzhi Liu, Jian-Guang Lou and Dongmei Zhang	5404
<i>Capturing Argument Interaction in Semantic Role Labeling with Capsule Networks</i>	
Xinchi Chen, Chunchuan Lyu and Ivan Titov	5414
<i>Learning Programmatic Idioms for Scalable Semantic Parsing</i>	
Srinivasan Iyer, Alvin Cheung and Luke Zettlemoyer	5425
<i>JuICE: A Large Scale Distantly Supervised Dataset for Open Domain Context-based Code Generation</i>	
Rajas Agashe, Srinivasan Iyer and Luke Zettlemoyer	5435
<i>Model-based Interactive Semantic Parsing: A Unified Framework and A Text-to-SQL Case Study</i>	
Ziyu Yao, Yu Su, Huan Sun and Wen-tau Yih	5446
<i>Modeling Graph Structure in Transformer for Better AMR-to-Text Generation</i>	
Jie Zhu, Junhui Li, Muhua Zhu, Longhua Qian, Min Zhang and Guodong Zhou	5458
<i>Syntax-Aware Aspect Level Sentiment Classification with Graph Attention Networks</i>	
Binxuan Huang and Kathleen Carley	5468
<i>Learning Explicit and Implicit Structures for Targeted Sentiment Analysis</i>	
Hao Li and Wei Lu	5477
<i>Capsule Network with Interactive Attention for Aspect-Level Sentiment Classification</i>	
Chunning Du, Haifeng Sun, Jingyu Wang, Qi Qi, Jianxin Liao, Tong Xu and Ming Liu	5488
<i>Emotion Detection with Neural Personal Discrimination</i>	
Xiabing Zhou, Zhongqing Wang, Shoushan Li, Guodong Zhou and Min Zhang	5498

<i>Specificity-Driven Cascading Approach for Unsupervised Sentiment Modification</i>	
Pengcheng Yang, Junyang Lin, Jingjing Xu, Jun Xie, Qi Su and Xu SUN	5507
<i>LexicalAT: Lexical-Based Adversarial Reinforcement Training for Robust Sentiment Classification</i>	
Jingjing Xu, Liang Zhao, Hanqi Yan, Qi Zeng, Yun Liang and Xu SUN	5517
<i>Leveraging Structural and Semantic Correspondence for Attribute-Oriented Aspect Sentiment Discovery</i>	
Zhe Zhang and Munindar Singh	5527
<i>From the Token to the Review: A Hierarchical Multimodal approach to Opinion Mining</i>	
Alexandre Garcia, Pierre Colombo, Florence d'Alché-Buc, Slim ESSID and Chloé Clavel	5538
<i>Shallow Domain Adaptive Embeddings for Sentiment Analysis</i>	
Prathusha K Sarma, Yingyu Liang and William Sethares	5548
<i>Domain-Invariant Feature Distillation for Cross-Domain Sentiment Classification</i>	
Mengting Hu, Yike Wu, Shiwan Zhao, Honglei Guo, Renhong Cheng and Zhong Su	5558
<i>A Novel Aspect-Guided Deep Transition Model for Aspect Based Sentiment Analysis</i>	
Yunlong Liang, Fandong Meng, Jinchao Zhang, Jinan Xu, Yufeng Chen and Jie Zhou	5568
<i>Human-Like Decision Making: Document-level Aspect Sentiment Classification via Hierarchical Reinforcement Learning</i>	
Jingjing Wang, Changlong Sun, Shoushan Li, Jiancheng Wang, Luo Si, Min Zhang, Xiaozhong Liu and Guodong Zhou	5580
<i>A Dataset of General-Purpose Rebuttal</i>	
Matan Orbach, Yonatan Bilu, Ariel Gera, Yoav Kantor, Lena Dankin, Tamar Lavee, Lili Kotlerman, Shachar Mirkin, Michal Jacovi, Ranit Aharonov and Noam Slonim	5590
<i>Rethinking Attribute Representation and Injection for Sentiment Classification</i>	
Reinald Kim Amplayo	5601
<i>A Knowledge Regularized Hierarchical Approach for Emotion Cause Analysis</i>	
Chuang Fan, Hongyu Yan, Jiachen Du, Lin Gui, Lidong Bing, Min Yang, Ruifeng Xu and Ruibin Mao	5613
<i>Automatic Argument Quality Assessment - New Datasets and Methods</i>	
Assaf Toledo, Shai Gretz, Edo Cohen-Karlik, Roni Friedman, Elad Venezian, Dan Lahav, Michal Jacovi, Ranit Aharonov and Noam Slonim	5624
<i>Fine-Grained Analysis of Propaganda in News Article</i>	
Giovanni Da San Martino, Seunghak Yu, Alberto Barrón-Cedeño, Rostislav Petrov and Preslav Nakov	5635
<i>Context-aware Interactive Attention for Multi-modal Sentiment and Emotion Analysis</i>	
Dushyant Singh Chauhan, Md Shad Akhtar, Asif Ekbal and Pushpak Bhattacharyya	5646
<i>Sequential Learning of Convolutional Features for Effective Text Classification</i>	
Avinash Madasu and Vijjini Anvesh Rao	5657
<i>The Role of Pragmatic and Discourse Context in Determining Argument Impact</i>	
Esin Durmus, Faisal Ladhak and Claire Cardie	5667
<i>Aspect-Level Sentiment Analysis Via Convolution over Dependency Tree</i>	
Kai Sun, Richong Zhang, Samuel Mensah, Yongyi Mao and Xudong Liu	5678

<i>Understanding Data Augmentation in Neural Machine Translation: Two Perspectives towards Generalization</i>	
Guanlin Li, Lemao Liu, Guoping Huang, Conghui Zhu and Tiejun Zhao	5688
<i>Simple and Effective Noisy Channel Modeling for Neural Machine Translation</i>	
Kyra Yee, Yann Dauphin and Michael Auli	5695
<i>MultiFiT: Efficient Multi-lingual Language Model Fine-tuning</i>	
Julian Eisenschlos, Sebastian Ruder, Piotr Czapla, Marcin Kadras, Sylvain Gugger and Jeremy Howard	5701
<i>Hint-Based Training for Non-Autoregressive Machine Translation</i>	
Zhuohan Li, Zi Lin, Di He, Fei Tian, Tao QIN, Liwei WANG and Tie-Yan Liu	5707
<i>Working Hard or Hardly Working: Challenges of Integrating Typology into Neural Dependency Parsers</i>	
Adam Fisch, Jiang Guo and Regina Barzilay	5713
<i>Cross-Lingual BERT Transformation for Zero-Shot Dependency Parsing</i>	
Yuxuan Wang, Wanxiang Che, Jiang Guo, Yijia Liu and Ting Liu	5720
<i>Multilingual Grammar Induction with Continuous Language Identification</i>	
Wenjuan Han, Ge Wang, Yong Jiang and Kewei Tu	5727
<i>Quantifying the Semantic Core of Gender Systems</i>	
Adina Williams, Damian Blasi, Lawrence Wolf-Sonkin, Hanna Wallach and Ryan Cotterell ..	5733
<i>Perturbation Sensitivity Analysis to Detect Unintended Model Biases</i>	
Vinodkumar Prabhakaran, Ben Hutchinson and Margaret Mitchell	5739
<i>Automatically Inferring Gender Associations from Language</i>	
Serina Chang and Kathy McKeown	5745
<i>Reporting the Unreported: Event Extraction for Analyzing the Local Representation of Hate Crimes</i>	
Aida Mostafazadeh Davani, Leigh Yeh, Mohammad Atari, Brendan Kennedy, Gwenyth Portillo Wightman, Elaine Gonzalez, Natalie DeLong, Rhea Bhatia, Arineh Mirinjian, Xiang Ren and Morteza Dehghani	5752
<i>Minimally Supervised Learning of Affective Events Using Discourse Relations</i>	
Jun Saito, Yugo Murawaki and Sadao Kurohashi	5757
<i>Event Detection with Multi-Order Graph Convolution and Aggregated Attention</i>	
Haoran Yan, Xiaolong Jin, Xiangbin Meng, Jiafeng Guo and Xueqi Cheng	5765
<i>Coverage of Information Extraction from Sentences and Paragraphs</i>	
Simon Razniewski, Nitisha Jain, Paramita Mirza and Gerhard Weikum	5770
<i>HMEAE: Hierarchical Modular Event Argument Extraction</i>	
Xiaozhi Wang, Ziqi Wang, Xu Han, Zhiyuan Liu, Juanzi Li, Peng Li, Maosong Sun, Jie Zhou and Xiang Ren	5776
<i>Entity, Relation, and Event Extraction with Contextualized Span Representations</i>	
David Wadden, Ulme Wennberg, Yi Luan and Hannaneh Hajishirzi	5783
<i>Next Sentence Prediction helps Implicit Discourse Relation Classification within and across Domains</i>	
Wei Shi and Vera Demberg	5789

<i>Split or Merge: Which is Better for Unsupervised RST Parsing?</i>	
Naoki Kobayashi, Tsutomu Hirao, Kengo Nakamura, Hidetaka Kamigaito, Manabu Okumura and Masaaki Nagata	5796
<i>BERT for Coreference Resolution: Baselines and Analysis</i>	
Mandar Joshi, Omer Levy, Luke Zettlemoyer and Daniel Weld	5802
<i>Linguistic Versus Latent Relations for Modeling Coherent Flow in Paragraphs</i>	
Dongyeop Kang and Eduard Hovy	5808
<i>Event Causality Recognition Exploiting Multiple Annotators' Judgments and Background Knowledge</i>	
Kazuma Kadowaki, Ryu Iida, Kentaro Torisawa, Jong-Hoon Oh and Julien Kloetzer	5815
<i>What Part of the Neural Network Does This? Understanding LSTMs by Measuring and Dissecting Neurons</i>	
Ji Xin, Jimmy Lin and Yaoliang Yu	5822
<i>Quantity doesn't buy quality syntax with neural language models</i>	
Marten van Schijndel, Aaron Mueller and Tal Linzen	5830
<i>Higher-order Comparisons of Sentence Encoder Representations</i>	
Mostafa Abdou, Artur Kulmizev, Felix Hill, Daniel M. Low and Anders Søgaard	5837
<i>Text Genre and Training Data Size in Human-like Parsing</i>	
John Hale, Adhiguna Kuncoro, Keith Hall, Chris Dyer and Jonathan Brennan	5845
<i>Feature2Vec: Distributional semantic modelling of human property knowledge</i>	
Steven Derby, Paul Miller and Barry Devereux	5852
<i>Sunny and Dark Outside?! Improving Answer Consistency in VQA through Entailed Question Generation</i>	
Arijit Ray, Karan Sikka, Ajay Divakaran, Stefan Lee and Giedrius Burachas	5859
<i>GeoSQA: A Benchmark for Scenario-based Question Answering in the Geography Domain at High School Level</i>	
Zixian Huang, Yulin Shen, Xiao Li, Yu'ang Wei, Gong Cheng, Lin Zhou, Xinyu Dai and Yuzhong Qu	5865
<i>Revisiting the Evaluation of Theory of Mind through Question Answering</i>	
Matthew Le, Y-Lan Boureau and Maximilian Nickel	5871
<i>Multi-passage BERT: A Globally Normalized BERT Model for Open-domain Question Answering</i>	
Zhiguo Wang, Patrick Ng, Xiaofei Ma, Ramesh Nallapati and Bing Xiang	5877
<i>A Span-Extraction Dataset for Chinese Machine Reading Comprehension</i>	
Yiming Cui, Ting Liu, Wanxiang Che, Li Xiao, Zhipeng Chen, Wentao Ma, Shijin Wang and Guoping Hu	5882
<i>MICRON: Multigranular Interaction for Contextualizing RepresentatiON in Non-factoid Question Answering</i>	
Hojae Han, Seungtaek Choi, Haeju Park and Seung-won Hwang	5889
<i>Machine Reading Comprehension Using Structural Knowledge Graph-aware Network</i>	
Delai Qiu, Yuanzhe Zhang, Xinwei Feng, Xiangwen Liao, Wenbin Jiang, Yajuan Lyu, Kang Liu and Jun Zhao	5895

<i>Answering Conversational Questions on Structured Data without Logical Forms</i>	
Thomas Mueller, Francesco Piccinno, Peter Shaw, Massimo Nicosia and Yasemin Altun	5901
<i>Improving Answer Selection and Answer Triggering using Hard Negatives</i>	
Sawan Kumar, shweta garg, Kartik Mehta and Nikhil Rasiwasia	5910
<i>Can You Unpack That? Learning to Rewrite Questions-in-Context</i>	
Ahmed Elgohary, Denis Peskov and Jordan Boyd-Graber	5917
<i>Quoref: A Reading Comprehension Dataset with Questions Requiring Coreferential Reasoning</i>	
Pradeep Dasigi, Nelson F. Liu, Ana Marasovic, Noah A. Smith and Matt Gardner	5924
<i>Zero-shot Reading Comprehension by Cross-lingual Transfer Learning with Multi-lingual Language Representation Model</i>	
Tsung-Yuan Hsu, Chi-Liang Liu and Hung-yi Lee	5932
<i>QuaRTz: An Open-Domain Dataset of Qualitative Relationship Questions</i>	
Oyvind Tafjord, Matt Gardner, Kevin Lin and Peter Clark	5940
<i>Giving BERT a Calculator: Finding Operations and Arguments with Reading Comprehension</i>	
Daniel Andor, Luheng He, Kenton Lee and Emily Pitler	5946
<i>A Gated Self-attention Memory Network for Answer Selection</i>	
Tuan Lai, Quan Hung Tran, Trung Bui and Daisuke Kihara	5952
<i>Polly Want a Cracker: Analyzing Performance of Parroting on Paraphrase Generation Datasets</i>	
Hong-Ren Mao and Hung-Yi Lee	5959
<i>Query-focused Sentence Compression in Linear Time</i>	
Abram Handler and Brendan O’Connor	5968
<i>Generating Personalized Recipes from Historical User Preferences</i>	
Bodhisattwa Prasad Majumder, Shuyang Li, Jianmo Ni and Julian McAuley	5975
<i>Generating Highly Relevant Questions</i>	
Jiazuo Qiu and Deyi Xiong	5982
<i>Improving Neural Story Generation by Targeted Common Sense Grounding</i>	
Huanru Henry Mao, Bodhisattwa Prasad Majumder, Julian McAuley and Garrison Cottrell . .	5987
<i>Abstract Text Summarization: A Low Resource Challenge</i>	
Shantipriya Parida and Petr Motlicek	5993
<i>Generating Modern Poetry Automatically in Finnish</i>	
Mika Härmäläinen and Khalid Alnajjar	5998
<i>SUM-QE: a BERT-based Summary Quality Estimation Model</i>	
Stratos Xenouleas, Prodromos Malakasiotis, Marianna Apidianaki and Ion Androutsopoulos .	6004
<i>An Empirical Comparison on Imitation Learning and Reinforcement Learning for Paraphrase Generation</i>	
Wanyu Du and Yangfeng Ji	6011
<i>Countering the Effects of Lead Bias in News Summarization via Multi-Stage Training and Auxiliary Losses</i>	
Matt Grenander, Yue Dong, Jackie Chi Kit Cheung and Annie Louis	6018

<i>Learning Rhyming Constraints using Structured Adversaries</i>	
Harsh Jhamtani, Sanket Vaibhav Mehta, Jaime Carbonell and Taylor Berg-Kirkpatrick	6024
<i>Question-type Driven Question Generation</i>	
Wenjie Zhou, Minghua Zhang and Yunfang Wu	6031
<i>Deep Reinforcement Learning with Distributional Semantic Rewards for Abstractive Summarization</i>	
Siyao Li, Deren Lei, Pengda Qin and William Yang Wang	6037
<i>Clause-Wise and Recursive Decoding for Complex and Cross-Domain Text-to-SQL Generation</i>	
Dongjun Lee	6044
<i>Do Nuclear Submarines Have Nuclear Captains? A Challenge Dataset for Commonsense Reasoning over Adjectives and Objects</i>	
James Mullenbach, Jonathan Gordon, Nanyun Peng and Jonathan May	6051
<i>Aggregating Bidirectional Encoder Representations Using MatchLSTM for Sequence Matching</i>	
Bo Shao, Yeyun Gong, Weizhen Qi, Nan Duan and Xiaola Lin	6058
<i>What Does This Word Mean? Explaining Contextualized Embeddings with Natural Language Definition</i>	
Ting-Yun Chang and Yun-Nung Chen	6063
<i>Pre-Training BERT on Domain Resources for Short Answer Grading</i>	
Chul Sung, Tejas Dhamecha, Swarnadeep Saha, Tengfei Ma, Vinay Reddy and Rishi Arora . .	6070
<i>WIQA: A dataset for "What if..." reasoning over procedural text</i>	
Niket Tandon, Bhavana Dalvi, Keisuke Sakaguchi, Peter Clark and Antoine Bosselut	6075
<i>Evaluating BERT for natural language inference: A case study on the CommitmentBank</i>	
Nanjiang Jiang and Marie-Catherine de Marneffe	6085
<i>Incorporating Domain Knowledge into Medical NLI using Knowledge Graphs</i>	
Soumya Sharma, Bishal Santra, Abhik Jana, Santosh Tokala, Niloy Ganguly and Pawan Goyal	6091
<i>The FLORES Evaluation Datasets for Low-Resource Machine Translation: Nepali-English and Sinhala-English</i>	
Francisco Guzmán, Peng-Jen Chen, Myle Ott, Juan Pino, Guillaume Lample, Philipp Koehn, Vishrav Chaudhary and Marc' Aurelio Ranzato	6097
<i>Mask-Predict: Parallel Decoding of Conditional Masked Language Models</i>	
Marjan Ghazvininejad, Omer Levy, Yinhan Liu and Luke Zettlemoyer	6111
<i>Learning to Copy for Automatic Post-Editing</i>	
Xuancheng Huang, Yang Liu, Huanbo Luan, Jingfang Xu and Maosong Sun	6121
<i>Exploring Human Gender Stereotypes with Word Association Test</i>	
Yupei Du, Yuanbin Wu and Man Lan	6132
<i>A Modular Architecture for Unsupervised Sarcasm Generation</i>	
Abhijit Mishra, Tarun Tater and Karthik Sankaranarayanan	6143
<i>Generating Classical Chinese Poems from Vernacular Chinese</i>	
Zhichao Yang, Pengshan Cai, Yansong Feng, Fei Li, Weijiang Feng, Elena Suet-Ying Chiu and hong yu	6154

<i>Set to Ordered Text: Generating Discharge Instructions from Medical Billing Codes</i> Litton J Kurisinkel and Nancy Chen	6164
<i>Constraint-based Learning of Phonological Processes</i> Shraddha Barke, Rose Kunkel, Nadia Polikarpova, Eric Meinhardt, Eric Bakovic and Leon Bergen	6175
<i>Detect Camouflaged Spam Content via StoneSkipping: Graph and Text Joint Embedding for Chinese Character Variation Representation</i> Zhuoren Jiang, Zhe Gao, Guoxiu He, Yangyang Kang, Changlong Sun, Qiong Zhang, Luo Si and Xiaozhong Liu	6186
<i>An Attentive Fine-Grained Entity Typing Model with Latent Type Representation</i> Ying Lin and Heng Ji	6196
<i>An Improved Neural Baseline for Temporal Relation Extraction</i> Qiang Ning, Sanjay Subramanian and Dan Roth	6202
<i>Improving Fine-grained Entity Typing with Entity Linking</i> Hongliang Dai, Donghong Du, Xin Li and Yangqiu Song	6209
<i>Combining Spans into Entities: A Neural Two-Stage Approach for Recognizing Discontiguous Entities</i> Bailin Wang and Wei Lu	6215
<i>Cross-Sentence N-ary Relation Extraction using Lower-Arity Universal Schemas</i> Kosuke Akimoto, Takuya Hiraoka, Kunihiko Sadamasa and Mathias Niepert	6224
<i>Gazetteer-Enhanced Attentive Neural Networks for Named Entity Recognition</i> Hongyu Lin, Yaojie Lu, Xianpei Han, Le Sun, Bin Dong and Shanshan Jiang	6231
<i>“A Buster Keaton of Linguistics”: First Automated Approaches for the Extraction of Vossian Antonomasia</i> Michel Schwab, Robert Jäschke, Frank Fischer and Jannik Strötgen	6237
<i>Multi-Task Learning for Chemical Named Entity Recognition with Chemical Compound Paraphrasing</i> Taiki Watanabe, Akihiro Tamura, Takashi Ninomiya, Takuya Makino and Tomoya Iwakura ..	6243
<i>FewRel 2.0: Towards More Challenging Few-Shot Relation Classification</i> Tianyu Gao, Xu Han, Hao Zhu, Zhiyuan Liu, Peng Li, Maosong Sun and Jie Zhou	6249
<i>ner and pos when nothing is capitalized</i> Stephen Mayhew, Tatiana Tsygankova and Dan Roth	6255
<i>CaRB: A Crowdsourced Benchmark for Open IE</i> Sangnie Bhardwaj, Samarth Aggarwal and Mausam Mausam	6261
<i>Weakly Supervised Attention Networks for Entity Recognition</i> Barun Patra and Joel Ruben Antony Moniz	6267
<i>Revealing and Predicting Online Persuasion Strategy with Elementary Units</i> Gaku Morio, Ryo Egawa and Katsuhide Fujita	6273
<i>A Challenge Dataset and Effective Models for Aspect-Based Sentiment Analysis</i> Qingnan Jiang, Lei Chen, Ruifeng Xu, Xiang Ao and Min Yang	6279

<i>Learning with Noisy Labels for Sentence-level Sentiment Classification</i>	
Hao Wang, Bing Liu, Chaozhuo Li, Yan Yang and Tianrui Li	6285
<i>DENS: A Dataset for Multi-class Emotion Analysis</i>	
Chen Liu, Muhammad Osama and Anderson De Andrade	6292
<i>Multi-Task Stance Detection with Sentiment and Stance Lexicons</i>	
Yingjie Li and Cornelia Caragea	6298
<i>A Robust Self-Learning Framework for Cross-Lingual Text Classification</i>	
Xin Dong and Gerard de Melo	6305
<i>Learning to Flip the Sentiment of Reviews from Non-Parallel Corpora</i>	
Canasai Kruengkrai	6310
<i>Label Embedding using Hierarchical Structure of Labels for Twitter Classification</i>	
Taro Miyazaki, Kiminobu Makino, Yuka Takei, Hiroki Okamoto and Jun Goto	6316
<i>Interpretable Word Embeddings via Informative Priors</i>	
Miriam Hurtado Bodell, Martin Arvidsson and Måns Magnusson	6322
<i>Adversarial Removal of Demographic Attributes Revisited</i>	
Maria Barrett, Yova Kementchedjheva, Yanai Elazar, Desmond Elliott and Anders Søgaard ..	6329
<i>A deep-learning framework to detect sarcasm targets</i>	
Jasabanta Patro, Srijan Bansal and Animesh Mukherjee	6335
<i>In Plain Sight: Media Bias Through the Lens of Factual Reporting</i>	
Lisa Fan, Marshall White, Eva Sharma, Ruisi Su, Prafulla Kumar Choubey, Ruihong Huang and Lu Wang	6342
<i>Incorporating Label Dependencies in Multilabel Stance Detection</i>	
William Ferreira and Andreas Vlachos	6349
<i>Investigating Sports Commentator Bias within a Large Corpus of American Football Broadcasts</i>	
Jack Merullo, Luke Yeh, Abram Handler, Alvin Grissom II, Brendan O'Connor and Mohit Iyyer	6354
<i>Charge-Based Prison Term Prediction with Deep Gating Network</i>	
Huajie Chen, Deng Cai, Wei Dai, Zehui Dai and Yadong Ding	6361
<i>Restoring ancient text using deep learning: a case study on Greek epigraphy</i>	
Yannis Assael, Thea Sommerschild and Jonathan Prag	6367
<i>Embedding Lexical Features via Tensor Decomposition for Small Sample Humor Recognition</i>	
Zhenjie Zhao, Andrew Cattle, Evangelos Papalexakis and Xiaojuan Ma	6375
<i>EDA: Easy Data Augmentation Techniques for Boosting Performance on Text Classification Tasks</i>	
Jason Wei and Kai Zou	6381
<i>Neural News Recommendation with Multi-Head Self-Attention</i>	
Chuhan Wu, Fangzhao Wu, Suyu Ge, Tao Qi, Yongfeng Huang and Xing Xie	6388
<i>What Matters for Neural Cross-Lingual Named Entity Recognition: An Empirical Analysis</i>	
Xiaolei Huang, Jonathan May and Nanyun Peng	6394

<i>Telling the Whole Story: A Manually Annotated Chinese Dataset for the Analysis of Humor in Jokes</i> Dongyu Zhang, Heting Zhang, Xikai Liu, Hongfei LIN and Feng Xia	6401
<i>Generating Natural Anagrams: Towards Language Generation Under Hard Combinatorial Constraints</i> Masaaki Nishino, Sho Takase, Tsutomu Hirao and Masaaki Nagata	6407
<i>STANCY: Stance Classification Based on Consistency Cues</i> Kashyap Papat, Subhabrata Mukherjee, Andrew Yates and Gerhard Weikum	6412
<i>Cross-lingual intent classification in a low resource industrial setting</i> Talaat Khalil, Kornel Kielczewski, Georgios Christos Chouliaras, Amina Keldibek and Maarten Versteegh	6418
<i>SoftRegex: Generating Regex from Natural Language Descriptions using Softened Regex Equivalence</i> Jun-U Park, Sang-Ki Ko, Marco Cогnetta and Yo-Sub Han	6424
<i>Using Clinical Notes with Time Series Data for ICU Management</i> Swaraj Khadanga, Karan Aggarwal, Shafiq Joty and Jaideep Srivastava	6431
<i>Spelling-Aware Construction of Macaronic Texts for Teaching Foreign-Language Vocabulary</i> Adithya Renduchintala, Philipp Koehn and Jason Eisner	6437
<i>Towards Machine Reading for Interventions from Humanitarian-Assistance Program Literature</i> Bonan Min, Yee Seng Chan, Haoling Qiu and Joshua Fasching	6443
<i>RUN through the Streets: A New Dataset and Baseline Models for Realistic Urban Navigation</i> Tzuf Paz-Argaman and Reut Tsarfaty	6448
<i>Context-Aware Conversation Thread Detection in Multi-Party Chat</i> Ming Tan, Dakuo Wang, Yupeng Gao, Haoyu Wang, Saloni Potdar, Xiaoxiao Guo, Shiyu Chang and Mo Yu	6455