# C⊗LING 2020

# Main Conference Program

Please notice that this program may not reflect last minute changes (printed 3-12-2020)

All indicated times are in [Central European Time (CET)](#).

COLING'2020 has announced in the program 16 papers that are deemed to be of outstanding quality. The selected papers are all on short-list for Best Paper, which will be revealed in the Closing Session. Outstanding papers are marked in this program with a star.

**⌃ Tuesday, December 8, 2020**

**14:00 - 14:30   Welcome and conference logistics** - Room Poblenou

**Donia Scott,** COLING'2020 General Chair

**Joan Gòmez Pallarès**, Director General of Research of the Dept of Enterprises and Knowledge, Government of Catalonia.

**Júlia Miralles de Imperial**. Deputy head for the area of Science and Universities, Barcelona City Council.

**Enric Vallduví**, Vicerector for Research. Pompeu Fabra University.

**Leo Wanner**, COLING'2020 Local Organization Committee

**Horacio Saggion,** COLING'2020 Local Organization Committee

**Chengqing Zong and Núria Bel**, COLING'2020 Program Co-Chairs

**Esther Seyffarth,** COLING'2020 Virtual Social Chair

| 14:30 - 15:30 | **INVITED TALK 1 (live)** - Room Poblenou |
| | Chair: ChuRen Huang |

**A multivariate multiple regression approach to the mental lexicon**
*Harald Baayen*
Professor
Seminar für Sprachwissenschaft
Eberhard Karls Universität
Tübingen

| 15:30 - 16:00 | Session LONG1 - **Language Modelling 1** - Room Montjuïc |
| | Chair: Fei Huang |
| | Co-Chair: Wenjuan Han |

**Exploring Controllable Text Generation Techniques**
*Shrimai Prabhumoye[1], Alan W Black[1], Ruslan Salakhutdinov[2]*
[1]Carnegie Mellon University, [2]CMU

**Infusing Sequential Information into Conditional Masked Translation Model with Self-Review Mechanism**
*Pan Xie[1], Zhi Cui[2], Xiuying Chen[3], XiaoHui Hu[4], Jianwei Cui[2], Bin Wang[2]*
[1]+8613126899683, [2]Xiaomi AI Lab, [3]Peking University, [4]Institute of Software, Chinese Academy of Sciences (ISCAS)

**Building Hierarchically Disentangled Language Models for Text Generation with Named Entities**
*Yash Agarwal[1], Devansh Batra[1], Ganesh Bagler[2]*
[1]Netaji Subhas University of Technology, [2]Indraprastha Institute of Information Technology Delhi (IIIT-Delhi)

**CharBERT: Character-aware Pre-trained Language Model**
*Wentao Ma[1], Yiming Cui[2], Chenglei Si[3], Ting Liu[2], Shijin Wang[1], Guoping Hu[1]*
[1]iFLYTEK Research, [2]Harbin Institute of Technology, [3]University of Maryland, College Park

**A Graph Representation of Semi-structured Data for Web Question Answering**
*xingyao zhang[1], Linjun Shou[2], Jian Pei[3], Ming Gong[4], Lijie Wen[5], Daxin Jiang[2]*
[1], [2]STCA NLP Group, Microsoft, [3]Simon Fraser University, [4]STCA NLP Group, Microsoft (China), [5]School of Software, Tsinghua University

| 15:30 - 16:00 | Session LONG2 - **Information Extraction 1** - Room El Raval |
| | Chair: Carlos Ramisch |
| | Co-Chair: Lucia Donatelli |

**Catching Attention with Automatic Pull Quote Selection**
*Tanner Bohn and Charles Ling*
Western University

**MZET: Memory Augmented Zero-Shot Fine-grained Named Entity Typing**
*Tao Zhang[1], Congying Xia[1], Chun-Ta Lu[2], Philip Yu[3]*
[1]University of Illinois at Chicago, [2]Google, [3]Universtiy of Illinois at Chicago

**Span-based Joint Entity and Relation Extraction with Attention-based Span-specific and Contextual Semantic Representations**

*bin ji, Jie Yu, Shasha Li, Jun Ma, Qingbo Wu, Yusong Tan, Huijun Liu*
college of computer, national university of defense technology

**Hierarchical Chinese Legal event extraction via Pedal Attention Mechanism**

*Shirong Shen, Guilin Qi, Zhen Li, Sheng Bi, Lusheng Wang*
Southeast University

**Is Killed More Significant than Fled? A Contextual Model for Salient Event Detection**

*Disha Jindal[1], Daniel Deutsch[2], Dan Roth[2]*
[1]Google, [2]University of Pennsylvania

| 15:30 - 16:00 | Session POSTER1 - **Sentiment and Emotion. Posters** - Exhibition Room Vila Olímpica |
|---|---|

**Appraisal Theories for Emotion Classification in Text**

*Jan Hofmann[1], Enrica Troiano[1], Kai Sassenberg[2], Roman Klinger[1]*
[1]University of Stuttgart, [2]IWM Tübingen

**A Symmetric Local Search Network for Emotion-Cause Pair Extraction**

*Zifeng Cheng[1], Zhiwei Jiang[2], Yafeng Yin[2], Hua Yu[1], Qing Gu[1]*
[1]Nanjing University, [2]State Key Laboratory for Novel Software Technology, Nanjing University

**Jointly Learning Aspect-Focused and Inter-Aspect Relations with Graph Convolutional Networks for Aspect Sentiment Analysis**

*Bin Liang[1], Rongdi Yin[1], Lin Gui[2], Jiachen Du[1], Ruifeng Xu[1]*
[1]Harbin Institute of Technology, Shenzhen, [2]University of Warwick

**METNet: A Mutual Enhanced Transformation Network for Aspect-based Sentiment Analysis**

*Bin Jiang[1], Jing Hou[1], Wanyue Zhou[1], Chao Yang[1], Shihan Wang[2], Liang Pang[3]*
[1]Hunan University, [2]Utrecht University, [3]Chinese Academy of Sciences

**Making the Best Use of Review Summary for Sentiment Analysis**

*Sen Yang[1], Leyang Cui[2], Jun Xie[3], Yue Zhang[1]*
[1]Westlake University, [2]Zhejiang University , Westlake University, [3]Alibaba

**From Sentiment Annotations to Sentiment Prediction through Discourse Augmentation**

*Patrick Huber and Giuseppe Carenini*
University of British Columbia

**End-to-End Emotion-Cause Pair Extraction with Graph Convolutional Network**

*Ying Chen[1], Wenjun Hou[1], Shoushan Li[2], Caicong Wu[1], Xiaoqiang Zhang[1]*
[1]China Agricultural University, [2]Soochow University

**A Unified Sequence Labeling Model for Emotion Cause Pair Extraction**

*Xinhong Chen[1], Qing Li[2], Jianping Wang[1]*
[1]City University of Hong Kong, [2]the Hong Kong Polytechnic University

**Regrexit or not Regrexit: Aspect-based Sentiment Analysis in Polarized Contexts**

*Vorakit Vorakitphan[1], Marco Guerini[2], Elena Cabrio[3], Serena Villata[4]*
[1]Université Côte d'Azur, Inria, CNRS, I3S, France, [2]Fondazione Bruno Kessler,
[3]Université Côte d'Azur, Inria, CNRS, I3S, [4]Université Côte d'Azur, CNRS, Inria, I3S

**Affective and Contextual Embedding for Sarcasm Detection**

*Nastaran Babanejad[1], Heidar Davoudi[2], Aijun An[3], Manos Papagelis[3]*
[1]York University of Canada, [2]Ontario Tech University, [3]York University

**Understanding Pre-trained BERT for Aspect-based Sentiment Analysis**

*Hu Xu[1], Lei Shu[2], Philip Yu[3], Bing Liu[4]*
[1]Facebook, [2]Amazon Alexa AI, [3]Universtiy of Illinois at Chicago, [4]University of Illinois at Chicago

**Weighed Domain-Invariant Representation Learning for Cross-domain Sentiment Analysis**

*Minlong Peng and Qi Zhang*
Fudan University

**Improving Sentiment Analysis over non-English Tweets using Multilingual Transformers and Automatic Translation for Data-Augmentation**

*Valentin Barriere and Alexandra Balahur*
Joint Research Center

**Joint Aspect Extraction and Sentiment Analysis with Directional Graph Convolutional Networks**

*Guimin Chen[1], Yuanhe Tian[2], Yan Song[3]*
[1]Shenzhen Research Institute of Big Data, [2]Department of Linguistics, University of Washington, [3]CUHK-SZ

16:00 - 16:30    Session IND1 - **INDUSTRY TRACK: Dialogue** - Room Gràcia
                 Chair: Jianguo Zhang

**Evaluating Cross-Lingual Transfer Learning Approaches in Multilingual Conversational Agent Models**

*Lizhen Tan and Olga Golovneva*

**Data-Efficient Paraphrase Generation to Bootstrap Intent Classification and Slot Labeling for New Features in Task-Oriented Dialog Systems**

*Shailza Jolly, Tobias Falke, Caglar Tirkaz and Daniil Sorokin*

**\* Leveraging User Paraphrasing Behavior In Dialog Systems To Automatically Collect Annotations For Long-Tail Utterances**

*Tobias Falke, Markus Boese, Daniil Sorokin, Caglar Tirkaz and Patrick Lehnen*

**Query Distillation: BERT-based Distillation for Ensemble Ranking**

*Wangshu Zhang, Junhong Liu, Zujie Wen, Yafang Wang and Gerard de Melo*

**Semantic Diversity for Natural Language Understanding Evaluation in Dialog Systems**
*Enrico Palumbo, Andrea Mezzalira, Cristina Marco, Alessandro Manzotti and Daniele Amberti*

| 16:00 - 16:30 | Session ROADMAPS 1 - **INDUSTRY ROADMAPS 1 (live)** - Room Eixample<br>Chair: Fei Yu Xu<br>Co-Chair: Christian Reisswig |
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**NLP at Lenovo**
*Lenovo*

**LUGE: An Open Source Project of Chinese NLP Datasets. Baidu**
*Baidu*

**Information extraction for cancer research and multi-modal language understanding/ generation at AIRC**
*AIRC*

**Expert.AI: Natural Language Expertise for Explainable and Practical AI**
*Expert AI*

| 16:00 - 16:30 | Session POSTER2 - **Applications. Posters** - Exhibition Room Vila Olímpica |
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**Train Once, and Decode As You Like**
*Chao Tian[1], Yifei Wang[2], Hao Cheng[1], Yijiang Lian[3], Zhihua Zhang[2]*
[1]Academy for Advanced Interdisciplinary Studies, Peking University, [2]School of Mathematical Sciences, Peking University, [3]Baidu Inc.

**A Representation Learning Approach to Animal Biodiversity Conservation**
*Meet Mukadam, Mandhara Jayaram, Yongfeng Zhang*
Rutgers University

**Integrating External Event Knowledge for Script Learning**
*Shangwen Lv[1], Fuqing Zhu[1], Songlin Hu[2]*
[1]Institute of Information Engineering, Chinese Academy of Sciences, [2]Institute of Information Engineering, CAS

**Pointing to Subwords for Generating Function Names in Source Code**
*Shogo Fujita[1], Hidetaka Kamigaito[1], Hiroya Takamura[2], Manabu Okumura[1]*
[1]Tokyo institute of technology, [2]The National Institute of Advanced Industrial Science and Technology (AIST)

**Heterogeneous Graph Neural Networks to Predict What Happen Next**
*Jianming Zheng, Fei Cai, Yanxiang Ling, Honghui Chen*
National University of Defense Technology

**CEREC: A Corpus for Entity Resolution in Email Conversations**
*Parag Pravin Dakle and Dan Moldovan*
The University of Texas at Dallas

**SQL Generation via Machine Reading Comprehension**
*ZEYU YAN[1], Jianqiang Ma[1], Yang Zhang[2], Jianping Shen[3]*
[1]Ping An Life, AI Department, [2]AI Department, Pingan Life Insurance, [3]Ping An Life

**Towards Privacy by Design in Learner Corpora Research: A Case of On-the-fly Pseudonymization of Swedish Learner Essays**
*Elena Volodina[1], Yousuf Ali Mohammed[1], Sandra Derbring[1], Arild Matsson[1], Beata Megyesi[2]*
[1]University of Gothenburg, [2]uu.se

**PG-GSQL: Pointer-Generator Network with Guide Decoding for Cross-Domain Context-Dependent Text-to-SQL Generation**
*Huajie Wang, Mei Li, Lei Chen*
East China Normal University

**Neural Approaches for Natural Language Interfaces to Databases: A Survey**
*Radu Cristian Alexandru Iacob[1], Florin Brad[2], Elena-Simona APOSTOL[1], Ciprian-Octavian Truică[1], Ionel Alexandru Hosu[3], Traian Rebedea[1]*
[1]University Politehnica of Bucharest, [2]Bitdefender, [3]Politehnica University of Bucharest

**Predicting Stance Change Using Modular Architectures**
*Aldo Porco and Dan Goldwasser*
Purdue University

**Leveraging HTML in Free Text Web Named Entity Recognition**
*Colin Ashby and David Weir*
University of Sussex

**Multimodal Review Generation with Privacy and Fairness Awareness**
*Xuan-Son Vu[1], Thanh-Son Nguyen[2], Duc-Trong Le[3], Lili Jiang[4]*
[1]PhD Student, [2]A*STAR, [3]UET, Vietnam National University in Hanoi, Vietnam, [4]Department of Computing Science, Umeå University, Sweden

**Generating Equation by Utilizing Operators : GEO model**
*Kyung Seo Ki, Donggeon Lee, Bugeun Kim, Gahgene Gweon*
Seoul National University

16:30 - 17:00    Session LONG3 - **Dialogue 1** - Room El Raval
                 Chair: Wanxiang Che
                 Co-Chair: Evan Jaffe

**Improving Abstractive Dialogue Summarization with Graph Structures and Topic Words**
*Lulu Zhao, Weiran Xu, Jun Guo*
Beijing University of Posts and Telecommunications

**Speaker-change Aware CRF for Dialogue Act Classification**

*Guokan Shang[1], Antoine Tixier[2], Michalis Vazirgiannis[3], Jean-Pierre Lorré[4]*
[1]École Polytechnique, [2]Ecole Polytechnique, Palaiseau, France, [3]Ecole Polytechnique, [4]Linagora

**LAVA: Latent Action Spaces via Variational Auto-encoding for Dialogue Policy Optimization**

*Nurul Lubis[1], Christian Geishauser[2], Michael Heck[1], Hsien-chin Lin[1], Marco Moresi[2], Carel van Niekerk[1], Milica Gasic[2]*
[1]Heinrich Heine University, [2]Heinrich Heine University Duesseldorf

**Recent Neural Methods on Slot Filling and Intent Classification for Task-Oriented Dialogue Systems: A Survey**

*Samuel Louvan[1] and Bernardo Magnini[2]*
[1]University of Trento - Fondazione Bruno Kessler, [2]FBK

**\*Re-framing Incremental Deep Language Models for Dialogue Processing with Multi-task Learning**

*Morteza Rohanian and Julian Hough*
Queen Mary University of London

16:30 - 17:00    Session LONG4 - **Information Extraction 2** - Room Montjuïc
                 Chair: Carlos Ramisch
                 Co-Chair: Danielly Sorato

**AprilE: Attention with Pseudo Residual Connection for Knowledge Graph Embedding**

*Yuzhang Liu[1], Peng Wang[1], Yingtai Li[2], Yizhan Shao[1], Zhongkai Xu[1]*
[1]Southeast University, [2]Southeast university, China

**Variational Autoencoder with Embedded Student-t Mixture Model for Authorship Attribution**

*Benedikt Boenninghoff[1], Steffen Zeiler[1], Robert Nickel[2], Dorothea Kolossa[1]*
[1]Ruhr-Universität Bochum, [2]Bucknell University

**Knowledge Graph Embeddings in Geometric Algebras**

*Chengjin Xu[1], Mojtaba Nayyeri[1], Yung-Yu Chen[1], Jens Lehmann[2]*
[1]University of Bonn, [2]University of Bonn and Fraunhofer IAIS

**Exploiting Node Content for Multiview Graph Convolutional Network and Adversarial Regularization**

*Qiuhao Lu[1], Nisansa de Silva[1], Dejing Dou[1], Thien Huu Nguyen[1], Prithviraj Sen[2], Berthold Reinwald[2], Yunyao Li[3]*
[1]University of Oregon, [2]IBM Research, [3]IBM Research - Almaden

**RatE: Relation-Adaptive Translating Embedding for Knowledge Graph Completion**

*Hao Huang[1], Guodong Long[2], Tao Shen[3], Jing Jiang[3], Chengqi Zhang[3]*
[1]Univerisity of Technology Sydney, [2]UTS, [3]University of Technology Sydney

16:30 - 17:00    Session LONG5 - **Sentiment Analysis 1** - Room Gràcia
Chair: Frank Xing
Co-Chair: Zhaopeng Tu

**SentiX: A Sentiment-Aware Pre-Trained Model for Cross-Domain Sentiment Analysis**
*Jie Zhou[1], Junfeng Tian[2], Rui Wang[2], Yuanbin Wu[1], Wenming Xiao[2], liang he[1]*
[1]East China Normal University, [2]Alibaba Group

**Bayes-enhanced Lifelong Attention Networks for Sentiment Classification**
*Hao Wang[1], Shuai Wang[2], Sahisnu Mazumder[3], Bing Liu[3], Yan Yang[1], Tianrui Li[1]*
[1]Southwest Jiaotong University, [2]Amazon AI, [3]University of Illinois at Chicago

**Arabizi Language Models for Sentiment Analysis**
*Gaétan Baert[1], Souhir Gahbiche[2], Guillaume Gadek[3], Alexandre Pauchet[4]*
[1]INSA Rouen Normandy - LITIS, [2]AIRBUS, [3]Normandie Univ, INSA Rouen, LITIS, 76000 Rouen, France ; Airbus DS, [4]Normandy University - INSA Rouen Normandy - LITIS

**Author's Sentiment Prediction**
*Mohaddeseh Bastan, Mahnaz Koupaee, Youngseo Son, Richard Sicoli, Niranjan Balasubramanian*
Stony Brook University

**Modeling Local Contexts for Joint Dialogue Act Recognition and Sentiment Classification with Bi-channel Dynamic Convolutions**
*Jingye Li, Hao Fei, Donghong Ji*
Wuhan University

16:30 -    Session POSTER3 - **Applications: Biomedical, health records and**
17:00       **medical texts. Posters** - Exhibition Room Vila Olímpica

**Named Entity Recognition for Chinese biomedical patents**
*Yuting Hu and Suzan Verberne*
LIACS, Leiden University

**Learning Health-Bots from Training Data that was Automatically Created using Paraphrase Detection and Expert Knowledge**
*Anna Liednikova[1], Philippe Jolivet[2], Alexandre Durand-Salmon[2], Claire Gardent[3]*
[1]ALIAE and LORIA, [2]ALIAE, [3]CNRS/LORIA

**A Joint Learning Approach based on Self-Distillation for Keyphrase Extraction from Scientific Documents**
*Tuan Lai[1], Trung Bui[2], Doo Soon Kim[2], Quan Hung Tran[2]*
[1]University of Illinois at Urbana-Champaign, [2]Adobe Research

**Enhancing Clinical BERT Embedding using a Biomedical Knowledge Base**
*Boran Hao[1], Henghui Zhu[2], Ioannis Paschalidis[1]*
[1]Boston University, [2]Amazon

**TIMBERT: Toponym Identifier For The Medical Domain Based on BERT**

*MohammadReza Davari, Leila Kosseim, Tien Bui*
Concordia University

**BioMedBERT: A Pre-trained Biomedical Language Model for QA and IR**

*SOURADIP CHAKRABORTY[1], Ekaba Bisong[2], Shweta Bhatt[3], Thomas Wagner[4], Riley Elliott[4], Francesco Mosconi[5]*
[1]Indian Statistical Institute, [2]Carleton University, [3]Jupiter, [4]TPHS Research, [5]Zero to Deep Learning

**Extracting Adherence Information from Electronic Health Records**

*Jordan Sanders[1], Meghana Gudala[2], Kathleen Hamilton[1], Nishtha Prasad[1], Jordan Stovall[2], Eduardo Blanco[1], Jane E Hamilton[2], Kirk Roberts[2]*
[1]University of North Texas, [2]University of Texas Health Science Center at Houston

**Identifying Depressive Symptoms from Tweets: Figurative Language Enabled Multitask Learning Framework**

*Shweta Yadav[1], Jainish Chauhan[2], Joy Prakash Sain[3], Krishnaprasad Thirunarayan[3], Amit Sheth[4], Jeremiah Schumm[3]*
[1]National Library of Medicine, [2]Indian Institute of Technology Gandhinagar, [3]Wright State University, [4]University of South Carolina

**French Biomedical Text Simplification: When Small and Precise Helps**

*Rémi Cardon[1] and Natalia Grabar[2]*
[1]CNRS UMR 8163 STL Université de Lille, [2]CNRS STL UMR8163, Université de Lille

**Summarizing Medical Conversations via Identifying Important Utterances**

*Yan Song[1], Yuanhe Tian[2], Nan Wang[3], Fei Xia[4]*
[1]CUHK-SZ, [2]Department of Linguistics, University of Washington, [3]Hunan University, [4]University of Washington

17:00 - 17:30    Session LONG6 - **Language Modelling 2** - Room El Raval
                 Chair: Harish Tayyar Madabushi

**Probing Multimodal Embeddings for Linguistic Properties: the Visual-Semantic Case**

*Adam Dahlgren Lindström, Johanna Björklund, Suna Bensch, Frank Drewes*
Umeå University

**\*Linguistic Profiling of a Neural Language Model**

*Alessio Miaschi[1], Dominique Brunato[2], Felice Dell'Orletta[3], Giulia Venturi[4]*
[1]University of Pisa, [2]Institute of Computational Linguistics "A. Zampolli" (ILC-CNR), Pisa, [3]ItaliaNLP LAb @ Institute for Computational Linguistics "Antonio Zampolli", ILC - CNR, [4]Institute of Computational Linguistics "Antonio Zampolli" (ILC-CNR)

**IndoLEM and IndoBERT: A Benchmark Dataset and Pre-trained Language Model for Indonesian NLP**

*Fajri Koto[1], Afshin Rahimi[2], Jey Han Lau[1], Timothy Baldwin[1]*
[1]The University of Melbourne, [2]The University of Queensland

**A Closer Look at Linguistic Knowledge in Masked Language Models: The Case of Relative Clauses in American English**

*Marius Mosbach, Stefania Degaetano-Ortlieb, Marie-Pauline Krielke, Badr M. Abdullah, Dietrich Klakow*

Saarland University

**Modeling language evolution and feature dynamics in a realistic geographic environment**

*Rhea Kapur[1] and Phillip Rogers[2]*

[1]The Pingry School, [2]University of California Santa Barbara

17:00 - 17:30    Session LONG7 - **Sentiment Analysis 2** - Room Montjuïc
Chair: Rui Xia
Co-Chair: Yufang Hou

**Syntax-Aware Graph Attention Network for Aspect-Level Sentiment Classification**

*Lianzhe Huang[1], Xin Sun[1], Sujian Li[2], Linhao Zhang[1], Houfeng Wang[1]*

[1]Peking University, [2]pku.edu.cn

**Attention Transfer Network for Aspect-level Sentiment Classification**

*Fei Zhao[1], Zhen Wu[1], Xinyu Dai[2]*

[1]Nanjing University, [2]National Key Laboratory for Novel Software Technology, Nanjing University

**Label Correction Model for Aspect-based Sentiment Analysis**

*Qianlong Wang and Jiangtao Ren*

Sun Yat-sen University

**Aspect-Category based Sentiment Analysis with Hierarchical Graph Convolutional Network**

*Hongjie Cai[1], Yaofeng Tu[2], Xiangsheng Zhou[2], Jianfei Yu[1], Rui Xia[1]*

[1]Nanjing University of Science and Technology, [2]ZTE Corporation, Shenzhen, China

**Constituency Lattice Encoding for Aspect Term Extraction**

*Yunyi Yang[1], Kun Li[1], Xiaojun Quan[1], Weizhou Shen[1], Qinliang Su[2]*

[1]School of Data and Computer Science, Sun Yat-sen University, [2]Sun Yat-sen University

17:00 - 17:30    Session LONG8 - **Applications1** - Room Gràcia
Chair: Miryam de Lhoneux

**A Corpus for Argumentative Writing Support in German**

*Thiemo Wambsganss[1], Christina Niklaus[2], Matthias Söllner[3], Siegfried Handschuh[2], Jan Marco Leimeister[4]*

[1]University of St.Gallen, [2]University of St. Gallen, [3]University of Kassel, [4]University of St.Gallen & University of Kassel

**Do Word Embeddings Capture Spelling Variation?**

*Dong Nguyen[1] and Jack Grieve[2]*

[1]Utrecht University, [2]University of Birmingham

**Don't take "nswvtnvakgxpm" for an answer –The surprising vulnerability of automatic content scoring systems to adversarial input**
*Yuning Ding[1], Brian Riordan[2], Andrea Horbach[3], Aoife Cahill[4], Torsten Zesch[5]*
[1]University Duisburg Essen, [2]ETS, [3]University of Duisburg-Essen, [4]Educational Testing Service, [5]Language Technology Lab, University of Duisburg-Essen

**Automated Prediction of Examinee Proficiency from Short-Answer Questions**
*Le An Ha[1], Victoria Yaneva[2], Polina Harik[3], Ravi Pandian[3], Amy Morales[3], Brian Clauser[3]*
[1]RGCL, RIILP, University of Wolverhampton, [2]University of Wolverhampton; National Board of Medical Examiners, [3]National Board of Medical Examiners

**Exploring Cross-sentence Contexts for Named Entity Recognition with BERT**
*Jouni Luoma and Sampo Pyysalo*
University of Turku

| 17:00 - 17:30 | Session POSTER4 - **Applications: Legal, financial, business, humanities. Posters** - Exhibition Room Vila Olímpica |
|---|---|

**Cross-lingual Annotation Projection in Legal Texts**
*Andrea Galassi[1], Kasper Drazewski[2], Marco Lippi[3], Paolo Torroni[4]*
[1]University of Bologna, [2]Bureau Européen des Unions de Consommateurs, [3]University of Modena and Reggio Emilia, [4]Alma Mater - Università di Bologna

**Deep Learning Framework for Measuring the Digital Strategy of Companies from Earnings Calls**
*Ahmed Ghanim Al-Ali[1], Robert Phaal[1], Donald Sull[2]*
[1]Department of Engineering, University of Cambridge, [2]MIT Sloan School of Management

**A Dataset and Evaluation Framework for Complex Geographical Description Parsing**
*Egoitz Laparra and Steven Bethard*
University of Arizona

**DocBank: A Benchmark Dataset for Document Layout Analysis**
*Minghao Li[1], Yiheng Xu[2], Lei Cui[2], Shaohan Huang[2], Furu Wei[3], Zhoujun Li[1], Ming Zhou[2]*
[1]Beihang University, [2]Microsoft Research Asia, [3]Microsoft Research

**Building Large-Scale English and Korean Datasets for Aspect-Level Sentiment Analysis in Automotive Domain**
*Dongmin Hyun, Junsu Cho, Hwanjo Yu*
Pohang University of Science and Technology (POSTECH)

**A High Precision Pipeline for Financial Knowledge Graph Construction**
*Sarah Elhammadi[1], Laks V.S. Lakshmanan[1], Raymond Ng[1], Michael Simpson[1], Baoxing Huai[2], Zhefeng Wang[2], Lanjun Wang[2]*
[1]University of British Columbia, [2]Huawei

**Financial Sentiment Analysis: An Investigation into Common Mistakes and Silver Bullets**
*Frank Xing[1], Lorenzo Malandri[2], Yue Zhang[3], Erik Cambria[1]*
[1]Nanyang Technological University, [2]University of Milan - Bicocca, [3]Westlake University

**Answering Legal Questions by Learning Neural Attentive Text Representation**
*Phi Manh Kien[1], Ha-Thanh Nguyen[2], Ngo Xuan Bach[1], Vu Tran[2], Minh Le Nguyen[2], Tu Minh Phuong[1]*
[1]Department of Computer Science, Posts and Telecommunications Institute of Technology, Hanoi, Vietnam, [2]Japan Advanced Institute of Science and Technology

**Joint Transformer/RNN Architecture for Gesture Typing in Indic Languages**
*Emil Biju[1], Anirudh Sriram[1], Mitesh M. Khapra[1], Pratyush Kumar[2]*
[1]Indian Institute of Technology Madras, [2]IIT Madras

**Automatic Charge Identification from Facts: A Few Sentence-Level Charge Annotations is All You Need**
*Shounak Paul[1], Pawan Goyal[2], Saptarshi Ghosh[2]*
[1]Indian Institute of Technology, Kharagpur, [2]IIT Kharagpur

**Context-Aware Text Normalisation for Historical Dialects**
*Maria Sukhareva*
Goethe University Frankfurt

**RuSemShift: a dataset of historical lexical semantic change in Russian**
*Julia Rodina[1] and Andrey Kutuzov[2]*
[1]National Research University Higher School of Economics, [2]University of Oslo

**Exploring Amharic Sentiment Analysis from Social Media Texts: Building Annotation Tools and Classification Models**
*Seid Muhie Yimam[1], Hizkiel Mitiku Alemayehu[2], Abinew Ayele[3], Chris Biemann[1]*
[1]Universität Hamburg, [2]Università di Bologna, [3]University of Hamburg, Bahir Dar University

**Effective Few-Shot Classification with Transfer Learning**
*Aakriti Gupta[1], Kapil Thadani[2], Neil O'Hare[2]*
[1]Verizon Media, [2]Yahoo Research

17:30 - 18:00　　Session LONG9 - **Multimodal 1** - Room El Raval
　　　　　　　　Chair: Iacer Calixto
　　　　　　　　Co-Chair: Orphee Declerq

**SWAFN: Sentimental Words Aware Fusion Network for Multimodal Sentiment Analysis**
*Minping Chen and Xia Li*
Guangdong University of Foreign Studies

**Multimodal Topic-Enriched Auxiliary Learning for Depression Detection**
*Minghui An, Jingjing Wang, Shoushan Li, Guodong Zhou*
Soochow University

**Imagining Grounded Conceptual Representations from Perceptual Information in Situated Guessing Games**

*Alessandro Suglia[1], Antonio Vergari[2], Ioannis Konstas[1], Yonatan Bisk[3], Emanuele Bastianelli[1], Andrea Vanzo[1], Oliver Lemon[1]*

[1]Heriot-Watt University, [2]University of California, Los Angeles, [3]Carnegie Mellon University

**Situated and Interactive Multimodal Conversations**

*Seungwhan Moon[1], Satwik Kottur[2], Paul Crook[3], Ankita De[3], Shivani Poddar[2], Theodore Levin[4], David Whitney[3], Daniel Difranco[3], Ahmad Beirami[3], Eunjoon Cho[3], Rajen Subba[3], Alborz Geramifard[5]*

[1]Facebook Conversational AI, [2]Carnegie Mellon University, [3]Facebook, [4]Facebook Asssistant, [5]Facebook AI

**Meet Changes with Constancy: Learning Invariance in Multi-Source Translation**

*Jianfeng Liu[1], Ling Luo[2], Xiang Ao[3], Yan Song[4], Haoran Xu[1], Jian Ye[1]*

[1]Institute of Computing Technology of the Chinese Academy of Sciences, [2]Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China, [3]Institute of Computing Technology, Chinese Academy of Sciences, [4]CUHK-SZ

17:30 - 18:00   Session LONG10 - **Machine learning 1** - Room Montjuïc
                Chair: Jong C. Park
                Co-Chair: Jacopo Tagliabue

**Enhancing Neural Models with Vulnerability via Adversarial Attack**

*Rong Zhang[1], Qifei Zhou[1], Bo An[2], Weiping Li[1], Tong Mo[1], Bo Wu[3]*

[1]Peking University, [2]Institute of Software, Chinese Academy of Sciences, [3]MIT-IBM Watson AI Lab

**R-VGAE: Relational-variational Graph Autoencoder for Unsupervised Prerequisite Chain Learning**

*Irene Li[1], Alexander Fabbri[1], Swapnil Hingmire[2], Dragomir Radev[1]*

[1]Yale University, [2]TRDDC, TCS Research And Innovation

**Fine-tuning BERT for Low-Resource Natural Language Understanding via Active Learning**

*Daniel Grießhaber[1], Johannes Maucher[1], Ngoc Thang Vu[2]*

[1]Hochschule der Medien, [2]University of Stuttgart

**Exploring End-to-End Differentiable Natural Logic Modeling**

*Yufei Feng[1], Zi'ou Zheng[1], Quan Liu[2], Michael Greenspan[1], Xiaodan Zhu[1]*

[1]Queen's University, [2]National Engineering Laboratory for Speech and Language Information Processing, University of Science and Technology of China; State Key Laboratory of Cognitive Intelligence, iFLYTEK Research, Hefei, China

**A Semantically Consistent and Syntactically Variational Encoder-Decoder Framework for Paraphrase Generation**

*Wenqing Chen[1], Jidong Tian[2], Liqiang Xiao[3], Hao He[4], Yaohui Jin[4]*

[1]State Key Lab of Advanced Optical Communication System and Network, Shanghai Jiao Tong University;Artificial Intelligence Institute, Shanghai Jiao Tong University,

[2]State Key Lab of Advanced Optical Communication System and Network, Shanghai Jiao Tong University; Artificial Intelligence Institute, Shanghai Jiao Tong University, [3]Artificial Intelligence Institute, Shanghai Jiao Tong University, [4]Shanghai Jiao Tong University

| 17:30 - 18:00 | Session POSTER5 - **Semantics 1. Posters** - Exhibition Room Vila Olímpica |
| --- | --- |

**Tiny Word Embeddings Using Globally Informed Reconstruction**
*Sora Ohashi[1], Mao Isogawa[1], Tomoyuki Kajiwara[2], Yuki Arase[2]*
[1]Graduate School of Information Science and Technology, Osaka University, [2]Osaka University

**Improving Word Embeddings through Iterative Refinement of Word- and Character-level Models**
*Phong Ha[1], Shanshan Zhang[1], Nemanja Djuric[2], Slobodan Vucetic[1]*
[1]Temple University, [2]Uber ATG

**Probing Multilingual BERT for Genetic and Typological Signals**
*Taraka Rama[1], Lisa Beinborn[2], Steffen Eger[3]*
[1]University of North Texas at Denton, [2]Vrije Universiteit Amsterdam, [3]NLLG Lab, Technische Universität Darmstadt

**Learning Efficient Task-Specific Meta-Embeddings with Word Prisms**
*Jingyi He[1], KC Tsiolis[1], Kian Kenyon-Dean[2], Jackie Chi Kit Cheung[2]*
[1]Mila, McGill University, [2]McGill University

**Always Keep your Target in Mind: Studying Semantics and Improving Performance of Neural Lexical Substitution**
*Nikolay Arefyev[1], Boris Sheludko[2], Alexander Podolskiy[3], Alexander Panchenko[4]*
[1]Lomonosov Moscow State University, Samsung R&D Institute, National Research University Higher School of Economics, Russia, [2]Samsung R&D Institute Russia, Lomonosov Moscow State University, [3]Samsung Research Russia, [4]Skolkovo Institue of Science and Technology

**Word Embedding Binarization with Semantic Information Preservation**
*Samarth Navali, Praneet Sherki, Ramesh Inturi, Vanraj Vala*
Samsung Research, Bangalore

**How Relevant Are Selectional Preferences for Transformer-based Language Models?**
*Eleni Metheniti[1], Tim Van de Cruys[2], Nabil Hathout[3]*
[1]CLLE-CNRS and IRIT-CNRS, [2]University of Leuven, [3]CLLE/ERSS, CNRS & Université de Toulouse

**Embedding Semantic Taxonomies**
*Alyssa Lees[1], Chris Welty[2], Shubin Zhao[3], Jacek Korycki[1], Sara Mc Carthy[1]*
[1]Google, [2]NA, [3]Google Research

**A Retrofitting Model for Incorporating Semantic Relations into Word Embeddings**

*Sapan Shah[1], Sreedhar Reddy[1], Pushpak Bhattacharyya[2]*
[1]Tata Consultancy Services Ltd, [2]Indian Institute of Technology Bombay and Patna

**Lexical Relation Mining in Neural Word Embeddings**
*Aishwarya Jadhav[1], Yifat Amir[2], Zachary Pardos[3]*
[1]Carnegie Mellon University, [2]Google, [3]UC Berkeley

**A BERT-based Dual Embedding Model for Chinese Idiom Prediction**
*Minghuan Tan and Jing Jiang*
Singapore Management University

**BERT-based Cohesion Analysis of Japanese Texts**
*Nobuhiro Ueda[1], Daisuke Kawahara[2], Sadao Kurohashi[1]*
[1]Kyoto University, [2]Waseda University

**Schema Aware Semantic Reasoning for Interpreting Natural Language Queries in Enterprise Settings**
*Jaydeep Sen[1], Tanaya Babtiwale[2], Kanishk Saxena[3], Yash Butala[4], Sumit Bhatia[1], Karthik Sankaranarayanan[1]*
[1]IBM Research AI, [2]NMIMS University, [3]Sir M. Visvesvaraya Institute of Technology, [4]Indian Institute of Technology Kharagpur

18:00 - 18:30    Session LONG11 - **Semantics 1** - Room El Raval
Chair: Jose Camacho-Collados
Co-Chair: Guy Emerson

**Multilingual Irony Detection with Dependency Syntax and Neural Models**
*Alessandra Teresa Cignarella[1], Valerio Basile[2], Manuela Sanguinetti[3], Cristina Bosco[4], Paolo Rosso[5], Farah Benamara[6]*
[1]Dipartimento di Informatica - Università degli studi di Torino, [2]University of Turin, [3]University of Cagliari, Department of Mathematics and Computer Science, [4]Dipartimento di Informatica - Università di Torino, [5]Universitat Politècnica de València, [6]University of toulouse

**What Can We Learn from Noun Substitutions in Revision Histories?**
*Talita Anthonio and Michael Roth*
University of Stuttgart

**Specializing Unsupervised Pretraining Models for Word-Level Semantic Similarity**
*Anne Lauscher[1], Ivan Vulić[2], Edoardo Maria Ponti[3], Anna Korhonen[2], Goran Glavaš[1]*
[1]University of Mannheim, [2]University of Cambridge, [3]Mila Montreal / University of Cambridge

**Harnessing Cross-lingual Features to Improve Cognate Detection for Low-resource Languages**
*Diptesh Kanojia[1], Raj Dabre[2], Shubham Dewangan[3], Pushpak Bhattacharyya[4], Gholamreza Haffari[5], Malhar Kulkarni[6]*
[1]IITB-Monash Research Academy, [2]NICT, [3]IIT Bombay, [4]Indian Institute of Technology Bombay and Patna, [5]Monash University, [6]IIT Bombay, India

**Bridging the Gap in Multilingual Semantic Role Labeling: a Language-Agnostic Approach**
*Simone Conia and Roberto Navigli*
Sapienza University of Rome

18:00 - 18:30   Session LONG12 - **Simplification** - Room Gràcia
          Chair: Carolina Scarton

**On the Helpfulness of Document Context to Sentence Simplification**
*Renliang Sun, Zhe Lin, Xiaojun Wan*
Peking University

**AutoMeTS: The Autocomplete for Medical Text Simplification**
*Hoang Van[1], David Kauchak[2], Gondy Leroy[1]*
[1]University of Arizona, [2]Pomona College

**Multi-Word Lexical Simplification**
*Piotr Przybyła[1] and Matthew Shardlow[2]*
[1]Institute of Computer Science, Polish Academy of Sciences, [2]Manchester Metropolitan University

18:00 - 18:30   Session SHORT1 - **Machine Learning methods. Short papers** - Room Montjuïc
          Chair: Jinhua Du

**Exploring the zero-shot limit of FewRel**
*alberto cetoli*
QBE

**A Deep Generative Distance-Based Classifier for Out-of-Domain Detection with Mahalanobis Space**
*Hong Xu, Keqing He, Yuanmeng Yan, Sihong Liu, Zijun Liu, Weiran XU*
Beijing University of Posts and Telecommunications

**Contrastive Zero-Shot Learning for Cross-Domain Slot Filling with Adversarial Attack**
*Keqing He[1], Jinchao Zhang[2], Yuanmeng Yan[1], Weiran XU[1], Cheng Niu[3], Jie Zhou[4]*
[1]Beijing University of Posts and Telecommunications, [2]Pattern Recognition Center, WeChat AI, Tencent, [3]Tencent America, [4]Tencent Inc.

**DoLFIn: Distributions over Latent Features for Interpretability**
*Phong Le[1] and Willem Zuidema[2]*
[1]Amazon, [2]University of Amsterdam

**Contextual Argument Component Classification for Class Discussions**
*Luca Lugini and Diane Litman*
University of Pittsburgh

**\*On the Practical Ability of Recurrent Neural Networks to Recognize Hierarchical Languages**

*Satwik Bhattamishra[1], Kabir Ahuja[2], Navin Goyal[3]*
[1]Microsoft Research India, [2]Microsoft Research, [3]Microsoft

**Pre-trained Language Model Based Active Learning for Sentence Matching**
*Guirong Bai[1], Shizhu He[1], Kang Liu[1], Jun Zhao[2], Zaiqing Nie[3]*
[1]Institute of Automation, Chinese Academy of Sciences, [2]Chinese Academy of Sciences, [3]Alibaba

**Event-Guided Denoising for Multilingual Relation Learning**
*Amith Ananthram[1], Emily Allaway[1], Kathleen McKeown[2]*
[1]Columbia University, [2]Columbia University and Amazon (Amazon Scholar)

**Using a Penalty-based Loss Re-estimation Method to Improve Implicit Discourse Relation Classification**
*xiao li[1], Yu Hong[1], Huibin Ruan[1], Zhen Huang[2]*
[1]Soochow University, [2]National University of Defense Technology

18:00 -
18:30
Session POSTER6 - **Information Extraction and Knowledge Graphs.**
**Posters** - Exhibition Room Vila Olímpica

**A Review of Dataset and Labeling Methods for Causality Extraction**
*Jinghang Xu, Wanli Zuo, Shining Liang, Xianglin Zuo*
Jilin University

**Knowledge Graph Embedding with Atrous Convolution and Residual Learning**
*Feiliang Ren, Juchen Li, Huihui Zhang, Shilei Liu, Bochao Li, Ruicheng Ming, Yujia Bai*
Northerstern University

**KnowDis: Knowledge Enhanced Data Augmentation for Event Causality Detection via Distant Supervision**
*Xinyu Zuo[1], Yubo Chen[1], Kang Liu[1], Jun Zhao[2]*
[1]Institute of automation, Chinese academy of sciences, [2]Chinese Academy of Sciences

**Graph Enhanced Dual Attention Network for Document-Level Relation Extraction**
*Bo Li, Wei Ye, Zhonghao Sheng, Rui Xie, Xiangyu Xi, Shikun Zhang*
Peking University

**Joint Entity and Relation Extraction for Legal Documents with Legal Feature Enhancement**
*Yanguang Chen[1], Yuanyuan Sun[1], Zhihao Yang[2], Hongfei LIN[1]*
[1]Dalian University of Technology, [2]Dalian University of Technogy

**TPLinker: Single-stage Joint Extraction of Entities and Relations Through Token Pair Linking**
*Yucheng Wang[1], Bowen Yu[1], Yueyang Zhang[2], Tingwen Liu[1], Hongsong Zhu[1], Limin Sun[1]*
[1]Institute of Information Engineering, Chinese Academy of Sciences, [2]Baidu, Inc

**TeRo: A Time-aware Knowledge Graph Embedding via Temporal Rotation**

*Chengjin Xu[1], Mojtaba Nayyeri[1], Fouad Alkhoury[2], Hamed Shariat Yazdi[1], Jens Lehmann[3]*
[1]University of Bonn, [2]Uni Bonn, [3]University of Bonn and Fraunhofer IAIS

**Meta-Information Guided Meta-Learning for Few-Shot Relation Classification**

*Bowen Dong[1], Yuan Yao[1], Ruobing Xie[2], Tianyu Gao[3], Xu Han[1], Zhiyuan Liu[1], Fen Lin[2], Leyu Lin[2], Maosong Sun[1]*
[1]Tsinghua University, [2]WeChat Search Application Department, Tencent, China, [3]Princeton University

**Unsupervised Deep Language and Dialect Identification for Short Texts**

*Koustava Goswami[1], Rajdeep Sarkar[2], Bharathi Raja Chakravarthi[1], Theodorus Fransen[3], John P. McCrae[4]*
[1]Insight Centre for Data Analytics, Data Science Institute, National University of Ireland Galway, [2]Data Science Institute, NUI Galway, [3]Insight Centre for Data Analytics, National University of Ireland, Galway, [4]Insight Center for Data Analytics, National University of Ireland Galway

**A Two-phase Prototypical Network Model for Incremental Few-shot Relation Classification**

*Haopeng Ren[1], Yi Cai[1], Xiaofeng Chen[1], Guohua Wang[1], Qing Li[2]*
[1]South China University of Technology, [2]the Hong Kong Polytechnic University

**Document-level Relation Extraction with Dual-tier Heterogeneous Graph**

*Zhenyu Zhang[1], Bowen Yu[1], Xiaobo Shu[1], Tingwen Liu[1], Hengzhu Tang[1], Wang Yubin[2], Li Guo[1]*
[1]Institute of Information Engineering, Chinese Academy of Sciences, [2]Institute of Information Engineering,   Chinese Academy of Sciences

**Biased TextRank: Unsupervised Graph-Based Content Extraction**

*Ashkan Kazemi, Verónica Pérez-Rosas, Rada Mihalcea*
University of Michigan

**Improving Long-Tail Relation Extraction with Collaborating Relation-Augmented Attention**

*Yang Li[1], Tao Shen[1], Guodong Long[2], Jing Jiang[1], Tianyi Zhou[3], Chengqi Zhang[1]*
[1]University of Technology Sydney, [2]UTS, [3]University of Washington

**ToHRE: A Top-Down Classification Strategy with Hierarchical Bag Representation for Distantly Supervised Relation Extraction**

*Erxin Yu[1], Wenjuan Han[2], Yuan Tian[1], Yi Chang[3]*
[1]Jilin university, [2]National University of Singapore, [3]School of Artificial Intelligence, Jilin University

**Improving Relation Extraction with Relational Paraphrase Sentences**

*Junjie Yu[1], Tong Zhu[1], Wenliang Chen[1], Wei Zhang[2], Min Zhang[3]*
[1]Soochow University, [2]Alibaba Group, [3]Suda

**Autoencoding Improves Pre-trained Word Embeddings**
*Masahiro Kaneko[1] and Danushka Bollegala[2]*
[1]Tokyo Metropolitan University, [2]University of Liverpool/Amazon

**PoD: Positional Dependency-Based Word Embedding for Aspect Term Extraction**
*Yichun Yin[1], Chenguang Wang[2], Ming Zhang[3]*
[1]Huawei Noah's Ark Lab, [2]Amazon Web Services, [3]Peking University

**Unequal Representations: Analyzing Intersectional Biases in Word Embeddings Using Representational Similarity Analysis**
*Michael Lepori*
Johns Hopkins University

**Vec2Sent: Probing Sentence Embeddings with Natural Language Generation**
*Martin Kerscher[1] and Steffen Eger[2]*
[1]Department of Computer Science, Technische Universität Darmstadt, [2]NLLG Lab, Technische Universität Darmstadt

**Multi-Task Learning for Knowledge Graph Completion with Pre-trained Language Models**
*Bosung Kim[1], Taesuk Hong[2], Youngjoong Ko[1], Jungyun Seo[2]*
[1]Sungkyunkwan University, [2]Sogang University

**comp-syn: Perceptually Grounded Word Embeddings with Color**
*Bhargav Srinivasa Desikan[1], Tasker Hull[2], Ethan Nadler[3], Douglas Guilbeault[4], Aabir Abubakar Kar[1], Mark Chu[5], Donald Ruggiero Lo Sardo[6]*
[1]University of Chicago, [2]Psiphon Inc, Toronto, [3]Stanford University, [4]University of California Berkeley, [5]Columbia University, [6]Medical University of Vienna

**Try to Substitute: An Unsupervised Chinese Word Sense Disambiguation Method Based on HowNet**
*Bairu Hou[1], Fanchao Qi[2], Yuan Zang[3], Xurui Zhang[3], Zhiyuan Liu[4], Maosong Sun[4]*
[1]School of Economic and Management, Tsinghua University, [2]Tsinghua Univeristy, [3]Department of Computer Science and Technology, Tsinghua University, [4]Tsinghua University

**Combining Event Semantics and Degree Semantics for Natural Language Inference**
*Izumi Haruta[1], Koji Mineshima[2], Daisuke Bekki[1]*
[1]Ochanomizu University, [2]Keio University

**Complaint Identification in Social Media with Transformer Networks**
*Mali Jin and Nikolaos Aletras*
University of Sheffield

**Syntactically Aware Cross-Domain Aspect and Opinion Terms Extraction**
*Oren Pereg[1], Daniel Korat[2], Moshe Wasserblat[2]*
[1]AI Lab, Intel Labs, [2]Intel AI Lab

**A Deep Generative Approach to Native Language Identification**
*Ehsan Lotfi, Ilia Markov, Walter Daelemans*
University of Antwerp, CLiPS

**Modeling Event Salience in Narratives via Barthes' Cardinal Functions**
*Takaki Otake[1], Sho Yokoi[2], Naoya Inoue[3], Ryo Takahashi[1], Tatsuki Kuribayashi[4], Kentaro Inui[5]*
[1]Tohoku University, [2]Tohoku University / RIKEN AIP, [3]Stony Brook University, [4]Tohoku University / Langsmith Inc., [5]Tohoku University / Riken

**Medical Knowledge-enriched Textual Entailment Framework**
*Shweta Yadav[1], Vishal Pallagani[2], Amit Sheth[2]*
[1]National Library of Medicine, [2]University of South Carolina, USA

**Predicting Personal Opinion on Future Events with Fingerprints**
*Fan Yang[1], Eduard Dragut[2], Arjun Mukherjee[1]*
[1]University of Houston, [2]Temple University

**Detecting de minimis Code-Switching in Historical German Books**
*Shijia Liu and David Smith*
Northeastern University

**Lin: Unsupervised Extraction of Tasks from Textual Communication**
*Parth Diwanji[1], Hui Guo[1], Munindar Singh[1], Anup Kalia[2]*
[1]North Carolina State University, [2]IBM T. J. Watson Research Center

**Connecting the Dots Between Fact Verification and Fake News Detection**
*Qifei LI and Wangchunshu Zhou*
Beihang University

| 18:30 - 19:00 | Session POSTER7 - **Multimodality. Posters** - Exhibition Room Vila Olímpica |
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**Personalized Multimodal Feedback Generation in Education**
*Haochen Liu[1], Zitao Liu[2], Zhongqin Wu[2], Jiliang Tang[1]*
[1]Michigan State University, [2]TAL Education Group

**Reasoning Step-by-Step: Temporal Sentence Localization in Videos via Deep Rectification-Modulation Network**
*Daizong Liu[1], Xiaoye Qu[1], Jianfeng Dong[2], Pan Zhou[1]*
[1]Huazhong University of Science and Technology, [2]Zhejiang Gongshang University

**RIVA: A Pre-trained Tweet Multimodal Model Based on Text-image Relation for Multimodal NER**

*Lin Sun[1], Jiquan Wang[2], Yindu Su[2], Fangsheng Weng[1], Yuxuan Sun[1], Zengwei Zheng[1], Yuanyi Chen[1]*
[1]Zhejiang University City College, [2]Zhejiang University

**Towards Knowledge-Augmented Visual Question Answering**
*Maryam Ziaeefard[1] and Freddy Lecue[2]*
[1]Thales Digital Solutions, [2]Inria

**Visual-Textual Alignment for Graph Inference in Visual Dialog**
*Tianling Jiang, Yi Ji, Chunping Liu, Hailin Shao*
Soochow University

**Ad Lingua: Text Classification Improves Symbolism Prediction in Image Advertisements**
*Andrey Savchenko[1], Anton Alekseev[2], Sejeong Kwon[3], Elena Tutubalina[4], Evgeny Myasnikov[1], Sergey Nikolenko[5]*
[1]Samsung-PDMI Joint AI Center, Steklov Mathematical Institute at St. Petersburg, [2]St. Petersburg Department of Steklov Mathematical Institute of Russian Academy of Sciences, [3]Samsung Research, [4]Kazan Federal University, [5]Steklov Math. Institute

**Humans Meet Models on Object Naming: A New Dataset and Analysis**
*Carina Silberer[1], Sina Zarrieß[2], Matthijs Westera[3], Gemma Boleda[4]*
[1]University of Stuttgart, [2]University of Jena, [3]Universitat Pompeu Fabra, [4]Universitat Pompeu Fabra / ICREA

**Encoding Lexico-Semantic Knowledge using Ensembles of Feature Maps from Deep Convolutional Neural Networks**
*Steven Derby[1], Paul Miller[1], Barry Devereux[2]*
[1]Queen's University Belfast, [2]Queen's University, Belfast

**Language-Driven Region Pointer Advancement for Controllable Image Captioning**
*Annika Lindh, Robert Ross, John Kelleher*
Technological University Dublin

**Offensive Language Detection on Video Live Streaming Chat**
*Zhiwei Gao, Shuntaro Yada, Shoko Wakamiya, Eiji Aramaki*
Nara Institute of Science and Technology

**Image Caption Generation for News Articles**
*Zhishen Yang and Naoaki Okazaki*
Tokyo Institute of Technology

**CoNAN: A Complementary Neighboring-based Attention Network for Referring Expression Generation**
*Jungjun Kim[1], Hanbin Ko[1], Jialin Wu[2]*
[1]Korea University, [2]University of Texas at Austin

19:00 - 20:30   **Big welcome reception at the Lounge**

19:00 - 19:30   **Queer in AI Social Event**

| 14:30 - 15:00 | SOCIAL EVENT - **Bon profit! Catalan cooking class with COLING'2020 organizers** |
|---|---|

**Chef**: Joan Gurgui; **Cooking Assistants**: Laura Pérez Mayos & Horacio Saggion (COLING organization team)
Filmed and edited by Tulio Goncalves
**Menu ([donwload recipes](#)):**

- Starters: Timbal d'escalivada amb formatge de cabra / Escalivada with goat cheese
- Main: Mandonguilles mar i muntanya / Sea and Mountain Meatballs
- Dessert: Panellets

| 15:00 - 15:30 | **INVITED TALK 2** - Room Poblenou |
|---|---|
| | Chair: Roberto Navigli |

**The computational linguistics of conversation modeling**
*Amanda Stent*
NLP Architect at Bloomberg LP

| 15:30 - 16:00 | Session LONG13 - **Language Generation 1** - Room Monjtuic |
|---|---|
| | Chair: Simon Mille |

**Mark-Evaluate: Assessing Language Generation using Population Estimation Methods**
*Gonçalo Mordido and Christoph Meinel*
Hasso Plattner Institute

**TableGPT: Few-shot Table-to-Text Generation with Table Structure Reconstruction and Content Matching**
*Heng Gong[1], Yawei Sun[1], Xiaocheng Feng[2], Bing Qin[1], Wei Bi[3], Xiaojiang Liu[3], Ting Liu[1]*
[1]Harbin Institute of Technology, [2]Harbin Institute of Technology,SCIR lab, [3]Tencent AI Lab

**The ApposCorpus: a new multilingual, multi-domain dataset for factual appositive generation**
*Yova Kementchedjhieva[1], Di Lu[2], Joel Tetreault[2]*
[1]University of Copenhagen, [2]Dataminr

**Generalized Shortest-Paths Encoders for AMR-to-Text Generation**
*Lisa Jin and Daniel Gildea*
University of Rochester

**An Enhanced Knowledge Injection Model for Commonsense Generation**
*Zhihao Fan[1], Yeyun Gong[2], Zhongyu Wei[3], Siyuan Wang[1], Yameng Huang[4], Jian Jiao[4], Xuanjing Huang[1], Nan Duan[2], Ruofei Zhang[4]*

[1]Fudan University, [2]Microsoft Research Asia, [3]School of Data Science, Fudan University, [4]Microsoft

**15:30 - 16:00   Session LONG14 - Parsing and Segmentation - Room El Raval**
**Chair: Luis Espinosa-Anke**
**Co-Chair: Ling Liu**

**Multi-grained Chinese Word Segmentation with Weakly Labeled Data**
*Chen Gong[1], Zhenghua Li[1], Bowei Zou[2], Min Zhang[3]*
[1]Soochow University, [2]Institute for Infocomm Research, ASTAR, [3]Suda

**\*KeyGames: A Game Theoretic Approach to Automatic Keyphrase Extraction**
*Arnav Saxena, Mudit Mangal, Goonjan Jain*
Delhi Technological University

**Parsers Know Best: German PP Attachment Revisited**
*Bich-Ngoc Do[1] and Ines Rehbein[2]*
[1]Heidelberg University, [2]University of Mannheim

Session LONG14 - **Towards Fast and Accurate Neural Chinese Word Segmentation with Multi-Criteria Learning**
*Weipeng Huang[1], Xingyi Cheng[2], Kunlong Chen[3], Taifeng Wang[4], Wei Chu[1]*
[1]Ant Financial, [2]Ant Financial Services Group, [3]Ant Financial Service, [4]Ant Finance

**Joint Chinese Word Segmentation and Part-of-speech Tagging via Multi-channel Attention of Character N-grams**
*Yuanhe Tian[1], Yan Song[2], Fei Xia[3]*
[1]Department of Linguistics, University of Washington, [2]CUHK-SZ, [3]University of Washington

**15:30 - 16:00   Session POSTER8 - Applications: grammar correction, support for language and script writing. Posters - Exhibition Room Vila Olímpica**

**Taking the Correction Difficulty into Account in Grammatical Error Correction Evaluation**
*Takumi Gotou[1], Ryo Nagata[2], Masato Mita[3], Kazuaki Hanawa[3]*
[1]Konan Univercity, [2]Konan University, [3]RIKEN AIP / Tohoku University

**Automatic Distractor Generation for Multiple Choice Questions in Standard Tests**
*Zhaopeng Qiu[1], Xian Wu[2], Wei Fan[1]*
[1]Tencent Medical AI Lab, [2]Tencent

**Towards A Friendly Online Community: An Unsupervised Style Transfer Framework for Profanity Redaction**
*Minh Tran[1], Yipeng Zhang[2], Mohammad Soleymani[1]*
[1]University of Southern California, [2]University of Rochester

**How Positive Are You: Text Style Transfer using Adaptive Style Embedding**
*Heejin Kim and Kyung-Ah Sohn*
Ajou University

**Neural text normalization leveraging similarities of strings and sounds**

*Riku Kawamura[1], Tatsuya Aoki[1], Hidetaka Kamigaito[1], Hiroya Takamura[2], Manabu Okumura[1]*
[1]Tokyo Institute of Technology, [2]The National Institute of Advanced Industrial Science and Technology (AIST)

**Generating Diverse Corrections with Local Beam Search for Grammatical Error Correction**

*Kengo Hotate, Masahiro Kaneko, Mamoru Komachi*
Tokyo Metropolitan University

**A Neural Local Coherence Analysis Model for Clarity Text Scoring**

*Panitan Muangkammuen[1], Sheng Xu[2], Fumiyo Fukumoto[1], Kanda Runapongsa Saikaew[3], Jiyi Li[1]*
[1]University of Yamanashi, [2]Hangzhou Dianzi University, [3]Khon Kaen University

**Grammatical error detection in transcriptions of spoken English**

*Andrew Caines[1], Christian Bentz[2], Kate Knill[1], Marek Rei[3], Paula Buttery[1]*
[1]University of Cambridge, [2]University of Tübingen, [3]Imperial College London

**Automatic Assistance for Academic Word Usage**

*Dariush Saberi[1], John Lee[1], Jonathan James Webster[2]*
[1]City University of Hong Kong, [2]The Halliday Centre for Intelligent Applications of Language Studies

**Style versus Content: A distinction without a (learnable) difference?**

*Somayeh Jafaritazehjani[1], Gwénolé Lecorvé[2], Damien Lolive[2], John Kelleher[3]*
[1]Technological University Dublin, [2]Univ Rennes, CNRS, IRISA, [3]Technological University Dublin

**Contextualized Embeddings for Enriching Linguistic Analyses on Politeness**

*Ahmad Aljanaideh, Eric Fosler-Lussier, Marie-Catherine de Marneffe*
The Ohio State University

**Heterogeneous Recycle Generation for Chinese Grammatical Error Correction**

*Charles Hinson[1], Hen-Hsen Huang[2], Hsin-Hsi Chen[1]*
[1]National Taiwan University, [2]Department of Computer Science, National Chengchi University

**Improving Grammatical Error Correction with Data Augmentation by Editing Latent Representation**

*Zhaohong Wan[1], Xiaojun Wan[1], Wenguang Wang[2]*
[1]Peking University, [2]DataGrand Tech Inc.

| 16:00 - 16:30 | Session IND2 - **INDUSTRY TRACK - Generation and Question Answering** - Room Gràcia<br>Chair: Daniele Bonadiman |
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**An Empirical Study on Multi-Task Learning for Text Style Transfer and Paraphrase Generation**

*Pawel Bujnowski, Kseniia Ryzhova, Hyungtak Choi, Katarzyna Witkowska, Jaroslaw Piersa, Tymoteusz Krumholc and Katarzyna Beksa*

**\*Best Practices for Data-Efficient Modeling in NLG: How to Train Production-Ready Neural Models with Less Data**
*Ankit Arun, Soumya Batra, Vikas Bhardwaj, Ashwini Challa, Pinar Donmez, Peyman Heidari, Hakan Inan, Shashank Jain, Anuj Kumar, Shawn Mei, Karthik Mohan and Michael White*

**Interactive Question Clarification in Dialogue via Reinforcement Learning**
*Xiang Hu, Zujie Wen, Yafang Wang, Xiaolong Li and Gerard de Melo*

**Towards building a Robust Industry-scale Question Answering System**
*Rishav Chakravarti, Anthony Ferritto, Bhavani Iyer, Lin Pan, Radu Florian, Salim Roukos and Avi Sil*

**Delexicalized Paraphrase Generation**
*Boya Yu, Konstantine Arkoudas and Wael Hamza*

| 16:00 - 16:30 | Session DEMO1 - **Tools useful in research and everyday use. Demos** - Exhibition Room El Born<br>Chair: Michal Ptaszynski |
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**An Online Readability Leveled Arabic Thesaurus**
*Zhengyang Jiang, Nizar Habash and Muhamed Al Khalil*

**Annobot: Platform for Annotating and Creating Datasets through Conversation with a Chatbot**
*Rafał Poświata and Michał Perełkiewicz*

**Arabic Curriculum Analysis**
*Hamdy Mubarak, Shimaa Amer, Ahmed Abdelali and Kareem Darwish*

**\*DART: A Lightweight Quality-Suggestive Data-to-Text Annotation Tool**
*Ernie Chang, Jeriah Caplinger, Alex Marin, Xiaoyu Shen and Vera Demberg*

**Epistolary Education in 21st Century: A System to Support Composition of E-mails by Students to Superiors in Japanese**
*Kenji Ryu and Michal Ptaszynski*

**Fast Word Predictor for On-Device Application**
*Huy Tien Nguyen, Khoi Tuan Nguyen, Anh Tuan Nguyen and Thanh Lac Thi Tran*

**MaintNet: A Collaborative Open-Source Library for Predictive Maintenance Language Resources**
*Farhad Akhbardeh, Travis Desell and Marcos Zampieri*

**TrainX – Named Entity Linking with Active Sampling and Bi-Encoders**
*Tom Oberhauser, Tim Bischoff, Karl Brendel, Maluna Menke, Tobias Klatt, Amy Siu, Felix Alexander Gers and Alexander Löser*

**XplaiNLI: Explainable Natural Language Inference through Visual Analytics**
*Aikaterini-Lida Kalouli, Rita Sevastjanova, Valeria de Paiva, Richard Crouch and Mennatallah El-Assady*

| | |
|---|---|
| 16:00 - 16:30 | Session POSTER9 - **Text Generation. Posters** - Exhibition Room Vila Olímpica |

**Cycle-Consistent Adversarial Autoencoders for Unsupervised Text Style Transfer**
*Yufang Huang[1], Wentao Zhu[2], Deyi Xiong[3], Yiye Zhang[1], Changjian Hu[4], Feiyu Xu[4]*
[1]Cornell University, [2]NVIDIA, [3]Tianjin University, [4]Lenovo

**Ask to Learn: A Study on Curiosity-driven Question Generation**
*Thomas Scialom[1] and Jacopo Staiano[2]*
[1]reciTAL, LIP6, [2]reciTAL

**Formality Style Transfer with Shared Latent Space**
*Yunli Wang[1], Yu Wu[2], Lili Mou[3], Zhoujun Li[1], WenHan Chao[1]*
[1]Beihang University, [2]Microsoft Research Asia, [3]University of Alberta

**Keep it Consistent: Topic-Aware Storytelling from an Image Stream via Iterative Multi-agent Communication**
*Ruize Wang[1], Zhongyu Wei[2], Ying Cheng[3], Piji Li[4], Haijun Shan[5], Ji Zhang[6], Qi Zhang[3], Xuanjing Huang[3]*
[1]Academy for Engineering and Technology, Fudan University, [2]School of Data Science, Fudan University, [3]Fudan University, [4]Tencent AI Lab, [5]Zhejiang Lab, [6]Faculty of Health, Engineering and Science, University of Southern Queensland; Zhejiang Lab

**Referring to what you know and do not know: Making Referring Expression Generation Models Generalize To Unseen Entities**
*Rossana Cunha, Thiago Castro Ferreira, Adriana Pagano, Fabio Alves*
Federal University of Minas Gerais

**Topic-driven Ensemble for Online Advertising Generation**
*Egor Nevezhin, Nikolay Butakov, Maria Khodorchenko, Maxim Petrov, Denis Nasonov*
ITMO University

**Retrieval-Augmented Controllable Review Generation**
*Jihyeok Kim[1], Seungtaek Choi[1], Reinald Kim Amplayo[2], Seung-won Hwang[1]*
[1]Yonsei University, [2]University of Edinburgh

**Automatic Detection of Machine Generated Text: A Critical Survey**
*Ganesh Jawahar[1], Muhammad Abdul-Mageed[1], Laks Lakshmanan, V.S.[2]*
[1]The University of British Columbia, [2]UBC

**A Learning-Exploring Method to Generate Diverse Paraphrases with Multi-Objective Deep Reinforcement Learning**
*Mingtong Liu[1], Erguang Yang[1], Deyi Xiong[2], YUJIE ZHANG[1], Yao Meng[3], Changjian Hu[3], Jinan Xu[1], Yufeng Chen[1]*
[1]Beijing Jiaotong University, [2]Tianjin University, [3]Lenovo

**Curious Case of Language Generation Evaluation Metrics: A Cautionary Tale**
*Ozan Caglayan, Pranava Madhyastha, Lucia Specia*
Imperial College London

**Facts2Story: Controlling Text Generation by Key Facts**
*Eyal Orbach and Yoav Goldberg*
Bar Ilan University

**Story Generation with Rich Details**
*Fangzhou Zhai, Vera Demberg, Alexander Koller*
Saarland University

**Learning with Contrastive Examples for Data-to-Text Generation**
*Yui Uehara[1], Tatsuya Ishigaki[2], Kasumi Aoki[3], Hiroshi Noji[4], Keiichi Goshima[5], Ichiro Kobayashi[3], Hiroya Takamura[1], Yusuke Miyao[6]*
[1]The National Institute of Advanced Industrial Science and Technology (AIST),
[2]National Institute of Advanced Industrial Science and Technology (AIST),
[3]Ochanomizu University, [4]Artificial Intelligence Research Center, AIST, [5]Waseda University, [6]University of Tokyo

**MedWriter: Knowledge-Aware Medical Text Generation**
*Youcheng Pan[1], Qingcai Chen[1], Weihua Peng[2], Xiaolong Wang[1], Baotian Hu[3], Xin Liu[1], Junying Chen[1], Wenxiu Zhou[1]*
[1]Harbin Institute of Technology, Shenzhen, [2]Baidu International Technology (Shenzhen) Co., Ltd, [3]Harbin Institue of Technology, Shenzhen

**Dynamic Topic Tracker for KB-to-Text Generation**
*Zihao Fu[1], Lidong Bing[2], Wai Lam[1], Shoaib Jameel[3]*
[1]The Chinese University of Hong Kong, [2]Alibaba DAMO Academy, [3]University of Essex

**Improving Variational Autoencoder for Text Modelling with Timestep-Wise Regularisation**
*Ruizhe Li[1], Xiao Li[2], Guanyi Chen[3], Chenghua Lin[4]*
[1]University of Sheffield, [2]Aberdeen University, [3]Utrecht University, [4]Department of Computer Science, University of Sheffield

**GenWiki: A Dataset of 1.3 Million Content-Sharing Text and Graphs for Unsupervised Graph-to-Text Generation**
*Zhijing Jin[1], Qipeng Guo[2], Xipeng Qiu[2], Zheng Zhang[3]*
[1]Max Planck Institute, [2]Fudan University, [3]NYU Shanghai

| 16:30 - 17:00 | Session LONG15 - **Dialogue and Language Generation** - Room El Raval<br>Chair: Michael White<br>Co-Chair: Anna Liednikova |
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**Have Your Text and Use It Too! End-to-End Neural Data-to-Text Generation with Semantic Fidelity**

*Hamza Harkous[1], Isabel Groves[2], Amir Saffari[2]*
[1]Amazon Alexa, [2]Amazon

**Graph-Based Knowledge Integration for Question Answering over Dialogue**
*Jian Liu[1], Dianbo Sui[2], Kang Liu[2], Jun Zhao[3]*
[1]Beijing Jiaotong University, [2]Institute of Automation, Chinese Academy of Sciences,
[3]Chinese Academy of Sciences

**A hierarchical approach to vision-based language generation: from simple sentences to complex natural language**
*Simion-Vlad Bogolin, Ioana Croitoru, Marius Leordeanu*
Institute of Mathematics of the Romanian Academy

**Sentiment Forecasting in Dialog**
*Zhongqing Wang[1], Xiujun Zhu[1], Yue Zhang[2], Shoushan Li[1], Guodong Zhou[1]*
[1]Soochow University, [2]Westlake University

**I Know What You Asked: Graph Path Learning using AMR for Commonsense Reasoning**
*Jungwoo Lim[1], Dongsuk Oh[2], Yoonna Jang[2], Kisu Yang[1], Heuiseok Lim[1]*
[1]Korea University, [2]Department of Computer Science and Engineering, Korea University

16:30 - 17:00    Session LONG16 - **Dependency Parsing** - Room Montjuïc
Chair: Carlos Gómez-Rodríguez
Co-Chair: Philipp Dufter

**Bracketing Encodings for 2-Planar Dependency Parsing**
*Michalina Strzyz, David Vilares, Carlos Gómez-Rodríguez*
Universidade da Coruña

**Semi-Supervised Dependency Parsing with Arc-Factored Variational Autoencoding**
*Ge Wang and Kewei Tu*
ShanghaiTech University

**Multitask Easy-First Dependency Parsing: Exploiting Complementarities of Different Dependency Representations**
*Yash Kankanampati[1], Joseph Le Roux[2], Nadi Tomeh[3], Dima Taji[4], Nizar Habash[4]*
[1]Indian Institute of Technology - Dhanbad, [2]Université Sorbonne Paris Nord, [3]LIPN,
Université Sorbonne Paris Nord, [4]New York University Abu Dhabi

**Context Dependent Semantic Parsing: A Survey**
*Zhuang Li, Lizhen Qu, Gholamreza Haffari*
Monash University

**A Survey of Unsupervised Dependency Parsing**
*Wenjuan Han[1], Yong Jiang[2], Hwee Tou Ng[1], Kewei Tu[3]*
[1]National University of Singapore, [2]Alibaba DAMO Academy, [3]ShanghaiTech University

16:30 - 17:00    Session LONG17 - **Question Answering** - Room Gràcia
                 Chair: Christian Suess

**Exploring Question-Specific Rewards for Generating Deep Questions**
*Yuxi Xie[1], Liangming Pan[2], Dongzhe Wang[3], Min-Yen Kan[2], Yansong Feng[1]*
[1]Peking University, [2]National University of Singapore, [3]Rakuten Institute of
Technology Singapore, Rakuten Asia.

**CHIME: Cross-passage Hierarchical Memory Network for Generative Review
Question Answering**
*Junru Lu[1], Gabriele Pergola[1], Lin Gui[1], Binyang Li[2], Yulan He[1]*
[1]University of Warwick, [2]University of International Relations

**\*Improving Conversational Question Answering Systems after Deployment using
Feedback-Weighted Learning**
*Jon Ander Campos[1], Kyunghyun Cho[2], Arantxa Otegi[3], Aitor Soroa[4], Eneko
Agirre[1], Gorka Azkune[5]*
[1]University of the Basque Country (UPV/EHU), [2]New York University, [3]University of
the Basque Country UPV/EHU, [4]University of the Basque Country, [5]University of
Basque Country

**Modelling Long-distance Node Relations for KBQA with Global Dynamic Graph**
*Xu Wang[1], Shuai Zhao[2], Jiale Han[2], Bo Cheng[2], Hao Yang[3], Jianchang Ao[4], Zhenzi Li[4]*
[1]Beijing University of Posts and Telecommunications,  State Key Laboratory of
Networking and Switching Technology, [2]Beijing University of Posts and
Telecommunications, [3]Huawei Co. Ltd, [4]2012 Labs ,Huawei Technologies CO., LTD

**Improving Commonsense Question Answering by Graph-based Iterative Retrieval
over Multiple Knowledge Sources**
*Qianglong Chen[1], Feng Ji[2], Haiqing Chen[3], Yin Zhang[1]*
[1]Zhejiang University, [2]Alibaba Group, [3]Alibaba

16:30 -        Session POSTER10 - **Reading comprehension and Spoken Language**
17:00          **Understanding. Posters** - Exhibition Room Vila Olímpica

**A Vietnamese Dataset for Evaluating Machine Reading Comprehension**
*Kiet Nguyen, Vu Nguyen, Anh Nguyen, Ngan Nguyen*
University of Information Technology, VNU-HCM

**Improving Spoken Language Understanding by Wisdom of Crowds**
*Koichiro Yoshino[1], Kana Ikeuchi[2], Katsuhito Sudoh[3], Satoshi Nakamura[4]*
[1]RIKEN Robotics, Nara Institute of Science and Technology, [2]Nara Institute of Science
and Technology, [3]Nara Institute of Science and Technology (NAIST), [4]Nara Institute of
Science and Technology and RIKEN AIP Center

**Bi-directional CognitiveThinking Network for Machine Reading Comprehension**
*Wei Peng, Yue Hu, Luxi Xing, Yuqiang Xie, Jing Yu, Yajing Sun, Xiangpeng Wei*
Institute of Information Engineering, Chinese Academy of Sciences

**Learn with Noisy Data via Unsupervised Loss Correction for Weakly Supervised
Reading Comprehension**

*Xuemiao Zhang[1], Kun Zhou[2], Sirui Wang[3], Fuzheng Zhang[3], Zhongyuan Wang[4], Junfei Liu[5]*

[1]School of Software and Microelectronics, Peking University, Beijing, [2]Renmin University of China, [3]Meituan-Dianping Group, [4]Meituan, [5]National Engineering Research Center for Software Engineering, Peking University, Beijing, China

**Incorporating Syntax and Frame Semantics in Neural Network for Machine Reading Comprehension**

*Shaoru Guo[1], Yong Guan[1], Ru Li[2], Xiaoli Li[3], Hongye Tan[4]*

[1]Shanxi University, [2]School of Computer and Information Technology,  Shanxi University, [3]Institute for Infocomm Research/Nanyang Technological University, [4]School of Computer Science and Info. Tech. of Shanxi University

**Molweni: A Challenge Multiparty Dialogues-based Machine Reading Comprehension Dataset with Discourse Structure**

*Jiaqi Li[1], Ming Liu[1], Min-Yen Kan[2], Zihao Zheng[3], Zekun Wang[1], Wenqiang Lei[2], Ting Liu[1], Bing Qin[1]*

[1]Harbin Institute of Technology, [2]National University of Singapore, [3]Harbin institution of technology

**Joint Event Extraction with Hierarchical Policy Network**

*Peixin Huang[1], Xiang Zhao[1], Ryuichi Takanobu[2], Zhen Tan[3], Weidong Xiao[1]*

[1]National University of Defense Technology, [2]Tsinghua University, [3]NUDT

**Automated Graph Generation at Sentence Level for Reading Comprehension Based on Conceptual Graphs**

*Wan-Hsuan Lin and Chun-Shien Lu*

Academia Sinica

**ForceReader: a BERT-based Interactive Machine Reading Comprehension Model with Attention Separation**

*zheng chen and kangjian wu*

University of Electronic Science and Technology of China

**NUT-RC: Noisy User-generated Text-oriented Reading Comprehension**

*Rongtao Huang[1], Bowei Zou[2], Yu Hong[3], Wei Zhang[4], AiTi Aw[5], Guodong Zhou[3]*

[1]Natural Language Processing Lab, Soochow University, [2]Institute for Infocomm Research, ASTAR, [3]Soochow University, [4]Alibaba Group, [5]Institute for Infocomm Research

**To What Degree Can Language Borders Be Blurred In BERT-based Multilingual Spoken Language Understanding?**

*Quynh Do[1], Judith Gaspers[2], Tobias Roeding[2], Melanie Bradford[2]*

[1]Amazon AI, [2]Amazon

**Cross-lingual Machine Reading Comprehension with Language Branch Knowledge Distillation**

*Junhao Liu[1], Linjun Shou[2], Jian Pei[3], Ming Gong[4], Min Yang[1], Daxin Jiang[2]*

[1]Chinese Academy of Sciences, [2]STCA NLP Group, Microsoft, [3]Simon Fraser University, [4]STCA NLP Group, Microsoft (China)

**Neural Networks approaches focused on French Spoken Language Understanding: application to the MEDIA Evaluation Task**
*Sahar Ghannay[1], Christophe Servan[2], Sophie Rosset[1]*
[1]Université Paris-Saclay, CNRS, LIMSI, [2]Qwant

**Syntactic Graph Convolutional Network for Spoken Language Understanding**
*Keqing He[1], Shuyu Lei[1], Yushu Yang[2], Huixing Jiang[2], Zhongyuan Wang[2]*
[1]Beijing University of Posts and Telecommunications, [2]Meituan-Dianping Group

**Conversational Machine Comprehension: a Literature Review**
*Somil Gupta[1], Bhanu Pratap Singh Rawat[2], hong yu[3]*
[1]University of Massachusetts Amherst, [2]University of Massachusetts, [3]University of Massachusetts, Lowell

**Robust Machine Reading Comprehension by Learning Soft labels**
*Zhenyu Zhao[1], Shuangzhi Wu[2], Muyun Yang[1], Kehai Chen[3], Tiejun Zhao[1]*
[1]Harbin Institute of Technology, [2]Tencent, [3]National Institute of Information and Communications Technology

**17:00 - 17:30**   Session LONG18 - **Language Generation 2** - Room El Raval
Chair: Sina Zarriess

**Reinforced Multi-task Approach for Multi-hop Question Generation**
*Deepak Gupta[1], Hardik Chauhan[2], Ravi Tej Akella[3], Asif Ekbal[1], Pushpak Bhattacharyya[4]*
[1]IIT Patna, [2]IIT, Roorkee, [3]Indian Institute of Technology Roorkee, [4]Indian Institute of Technology Bombay and Patna

**Knowledge-enriched, Type-constrained and Grammar-guided Question Generation over Knowledge Bases**
*Sheng Bi[1], Xiya Cheng[1], Yuan-Fang Li[2], Yongzhen Wang[3], Guilin Qi[1]*
[1]Southeast University, [2]Monash University, [3]Indiana University Bloomington

**Adapting a Language Model for Controlled Affective Text Generation**
*Tushar Goswamy[1], Ishika Singh[2], Ahsan Barkati[1], Ashutosh Modi[2]*
[1]IIT Kanpur, [2]Indian Institute of Technology Kanpur

**Generating Instructions at Different Levels of Abstraction**
*Arne Köhn, Julia Wichlacz, Álvaro Torralba, Daniel Höller, Jörg Hoffmann, Alexander Koller*
Saarland University

**"Judge me by my \underline{size} (noun), do you?" YodaLib: A Demographic-Aware Humor Generation Framework**
*Aparna Garimella[1], Carmen Banea[2], Nabil Hossain[3], Rada Mihalcea[4]*
[1]Adobe Research, [2]Initium AI Inc., [3]University of Rochester, [4]University of Michigan

**17:00 - 17:30**   Session LONG19 - **Morphology** - Room Montjuïc
Chair: Claudia Borg
Co-Chair: Garrett Nicolai

### Does Chinese BERT Encode Word Structure?

*Yile Wang[1], Leyang Cui[2], Yue Zhang[3]*
[1]Zhejiang University, Westlake University, [2]Zhejiang University, Westlake University, [3]Westlake University

### Noise Isn't Always Negative: Countering Exposure Bias in Sequence-to-Sequence Inflection Models

*Garrett Nicolai and Miikka Silfverberg*
University of British Columbia

### Morphologically Aware Word-Level Translation

*Paula Czarnowska[1], Sebastian Ruder[2], Ryan Cotterell[3], Ann Copestake[1]*
[1]University of Cambridge, [2]DeepMind, [3]ETH Zürich

### Analogy Models for Neural Word Inflection

*Ling Liu[1] and Mans Hulden[2]*
[1]University of Colorado Boulder, [2]University of Colorado

### Computational Modeling of Affixoid Behavior in Chinese Morphology

*Yu-Hsiang Tseng, Shu-Kai HSIEH, Pei-Yi Chen, Sara Court*
Graduate Institute of Linguistics, National Taiwan University

17:00 - 17:30    Session LONG20 - **Applications 2** - Room Gràcia
Chair: Paul Rayson
Co-Chair: Andrey Kutuzov

### One Comment from One Perspective: An Effective Strategy for Enhancing Automatic Music Comment

*Tengfei Huo[1], Zhiqiang Liu[2], Jinchao Zhang[3], Jie Zhou[4]*
[1]CAS Key Lab of Network Data Science and Technology, Institute of Computing Technology, Chinese Academy of Sciences (CAS); School of Computer Science and Technology, The University of CAS, [2]WeChat AI - Pattern Recognition Center Tencent Inc, [3]Pattern Recognition Center, WeChat AI, Tencent, [4]Tencent Inc.

### A Tale of Two Linkings: Dynamically Gating between Schema Linking and Structural Linking for Text-to-SQL Parsing

*Sanxing Chen[1], Aidan San[1], Xiaodong Liu[2], Yangfeng Ji[1]*
[1]University of Virginia, [2]Microsoft Research

### Autoregressive Affective Language Forecasting: A Self-Supervised Task

*Matthew Matero and H. Andrew Schwartz*
Stony Brook University

### Solving Math Word Problems with Multi-Encoders and Multi-Decoders

*Yibin Shen and Cheqing Jin*
East China Normal University

17:00 - 17:30    Session POSTER11 - **Semantics 2. Posters** - Exhibition Room Vila Olímpica

**End to End Chinese Lexical Fusion Recognition with Sememe Knowledge**

*Yijiang Liu[1], Meishan Zhang[2], Donghong Ji[1]*
[1]Wuhan University, [2]Tianjin University, China

**Comparison by Conversion: Reverse-Engineering UCCA from Syntax and Lexical Semantics**

*Daniel Hershcovich[1], Nathan Schneider[2], Dotan Dvir[3], Jakob Prange[2], Miryam de Lhoneux[1], Omri Abend[4]*
[1]University of Copenhagen, [2]Georgetown University, [3]Hebrew University of Jerusalem, [4]The Hebrew University of Jerusalem

**Logic-guided Semantic Representation Learning for Zero-Shot Relation Classification**

*Juan Li, Ruoxu Wang, Ningyu Zhang, Wen Zhang, Fan Yang, Huajun Chen*
Zhejiang University

**Semantic Role Labeling with Heterogeneous Syntactic Knowledge**

*Qingrong Xia[1], Rui Wang[2], Zhenghua Li[1], Yue Zhang[2], Min Zhang[3]*
[1]Soochow University, [2]Alibaba Group, [3]Suda

**Normalizing Compositional Structures Across Graphbanks**

*Lucia Donatelli[1], Jonas Groschwitz[1], Matthias Lindemann[2], Alexander Koller[1], Pia Weißenhorn[1]*
[1]Saarland University, [2]University of Edinburgh

**Leveraging WordNet Paths for Neural Hypernym Prediction**

*Yejin Cho[1], Juan Diego Rodriguez[2], Yifan Gao[3], Katrin Erk[1]*
[1]University of Texas at Austin, [2]Applied Research Laboratories, The University of Texas at Austin, [3]the University of Texas at Austin

**When Beards Start Shaving Men: A Subject-object Resolution Test Suite for Morpho-syntactic and Semantic Model Introspection**

*Patricia Fischer, Daniël de Kok, Erhard Hinrichs*
University of Tübingen

**Modality Enriched Neural Network for Metaphor Detection**

*Mingyu WAN[1] and Baixi Xing[2]*
[1]The Hong Kong Polytechnic University, [2]School of Information Science Language, Beijing Language and Culture University

**Coordination Boundary Identification without Labeled Data for Compound Terms Disambiguation**

*Yuya Sawada[1], Takashi Wada[2], Takayoshi Shibahara[1], Hiroki Teranishi[1], Shuhei Kondo[1], Hiroyuki Shindo[1], Taro Watanabe[1], Yuji Matsumoto[3]*
[1]Nara Institute of Science and Technology, [2]School of Computing and Information Systems, The University of Melbourne, [3]Riken Center for Advanced Intelligence Project

**Learning Semantic Correspondences from Noisy Data-text Pairs \\by Local-to-Global Alignments**

*Feng Nie[1], Jinpeng Wang[2], Chin-Yew Lin[3]*
[1]sysu.edu.cn, [2]Microsoft Research, Beijing, China, [3]Microsoft Research

**Definition Frames: Using Definitions for Hybrid Concept Representations**
*Evangelia Spiliopoulou[1], Artidoro Pagnoni[1], Eduard Hovy[2]*
[1]Carnegie Mellon University, [2]CMU

**QANom: Question-Answer driven SRL for Nominalizations**
*Ayal Klein[1], Jonathan Mamou[2], Valentina Pyatkin[3], Daniela Stepanov[4], Hangfeng He[5], Dan Roth[5], Luke Zettlemoyer[6], Ido Dagan[3]*
[1]Bar Ilan University, [2]Intel Labs, [3]Bar-Ilan University, [4]Recruit Institute of Technology, [5]University of Pennsylvania, [6]University of Washington; Facebook

**Event Coreference Resolution with their Paraphrases and Argument-aware Embeddings**
*Yutao Zeng[1], Xiaolong Jin[2], Saiping Guan[3], Jiafeng Guo[2], Xueqi Cheng[2]*
[1]Institute of Computing Technology, Chinese Academy of Sciences, [2]Institute of Computing Technology, Chinese Academy of Sciences, [3]School of Computer Science and Technology, University of Chinese Academy of Sciences; CAS Key Laboratory of Network Data Science and Technology, Institute of Computing Technology, Chinese Academy of Sciences

**Studying Taxonomy Enrichment on Diachronic WordNet Versions**
*Irina Nikishina[1], Varvara Logacheva[2], Alexander Panchenko[3], Natalia Loukachevitch[4]*
[1]Skoltech, [2]Skolkovo Institute of Science and Technology, [3]Skolkovo Institue of Science and Technology, [4]Lomonosov Moscow State University

17:30 - 18:00    Session LONG21 - **Multimodality 2** - Room El Raval
                 Chair: Helen Meng
                 Co-Chair: Samridhi Choudhary

**VICTR: Visual Information Captured Text Representation for Text-to-Vision Multimodal Tasks**
*Caren Han, SIQU LONG, Siwen Luo, Kunze Wang, Josiah Poon*
University of Sydney

**Finding the Evidence: Localization-aware Answer Prediction for Text Visual Question Answering**
*Wei Han, Hantao Huang, Tao Han*
MediaTek Inc.

**Interactive Key-Value Memory-augmented Attention for Image Paragraph Captioning**
*Chunpu Xu[1], Yu Li[2], Chengming Li[3], Xiang Ao[4], Min Yang[5], Jinwen Tian[6]*
[1]Shenzhen Institutes of Advanced Technology, Chinese Academy of Science, [2]Shanghai Jiaotong University, [3]Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences, [4]Institute of Computing Technology, Chinese Academy of Sciences, [5]Chinese Academy of Sciences, [6]Huazhong University of Science and Technology

**Geo-Aware Image Caption Generation**
*Sofia Nikiforova, Tejaswini Deoskar, Denis Paperno, Yoad Winter*
Utrecht University

**Bridge the Gap: High-level Semantic Planning for Image Captioning**
*Chenxi Yuan[1], Yang Bai[1], Chun Yuan[2]*
[1]Tsinghua University, [2]Tsinghua Shenzhen International Graduate School

17:30 - 18:00    Session LONG22 - **Machine Learning 2** - Room Montjuïc
                 Chair: Matthias Gallé
                 Co-Chair: Zhijing Jin

**Interactively-Propagative Attention Learning for Implicit Discourse Relation Recognition**
*Huibin Ruan[1], Yu Hong[1], Yang Xu[2], Zhen Huang[3], Guodong Zhou[1], Min Zhang[4]*
[1]Soochow University, [2]Baidu.com, [3]National University of Defense Technology, [4]Suda

**Dual Attention Model for Citation Recommendation**
*Yang Zhang and Qiang Ma*
Kyoto University

**Dual Attention Network for Cross-lingual Entity Alignment**
*Jian Sun[1], Yu Zhou[2], Chengqing Zong[3]*
[1]University of Chinese Academy of Sciences, [2]CASIA, [3]Institute of Automation, Chinese Academy of Sciences

**Task-Aware Representation of Sentences for Generic Text Classification**
*Kishaloy Halder[1], Alan Akbik[2], Josip Krapac[1], Roland Vollgraf[1]*
[1]Zalando Research, [2]Humboldt-Universität zu Berlin

**RANCC: Rationalizing Neural Networks via Concept Clustering**
*Housam Khalifa Bashier[1], Mi-Young Kim[2], Randy Goebel[2]*
[1]Alberta Machine Intelligence Institute, Department of Computing Science,University of Alberta, [2]University of Alberta

17:30 -          Session POSTER12 - **Semantics 3. Posters** - Exhibition Room Vila
18:00            Olímpica

**LadaBERT: Lightweight Adaptation of BERT through Hybrid Model Compression**
*Yihuan Mao[1], Yujing Wang[2], Chufan Wu[1], Chen Zhang[2], Yang Wang[3], Quanlu Zhang[4], Yaming Yang[2], Yunhai Tong[5], Jing Bai[4]*
[1]Tsinghua University, [2]Microsoft Research Asia, [3]Beijing Institute of Technology, [4]Microsoft, [5]Peking University

**Emotion Classification by Jointly Learning to Lexiconize and Classify**
*Deyu Zhou[1], Shuangzhi Wu[2], Qing Wang[3], Jun Xie[4], Zhaopeng Tu[5], Mu Li[6]*
[1]South China University of Technology, [2]Tencent, [3]University of Illinois at Urbana Champaign, [4]Alibaba, [5]Tencent AI Lab, [6]Tencent Inc.

### Multi-level Alignment Pretraining for Multi-lingual Semantic Parsing

*Bo Shao[1], Yeyun Gong[2], Weizhen Qi[3], Nan Duan[2], Xiaola Lin[1]*
[1]Sun Yat-sen University, [2]Microsoft Research Asia, [3]University of Science and Technology of China

### Transformation of Dense and Sparse Text Representations

*Wenpeng Hu[1], Mengyu Wang[2], Bing Liu[2], Feng Ji[3], Jinwen Ma[2], Dongyan Zhao[4]*
[1]School of Mathematical Sciences, Peking University, [2]Peking University, [3]Alibaba Group, [4]pku.edu.cn

### Conception: Multilingually-Enhanced, Human-Readable Concept Vector Representations

*Simone Conia and Roberto Navigli*
Sapienza University of Rome

### What Does This Acronym Mean? Introducing a New Dataset for Acronym Identification and Disambiguation

*Amir Pouran Ben Veyseh[1], Franck Dernoncourt[2], Quan Hung Tran[2], Thien Huu Nguyen[1]*
[1]University of Oregon, [2]Adobe Research

### Sentence Matching with Syntax- and Semantics-Aware BERT

*Tao Liu[1], Xin Wang[2], Chengguo Lv[3], Ranran Zhen[3], Guohong Fu[4]*
[1]Heilongjiang University, [2]CuraCloud Corporation, Seattle, WA, USA,, [3]Heilongjiang University, [4]Soochow University

### Temporal Relations Annotation and Extrapolation Based on Semi-intervals and Boundig Relations

*Alejandro Pimentel[1], Gemma Bel Enguix[2], Gerardo Sierra Martínez[1], Azucena Montes[3]*
[1]Universidad Nacional Autónoma de México, [2]Université Aix-Marseille, [3]Centro Nacional de Investigación y Desarrollo Tecnológico

### Homonym normalisation by word sense clustering: a case in Japanese

*Yo Sato[1] and Kevin Heffernan[2]*
[1]Satoama Language Services, [2]Kwansei Gakuin University

### Verbal Multiword Expression Identification: Do We Need a Sledgehammer to Crack a Nut?

*Caroline Pasquer[1], Agata Savary[1], Carlos Ramisch[2], Jean-Yves Antoine[3]*
[1]University of Tours, [2]Aix Marseille University, CNRS, LIS, [3]Tours U., LIFAT Lab

18:00 - 18:30     Session LONG23 - **Semantics 2** - Room El Raval
                  Chair: Tommaso Caselli
                  Co-Chair: Meiqi Guo

### An Unsupervised Method for Learning Representations of Multi-word Expressions for Semantic Classification

*Robert Vacareanu[1], Marco A. Valenzuela-Escárcega[2], Rebecca Sharp[2], Mihai Surdeanu[2]*
[1]Technical University of Cluj-Napoca, [2]University of Arizona

**SLICE: Supersense-based Lightweight Interpretable Contextual Embeddings**
*Cindy ALOUI[1], Carlos Ramisch[2], Alexis Nasr[3], Lucie Barque[4]*
[1]Aix-Marseille Univ, LIS, Marseille, France, [2]Aix Marseille University, CNRS, LIS, [3]Aix Marseille University, [4]Université Paris 13

**An Empirical Study of the Downstream Reliability of Pre-Trained Word Embeddings**
*Anthony Rios and Brandon Lwowski*
University of Texas at San Antonio

**Sentence Analogies: Linguistic Regularities in Sentence Embeddings**
*Xunjie Zhu[1] and Gerard de Melo[2]*
[1]ByteDance, [2]Hasso Plattner Institute, University of Potsdam

**Manifold Learning-based Word Representation Refinement Incorporating Global and Local Information**
*Wenyu Zhao[1], Dong Zhou[1], LIN LI[2], Jinjun Chen[3]*
[1]Hunan University of Science and Technology, [2]Wuhan University of Technology, [3]Swinburne University of Technology

| 18:00 - 18:30 | Session SHORT4 - **Scarce data and low resourced languages. Short papers** - Room Montjuïc<br>Chair: Marc Schulder<br>Co-Chair: Rolando Coto-Solano |
|---|---|

**Collective Wisdom: Improving Low-resource Neural Machine Translation using Adaptive Knowledge Distillation**
*Fahimeh Saleh, Wray Buntine, Gholamreza Haffari*
Monash University

**Enabling Interactive Transcription in an Indigenous Community**
*Eric Le Ferrand[1], Steven Bird[1], Laurent Besacier[2]*
[1]Charles Darwin University, [2]LIG

**Optimizing Transformer for Low-Resource Neural Machine Translation**
*Ali Araabi and Christof Monz*
University of Amsterdam

**Mixup-Transformer: Dynamic Data Augmentation for NLP Tasks**
*Lichao Sun[1], Congying Xia[1], Wenpeng Yin[2], Tingting Liang[3], Philip Yu[4], Lifang He[5]*
[1]University of Illinois at Chicago, [2]Salesforce Research, [3]Hangzhou Dianzi University, [4]Universtiy of Illinois at Chicago, [5]Lehigh University

**Handling Anomalies of Synthetic Questions in Unsupervised Question Answering**
*Giwon Hong[1], Junmo Kang[2], Doyeon Lim[2], Sung-Hyon Myaeng[3]*
[1]KAIST School of Computing, [2]KAIST, [3]School of Computing, KAIST

**Designing Templates for Eliciting Commonsense Knowledge from Pretrained Sequence-to-Sequence Models**
*Jheng-Hong Yang[1], Sheng-Chieh Lin[2], Rodrigo Nogueira[1], Ming-Feng Tsai[3], Chuan-Ju*

*Wang[2], Jimmy Lin[1]*
[1]University of Waterloo, [2]Academia Sinica, [3]National Chengchi University

**Towards the First Machine Translation System for Sumerian Transliterations**
*Ravneet Punia[1], Niko Schenk[2], Christian Chiarcos[3], Émilie Pagé-Perron[4]*
[1]Delhi Technological University, [2]Amazon, [3]Goethe-Universität Frankfurt am Main, [4]University of Toronto

**Using Bilingual Patents for Translation Training**
*John Lee, Benjamin Tsou, Tianyuan Cai*
City University of Hong Kong

18:00 - 18:30    Session LONG24 - **Speech** - Room Gràcia
                      Chair: Antonios Anastasopoulos

**Federated Learning for Spoken Language Understanding**
*Zhiqi Huang, Fenglin Liu, Yuexian Zou*
Peking University

**Attentively Embracing Noise for Robust Latent Representation in BERT**
*Gwenaelle Cunha Sergio, Dennis Singh Moirangthem, Minho Lee*
Kyungpook National University

**A Comprehensive Evaluation of Incremental Speech Recognition and Diarization for Conversational AI**
*Angus Addlesee, Yanchao Yu, Arash Eshghi*
Heriot-Watt University

**\*Decolonising Speech and Language Technology**
*Steven Bird*
Charles Darwin University

**Dual-decoder Transformer for Joint Automatic Speech Recognition and Multilingual Speech Translation**
*Hang Le[1], Juan Pino[2], Changhan Wang[3], Jiatao Gu[3], Didier Schwab[4], Laurent Besacier[5]*
[1]Université Grenoble Alpes, CNRS, LIG, [2]Facebook, [3]Facebook AI Research, [4]Univ. Grenoble Alpes, [5]LIG

18:00 -         Session POSTER13 - **Machine Learning. Posters** - Exhibition Room
18:30         Vila Olímpica

**Multitask Learning-Based Neural Bridging Reference Resolution**
*Juntao Yu and Massimo Poesio*
Queen Mary University of London

**Improving Human-Labeled Data through Dynamic Automatic Conflict Resolution**
*David Q. Sun, Hadas Kotek, Christopher Klein, Mayank Gupta, William Li, Jason D. Williams*
Apple

**Automatic Discovery of Heterogeneous Machine Learning Pipelines: An Application to Natural Language Processing**

*Suilan Estevez-Velarde[1], Yoan Gutiérrez[2], Andres Montoyo[2], Yudivián Almeida Cruz[3]*
[1]University of Havana, [2]University of Alicante, [3]Havana University

**Distill and Replay for Continual Language Learning**

*Jingyuan Sun[1], Shaonan Wang[2], Jiajun Zhang[3], Chengqing Zong[1]*
[1]Institute of Automation, Chinese Academy of Sciences, [2]National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, [3]Institute of Automation Chinese Academy of Sciences

**Incorporating Noisy Length Constraints into Transformer with Length-aware Positional Encodings**

*Yui Oka[1], Katsuki Chousa[1], Katsuhito Sudoh[2], Satoshi Nakamura[3]*
[1]Nara Institute of Science and Technology, [2]Nara Institute of Science and Technology (NAIST), [3]Nara Institute of Science and Technology and RIKEN AIP Center

**Rethinking Skip Connection with Layer Normalization**

*Fenglin Liu, Xuancheng Ren, Zhiyuan Zhang, Xu SUN, Yuexian Zou*
Peking University

**Specializing Word Vectors by Spectral Decomposition on Heterogeneously Twisted Graphs**

*Yuanhang Ren[1] and Ye Du[2]*
[1]University of Electronic Science and Technology of China, [2]Southwestern University of Finance and Economics, China

**Deep Inside-outside Recursive Autoencoder with All-span Objective**

*Ruyue Hong, Jiong Cai, Kewei Tu*
ShanghaiTech University

**Cross-Lingual Document Retrieval with Smooth Learning**

*Jiapeng Liu[1], Xiao Zhang[2], Dan Goldwasser[1], Xiao Wang[1]*
[1]Purdue University, [2]Amazon

**Increasing Learning Efficiency of Self-Attention Networks through Direct Position Interactions, Learnable Temperature, and Convoluted Attention**

*Philipp Dufter[1], Martin Schmitt[1], Hinrich Schütze[2]*
[1]Center for Information and Language Processing, LMU Munich, [2]Center for Information and Language Processing, University of Munich

**Picking BERT's Brain: Probing for Linguistic Dependencies in Contextualized Embeddings Using Representational Similarity Analysis**

*Michael Lepori and R. Thomas McCoy*
Johns Hopkins University

**The Devil is in the Details: Evaluating Limitations of Transformer-based Methods for Granular Tasks**

*Brihi Joshi[1], Neil Shah[2], Francesco Barbieri[3], Leonardo Neves[4]*

[1]Indraprastha Institute of Information Technology, Delhi, [2]snap inc, [3]Snap Inc., [4]Snap Research

**CoLAKE: Contextualized Language and Knowledge Embedding**
*Tianxiang Sun[1], Yunfan Shao[1], Xipeng Qiu[1], Qipeng Guo[1], Yaru Hu[1], Xuanjing Huang[1], Zheng Zhang[2]*
[1]Fudan University, [2]NYU Shanghai

**Invertible Tree Embeddings using a Cryptographic Role Embedding Scheme**
*Coleman Haley and Paul Smolensky*
Johns Hopkins University

18:30 - 19:00    Session LONG25 - **Semantics 3** - Room Montjuïc
Chair: Goran Glavas
Co-Chair: Alyssa Lees

**Synonym Knowledge Enhanced Reader for Chinese Idiom Reading Comprehension**
*Siyu Long[1], Ran Wang[1], Kun Tao[1], Jiali Zeng[2], Xinyu Dai[1]*
[1]National Key Laboratory for Novel Software Technology, Nanjing University, [2]Tencent Technology Co., Ltd, Beijing, China

**Target Word Masking for Location Metonymy Resolution**
*Haonan Li[1], Maria Vasardani[2], Martin Tomko[1], Timothy Baldwin[1]*
[1]The University of Melbourne, [2]RMIT

**Bridging Resolution: A Survey of the State of the Art**
*Hideo Kobayashi[1] and Vincent Ng[2]*
[1]The University of Texas at Dallas, [2]University of Texas at Dallas

**An analysis of language models for metaphor recognition**
*Arthur Neidlein, Philip Wiesenbach, Katja Markert*
Heidelberg University

**What Meaning-Form Correlation Has to Compose With: A Study of MFC on Artificial and Natural Language**
*Timothee Mickus[1], Timothée Bernard[2], Denis Paperno[3]*
[1]Université de Lorraine, ATILF, [2]Université de Paris, [3]Utrecht University

18:30 - 19:00    Session PANEL1 - **PANEL 1 (live): Should GPT-3 Have the Right to Free Speech?** - Room El Raval
Chair: Robert Dale

*Robert Dale[1], Emily Bender[2], Pascale Fung[3], Christopher Potts[4]*
[1]Language Technology Group, [2]University of Washington, [3]Hong Kong University of Science and Technology, [4]Stanford University

18:30 - 19:00    Session POSTER14 - **Parsing. Posters** - Exhibition Room Vila Olímpica

**Evaluating Pretrained Transformer-based Models on the Task of Fine-Grained Named Entity Recognition**

*Cedric Lothritz, Kevin Allix, Lisa Veiber, Tegawendé F. Bissyandé, Jacques Klein*
University of Luxembourg

**Seeing Both the Forest and the Trees: Multi-head Attention for Joint Classification on Different Compositional Levels**
*Miruna Pislar[1] and Marek Rei[2]*
[1]University of Cambridge, [2]Imperial College London

**A Unifying Theory of Transition-based and Sequence Labeling Parsing**
*Carlos Gómez-Rodríguez, Michalina Strzyz, David Vilares*
Universidade da Coruña

**Unleashing the Power of Neural Discourse Parsers - A Context and Structure Aware Approach Using Large Scale Pretraining**
*Grigorii Guz, Patrick Huber, Giuseppe Carenini*
University of British Columbia

**Semi-supervised Domain Adaptation for Dependency Parsing via Improved Contextualized Word Representations**
*Ying Li, Zhenghua Li, Min Zhang*
Soochow University

**Data Augmentation via Subtree Swapping for Dependency Parsing of Low-Resource Languages**
*Mathieu Dehouck and Carlos Gómez-Rodríguez*
Universidade da Coruña

**Porous Lattice Transformer Encoder for Chinese NER**
*Xue Mengge[1], Bowen Yu[2], Tingwen Liu[2], Yue Zhang[3], Erli Meng[4], Bin Wang[5]*
[1]Institute of Information Engineering,  Chinese Academy of Sciences, [2]Institute of Information Engineering, Chinese Academy of Sciences, [3]Westlake University, [4]Xiaomi Inc., [5]Xiaomi AI Lab

**Learning to Prune Dependency Trees with Rethinking for Neural Relation Extraction**
*Bowen Yu[1], Xue Mengge[2], Zhenyu Zhang[1], Tingwen Liu[1], Wang Yubin[2], Bin Wang[3]*
[1]Institute of Information Engineering, Chinese Academy of Sciences, [2]Institute of Information Engineering,  Chinese Academy of Sciences, [3]Xiaomi AI Lab

**How Far Does BERT Look At: Distance-based Clustering and Analysis of BERT's Attention**
*Yue Guan[1], Jingwen Leng[1], Chao Li[2], Quan Chen[1], Minyi Guo[1]*
[1]Shanghai Jiao Tong University, [2]SJTU

**An Analysis of Simple Data Augmentation for Named Entity Recognition**
*Xiang Dai[1] and Heike Adel[2]*
[1]University of Sydney, [2]Bosch Center for Artificial Intelligence

**Semi-supervised Autoencoding Projective Dependency Parsing**
*Xiao Zhang[1] and Dan Goldwasser[2]*
[1]Amazon, [2]Purdue University

**Towards Instance-Level Parser Selection for Cross-Lingual Transfer of Dependency Parsers**
*Robert Litschko[1], Ivan Vulić[2], Željko Agić[3], Goran Glavaš[1]*
[1]University of Mannheim, [2]University of Cambridge, [3]Unity Technologies

**Learning from Non-Binary Constituency Trees via Tensor Decomposition**
*Daniele Castellana and Davide Bacciu*
Università di Pisa

**Second-Order Unsupervised Neural Dependency Parsing**
*Songlin Yang[1], Yong Jiang[2], Wenjuan Han[3], Kewei Tu[1]*
[1]ShanghaiTech University, [2]Alibaba DAMO Academy, [3]National University of Singapore

19:30 - 20:00    Session SOCIAL3 - **North Africans in NLP Social Event**

**14:30 - 15:30**  **INVITED TALK 3 (live)** - Room Poblenou
Chair: Joakim Nivre

**Neural networks as cognitive models of syntax**
*Tal Linzen*
Assistant Professor of Linguistics and Data Science
Director of the Computation and Psycholinguistics Lab
New York University

**15:30 - 16:00**  Session LONG26 - **Neural Machine Translation 1** - Room Monjtuic
Chair: Constantin Orasan

**Integrating Domain Terminology into Neural Machine Translation**
*Elise Michon, Josep Crego, Jean Senellart*
SYSTRAN

**Understanding the effects of word-level linguistic annotations in under-resourced neural machine translation**
*Víctor M. Sánchez-Cartagena[1], Juan Antonio Pérez-Ortiz[2], Felipe Sánchez-Martínez[1]*
[1]Universitat d'Alacant, [2]Departament de Llenguatges i Sistemes Informàtics, Universitat d'Alacant

**\*Breeding Gender-aware Direct Speech Translation Systems**
*Marco Gaido[1], Beatrice Savoldi[2], Luisa Bentivogli[3], Matteo Negri[3], Marco Turchi[3]*
[1]Fondazione Bruno Kessler, University of Trento, [2]Università degli Studi di Trento, [3]Fondazione Bruno Kessler

**Neural Machine Translation Models with Back-Translation for the Extremely Low-Resource Indigenous Language Bribri**
*Isaac Feldman and Rolando Coto-Solano*
Dartmouth College

**Dynamic Curriculum Learning for Low-Resource Neural Machine Translation**
*Chen Xu[1], Bojie Hu[2], Yufan Jiang[1], Kai Feng[1], Zeyang Wang[1], shen huang[3], Qi Ju[3], Tong Xiao[1], Jingbo Zhu[1]*
[1]Northeastern University, [2]Tencent Minority-Mandarin Translation, Beijing, China, [3]tencent

**15:30 - 16:00**  Session LONG27 - **Computational Linguistics and Linguistic Theories 1** - Room El Raval
Chair: Elke Teich
Co-Chair: Simonetta Montemagni

**Real-Valued Logics for Typological Universals: Framework and Application**
*Tillmann Dönicke[1], Xiang Yu[2], Jonas Kuhn[3]*
[1]University of Göttingen, [2]IMS, University of Stuttgart, [3]University of Stuttgart

**Comparative Probing of Lexical Semantics Theories for Cognitive Plausibility and Technological Usefulness**

*António Branco[1], João António Rodrigues[1], Malgorzata Salawa[2], Ruben Branco[3], Chakaveh Saedi[4]*
[1]University of Lisbon, [2]AGH University of Science and Technology, [3]Faculty of Sciences, University of Lisbon, [4]Macquarie University, Science and Engineering Faculty, Department of Computing

**CxGBERT: BERT meets Construction Grammar**
*Harish Tayyar Madabushi[1], Laurence Romain[2], Dagmar Divjak[3], Petar Milin[4]*
[1]University of Birmingham, [2]Department of Modern Languages, University of Birmingham, [3]Department of Modern Languages & Department of English Language and Linguistics, The University of Birmingham, [4]Department of Modern Languages, The University of Birmingham

**How LSTM Encodes Syntax: Exploring Context Vectors and Semi-Quantization on Natural Text**
*Chihiro Shibata[1], Kei Uchiumi[2], Daichi Mochihashi[3]*
[1]Tokyo University of Technology, [2]Denso IT Laboratory, [3]The Institute of Statistical Mathematics

**Corpus-based Identification of Verbs Participating in Verb Alternations Using Classification and Manual Annotation**
*Esther Seyffarth[1] and Laura Kallmeyer[2]*
[1]Heinrich Heine University Düsseldorf, [2]University of Duesseldorf

| 15:30 - 16:00 | Session POSTER15 - **Dialogue and Interactive Systems. Posters** - Exhibition Room Vila Olímpica |
|---|---|

**When and Who? Conversation Transition Based on Bot-Agent Symbiosis Learning Network**
*Yipeng Yu[1], Ran Guan[2], Jie Ma[3], Zhuoxuan Jiang[4], Jingchang Huang[3]*
[1]Tencent, [2]university of cambridge, [3]IBM Research China, [4]JD AI Research

**Topic-relevant Response Generation using Optimal Transport for an Open-domain Dialog System**
*Shuying Zhang[1], Tianyu Zhao[2], Tatsuya Kawahara[1]*
[1]Kyoto University, [2]rinna Co., Ltd.

**An Iterative Emotion Interaction Network for Emotion Recognition in Conversations**
*Xin Lu, Yanyan Zhao, Yang Wu, Yijian Tian, Huipeng Chen, Bing Qin*
Harbin Institute of Technology

**PEDNet: A Persona Enhanced Dual Alternating Learning Network for Conversational Response Generation**
*Bin Jiang[1], Wanyue Zhou[1], Jingxu Yang[1], Chao Yang[1], Shihan Wang[2], Liang Pang[3]*
[1]Hunan University, [2]Utrecht University, [3]Chinese Academy of Sciences

**Dual Dynamic Memory Network for End-to-End Multi-turn Task-oriented Dialog Systems**
*Jian Wang[1], Junhao Liu[2], Wei Bi[3], Xiaojiang Liu[3], Kejing He[1], Ruifeng Xu[4], Min Yang[2]*

[1]South China University of Technology, [2]Chinese Academy of Sciences, [3]Tencent AI Lab, [4]Harbin Institute of Technology, Shenzhen

**Translation vs. Dialogue: A Comparative Analysis of Sequence-to-Sequence Modeling**

*Wenpeng Hu[1], Ran Le[2], Bing Liu[2], Jinwen Ma[2], Dongyan Zhao[3], Rui Yan[2]*
[1]School of Mathematical Sciences, Peking University, [2]Peking University, [3]pku.edu.cn

**Diverse dialogue generation with context dependent dynamic loss function**

*Ayaka Ueyama[1] and Yoshinobu Kano[2]*
[1]Shizuoka University, [2]Faculty of Informatics, Shizuoka University

**Towards Topic-Guided Conversational Recommender System**

*Kun Zhou[1], Yuanhang Zhou[1], Wayne Xin Zhao[2], Xiaoke Wang[1], Ji-Rong Wen[1]*
[1]Renmin University of China, [2]RUC

**Intent Mining from past conversations for Conversational Agent**

*Ajay Chatterjee and Shubhashis Sengupta*
Accenture Technology Labs

**Summarize before Aggregate: A Global-to-local Heterogeneous Graph Inference Network for Conversational Emotion Recognition**

*Dongming Sheng[1], Dong Wang[2], Ying Shen[3], Haitao Zheng[4], Haozhuang Liu[5]*
[1]Department of Computer Science and Technology, Tsinghua University, Beijing, China, [2]Shenzhen International Graduate School, Tsinghua University, [3]Sun Yat-Sen University, [4]Tsinghua University, Shenzhen International Graduate School., [5]Department of Computer Science and Technology,Tsinghua University

**Deconstruct to Reconstruct a Configurable Evaluation Metric for Open-Domain Dialogue Systems**

*Vitou Phy[1], Yang Zhao[2], Akiko Aizawa[3]*
[1]The University of Tokyo, [2]IBM-Research Tokyo, Japan, [3]National Institute of Informatics

**Suggest me a movie for tonight: Leveraging Knowledge Graphs for Conversational Recommendation**

*Rajdeep Sarkar[1], Koustava Goswami[2], Mihael Arcan[3], John P. McCrae[4]*
[1]Data Science Institute, NUI Galway, [2]Insight Centre for Data Analytics, Data Science Institute, National University of Ireland Galway, [3]National Universith of Ireland Galway, [4]Insight Center for Data Analytics, National University of Ireland Galway

**HiTrans: A Transformer-Based Context- and Speaker-Sensitive Model for Emotion Detection in Conversations**

*Jingye Li[1], Donghong Ji[1], Fei Li[2], Meishan Zhang[3], Yijiang Liu[1]*
[1]Wuhan University, [2]University of Massachusetts Lowell, [3]Tianjin University, China

**A Co-Attentive Cross-Lingual Neural Model for Dialogue Breakdown Detection**

*Qian Lin, Souvik Kundu, Hwee Tou Ng*
National University of Singapore

**Integrating User History into Heterogeneous Graph for Dialogue Act Recognition**
*Dong Wang[1], Ziran Li[2], Haitao Zheng[3], Ying Shen[4]*
[1]Shenzhen International Graduate School, Tsinghua University, [2]Tsinghua University, [3]Tsinghua University, Shenzhen International Graduate School., [4]Sun Yat-Sen University

**A Two-Level Interpretation of Modality in Human-Robot Dialogue**
*Lucia Donatelli[1], Kenneth Lai[2], James Pustejovsky[2]*
[1]Saarland University, [2]Brandeis University

16:00 - 16:30    Session IND3 - **INDUSTRY TRACK - Applications** - Room Gràcia
                 Chair: Elena Tutubalina

**Multi-task Learning of Spoken Language Understanding by Integrating N-Best Hypotheses with Hierarchical Attention**
*Mingda Li, Xinyue Liu, Weitong Ruan, Luca Soldaini, Wael Hamza and Chengwei Su*

**\*Misspelling Detection from Noisy Product Images**
*Varun Nagaraj Rao and Mingwei Shen*

**hinglishNorm - A Corpus of Hindi-English Code Mixed Sentences for Text Normalization**
*Piyush Makhija, Ankit Kumar and Anuj Gupta*

**Assessing Social License to Operate from the Public Discourse on Social Media**
*Chang Xu, Cecile Paris, Ross Sparks, Surya Nepal and Keith VanderLinden*

**Extreme Model Compression for On-device Natural Language Understanding**
*Kanthashree Mysore Sathyendra, Samridhi Choudhary and Leah Nicolich-Henkin*

**Scalable Cross-lingual Treebank Synthesis for Improved Production Dependency Parsers**
*Yousef El-Kurdi, Hiroshi Kanayama, Efsun Sarioglu Kayi, Vittorio Castelli, Todd Ward and Radu Florian*

16:00 -      Session ROADMAPS 2 - **INDUSTRY ROADMAPS 2 (live)** - Room
16:30        Eixample
             Chair: Alexander Loeser
             Co-Chair: José Manuel Gómez Perez

**Leveraging Chargrid and BERTgrid for document information extraction.**
*SAP*

**The Financial Search Engine and AI at Bloomberg**
*Bloomberg*

**The Language of Fashion AI at Zalando: From Search and Customer Feedback to Outfits**
*Zalando*

**Engineering at Grammarly**
*Grammarly*

| 16:00 - 16:30 | Session POSTER16 - **Machine translation. Posters** - Exhibition Room Vila Olímpica |

**Robust Unsupervised Neural Machine Translation with Adversarial Denoising Training**
*Haipeng Sun[1], Rui Wang[2], Kehai Chen[3], Xugang Lu[2], Masao Utiyama[2], Eiichiro Sumita[2], Tiejun Zhao[1]*
[1]Harbin Institute of Technology, [2]NICT, [3]National Institute of Information and Communications Technology

**Understanding Pure Character-Based Neural Machine Translation: The Case of Translating Finnish into English**
*Gongbo Tang[1], Rico Sennrich[2], Joakim Nivre[1]*
[1]Uppsala University, [2]University of Zurich

**Improving Low-Resource NMT through Relevance Based Linguistic Features Incorporation**
*Abhisek Chakrabarty[1], Raj Dabre[2], Chenchen Ding[2], Masao Utiyama[2], Eiichiro Sumita[2]*
[1]NICT, Japan, [2]NICT

**Layer-Wise Multi-View Learning for Neural Machine Translation**
*Qiang Wang[1], Changliang Li[2], Yue Zhang[3], Tong Xiao[4], Jingbo Zhu[4]*
[1]Northeastern University at Shenyang, China, [2]Kingsoft, [3]Westlake University, [4]Northeastern University

**Bilingual Subword Segmentation for Neural Machine Translation**
*Hiroyuki Deguchi[1], Masao Utiyama[2], Akihiro Tamura[3], Takashi Ninomiya[1], Eiichiro Sumita[2]*
[1]Ehime University, [2]NICT, [3]Doshisha University

**Token Drop mechanism for Neural Machine Translation**
*Huaao Zhang[1], Shigui Qiu[1], Xiangyu Duan[1], Min Zhang[2]*
[1]Soochow University, [2]Suda

**Supervised Visual Attention for Multimodal Neural Machine Translation**
*Tetsuro Nishihara[1], Akihiro Tamura[2], Takashi Ninomiya[1], Yutaro Omote[1], Hideki Nakayama[3]*
[1]Ehime University, [2]Doshisha University, [3]The University of Tokyo

**Investigating Catastrophic Forgetting During Continual Training for Neural Machine Translation**
*Shuhao Gu[1] and Yang Feng[2]*
[1]institute of Computing Technology, Chinese Academy of Sciences; University of Chinese Academy of Sciences, [2]Institute of Computing Technology, Chinese Academy of Sciences

**The Two Shades of Dubbing in Neural Machine Translation**
*Alina Karakanta[1], Supratik Bhattacharya[2], Shravan Nayak[3], Timo Baumann[4], Matteo Negri[5], Marco Turchi[5]*

[1]Fondazione Bruno Kessler (FBK), University of Trento, [2]Birla Institute of Technology and Science, [3]Indian Institute of Technology (BHU), [4]Universität Hamburg, [5]Fondazione Bruno Kessler

**Filtering Back-Translated Data in Unsupervised Neural Machine Translation**
*Jyotsana Khatri[1] and Pushpak Bhattacharyya[2]*
[1]Indian Institute of Technology Bombay, Mumbai, [2]Indian Institute of Technology Bombay and Patna

**Lost in Back-Translation: Emotion Preservation in Neural Machine Translation**
*Enrica Troiano[1], Roman Klinger[1], Sebastian Padó[2]*
[1]University of Stuttgart, [2]Stuttgart University

**Intermediate Self-supervised Learning for Machine Translation Quality Estimation**
*Raphael Rubino and Eiichiro Sumita*
NICT

**Unifying Input and Output Smoothing in Neural Machine Translation**
*Yingbo Gao, Baohao Liao, Hermann Ney*
RWTH Aachen University

**Neural Transduction for Multilingual Lexical Translation**
*Dylan Lewis, Winston Wu, Arya D. McCarthy, David Yarowsky*
Johns Hopkins University

**A Document-Level Neural Machine Translation Model with Dynamic Caching Guided by Theme-Rheme Information**
*Yiqi Tong[1], Jiangbin Zheng[1], Hongkang Zhu[1], Yidong Chen[1], xiaodong shi[2]*
[1]Department of Artificial Intelligence, School of Informatics, Xiamen University, [2]Xiamen University

**Context-Aware Cross-Attention for Non-Autoregressive Translation**
*Liang Ding[1], Longyue Wang[2], Di Wu[3], Dacheng Tao[4], Zhaopeng Tu[2]*
[1]School of Computer Science, FEIT, The University of Sydney, [2]Tencent AI Lab, [3]pku.edu.cn, [4]UBTECH Sydney AI Center; School of Computer Science, The University of Sydney

16:30 - 17:00    Session LONG28 - **Dialogue 2** - Room El Raval
                 Chair: Philippe Blache
                 Co-Chair: Olga Golovneva

**Does Gender Matter? Towards Fairness in Dialogue Systems**
*Haochen Liu[1], Jamell Dacon[1], Wenqi Fan[2], Hui Liu[1], Zitao Liu[3], Jiliang Tang[1]*
[1]Michigan State University, [2]The Hong Kong Polytechnic University, [3]TAL Education Group

**Combining Cognitive Modeling and Reinforcement Learning for Clarification in Dialogue**
*Baber Khalid[1], Malihe Alikhani[2], Matthew Stone[1]*
[1]Rutgers University, [2]University of Pittsburgh

**Knowledge Aware Emotion Recognition in Textual Conversations via Multi-Task Incremental Transformer**

*Duzhen Zhang[1], Xiuyi Chen[1], Shuang Xu[2], Bo Xu[2]*
[1]Institute of Automation, Chinese Academy of Sciences., [2]Institute of Automation, Chinese Academy of Sciences

**MEISD: A Multimodal Multi-Label Emotion, Intensity and Sentiment Dialogue Dataset for Emotion Recognition and Sentiment Analysis in Conversations**

*Mauajama Firdaus[1], Hardik Chauhan[2], Asif Ekbal[1], Pushpak Bhattacharyya[3]*
[1]IIT Patna, [2]IIT, Roorkee, [3]Indian Institute of Technology Bombay and Patna

**EmpDG: Multi-resolution Interactive Empathetic Dialogue Generation**

*Qintong Li[1], Hongshen Chen[2], Zhaochun Ren[1], Pengjie Ren[3], Zhaopeng Tu[4], Zhumin CHEN[1]*
[1]Shandong University, [2]JD.com, [3]University of Amsterdam, [4]Tencent AI Lab

16:30 - 17:00    Session LONG29 - **Neural Machine Translation 2** - Room Montjuïc
                 Chair: Jiajun Zhang

**Leveraging Discourse Rewards for Document-Level Neural Machine Translation**

*Inigo Jauregi Unanue[1], Nazanin Esmaili[1], Gholamreza Haffari[2], Massimo Piccardi[1]*
[1]University of Technology Sydney, [2]Monash University

**\*Effective Use of Target-side Context for Neural Machine Translation**

*Hideya Mino[1], Hitoshi Ito[1], Isao Goto[2], Ichiro Yamada[3], Takenobu Tokunaga[4]*
[1]NHK Science & Technology Research Laboratories, [2]NHK, [3]Japan Broadcasting Corporation, [4]Tokyo Institute of Technology

**Knowledge Graph Enhanced Neural Machine Translation via Multi-task Learning on Sub-entity Granularity**

*Yang Zhao[1], Lu Xiang[2], Junnan Zhu[1], Jiajun Zhang[3], Yu Zhou[4], Chengqing Zong[1]*
[1]Institute of Automation, Chinese Academy of Sciences, [2]National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, [3]Institute of Automation Chinese Academy of Sciences, [4]CASIA

**\*Is MAP Decoding All You Need? The Inadequacy of the Mode in Neural Machine Translation**

*Bryan Eikema and Wilker Aziz*
University of Amsterdam

**Domain Transfer based Data Augmentation for Neural Query Translation**

*Liang Yao[1], Baosong Yang[2], Haibo Zhang[1], Boxing Chen[1], Weihua Luo[3]*
[1]Alibaba, [2]Alibaba Damo Academy, Alibaba Inc., [3]Alibaba Group

16:30 -        Session LONG30 - **Computational Linguistics and Linguistic Theories**
17:00          **2** - Room Gràcia
               Chair: Alessandro Lenci
               Co-Chair: Gemma Bel Engix

**Living Machines: A study of atypical animacy**

*Mariona Coll Ardanuy[1], Federico Nanni[1], Kaspar Beelen[1], Kasra Hosseini[1], Ruth*

*Ahnert[2], Jon Lawrence[3], Katherine McDonough[1], Giorgia Tolfo[4], Daniel CS Wilson[1], Barbara McGillivray[5]*
[1]The Alan Turing Institute, [2]Queen Mary University of London, [3]University of Exeter, [4]The British Library, [5]Alan Turing Institute / University of Cambridge

**Aspectuality Across Genre: A Distributional Semantics Approach**
*Thomas Kober[1], Malihe Alikhani[2], Matthew Stone[3], Mark Steedman[4]*
[1]rasa Technologies GmbH, [2]University of Pittsburgh, [3]Rutgers University, [4]University of Edinburgh

**Rhetoric, Logic, and Dialectic: Advancing Theory-based Argument Quality Assessment in Natural Language Processing**
*Anne Lauscher[1], Lily Ng[2], Courtney Napoles[2], Joel Tetreault[3]*
[1]University of Mannheim, [2]Grammarly, [3]Dataminr

**A Linguistic Perspective on Reference: Choosing a Feature Set for Generating Referring Expressions in Context**
*Fahime Same[1] and Kees van Deemter[2]*
[1]University of Cologne, [2]Utrecht University

**Coreference information guides human expectations during natural reading**
*Evan Jaffe, Cory Shain, William Schuler*
The Ohio State University

| 16:30 - 17:00 | Session POSTERS17 - **Morphology and Segmentation. Posters** - Exhibition Room Vila Olímpica |
|---|---|

**Interactive Word Completion for Morphologically Complex Languages**
*William Lane and Steven Bird*
Charles Darwin University

**Joint Persian Word Segmentation Correction and Zero-Width Non-Joiner Recognition Using BERT**
*Ehsan Doostmohammadi[1], Minoo Nassajian[1], Adel Rahimi[2]*
[1]Sharif University of Technology, [2]Dathena Science Pte. Ltd.

**Syllable-based Neural Thai Word Segmentation**
*Pattarawat Chormai[1], Ponrawee Prasertsom[2], Jin Cheevaprawatdomrong[2], Attapol Rutherford[2]*
[1]Technical University of Berlin; Max Planck School of Cognition, [2]Chulalongkorn University

**Incorporating Inner-word and Out-word Features for Mongolian Morphological Segmentation**
*Na Liu, Xiangdong Su, Haoran Zhang, Guanglai Gao, Feilong Bao*
College of Computer Science Inner Mongolia University

**Morphological disambiguation from stemming data**
*Antoine Nzeyimana*
University of Massachusetts Amherst

**Revitalization of Indigenous Languages through Pre-processing and Neural Machine Translation: The case of Inuktitut**
*Tan Ngoc Le and Fatiha Sadat*
UQAM

**Semi-supervised URL Segmentation with Recurrent Neural Networks Pre-trained on Knowledge Graph Entities**
*Hao Zhang, Jae Ro, Richard Sproat*
Google

**Utilizing Subword Entities in Character-Level Sequence-to-Sequence Lemmatization Models**
*Nasser Zalmout[1] and Nizar Habash[2]*
[1]Amazon, [2]New York University Abu Dhabi

**Wiktionary Normalization of Translations and Morphological Information**
*Winston Wu and David Yarowsky*
Johns Hopkins University

| 17:00 - 17:30 | Session LONG31 - **Machine Translation and Transfer Learning** - Room El Raval<br>Chair: Marta Ruiz Costa-Jussà<br>Co-Chair: Gongbo Tang |
|---|---|

**Detecting Urgency Status of Crisis Tweets: A Transfer Learning Approach for Low Resource Languages**
*Efsun Sarioglu Kayi[1], Linyong Nan[2], Bohan Qu[2], Mona Diab[3], Kathleen McKeown[4]*
[1]Columbia University/IBM Research, [2]Columbia University, [3]Facebook AI, [4]Columbia University and Amazon (Amazon Scholar)

**Cross-lingual Transfer Learning for Grammatical Error Correction**
*Ikumi Yamashita[1], Satoru Katsumata[2], Masahiro Kaneko[1], Aizhan Imankulova[1], Mamoru Komachi[1]*
[1]Tokyo Metropolitan University, [2]Retrieva, Inc.

**Emergent Communication Pretraining for Few-Shot Machine Translation**
*Yaoyiran Li[1], Edoardo Maria Ponti[2], Ivan Vulić[1], Anna Korhonen[1]*
[1]University of Cambridge, [2]Mila Montreal / University of Cambridge

**ContraCAT: Contrastive Coreference Analytical Templates for Machine Translation**
*Dario Stojanovski[1], Benno Krojer[1], Denis Peskov[2], Alexander Fraser[3]*
[1]LMU Munich, [2]University of Maryland, [3]Ludwig-Maximilians-Universität München

**SpanAlign: Sentence Alignment Method based on Cross-Language Span Prediction and ILP**
*Katsuki Chousa[1], Masaaki Nagata[2], Masaaki Nishino[3]*
[1]NTT, [2]NTT Corporation, [3]NTT Communication Science Laboratories

17:00 - 17:30    Session LONG32 - **Evaluation** - Room Montjuïc
                 Chair: Maja Popovic
                 Co-Chair: Liane Guillou

**CLUE: A Chinese Language Understanding Evaluation Benchmark**
*Liang Xu[1], Hai Hu[2], Xuanwei Zhang[3], Lu Li[4], Chenjie Cao[5], Yudong Li[6], Yechen Xu[7], Kai Sun[8], Dian Yu[9], Cong Yu[1], Yin Tian[10], Qianqian Dong[11], Weitang Liu[12], Bo Shi[13], Yiming Cui[14], Junyi Li[15], Jun Zeng[4], Rongzhao Wang[16], Weijian Xie[17], Yanting Li[18], Yina Patterson[19], Zuoyu Tian[2], Yiwen Zhang[19], He Zhou[2], Shaoweihua Liu[20], Zhe Zhao[21], Qipeng Zhao[22], Cong Yue[23], Xinrui Zhang[24], Zhengliang Yang[25], Kyle Richardson[26], Zhenzhong Lan[27]*
[1]ai-indeed, [2]Indiana University, [3]iqiyi Inc., [4]Central China Normal University, [5]PingAn Gammalab, [6]China University of Geosciences (Beijing), [7]Zhejiang University, [8]Cornell University, [9]Tencent AI Lab, [10]Intelligence Indeed, [11]Institute of Automation, Chinese Academy of Sciences, [12]zhejiang dahua technology CO.LTD, [13]NLP Group, Mobvoi Inc., [14]Harbin Institute of Technology, [15]China Academy of Electronics and Information Technology, [16]Peking University, [17]Baidu Inc., [18]MIT, [19]Indiana University Bloomington, [20]Yiwise.AI, [21]Renmin University of China, [22]Beijing Xinhua Multimedia Data Co.,Ltd., [23]Mobvoi, [24]SF Technology, [25]tkonline-nlplab, [26]the Allen Institute for Artificial Intelligence, [27]Westlake University

**A Human Evaluation of AMR-to-English Generation Systems**
*Emma Manning, Shira Wein, Nathan Schneider*
Georgetown University

**Identifying Annotator Bias: A new IRT-based method for bias identification**
*Jacopo Amidei[1], Paul Piwek[2], Alistair Willis[2]*
[1]Open University, [2]The Open University

**Would you describe a leopard as yellow? Evaluating crowd-annotations with justified and informative disagreement**
*Pia Sommerauer[1], Antske Fokkens[2], Piek Vossen[3]*
[1]Vrije Universiteit Amsterdam, [2]VU Amsterdam, [3]VU University Amsterdam

**Manual Clustering and Spatial Arrangement of Verbs for Multilingual Evaluation and Typology Analysis**
*Olga Majewska[1], Ivan Vulić[1], Diana McCarthy[2], Anna Korhonen[1]*
[1]University of Cambridge, [2]University of Cambridge (DTAL)

17:00 - 17:30    Session LONG33 - **Applications 3** - Room Gràcia
                 Chair: Elena Cabrio
                 Co-Chair: Chenyang Lyu

**Hierarchical Trivia Fact Extraction from Wikipedia Articles**
*Jingun Kwon[1], Hidetaka Kamigaito[1], Young-In Song[2], Manabu Okumura[1]*
[1]Tokyo Institute of Technology, [2]NAVER

**Predicting Clickbait Strength in Online Social Media**
*Vijayasaradhi Indurthi[1], Bakhtiyar Syed[2], Manish Gupta[2], Vasudeva Varma[2]*
[1]International Institute of Information Technology, [2]IIIT Hyderabad

**\*GPolS: A Contextual Graph-Based Language Model for Analyzing Parliamentary Debates and Political Cohesion**

*Ramit Sawhney[1], Arnav Wadhwa[2], Shivam Agarwal[3], Rajiv Ratn Shah[4]*
[1]Netaji Subhas Institute of Technology, [2]MIDAS IIITD, [3]Manipal Institute of Technology, [4]IIIT Delhi

**Measuring Correlation-to-Causation Exaggeration in Press Releases**

*Bei Yu[1], Jun Wang[2], Lu Guo[3], Yingya Li[1]*
[1]Syracuse University, [2]Independent Researcher, [3]Sichuan University

**Inflating Topic Relevance with Ideology: A Case Study of Political Ideology Bias in Social Topic Detection Models**

*Meiqi Guo, Rebecca Hwa, Yu-Ru Lin, Wen-Ting Chung*
University of Pittsburgh

17:00 - 17:30    Session POSTER18 - **Dialogue and understanding. Posters** - Exhibition Room Vila Olímpica

**A Taxonomy of Empathetic Response Intents in Human Social Conversations**

*Anuradha Welivita and Pearl Pu*
École polytechnique fédérale de Lausanne

**A Multitask Active Learning Framework for Natural Language Understanding**

*Hua Zhu[1], Wu Ye[2], Sihan Luo[2], Xidong Zhang[2]*
[1]vivo Mobile Communication Co.,Ltd, [2]vivo Mobile Communication Co., Ltd

**Two-level classification for dialogue act recognition in task-oriented dialogues**

*Philippe Blache[1], Massina Abderrahmane[2], Stéphane Rauzy[3], Magalie Ochs[4], Houda Oufaida[5]*
[1]LPL CNRS, [2]LPL & ESI, [3]LPL AMU-CNRS, [4]LIS AMU-CNRS, [5]ESI

**Balanced Joint Adversarial Training for Robust Intent Detection and Slot Filling**

*Xu Cao[1], Deyi Xiong[2], Chongyang Shi[3], Chao Wang[4], Yao Meng[5], Changjian Hu[5]*
[1]Lenovo Research; Beijing Institute of Technology, [2]Tianjin University, [3]School of Computer Science, Beijing Institute of Technology, [4]NLP&CA, AI lab, Lenovo Research, [5]Lenovo

**Reasoning Requirements for Indirect Speech Act Interpretation**

*Vasanth Sarathy, Alexander Tsuetaki, Antonio Roque, Matthias Scheutz*
Tufts University

**Understanding Unnatural Questions Improves Reasoning over Text**

*Xiaoyu Guo, Yuan-Fang Li, Gholamreza Haffari*
Monash University

**An Empirical Study of Contextual Data Augmentation for Japanese Zero Anaphora Resolution**

*Ryuto Konno[1], Yuichiroh Matsubayashi[1], Shun Kiyono[2], Hiroki Ouchi[3], Ryo Takahashi[1], Kentaro Inui[4]*
[1]Tohoku University, [2]RIKEN AIP / Tohoku University, [3]Riken AIP, [4]Tohoku University / Riken

**A Large-Scale Corpus of E-mail Conversations with Standard and Two-Level Dialogue Act Annotations**

*Motoki Taniguchi[1], Yoshihiro Ueda[2], Tomoki Taniguchi[3], Tomoko Ohkuma[3]*
[1]Fuji Xerox, Tokyo Metropolitan University, [2]Fuji Xerox Co., Ltd., [3]Fuji Xerox

**Intra-/Inter-Interaction Network with Latent Interaction Modeling for Multi-turn Response Selection**

*Yang Deng, Wenxuan Zhang, Wai Lam*
The Chinese University of Hong Kong

**Few-shot Pseudo-Labeling for Intent Detection**

*Thomas Dopierre[1], Christophe Gravier[2], Julien Subercaze[3], Wilfried Logerais[4]*
[1]Lab Hubert Curien UMR 5516, [2]Université Jean Monnet, [3]Laboratoire Hubert Curien, [4]Meetic

**Similarity or deeper understanding? Analyzing the TED-Q dataset of evoked questions**

*Matthijs Westera[1], Jacopo Amidei[2], Laia Mayol[1]*
[1]Universitat Pompeu Fabra, [2]Open University

**Sentiment Analysis for Emotional Speech Synthesis in a News Dialogue System**

*Hiroaki Takatsu[1], Ryota Ando[2], Yoichi Matsuyama[1], Tetsunori Kobayashi[1]*
[1]Waseda University, [2]Naigai Pressclipping Bureau,Ltd.

**Adversarial Learning on the Latent Space for Diverse Dialog Generation**

*Kashif Khan[1], Gaurav Sahu[1], Vikash Balasubramanian[1], Lili Mou[2], Olga Vechtomova[1]*
[1]University of Waterloo, [2]University of Alberta

**Inconsistencies in Crowdsourced Slot-Filling Annotations: A Typology and Identification Methods**

*Stefan Larson[1], Adrian Cheung[2], Anish Mahendran[3], Kevin Leach[4], Jonathan K. Kummerfeld[4]*
[1](unaffiliated), [2]Clinc, [3]Clinc, Inc, [4]University of Michigan

| 17:30 - 18:00 | Session LONG34 - **Machine Translation, Quality and Evaluation** - Room El Raval<br>Chair: Antonio Toral<br>Co-Chair: Yingbo Gao |
| --- | --- |

**Online Versus Offline NMT Quality: An In-depth Analysis on English-German and German-English**

*Maha Elbayad[1], Michael Ustaszewski[2], Emmanuelle Esperança-Rodier[3], Francis Brunet-Manquat[4], Jakob Verbeek[5], Laurent Besacier[6]*
[1]INRIA / LIG, [2]University of Innsbruck, [3]Univ. Grenoble Alpes, CNRS, Grenoble INP*, LIG, [4]UGA, [5]INRIA, [6]LIG

**Informative Manual Evaluation of Machine Translation Output**

*Maja Popović*
ADAPT Centre @ DCU

**TransQuest: Translation Quality Estimation with Cross-lingual Transformers**
*Tharindu Ranasinghe[1], Constantin Orasan[2], Ruslan Mitkov[1]*
[1]University of Wolverhampton, [2]University of Surrey

**Monolingual and Multilingual Reduction of Gender Bias in Contextualized Representations**
*Sheng Liang[1], Philipp Dufter[1], Hinrich Schütze[2]*
[1]Center for Information and Language Processing, LMU Munich, [2]Center for Information and Language Processing, University of Munich

**AraBench: Benchmarking Dialectal Arabic-English Machine Translation**
*Hassan Sajjad[1], Ahmed Abdelali[1], Nadir Durrani[2], Fahim Dalvi[3]*
[1]Qatar Computing Research Institute, [2]QCRI, [3]Qatar Computing Research Institute, HBKU

17:30 - 18:00    Session LONG35 - **Machine Learning 3** - Room Montjuïc
                 Chair: Vincent Ng
                 Co-Chair: Anthony Rios

**Learning to Few-Shot Learn Across Diverse Natural Language Classification Tasks**
*Trapit Bansal[1], Rishikesh Jha[2], Andrew McCallum[3]*
[1]University of Massachusetts Amherst, [2]Code for Science and Society, [3]UMass Amherst

**A Mixture-of-Experts Model for Learning Multi-Facet Entity Embeddings**
*Rana Alshaikh[1], Zied Bouraoui[2], Shelan Jeawak[3], Steven Schockaert[3]*
[1]School of Computer Science and Informatics, [2]CRIL-CNRS & University of Artois, [3]Cardiff University

**Classifier Probes May Just Learn from Linear Context Features**
*Jenny Kunz and Marco Kuhlmann*
Linköping University

**Priorless Recurrent Networks Learn Curiously**
*Jeff Mitchell and Jeffrey Bowers*
University of Bristol

**Answer-driven Deep Question Generation based on Reinforcement Learning**
*Liuyin Wang[1], Zihan Xu[2], Zibo Lin[3], Haitao Zheng[4], Ying Shen[5]*
[1]Department of Computer Science and Technology,Tsinghua University, [2]Tsinghua University, [3]Department of Computer Science and Technology, Tsinghua University, [4]Tsinghua University, Shenzhen International Graduate School., [5]Sun Yat-Sen University

17:30 - 18:00    Session POSTER19 - **Textual Inference and Question Answering. Posters** - Exhibition Room Vila Olímpica

**Distinguishing Between Foreground and Background Events in News**
*Mohammed Aldawsari[1], Adrian Perez[1], Deya Banisakher[1], Mark Finlayson[2]*
[1]Florida International University, [2]FIU

**Pick a Fight or Bite your Tongue: Investigation of Gender Differences in Idiomatic Language Usage**

*Ella Rabinovich[1], Hila Gonen[2], Suzanne Stevenson[3]*
[1]IBM Research, [2]Bar-Ilan University, [3]University of Toronto

**Intra-Correlation Encoding for Chinese Sentence Intention Matching**

*Xu Zhang[1], Yifeng Li[2], Wenpeng Lu[1], Ping Jian[3], Guoqiang Zhang[4]*
[1]Qilu University of Technology (Shandong Academy of Sciences), [2]Brock University, [3]Beijing Institute of Technology, [4]University of Technology Sydney

**Explain by Evidence: An Explainable Memory-based Neural Network for Question Answering**

*Quan Hung Tran[1], Nhan Dam[2], Tuan Lai[3], Franck Dernoncourt[1], Trung Le[2], Nham Le[4], Dinh Phung[5]*
[1]Adobe Research, [2]Monash University, [3]University of Illinois at Urbana-Champaign, [4]University of Waterloo, [5]Monash University, Australia

**A Study on Efficiency, Accuracy and Document Structure for Answer Sentence Selection**

*Daniele Bonadiman[1] and Alessandro Moschitti[2]*
[1]Amazon AI, [2]Amazon

**Auto-Encoding Variational Bayes for Inferring Topics and Visualization**

*Dang Pham[1] and Tuan Le[2]*
[1]NMSU, [2]New Mexico State University

**Hy-NLI: a Hybrid system for Natural Language Inference**

*Aikaterini-Lida Kalouli[1], Richard Crouch[2], Valeria de Paiva[3]*
[1]University of Konstanz, [2]Chegg, [3]Topos Institute

**Identifying Motion Entities in Natural Language and A Case Study for Named Entity Recognition**

*Ngoc Phuoc An Vo, Irene Manotas, Vadim Sheinin, Octavian Popescu*
IBM Research

**Global Context-enhanced Graph Convolutional Networks for Document-level Relation Extraction**

*Huiwei Zhou, Yibin Xu, Weihong Yao, Zhe Liu, Chengkun Lang, Haibin Jiang*
Dalian University of Technology

**Diverse Keyphrase Generation with Neural Unlikelihood Training**

*Hareesh Bahuleyan and Layla El Asri*
Borealis AI

**User Memory Reasoning for Conversational Recommendation**

*Hu Xu[1], Seungwhan Moon[2], Honglei Liu[2], Bing Liu[1], Pararth Shah[3], Philip Yu[4]*
[1]Facebook, [2]Facebook Conversational AI, [3]Facebook Assistant, [4]Universtiy of Illinois at Chicago

**Diverse and Non-redundant Answer Set Extraction on Community QA based on DPPs**

*Shogo Fujita[1], Tomohide Shibata[2], Manabu Okumura[1]*
[1]Tokyo institute of technology, [2]Yahoo Japan Corporation

**An empirical analysis of existing systems and datasets toward general simple question answering**
*Namgi Han[1], Goran Topic[2], Hiroshi Noji[3], Hiroya Takamura[4], Yusuke Miyao[5]*
[1]The Graduate University for Advanced Studies, SOKENDAI, [2]AIST, [3]Artificial Intelligence Research Center, AIST, [4]The National Institute of Advanced Industrial Science and Technology (AIST), [5]University of Tokyo

**Learn to Combine Linguistic and Symbolic Information for Table-based Fact Verification**
*Qi Shi, Yu Zhang, Qingyu Yin, Ting Liu*
Harbin Institute of Technology

**CosMo: Conditional Seq2Seq-based Mixture Model for Zero-Shot Commonsense Question Answering**
*Farhad Moghimifar[1], Lizhen Qu[2], Yue Zhuo[3], Mahsa Baktashmotlagh[4], Gholamreza Haffari[2]*
[1]The University of Queensland, [2]Monash University, [3]The University of New South Wales, [4]UQ

18:00 - 19:00   **INVITED TALK 4 (live)** - Room Poblenou
Chair: Hans Uszkoreit

**Genie: The Open Virtual Assistant Initiative**
*Monica Lam*
Professor
Computer Science Department
Stanford University
Faculty Director
Open Virtual Assistant Lab (OVAL)

19:00 -
19:30   SOCIAL EVENT - **Catalan Human Towers: Interview with a *Casteller***

Catalan Human Towers: Interview with a Casteller

Casteller: Gabriel Puig

(Colla castellera Els Trempats / Universitat Pompeu Fabra)

19:30 – 20:00   "Black in AI" social event

**14:30 - 15:00   SOCIAL EVENT: Music for COLING '2020**

MACHÍN-LENIN: Collaborative exploration of poetry, music, and speech.
Work commissioned by COLING 2020
Concept, artistic direction, electronics and programming by Àngel Faraldo
Cinematography by Judro Guerrero
Computer modified text by Gerard Altaió
Voices: Iona Schneider and Gerard Altaió
Piano: Haize Lizarazu
Double bass: Àlex Reviriego
Video Assistant: Isaac Rodriguez

**15:00 - 15:30   INVITED TALK 5** - Room Poblenou
                  Chair: Nicoletta Calzolari

**Ethics in the Vision and Language of Artificial Intelligence**
*Margaret Mitchell*
Senior Research Scientist
Google Research and Machine Intelligence

**15:30 - 16:00   Session LONG36 - Summarization** - Room Montjuïc
                  Chair: Jackie Chi Kit Cheung
                  Co-Chair: Behzad Golshan

**Enhancing Extractive Text Summarization with Topic-Aware Graph Neural Networks**
*Peng Cui, Le Hu, Yuanchao Liu*
Harbin Institute of Technology

**SaSAKE: Syntax and Semantics Aware Keyphrase Extraction from Research Papers**
*T.Y.S.S Santosh, Debarshi Kumar Sanyal, Plaban Kumar Bhowmick, Partha Pratim Das*
IIT Kharagpur

**News Editorials: Towards Summarizing Long Argumentative Texts**
*Shahbaz Syed[1], Roxanne El Baff[2], Johannes Kiesel[3], Khalid Al Khatib[3], Benno Stein[3], Martin Potthast[1]*
[1]Leipzig University, [2]German Aerospace Center, [3]Bauhaus-Universität Weimar

**Automatic Interlinear Glossing for Under-Resourced Languages Leveraging Translations**
*Xingyuan Zhao[1], Satoru Ozaki[1], Antonios Anastasopoulos[2], Graham Neubig[1], Lori Levin[1]*
[1]Carnegie Mellon University, [2]George Mason University

**Scientific Keyphrase Identification and Classification by Pre-Trained Language Models Intermediate Task Transfer Learning**

*Seoyeon Park and Cornelia Caragea*
University of Illinois at Chicago

**15:30 - 16:00**    Session LONG37 - **Fake News and Rumours** - Room El Raval
Chair: John McCrae

**Exploiting Microblog Conversation Structures to Detect Rumors**
*Jiawen Li, Yudianto Sujana, Hung-Yu Kao*
National Cheng Kung University

**Explainable Automated Fact-Checking: A Survey**
*Neema Kotonya and Francesca Toni*
Imperial College London

**Early Detection of Fake News by Utilizing the Credibility of News, Publishers, and Users based on Weakly Supervised Learning**
*Chunyuan Yuan[1], Qianwen Ma[2], Wei Zhou[3], Jizhong Han[4], Songlin Hu[5]*
[1]Institute of Information Engineering，Chinese Academy of Sciences, [2]University of Chinese Academy of Sciences, [3]University of Chinese Academy of Sciences and Institute of Information Engineering, Chinese Academy of Sciences, [4]Institute of Information Engineering, Chinese Academy of Sciences, [5]Institute of Information Engineering, CAS

**Debunking Rumors on Twitter with Tree Transformer**
*Jing Ma[1] and Wei Gao[2]*
[1]Hong Kong Baptist University, [2]Singapore Management University

**Words are the Window to the Soul: Language-based User Representations for Fake News Detection**
*Marco Del Tredici[1] and Raquel Fernández[2]*
[1]University of Amsterdam, [2]ILLC, University of Amsterdam

**15:30 - 16:00**    Session POSTER20 - **Text Classification, Text Mining and Knowledge Extraction. Posters** - Exhibition Room Vila Olímpica

**Argumentation Mining on Essays at Multi Scales**
*Hao Wang[1], Zhen Huang[2], Yong Dou[1], Yu Hong[3]*
[1]National University of Defense Technology, [2]National University of DefenseTechnology, [3]School of Computer Science and Technology, Soochow University

**Data Augmentation for Multiclass Utterance Classification – A Systematic Study**
*Binxia Xu[1], Siyuan Qiu[1], Jie Zhang[1], Yafang Wang[2], Xiaoyu Shen[3], Gerard de Melo[4]*
[1]Ant Financial Services Group, [2]Alibaba, [3]Max Planck Institute for Informatics, [4]Hasso Plattner Institute, University of Potsdam

**KINNEWS and KIRNEWS: Benchmarking Cross-Lingual Text Classification for Kinyarwanda and Kirundi**
*Rubungo Andre Niyongabo[1], Qu Hong[2], Julia Kreutzer[3], Li Huang[1]*
[1]University of Electronic Science and Technology of China, [2]School of Computer

Science and Engineering, University of Electronic Science and Technology of China, [3]Masakhane

**Go Simple and Pre-Train on Domain-Specific Corpora: On the Role of Training Data for Text Classification**
*Aleksandra Edwards, Jose Camacho-Collados, Hélène De Ribaupierre, Alun Preece*
Cardiff University

**Unsupervised Fine-tuning for Text Clustering**
*Shaohan Huang[1], Furu Wei[2], Lei Cui[1], Xingxing Zhang[1], Ming Zhou[1]*
[1]Microsoft Research Asia, [2]Microsoft Research

**Exploiting Narrative Context and A Priori Knowledge of Categories in Textual Emotion Classification**
*Hikari Tanabe, Tetsuji Ogawa, Tetsunori Kobayashi, Yoshihiko Hayashi*
Waseda University

**Word-Level Uncertainty Estimation for Black-Box Text Classifiers using RNNs**
*Jakob Smedegaard Andersen[1], Tom Schöner[2], Walid Maalej[1]*
[1]University of Hamburg, [2]HAW Hamburg

**Few-Shot Text Classification with Edge-Labeling Graph Neural Network-Based Prototypical Network**
*Chen Lyu, Weijie Liu, Ping Wang*
Peking University

**ManyEnt: A Dataset for Few-shot Entity Typing**
*Markus Eberts, Kevin Pech, Adrian Ulges*
RheinMain University of Applied Sciences

**Embedding Meta-Textual Information for Improved Learning to Rank**
*Toshitaka Kuwa[1], Shigehiko Schamoni[2], Stefan Riezler[2]*
[1]Japanese Patent Office, [2]Heidelberg University

**Automatically Identifying Words That Can Serve as Labels for Few-Shot Text Classification**
*Timo Schick[1], Helmut Schmid[2], Hinrich Schütze[3]*
[1]LMU Munich / Sulzer GmbH, [2]CIS, Ludwig-Maximilians-Universität, [3]Center for Information and Language Processing, University of Munich

**Knowledge Base Embedding By Cooperative Knowledge Distillation**
*Raphaël Sourty[1], Jose G. Moreno[2], François-Paul Servant[3], Lynda Tamine-Lechani[4]*
[1]IRIT/University of Toulouse, [2]Paul Sabatier University - IRIT, [3]Groupe Renault, [4]IRIT

**IntKB: A Verifiable Interactive Framework for Knowledge Base Completion**
*Bernhard Kratzwald[1], Guo Kunpeng[2], Stefan Feuerriegel[1], Dennis Diefenbach[2]*
[1]ETH Zurich, [2]University of Lyon

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| 16:00 - 16:30 | Session IND4 - **INDUSTRY TRACK - Machine Learning Applications** - Room Gràcia<br>Chair: Vipul Raheja |

**An Industry Evaluation of Embedding-based Entity Alignment**
*Ziheng Zhang, Hualuo Liu, Jiaoyan Chen, Xi Chen, Bo Liu, YueJia Xiang and Yefeng Zheng*

**Learning Domain Terms - Empirical Methods to Enhance Enterprise Text Analytics Performance**
*Gargi Roy, Lipika Dey, Mohammad Shakir and Tirthankar Dasgupta*

**Model-agnostic Methods for Text Classification with Inherent Noise**
*Kshitij Tayal, Rahul Ghosh and Vipin Kumar*

**ScopeIt: Scoping Task Relevant Sentences in Documents**
*Barun Patra, Vishwas Suryanarayanan, Chala Fufa, Pamela Bhattacharya and Charles Lee*

**Uncertainty Modeling for Machine Comprehension Systems using Efficient Bayesian Neural Networks**
*Zhengyuan Liu, Pavitra Krishnaswamy, Ai Ti Aw and Nancy Chen*

**Regularized Graph Convolutional Networks for Short Text Classification**
*Kshitij Tayal, Nikhil Rao, Saurabh Agarwal, Xiaowei Jia, Karthik Subbian and Vipin Kumar*

| 16:00 - 16:30 | Session DEMO2 - **Tools with higher purpose (Applications of NLP in other areas). Demos** - Exhibition Room El Born<br>Chair: Michal Ptaszynski |
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Session DEMO2 - **A Multilingual Reading Comprehension System for more than 100 Languages.**
*Anthony Ferritto, Sara Rosenthal, Mihaela Bornea, Kazi Hasan, Rishav Chakravarti, Salim Roukos, Radu-Florian and Avi Sil*

**BullStop: A Mobile App for Cyberbullying Prevention**
*Semiu Salawu, Yulan He and Jo Lumsden*

**CogniVal in Action: An Interface for Customizable Cognitive Word Embedding Evaluation**
*Nora Hollenstein, Adrian van der Lek and Ce Zhang*

**Demo Application for the AutoGOAL Framework**
*Suilan Estevez-Velarde, Alejandro Piad-Morffis, Yoan Gutiérrez, Andres Montoyo, Rafael Muñoz-Guillena and Yudivián Almeida Cruz*

**Discussion Tracker: Supporting Teacher Learning about Students' Collaborative Argumentation in High School Classrooms**
*Luca Lugini, Christopher Olshefski, Ravneet Singh, Diane Litman and Amanda Godley*

**Semantic search with domain-specific word-embedding and production monitoring in Fintech**
*Mojtaba Farmanbar, Nikki Van Ommeren and Boyang Zhao*

**Ve'rdd. Narrowing the Gap between Paper Dictionaries, Low-Resource NLP and Community Involvement**
*Khalid Alnajjar, Mika Hämäläinen, Jack Rueter and Niko Partanen*

| 16:00 - 16:30 | Session POSTER21 - **Summarization. Posters** - Exhibition Room Vila Olímpica |
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**Reference and Document Aware Semantic Evaluation Methods for Korean Language Summarization**
*Dongyub Lee[1], Myeong Cheol Shin[2], Taesun Whang[3], Seungwoo Cho[2], Byeongil Ko[4], Daniel Lee[4], EungGyun Kim[2], Jaechoon Jo[5]*
[1]Kakao Corp, [2]Kakao Enterprise, [3]Wisenut Inc., [4]Kakao Enterprise Corp., [5]Sangmyung University

**At Which Level Should We Extract? An Empirical Analysis on Extractive Document Summarization**
*Qingyu Zhou[1], Furu Wei[2], Ming Zhou[3]*
[1]Harbin Institute of Technology, [2]Microsoft Research, [3]microsoft research asia

**Fact-level Extractive Summarization with Hierarchical Graph Mask on BERT**
*Ruifeng Yuan[1], zili Wang[2], Wenjie Li[1]*
[1]The Hong Kong Polytechnic University, [2]Xidian University

**Flight of the PEGASUS? Comparing Transformers on Few-shot and Zero-shot Multi-document Abstractive Summarization**
*Travis Goodwin[1], Max Savery[2], Dina Demner-Fushman[3]*
[1]U.S. National Library of Medicine, [2]NIH/NLM, [3]National Library of Medicine

**WSL-DS: Weakly Supervised Learning with Distant Supervision for Query Focused Multi-Document Abstractive Summarization**
*Md Tahmid Rahman Laskar[1], Enamul Hoque[2], Jimmy Xiangji Huang[3]*
[1]M.Sc. Student, York University, [2]York University, [3]School of Information Technology, York University

**Multimodal Sentence Summarization via Multimodal Selective Encoding**
*Haoran Li[1], Junnan Zhu[2], Jiajun Zhang[3], Xiaodong He[1], Chengqing Zong[2]*
[1]JD AI Research, [2]Institute of Automation, Chinese Academy of Sciences, [3]Institute of Automation Chinese Academy of Sciences

**Controllable Abstractive Sentence Summarization with Guiding Entities**
*Changmeng Zheng[1], Yi Cai[1], Guanjie Zhang[1], Qing Li[2]*
[1]South China University of Technology, [2]the Hong Kong Polytechnic University

**HOLMS: Alternative Summary Evaluation with Large Language Models**
*Yassine Mrabet[1] and Dina Demner-Fushman[2]*
[1]U.S. National Library of Medicine, [2]National Library of Medicine

**How Domain Terminology Affects Meeting Summarization Performance**
*Jia Jin Koay, Alexander Roustai, Xiaojin Dai, Dillon Burns, Alec Kerrigan, Fei Liu*
University of Central Florida

**An Anchor-Based Automatic Evaluation Metric for Document Summarization**
*Kexiang Wang[1], Tianyu Liu[1], Baobao Chang[2], Zhifang Sui[1]*
[1]Peking University, [2]Institute of Computational Linguistic, Peking University

**Metrics also Disagree in the Low Scoring Range: Revisiting Summarization Evaluation Metrics**
*Manik Bhandari, Pranav Narayan Gour, Atabak Ashfaq, Pengfei Liu*
Carnegie Mellon University

**On the Faithfulness for E-commerce Product Summarization**
*Peng Yuan[1], Haoran Li[1], Song Xu[1], Youzheng Wu[1], Xiaodong He[1], Bowen Zhou[2]*
[1]JD AI Research, [2]JD.Com AI Research

**SumTitles: a Summarization Dataset with Low Extractiveness**
*Valentin Malykh[1], Konstantin Chernis[2], Ekaterina Artemova[3], Irina Piontkovskaya[2]*
[1]Huawei Noah's Ark Lab / Kazan Federal University, [2]Huawei Noah's Ark Lab, [3]NRU HSE

**TWEETSUM: Event oriented Social Summarization Dataset**
*Ruifang He, Liangliang Zhao, Huanyu Liu*
Tianjin University

16:30 - 17:00     Session LONG38 - **Discourse 1** - Room El Raval
                  Chair: Costanza Navarretta
                  Co-Chair: Erik Ketzan

**Exploiting a lexical resource for discourse connective disambiguation in German**
*Peter Bourgonje[1] and Manfred Stede[2]*
[1]DFKI, [2]University of Potsdam

**Chinese Paragraph-level Discourse Parsing with Global Backward and Local Reverse Reading**
*Feng Jiang, Xiaomin Chu, Peifeng Li, Fang Kong, Qiaoming Zhu*
Soochow University

**\*A Neural Model for Aggregating Coreference Annotation in Crowdsourcing**
*Maolin Li[1], Hiroya Takamura[2], Sophia Ananiadou[1]*
[1]University of Manchester, [2]The National Institute of Advanced Industrial Science and Technology (AIST)

**Variation in Coreference Strategies across Genres and Production Media**
*Berfin Aktaş and Manfred Stede*
University of Potsdam

**Towards automatically generating Questions under Discussion to link information and discourse structure**
*Kordula De Kuthy[1], Madeeswaran Kannan[2], Haemanth Santhi Ponnusamy[2], Detmar Meurers[3]*
[1]SFB 833, Universität Tübingen, [2]University of Tübingen, [3]Universität Tübingen

16:30 - 17:00    Session LONG39 - **Classification systems** - Room Montjuïc
                 Chair: Goran Glavas
                 Co-Chair: Xiao Zhang

**Learning to Decouple Relations: Few-Shot Relation Classification with Entity-Guided Attention and Confusion-Aware Training**
*Yingyao Wang[1], Junwei Bao[2], Guangyi Liu[3], Youzheng Wu[2], Xiaodong He[2], Bowen Zhou[4], Tiejun Zhao[1]*
[1]Harbin Institute of Technology, [2]JD AI Research, [3]Chinese University of Hongkong, Shenzhen, [4]JD.Com AI Research

**Semi-supervised Multi-task Learning for Multi-label Fine-grained Sexism Classification**
*Harika Abburi[1], Pulkit Parikh[1], Niyati Chhaya[2], Vasudeva Varma[1]*
[1]IIIT Hyderabad, [2]Adobe Research

**Using Eye-tracking Data to Predict the Readability of Brazilian Portuguese Sentences in Single-task, Multi-task and Sequential Transfer Learning Approaches**
*Sidney Evaldo Leal[1], João Marcos Munguba Vieira[2], Erica dos Santos Rodrigues[3], Elisângela Nogueira Teixeira[2], Sandra Aluísio[4]*
[1]University of Sao Paulo, Institute of Mathematics and Computer Sciences, [2]Departamento de Letras Vernáculas - Universidade Federal do Ceará (UFC), [3]Pontifícia Universidade Católica do Rio de Janeiro (PUC), Departamento de Letras, [4]University of São Paulo

**Retrieving Skills from Job Descriptions: A Language Model Based Extreme Multi-label Classification Framework**
*Akshay Bhola[1], Kishaloy Halder[2], Animesh Prasad[3], Min-Yen Kan[4]*
[1]Indian Institute of Technology Kanpur, [2]Zalando Research, [3]Amazon Alexa, [4]National University of Singapore

**Native-like Expression Identification by Contrasting Native and Proficient Second Language Speakers**
*Oleksandr Harust, Yugo Murawaki, Sadao Kurohashi*
Kyoto University

16:30 - 17:00    Session LONG40 - **Resources and Datasets** - Room Gràcia
                 Chair: Fei Xia

**An Analysis of Dataset Overlap on Winograd-Style Tasks**
*Ali Emami[1], Kaheer Suleman[2], Adam Trischler[2], Jackie Chi Kit Cheung[1]*
[1]McGill University, [2]Microsoft Research Montreal

**The Indigenous Languages Technology project at NRC Canada: An empowerment-oriented approach to developing language software**
*Roland Kuhn[1], Fineen Davis[1], Alain Désilets[1], Eric Joanis[1], Anna Kazantseva[1], Rebecca Knowles[1], Patrick Littell[1], Delaney Lothian[1], Aidan Pine[1], Caroline Running Wolf[1], Eddie Santos[1], Darlene Stewart[1], Gilles Boulianne[2], Vishwa Gupta[2], Brian Maracle Owennatékha[3], Akwiratékha'*

Martin[4], Christopher Cox[5], Marie-Odile Junker[5], Olivia Sammons[5], Delasie Torkornoo[5], Nathan Thanyehténhas Brinklow[6], Sara Child[7], Benoît Farley[8], David Huggins-Daines[9], Daisy Rosenblum[10], Heather Souter[11]
[1]National Research Council of Canada, [2]Centre de recherche informatique de Montréal, [3]Onkwawenna Kentyohkwa, [4]Kahnawà:ke, [5]Carleton University, [6]Queen's University, [7]Sanyakola Foundation, [8]Pirurvik Centre, [9]Nuance Communications, [10]University of British Columbia, [11]Prairies to Woodlands Indigenous Language Revitalization Circle

**Cross-Lingual Emotion Lexicon Induction using Representation Alignment in Low-Resource Settings**
Arun Ramachandran[1] and Gerard de Melo[2]
[1]Microsoft, [2]Hasso Plattner Institute, University of Potsdam

**Don't Patronize Me! An Annotated Dataset with Patronizing and Condescending Language towards Vulnerable Communities**
Carla Perez Almendros, Luis Espinosa Anke, Steven Schockaert
Cardiff University

**100,000 Podcasts: A Spoken English Document Corpus**
Ann Clifton[1], Sravana Reddy[1], Yongze Yu[1], Aasish Pappu[2], Rezvaneh Rezapour[3], Hamed Bonab[4], Maria Eskevich[5], Gareth Jones[6], Jussi Karlgren[1], Ben Carterette[1], Rosie Jones[1]
[1]Spotify, [2]Spotify Research, [3]University of Illinois at Urbana-Champaign, [4]University of Massachusetts Amherst, [5]CLARIN ERIC, [6]Dublin City University

16:30 - 17:00     Session POSTER22 - **Translation, Crosslingual and Multilingual Systems. Posters** - Exhibition Room Vila Olímpica

**A Contextual Alignment Enhanced Cross Graph Attention Network for Cross-lingual Entity Alignment**
Zhiwen Xie[1], Runjie Zhu[2], Kunsong Zhao[1], Jin Liu[1], Guangyou Zhou[3], Jimmy Xiangji Huang[4]
[1]School of Computer Science, Wuhan University, [2]York University, [3]School of Computer Science, Central China Normal University, [4]School of Information Technology, York University

**PheMT: A Phenomenon-wise Dataset for Machine Translation Robustness on User-Generated Contents**
Ryo Fujii[1], Masato Mita[2], Kaori Abe[3], Kazuaki Hanawa[2], Makoto Morishita[4], Jun Suzuki[5], Kentaro Inui[3]
[1]Tohoku University, [2]RIKEN AIP / Tohoku University, [3]Tohoku University / Riken, [4]NTT Communication Science Laboratories, [5]Tohoku University / RIKEN Center for AIP

**Detecting Non-literal Translations by Fine-tuning Cross-lingual Pre-trained Language Models**
Yuming Zhai[1], Gabriel ILLOUZ[2], Anne Vilnat[3]
[1]Beijing Foreign Studies University, [2]Université Paris Sud, [3]LIMSI et Université Paris-Saclay

*Felipe Almeida Costa[1], Thiago Castro Ferreira[2], Adriana Pagano[2], Wagner Meira[2]*
[1]Federal University of Minas Gerais (UFMG), [2]Federal University of Minas Gerais

**Analysing cross-lingual transfer in lemmatisation for Indian languages**
*Kumar Saurav[1], Kumar Saunack[1], Pushpak Bhattacharyya[2]*
[1]IIT Bombay, [2]Indian Institute of Technology Bombay and Patna

17:00 - 17:30    Session LONG41 - **Discourse 2** - Room El Raval
                 Chair: Nianwen Xue

**Neural Automated Essay Scoring Incorporating Handcrafted Features**
*Masaki Uto, Yikuan Xie, Maomi Ueno*
The University of Electro-Communications

**A Straightforward Approach to Narratologically Grounded Character Identification**
*Labiba Jahan[1], Rahul Mittal[1], W. Victor Yarlott[1], Mark Finlayson[2]*
[1]Florida International University, [2]FIU

**Fine-grained Information Status Classification Using Discourse Context-Aware BERT**
*Yufang Hou*
IBM Research

**Free the Plural: Unrestricted Split-Antecedent Anaphora Resolution**
*Juntao Yu[1], Nafise Sadat Moosavi[2], Silviu Paun[1], Massimo Poesio[1]*
[1]Queen Mary University of London, [2]UKP Lab, Technische Universität Darmstadt

**How coherent are neural models of coherence?**
*Leila Pishdad[1], Federico Fancellu[2], Ran Zhang[3], Afsaneh Fazly[4]*
[1]Samsung AI Centre, [2]Samsung AI Research Canada, [3]Samsung AI Center - Toronto, [4]University of Toronto; Samsung AI Research

17:00 - 17:30    Session LONG42 - **Text Classification** - Room Montjuïc
                 Chair: Jeff Mitchell

**Fact vs. Opinion: the Role of Argumentation Features in News Classification**
*Tariq Alhindi[1], Smaranda Muresan[1], Daniel Preotiuc-Pietro[2]*
[1]Columbia University, [2]Bloomberg LP

**Generating Plausible Counterfactual Explanations for Deep Transformers in Financial Text Classification**
*Linyi Yang[1], Eoin Kenny[2], Tin Lok James Ng[3], Yi Yang[4], Barry Smyth[2], Ruihai Dong[2]*
[1]UCD, [2]Insight Centre, UCD, [3]University of Wollongong, [4]Hong Kong University of Science and Technology

**Text Classification by Contrastive Learning and Cross-lingual Data Augmentation for Alzheimer's Disease Detection**
*Zhiqiang Guo[1], Zhaoci Liu[1], Zhenhua Ling[1], Shijin Wang[2], Lingjing Jin[3], Yunxia Li[3]*
[1]University of Science and Technology of China, [2]iFLYTEK Research, [3]Shanghai Tongji Hospital, Tongji University School of Medicine

**Multilingual Epidemiological Text Classification: A Comparative Study**

*Stephen Mutuvi[1], Emanuela Boros[2], Antoine Doucet[2], Adam Jatowt[3], Gaël Lejeune[4], Moses Odeo[5]*

[1]University of La Rochelle/Multimedia University of Kenya, [2]University of La Rochelle, [3]Kyoto University, [4]STIH, Paris-Sorbonne, [5]Multimedia University of Kenya

**Pointing to Select: A Fast Pointer-LSTM for Long Text Classification**

*Jinhua Du[1], Yan Huang[1], Karo Moilanen[2]*

[1]Investments AI, AIG, [2]AIG Investments

17:00 - 17:30   Session LONG43 - **Applications 4** - Room Gràcia
Chair: Lluis Padró
Co-Chair: Diptesh Kanojia

**Aspect-based Document Similarity for Research Papers**

*Malte Ostendorff[1], Terry Ruas[2], Till Blume[3], Bela Gipp[4], Georg Rehm[5]*

[1]German Research Center for Artificial Intelligence, [2]University of Michigan - Dearborn, [3]University of Kiel, [4]University of Wuppertal, [5]DFKI

**Explainable and Sparse Representations of Academic Articles for Knowledge Exploration**

*Keng-Te Liao[1], Zhihong Shen[2], Chiyuan Huang[3], Chieh-Han Wu[2], PoChun Chen[1], Kuansan Wang[2], Shou-de Lin[1]*

[1]National Taiwan University, [2]Microsoft Research, [3]Microsoft

**"What is on your mind?" Automated Scoring of Mindreading in Childhood and Early Adolescence**

*Venelin Kovatchev, Phillip Smith, Mark Lee, Imogen Grumley Traynor, Irene Luque Aguilera, Rory Devine*

University of Birmingham

**A Deep Metric Learning Method for Biomedical Passage Retrieval**

*Andrés Rosso-Mateus[1], Fabio A. González[2], Manuel Montes-y-Gómez[3]*

[1]Universidad Nacional de Colombia, PhD Candidate, [2]Universidad Nacional de Colombia, [3]Laboratorio de Tecnologías del Lenguaje INAOE

**Hierarchical Text Segmentation for Medieval Manuscripts**

*Amir Hazem[1], Beatrice Daille[2], Dominique Stutzmann[3], Christopher Kermorvant[4], Louis Chevalier[3]*

[1]LS2N UMR CNRS 6004, [2]Université de Nantes - LS2N, [3]IRHT, [4]Teklia

17:00 - 17:30   Session POSTER23 - **Applications: Abusive language, bias, fake news and rumours detection. Posters** - Exhibition Room Vila Olímpica

**Are We Ready for this Disaster? Towards Location Mention Recognition from Crisis Tweets**

*Reem Suwaileh[1], Muhammad Imran[2], Tamer Elsayed[1], Hassan Sajjad[2]*

[1]Qatar University, [2]Qatar Computing Research Institute

**Modeling Evolution of Message Interaction for Rumor Resolution**
*Lei Chen[1], Zhongyu Wei[1], Jing Li[2], Baohua Zhou[3], Qi ZHANG[3], Xuanjing Huang[3]*
[1]School of Data Science, Fudan University, [2]Department of Computing, The Hong Kong Polytechnic University, [3]Fudan University

**17:30 - 18:00  Session LONG44 - Relation Extraction - Room El Raval**
**Chair: Gabor Recski**

**Regularized Attentive Capsule Network for Overlapped Relation Extraction**
*Tianyi Liu[1], Xiangyu Lin[2], Weijia Jia[3], Mingliang Zhou[4], Wei Zhao[5]*
[1]Shanghai Jiao Tong University, [2]University of Macau, [3]BNU-UIC Joint AI Resrach Institute, Beijing Normal University (Zhuhai) & Shanghai Jiao Tong University, [4]the School of Computer Science, Chongqing University, 174 Shazheng Street, Shapingba District, [5]American University of Sharjah,   Sharjah United Arab Emirates

**Bridging Text and Knowledge with Multi-Prototype Embedding for Few-Shot Relational Triple Extraction**
*Haiyang Yu[1], Ningyu Zhang[1], Shumin Deng[1], Hongbin Ye[1], Wei Zhang[2], Huajun Chen[1]*
[1]Zhejiang University, [2]Alibaba Group

**\*Dual Supervision Framework for Relation Extraction with Distant Supervision and Human Annotation**
*Woohwan Jung and Kyuseok Shim*
Seoul National University

**Graph Convolution over Multiple Dependency Sub-graphs for Relation Extraction**
*Angrosh Mandya[1], Danushka Bollegala[2], Frans Coenen[1]*
[1]University of Liverpool, [2]University of Liverpool/Amazon

**Towards Accurate and Consistent Evaluation: A Dataset for Distantly-Supervised Relation Extraction**
*Tong Zhu[1], Haitao Wang[1], Junjie Yu[1], Xiabing Zhou[1], Wenliang Chen[1], Wei Zhang[2], Min Zhang[3]*
[1]Soochow University, [2]Alibaba Group, [3]Suda

**17:30 - 18:00  Session LONG45 - Inference and Comprehension - Room Montjuïc**
**Chair: Jean-Francois Beaumont**
**Co-Chair: Jing Ma**

**Multi-choice Relational Reasoning for Machine Reading Comprehension**
*Wuya Chen[1], Xiaojun Quan[2], Chunyu Kit[3], Zhengcheng Min[1], Jiahai Wang[1]*
[1]Sun Yat-sen University, [2]School of Data and Computer Science, Sun Yat-sen University, [3]City University of Hong Kong

**FASTMATCH: Accelerating the Inference of BERT-based Text Matching**
*Shuai Pang[1], Jianqiang Ma[2], ZEYU YAN[2], Yang Zhang[3], Jianping Shen[4]*
[1]PING AN INSURANCE (GROUP) COMPANY OF CHINA, [2]Ping An Life, AI Department, [3]AI Department, Pingan Life Insurance, [4]Ping An Life

**DT-QDC: A Dataset for Question Comprehension in Online Test**
*Sijin Wu[1], Yujiu Yang[1], Nicholas Yung[2], Zhengchen Shen[3], Zeyang Lei[4]*

[1]tsinghua.edu.cn, [2]Bielcrystal Datalab, [3]Institute for Network Sciences and Cyberspace, Tsinghua University, [4]Baidu Inc.

**Read and Reason with MuSeRC and RuCoS: Datasets for Machine Reading Comprehension for Russian**

*Alena Fenogenova[1], Vladislav Mikhailov[2], Denis Shevelev[1]*

[1]Sberbank, [2]Sberbank, Higher School of Economics

**Knowledge-Enhanced Natural Language Inference Based on Knowledge Graphs**

*Zikang Wang, Linjing Li, Daniel Zeng*

Institute of Automation, Chinese Academy of Sciences

| 17:30 - 18:00 | Session POSTER24 - **Language Resources and Evaluation. Posters** - Exhibition Room |
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**NYTWIT: A Dataset of Novel Words in the New York Times**

*Yuval Pinter[1], Cassandra L. Jacobs[2], Max Bittker[3]*

[1]Georgia Institute of Technology, [2]University of Wisconsin, Madison, [3]School for Poetic Computation, NY

**SOME: Reference-less Sub-Metrics Optimized for Manual Evaluations of Grammatical Error Correction**

*Ryoma Yoshimura[1], Masahiro Kaneko[1], Tomoyuki Kajiwara[2], Mamoru Komachi[1]*

[1]Tokyo Metropolitan University, [2]Osaka University

**Continual Lifelong Learning in Natural Language Processing: A Survey**

*Magdalena Biesialska, Katarzyna Biesialska, Marta R. Costa-jussà*

Universitat Politècnica de Catalunya

**XED: A Multilingual Dataset for Sentiment Analysis and Emotion Detection**

*Emily Öhman[1], Marc Pàmies[2], Kaisla Kajava[1], Jörg Tiedemann[1]*

[1]University of Helsinki, [2]Linköping University

**Human or Neural Translation?**

*Shivendra Bhardwaj[1], David Alfonso Hermelo[1], Phillippe Langlais[2], Gabriel Bernier-Colborne[3], Cyril Goutte[3], Michel Simard[4]*

[1]RALI / University of Montreal, [2]Université de Montréal, [3]National Research Council Canada, [4]NRC

**Biomedical Concept Relatedness – A large EHR-based benchmark**

*Claudia Schulz[1], Josh Levy-Kramer[2], Camille Van Assel[2], Miklos Kepes[2], Nils Hammerla[3]*

[1]Argus Data Insights, [2]Babylon Health, [3]Twitter

**Domain-Specific Sentiment Lexicons Induced from Labeled Documents**

*SM Mazharul Islam[1], Xin Dong[2], Gerard de Melo[3]*

[1]University of Texas at Arlington, [2]Rutgers University, [3]Hasso Plattner Institute, University of Potsdam

**Language ID in the Wild: Unexpected Challenges on the Path to a Thousand-Language Web Text Corpus**

*Isaac Caswell[1], Theresa Breiner[2], Daan van Esch[2], Ankur Bapna[3]*
[1]Google Research, [2]Google, [3]Google AI

**Constructing A Multi-hop QA Dataset for Comprehensive Evaluation of Reasoning Steps**

*Xanh Ho[1], Anh-Khoa Duong Nguyen[2], Saku Sugawara[1], Akiko Aizawa[1]*
[1]National Institute of Informatics, [2]National Institute of Advanced Industrial Science and Technology

**RoBERT – A Romanian BERT Model**

*Mihai Masala, Stefan Ruseti, Mihai Dascalu*
University Politehnica of Bucharest

**Exploring the Language of Data**

*Gábor Bella, Linda Gremes, Fausto Giunchiglia*
University of Trento

**DaN+: Danish Nested Named Entities and Lexical Normalization**

*Barbara Plank, Kristian Nørgaard Jensen, Rob van der Goot*
IT University of Copenhagen

**New Benchmark Corpus and Models for Fine-grained Event Classification: To BERT or not to BERT?**

*Jakub Piskorski[1], Jacek Haneczok[2], Guillaume Jacquet[3]*
[1]Polish Academy of Sciences, [2]Erste Group IT, [3]Joint Research Centre - European Commission

**A Geometry-Inspired Attack for Generating Natural Language Adversarial Examples**

*Zhao Meng and Roger Wattenhofer*
ETH Zurich

**Expert Concept-Modeling Ground Truth Construction for Word Embeddings Evaluation in Concept-Focused Domains**

*Arianna Betti[1], Martin Reynaert[2], Thijs Ossenkoppele[1], Yvette Oortwijn[1], Andrew Salway[3], Jelke Bloem[1]*
[1]University of Amsterdam, [2]ILLC - Universiteit van Amsterdam / DCA - Tilburg University, [3]Uni Research

**Creation of Corpus and analysis in Code-Mixed Kannada-English Twitter data for Emotion Prediction**

*Abhinav Reddy Appidi, Vamshi Krishna Srirangam, Darsi Suhas, Manish Shrivastava*
International Institute of Information Technology, Hyderabad

| 18:00 -<br>18:30 | Session PANEL2 - **PANEL 2: On the generalization of NLP models – ways around data hunger.** - Room El Raval<br>Chair: Yue Zhang |
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*Yue Zhang[1], Xiaodan Zhu[2], Jacob Andreas[3], Nathanael Schärli[4]*
[1]Westlake University, [2]Queens University, Canada, [3]MIT, [4]Google

| 18:00 -<br>18:30 | Session SHORT5 - **Discourse, Parsing, Dialogue and others. Short papers** - Room Montjuïc<br>Chair: David Vilares<br>Co-Chair: Serena Villata |
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**Fair Evaluation in Concept Normalization: a Large-scale Comparative Analysis for BERT-based Models**
*Elena Tutubalina[1], Artur Kadurin[1], Zulfat Miftahutdinov[2]*
[1]Insilico Medicine, [2]Kazan Federal University

**A Sentence Cloze Dataset for Chinese Machine Reading Comprehension**
*Yiming Cui[1], Ting Liu[1], Ziqing Yang[2], Zhipeng Chen[2], Wentao Ma[2], Wanxiang Che[1], Shijin Wang[2], Guoping Hu[2]*
[1]Harbin Institute of Technology, [2]iFLYTEK Research

**Improving Document-Level Sentiment Analysis with User and Product Context**
*Chenyang Lyu[1], Jennifer Foster[1], Yvette Graham[2]*
[1]Dublin City University, [2]Trinity College Dublin

**Multilingual Neural RST Discourse Parsing**
*Zhengyuan Liu, Ke Shi, Nancy Chen*
Institute for Infocomm Research, A*STAR

**Intrinsic Quality Assessment of Arguments**
*Henning Wachsmuth and Till Werner*
Paderborn University

**Tree Representations in Transition System for RST Parsing**
*Jinfen Li and Lu Xiao*
Syracuse University

**Incremental Neural Lexical Coherence Modeling**
*Sungho Jeon and Michael Strube*
Heidelberg Institute for Theoretical Studies

**Statistical Parsing of Tree Wrapping Grammars**
*Tatiana Bladier[1], Jakub Waszczuk[2], Laura Kallmeyer[2]*
[1]Heinrich Heine University of Düsseldorf, [2]University of Duesseldorf

**Out-of-Task Training for Dialog State Tracking Models**
*Michael Heck[1], Christian Geishauser[2], Hsien-chin Lin[1], Nurul Lubis[1], Marco Moresi[2], Carel van Niekerk[1], Milica Gasic[2]*
[1]Heinrich Heine University, [2]Heinrich Heine University Duesseldorf

**Resource Constrained Dialog Policy Learning Via Differentiable Inductive Logic Programming**
*Zhenpeng Zhou[1], Ahmad Beirami[2], Paul Crook[3], Pararth Shah[1], Rajen Subba[3], Alborz Geramifard[2]*
[1]Facebook Assistant, [2]Facebook AI, [3]Facebook

| 18:00 - 18:30 | Session POSTER25 - **Machine Learning and Language Modelling. Posters** - Exhibition Room Vila Olímpica |
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**German's Next Language Model**
*Branden Chan[1], Stefan Schweter[2], Timo Möller[1]*
[1]deepset, [2]DBMDZ

**Language Model Transformers as Evaluators for Open-domain Dialogues**
*Rostislav Nedelchev[1], Jens Lehmann[2], Ricardo Usbeck[3]*
[1]University of Bonn, [2]University of Bonn and Fraunhofer IAIS, [3]Fraunhofer IAIS

**Embedding Dynamic Attributed Networks by Modeling the Evolution Processes**
*Zenan Xu[1], Zijing Ou[1], Qinliang Su[1], Jianxing Yu[1], Xiaojun Quan[2], ZhenKun Lin[1]*
[1]Sun Yat-sen University, [2]School of Data and Computer Science, Sun Yat-sen University

**Learning distributed sentence vectors with bi-directional 3D convolutions**
*Bin Liu[1], Liang Wang[1], Guosheng Yin[2]*
[1]Southwestern University of Finance and Economics, [2]University of Hong Kong

**Don't Invite BERT to Drink a Bottle: Modeling the Interpretation of Metonymies Using BERT and Distributional Representations**
*Paolo Pedinotti and Alessandro Lenci*
University of Pisa

**Neural Unsupervised Domain Adaptation in NLP---A Survey**
*Alan Ramponi[1] and Barbara Plank[2]*
[1]University of Trento; Fondazione the Microsoft Research – University of Trento Centre for Computational and Systems Biology, [2]IT University of Copenhagen

**Exploring the Value of Personalized Word Embeddings**
*Charles Welch, Jonathan K. Kummerfeld, Verónica Pérez-Rosas, Rada Mihalcea*
University of Michigan

**Do Neural Language Models Overcome Reporting Bias?**
*Vered Shwartz[1] and Yejin Choi[2]*
[1]University of Washington / Allen Institute for AI (AI2), [2]University of Washington

**Interpretable Multi-headed Attention for Abstractive Summarization at Controllable Lengths**
*Ritesh Sarkhel[1], Moniba Keymanesh[2], Arnab Nandi[1], Srinivasan Parthasarathy[1]*
[1]Ohio State University, [2]The Ohio State University

**Scale down Transformer by Grouping Features for a Lightweight Character-level Language Model**
*Sungrae Park[1], Geewook Kim[2], JUNYEOP LEE[3], Junbum Cha[4], Ji-Hoon Kim[1], Hwalsuk Lee[5]*
[1]Clova AI Research, NAVER Corporation, [2]NAVER, [3]Upstage AI Research, [4]Clova AI Research, NAVER Corp., [5]Upstage AI Research, Upstage

**Attention Word Embedding**

*Shashank Sonkar, Andrew Waters, Richard Baraniuk*

Rice University

**CharacterBERT: Reconciling ELMo and BERT for Word-Level Open-Vocabulary Representations From Characters**

*Hicham El Boukkouri[1], Olivier Ferret[2], Thomas Lavergne[3], Hiroshi Noji[4], Pierre Zweigenbaum[1], Jun'ichi Tsujii[5]*

[1]LIMSI, CNRS, Université Paris-Saclay, [2]CEA LIST, [3]LIMSI/CNRS & Université Paris Sud, [4]Artificial Intelligence Research Center, AIST, [5]Aritificial Intelligence Research Centre at AIST

**Autoregressive Reasoning over Chains of Facts with Transformers**

*Ruben Cartuyvels, Graham Spinks, Marie-Francine Moens*

Catholic University of Leuven

**Augmenting NLP models using Latent Feature Interpolations**

*Amit Jindal[1], Arijit Ghosh Chowdhury[1], Aniket Didolkar[1], Di Jin[2], Ramit Sawhney[3], Rajiv Ratn Shah[4]*

[1]Manipal Institute of Technology, [2]MIT, [3]Netaji Subhas Institute of Technology, [4]IIIT Delhi

**Neural Language Modeling for Named Entity Recognition**

*Zhihong Lei[1], Weiyue Wang[2], Christian Dugast[3], Hermann Ney[2]*

[1]Apple Inc., [2]RWTH Aachen University, [3]RWTH, University of Aachen

18:30 - 19:00   **Best Paper Awards and Closing** - Room Poblenou


**Donia Scott,** COLING2020 General Chair

**Leo Wanner**, COLING2020 Local Organization Committee

**Horacio Saggion,** COLING2020 Local Organization Committee

**Chengqing Zhong and Núria Bel**, COLING2020 Program Co-Chairs

**Courtney Napoles,** COLING2020 Industry Track Co-Chair

**Michal Ptaszynski,** COLING2020 Demonstration Systems Co-Chair