

EMNLP 2020

**Fifth Conference on  
Machine Translation**

**Proceedings of the Conference**

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Online

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## Introduction

The Fifth Conference on Machine Translation (WMT 2020) took place on Thursday, November 19 and Friday, November 20, 2020 immediately following the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP 2020).

This is the fifth time WMT has been held as a conference. The first time WMT was held as a conference was at ACL 2016 in Berlin, Germany, the second time at EMNLP 2017 in Copenhagen, Denmark, the third time at EMNLP 2018 in Brussels, Belgium, and the fourth time at ACL 2019 in Florence, Italy. Prior to being a conference, WMT was held 10 times as a workshop. WMT was held for the first time at HLT-NAACL 2006 in New York City, USA. In the following years the Workshop on Statistical Machine Translation was held at ACL 2007 in Prague, Czech Republic, ACL 2008, Columbus, Ohio, USA, EACL 2009 in Athens, Greece, ACL 2010 in Uppsala, Sweden, EMNLP 2011 in Edinburgh, Scotland, NAACL 2012 in Montreal, Canada, ACL 2013 in Sofia, Bulgaria, ACL 2014 in Baltimore, USA, EMNLP 2015 in Lisbon, Portugal.

The focus of our conference is to bring together researchers from the area of machine translation and invite selected research papers to be presented at the conference.

Prior to the conference, in addition to soliciting relevant papers for review and possible presentation, we conducted 11 shared tasks. These consisted of seven translation tasks: Machine Translation of News, Lifelong Learning for Machine Translation, Robust Machine Translation, Similar Language Translation, Unsupervised and Very Low Resource Supervised Translation, Biomedical Translation, and Machine Translation for Chats, and four other tasks: Automatic Post-Editing, Metrics for Machine Translation, and Parallel Corpus Filtering and Alignment for Low-Resource Conditions.

The results of all shared tasks were announced at the conference, and these proceedings also include overview papers for the shared tasks, summarizing the results, as well as providing information about the data used and any procedures that were followed in conducting or scoring the tasks. In addition, there are short papers from each participating team that describe their underlying system in greater detail.

Like in previous years, we have received a far larger number of submissions than we could accept for presentation. WMT 2020 has received 58 full research paper submissions (not counting withdrawn submissions). In total, WMT 2020 featured 19 full research paper oral presentations and 112 shared task poster presentations.

The invited talk entitled “Low-resourcedness Beyond Data” was given by Ignatius Ezeani, Jade Abbott, Julia Kreutzer, Salomon Kabongo, Perez Ogayo, Shamsuddeen Hassan Muhammad, Rubungo Andre Niyongabo, Jamiil Toure Ali, Kathleen Siminyu, Salomey Osei, Wilhelmina Nekoto, Arshath Ramkilowan, Masabata Mokgesi-Seling, Bonaventure Dossou, Ayodele Olabiyi, Blessing Sibanda, Akinola Oluwole, Vukosi Marivate, and Orevaoghene Ahia.

We would like to thank the members of the Program Committee for their timely reviews. We also would like to thank the participants of the shared task and all the other volunteers who helped with the evaluations.

Loïc Barrault, Ondřej Bojar, Fethi Bougares, Rajen Chatterjee, Marta R. Costa-jussà, Christian Federmann, Mark Fishel, Alexander Fraser, Yvette Graham, Paco Guzman, Barry Haddow, Matthias Huck, Antonio Jimeno Yepes, Philipp Koehn, André Martins, Makoto Morishita, Christof Monz,

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*Incorporating Terminology Constraints in Automatic Post-Editing*

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# Conference Program

Thursday, November 19, 2020

9:45–10:00 *Opening Remarks*

10:00–11:00 **Session 1: Shared Task Overview Papers I (Chair: Rachel Bawden)**

*Findings of the 2020 Conference on Machine Translation (WMT20)*

Loïc Barrault, Magdalena Biesialska, Ondřej Bojar, Marta R. Costa-jussà, Christian Federmann, Yvette Graham, Roman Grundkiewicz, Barry Haddow, Matthias Huck, Eric Joanis, Tom Kocmi, Philipp Koehn, Chi-kiu Lo, Nikola Ljubešić, Christof Monz, Makoto Morishita, Masaaki Nagata, Toshiaki Nakazawa, Santanu Pal, Matt Post and Marcos Zampieri

*Findings of the First Shared Task on Lifelong Learning Machine Translation*

Loïc Barrault, Magdalena Biesialska, Marta R. Costa-jussà, Fethi Bougares and Olivier Galibert

*Findings of the WMT 2020 Shared Task on Chat Translation*

M. Amin Farajian, António V. Lopes, André F. T. Martins, Sameen Maruf and Gholamreza Haffari

*Findings of the WMT 2020 Shared Task on Machine Translation Robustness*

Lucia Specia, Zhenhao Li, Juan Pino, Vishrav Chaudhary, Francisco Guzmán, Graham Neubig, Nadir Durrani, Yonatan Belinkov, Philipp Koehn, Hassan Sajjad, Paul Michel and Xian Li

11:00–12:30 **Session 2: Shared Task Posters I**

11:00–12:30 **News Translation Task**

11:00–12:30 *The University of Edinburgh's English-Tamil and English-Inuktitut Submissions to the WMT20 News Translation Task*

Rachel Bawden, Alexandra Birch, Radina Dobрева, Arturo Oncevay, Antonio Valerio Miceli Barone and Philip Williams

11:00–12:30 *GTCOM Neural Machine Translation Systems for WMT20*

Chao Bei, Hao Zong, Qingmin Liu and Conghu Yuan

11:00–12:30 *DiDi's Machine Translation System for WMT2020*

Tanfeng Chen, Weiwei Wang, Wenyang Wei, Xing Shi, Xiangang Li, Jieping Ye and Kevin Knight

11:00–12:30 *Facebook AI's WMT20 News Translation Task Submission*

Peng-Jen Chen, Ann Lee, Changhan Wang, Naman Goyal, Angela Fan, Mary Williamson and Jiatao Gu

**Thursday, November 19, 2020 (continued)**

- 11:00–12:30 *Linguistically Motivated Subwords for English-Tamil Translation: University of Groningen’s Submission to WMT-2020*  
Prajit Dhar, Arianna Bisazza and Gertjan van Noord
- 11:00–12:30 *The TALP-UPC System Description for WMT20 News Translation Task: Multilingual Adaptation for Low Resource MT*  
Carlos Escolano, Marta R. Costa-jussà and José A. R. Fonollosa
- 11:00–12:30 *An Iterative Knowledge Transfer NMT System for WMT20 News Translation Task*  
Jiwan Kim, Soyeon Park, Sangha Kim and Yoonjung Choi
- 11:00–12:30 *Tohoku-AIP-NTT at WMT 2020 News Translation Task*  
Shun Kiyono, Takumi Ito, Ryuto Konno, Makoto Morishita and Jun Suzuki
- 11:00–12:30 *NRC Systems for the 2020 Inuktitut-English News Translation Task*  
Rebecca Knowles, Darlene Stewart, Samuel Larkin and Patrick Littell
- 11:00–12:30 *CUNI Submission for the Inuktitut Language in WMT News 2020*  
Tom Kocmi
- 11:00–12:30 *Tilde at WMT 2020: News Task Systems*  
Rihards Krišlauks and Mārcis Pinnis
- 11:00–12:30 *Samsung R&D Institute Poland submission to WMT20 News Translation Task*  
Mateusz Krubiński, Marcin Chochowski, Bartłomiej Boczek, Mikołaj Koszowski, Adam Dobrowolski, Marcin Szymański and Paweł Przybysz
- 11:00–12:30 *Speed-optimized, Compact Student Models that Distill Knowledge from a Larger Teacher Model: the UEDIN-CUNI Submission to the WMT 2020 News Translation Task*  
Ulrich Germann, Roman Grundkiewicz, Martin Popel, Radina Dobрева, Nikolay Bogoychev and Kenneth Heafield
- 11:00–12:30 *The University of Edinburgh’s submission to the German-to-English and English-to-German Tracks in the WMT 2020 News Translation and Zero-shot Translation Robustness Tasks*  
Ulrich Germann
- 11:00–12:30 *Contact Relatedness can help improve multilingual NMT: Microsoft STCI-MT @ WMT20*  
Vikrant Goyal, Anoop Kunchukuttan, Rahul Kejriwal, Siddharth Jain and Amit Bhagwat
- 11:00–12:30 *The AFRL WMT20 News Translation Systems*  
Jeremy Gwinnup and Tim Anderson

**Thursday, November 19, 2020 (continued)**

- 11:00–12:30 *The Ubiquitous English-Inuktitut System for WMT20*  
François Hernandez and Vincent Nguyen
- 11:00–12:30 *SJTU-NICT's Supervised and Unsupervised Neural Machine Translation Systems for the WMT20 News Translation Task*  
Zuchao Li, Hai Zhao, Rui Wang, Kehai Chen, Masao Utiyama and Eiichiro Sumita
- 11:00–12:30 *Combination of Neural Machine Translation Systems at WMT20*  
Benjamin Marie, Raphael Rubino and Atsushi Fujita
- 11:00–12:30 *WeChat Neural Machine Translation Systems for WMT20*  
Fandong Meng, Jianhao Yan, Yijin Liu, Yuan Gao, Xianfeng Zeng, Qinsong Zeng, Peng Li, Ming Chen, Jie Zhou, Sifan Liu and Hao Zhou
- 11:00–12:30 *PROMT Systems for WMT 2020 Shared News Translation Task*  
Alexander Molchanov
- 11:00–12:30 *eTranslation's Submissions to the WMT 2020 News Translation Task*  
Csaba Oravecz, Katina Bontcheva, László Tihanyi, David Kolovratnik, Bhavani Bhaskar, Adrien Lardilleux, Szymon Kloczek and Andreas Eisele
- 11:00–12:30 *The ADAPT System Description for the WMT20 News Translation Task*  
Venkatesh Parthasarathy, Akshai Ramesh, Rejwanul Haque and Andy Way
- 11:00–12:30 *CUNI English-Czech and English-Polish Systems in WMT20: Robust Document-Level Training*  
Martin Popel
- 11:00–12:30 *Machine Translation for English–Inuktitut with Segmentation, Data Acquisition and Pre-Training*  
Christian Roest, Lukas Edman, Gosse Minnema, Kevin Kelly, Jennifer Spenader and Antonio Toral
- 11:00–12:30 *OPPO's Machine Translation Systems for WMT20*  
Tingxun Shi, Shiyu Zhao, Xiaopu Li, Xiaoxue Wang, Qian Zhang, Di Ai, Dawei Dang, Xue Zhengshan and JIE HAO
- 11:00–12:30 *HW-TSC's Participation in the WMT 2020 News Translation Shared Task*  
Daimeng Wei, Hengchao Shang, Zhanglin Wu, Zhengzhe Yu, Liangyou Li, Jiaxin Guo, Minghan Wang, Hao Yang, Lizhi Lei, Ying Qin and Shiliang Sun
- 11:00–12:30 *IIE's Neural Machine Translation Systems for WMT20*  
Xiangpeng Wei, Ping Guo, Yunpeng Li, Xingsheng Zhang, Luxi Xing and Yue Hu

**Thursday, November 19, 2020 (continued)**

- 11:00–12:30 *The Volctrans Machine Translation System for WMT20*  
Liwei Wu, Xiao Pan, Zehui Lin, Yaoming ZHU, Mingxuan Wang and Lei Li
- 11:00–12:30 *Tencent Neural Machine Translation Systems for the WMT20 News Translation Task*  
Shuangzhi Wu, Xing Wang, Longyue Wang, Fangxu Liu, Jun Xie, Zhaopeng Tu, Shuming Shi and Mu Li
- 11:00–12:30 *Russian-English Bidirectional Machine Translation System*  
ariel Xv
- 11:00–12:30 *The DeepMind Chinese–English Document Translation System at WMT2020*  
Lei Yu, Laurent Sartran, Po-Sen Huang, Wojciech Stokowiec, Domenic Donato, Srivatsan Srinivasan, Alek Andreev, Wang Ling, Sona Mokra, Agustin Dal Lago, Yotam Doron, Susannah Young, Phil Blunsom and Chris Dyer
- 11:00–12:30 *The NiuTrans Machine Translation Systems for WMT20*  
Yuhao Zhang, Ziyang Wang, Runzhe Cao, Binghao Wei, Weiqiao Shan, Shuhan Zhou, Abudurexiti Rehehan, Tao Zhou, Xin Zeng, Laohu Wang, Yongyu Mu, Jingnan Zhang, Xiaoqian Liu, Xuanjun Zhou, Yinqiao Li, Bei Li, Tong Xiao and Jingbo Zhu
- 11:00–12:30 Test Sets**
- 11:00–12:30 *Fine-grained linguistic evaluation for state-of-the-art Machine Translation*  
Eleftherios Avramidis, Vivien Macketanz, Ursula Strohrigel, Aljoscha Burchardt and Sebastian Möller
- 11:00–12:30 *Gender Coreference and Bias Evaluation at WMT 2020*  
Tom Kocmi, Tomasz Limisiewicz and Gabriel Stanovsky
- 11:00–12:30 *The MUCOW word sense disambiguation test suite at WMT 2020*  
Yves Scherrer, Alessandro Raganato and Jörg Tiedemann
- 11:00–12:30 *WMT20 Document-Level Markable Error Exploration*  
Vilém Zouhar, Tereza Vojtěchová and Ondřej Bojar

**Thursday, November 19, 2020 (continued)**

**11:00–12:30 Similar Language Translation Task**

11:00–12:30 *Translating Similar Languages: Role of Mutual Intelligibility in Multilingual Transformers*

Ife Adebara, El Moatez Billah Nagoudi and Muhammad Abdul Mageed

11:00–12:30 *Attention Transformer Model for Translation of Similar Languages*

Farhan Dhanani and Muhammad Rafi

11:00–12:30 *Transformer-based Neural Machine Translation System for Hindi – Marathi: WMT20 Shared Task*

Amit Kumar, Rupjyoti Baruah, Rajesh Kumar Mundotiya and Anil Kumar Singh

11:00–12:30 *Hindi-Marathi Cross Lingual Model*

Sahinur Rahman Laskar, Abdullah Faiz Ur Rahman Khilji, Partha Pakray and Sivaji Bandyopadhyay

11:00–12:30 *Transfer Learning for Related Languages: Submissions to the WMT20 Similar Language Translation Task*

Lovish Madaan, Soumya Sharma and Parag Singla

11:00–12:30 *The IPN-CIC team system submission for the WMT 2020 similar language task*

Luis A. Menéndez-Salazar, Grigori Sidorov and Marta R. Costa-Jussà

11:00–12:30 *NMT based Similar Language Translation for Hindi - Marathi*

Vandan Mujadia and Dipti Sharma

11:00–12:30 *NUIG-Panlingua-KMI Hindi-Marathi MT Systems for Similar Language Translation Task @ WMT 2020*

Atul Kr. Ojha, Priya Rani, Akanksha Bansal, Bharathi Raja Chakravarthi, Ritesh Kumar and John P. McCrae

11:00–12:30 *Neural Machine Translation for Similar Languages: The Case of Indo-Aryan Languages*

Santanu Pal and Marcos Zampieri

11:00–12:30 *Neural Machine Translation between similar South-Slavic languages*

Maja Popović and Alberto Poncelas

11:00–12:30 *Infosys Machine Translation System for WMT20 Similar Language Translation Task*

Kamalkumar Rathinasamy, Amanpreet Singh, Balaguru Sivasambagupta, Prajna Prasad Neerchal and Vani Sivasankaran



**Thursday, November 19, 2020 (continued)**

- 11:00–12:30 *Document Level NMT of Low-Resource Languages with Backtranslation*  
Sami Ul Haq, Sadaf Abdul Rauf, Arsalan Shaukat and Abdullah Saeed
- 11:00–12:30 *Multilingual Neural Machine Translation: Case-study for Catalan, Spanish and Portuguese Romance Languages*  
Pere Vergés Boncompte and Marta R. Costa-jussà
- 11:00–12:30 *A3-108 Machine Translation System for Similar Language Translation Shared Task 2020*  
Saumitra Yadav and Manish Shrivastava

**11:00–12:30 Chat Translation Task**

- 11:00–12:30 *The University of Maryland’s Submissions to the WMT20 Chat Translation Task: Searching for More Data to Adapt Discourse-Aware Neural Machine Translation*  
Calvin Bao, Yow-Ting Shiue, Chujun Song, Jie Li and Marine Carpuat
- 11:00–12:30 *Naver Labs Europe’s Participation in the Robustness, Chat, and Biomedical Tasks at WMT 2020*  
Alexandre Berard, Ioan Calapodescu, Vassilina Nikoulina and Jerin Philip
- 11:00–12:30 *The University of Edinburgh-Uppsala University’s Submission to the WMT 2020 Chat Translation Task*  
Nikita Moghe, Christian Hardmeier and Rachel Bawden
- 11:00–12:30 *JUST System for WMT20 Chat Translation Task*  
Roweida Mohammed, Mahmoud Al-Ayyoub and Malak Abdullah
- 11:00–12:30 *Tencent AI Lab Machine Translation Systems for WMT20 Chat Translation Task*  
Longyue Wang, Zhaopeng Tu, Xing Wang, Li Ding, Liang Ding and Shuming Shi

**12:30–13:00 Break**

**Thursday, November 19, 2020 (continued)**

**13:00–14:00 Session 3: Research Papers I (Chair: Tom Kocmi)**

*Combining Sequence Distillation and Transfer Learning for Efficient Low-Resource Neural Machine Translation Models*

Raj Dabre and Atsushi Fujita

*Fast Interleaved Bidirectional Sequence Generation*

Biao Zhang, Ivan Titov and Rico Sennrich

*Priming Neural Machine Translation*

Minh Quang Pham, Jitao Xu, Josep Crego, François Yvon and Jean Senellart

*Subword Segmentation and a Single Bridge Language Affect Zero-Shot Neural Machine Translation*

Annette Rios, Mathias Müller and Rico Sennrich

*Look It Up: Bilingual and Monolingual Dictionaries Improve Neural Machine Translation*

Xing Jie Zhong and David Chiang

**14:00–16:00 Break**

**16:00–17:00 Session 4: Shared Task Overview I (Chair: Antonio Toral)**

**17:00–18:30 Session 5: Shared Task Posters I**

**18:30–19:00 Break**

**Thursday, November 19, 2020 (continued)**

**19:00–20:00 Session 6: Research Papers II (Chair: Colin Cherry)**

*Complete Multilingual Neural Machine Translation*

Markus Freitag and Orhan Firat

*Paraphrase Generation as Zero-Shot Multilingual Translation: Disentangling Semantic Similarity from Lexical and Syntactic Diversity*

Brian Thompson and Matt Post

*When Does Unsupervised Machine Translation Work?*

Kelly Marchisio, Kevin Duh and Philipp Koehn

*Language Models not just for Pre-training: Fast Online Neural Noisy Channel Modeling*

Shruti Bhosale, Kyra Yee, Sergey Edunov and Michael Auli

**Friday, November 20, 2020**

**9:00–10:00 Session 7: Research Papers III (Chair: Marta R. Costa-jussà)**

*Towards Multimodal Simultaneous Neural Machine Translation*

Aizhan Imankulova, Masahiro Kaneko, Tosho Hirasawa and Mamoru Komachi

*Diving Deep into Context-Aware Neural Machine Translation*

Jingjing Huo, Christian Herold, Yingbo Gao, Leonard Dahlmann, Shahram Khadivi and Hermann Ney

*A Study of Residual Adapters for Multi-Domain Neural Machine Translation*

Minh Quang Pham, Josep Maria Crego, François Yvon and Jean Senellart

*Mitigating Gender Bias in Machine Translation with Target Gender Annotations*

Artūrs Stāfānovičs, Mārcis Pinnis and Toms Bergmanis

*Document-aligned Japanese-English Conversation Parallel Corpus*

Matīss Rikters, Ryokan Ri, Tong Li and Toshiaki Nakazawa

Friday, November 20, 2020 (continued)

**10:00–11:00 Session 8: Shared Task Overview Papers II (Chair Jindřich Libovický)**

*Findings of the WMT 2020 Shared Task on Automatic Post-Editing*

Rajen Chatterjee, Markus Freitag, Matteo Negri and Marco Turchi

*Findings of the WMT 2020 Biomedical Translation Shared Task: Basque, Italian and Russian as New Additional Languages*

Rachel Bawden, Giorgio Maria Di Nunzio, Cristian Grozea, Inigo Jauregi Unanue, Antonio Jimeno Yepes, Nancy Mah, David Martinez, Aurélie Névéal, Mariana Neves, Maite Oronoz, Olatz Perez-de-Viñaspre, Massimo Piccardi, Roland Roller, Amy Siu, Philippe Thomas, Federica Vezzani, Maika Vicente Navarro, Dina Wiemann and Lana Yeganova

*Results of the WMT20 Metrics Shared Task*

Nitika Mathur, Johnny Wei, Markus Freitag, Qingsong Ma and Ondřej Bojar

*Findings of the WMT 2020 Shared Task on Parallel Corpus Filtering and Alignment*

Philipp Koehn, Vishrav Chaudhary, Ahmed El-Kishky, Naman Goyal, Peng-Jen Chen and Francisco Guzmán

*Findings of the WMT 2020 Shared Task on Quality Estimation*

Lucia Specia, Frédéric Blain, Marina Fomicheva, Erick Fonseca, Vishrav Chaudhary, Francisco Guzmán and André F. T. Martins

*Findings of the WMT 2020 Shared Tasks in Unsupervised MT and Very Low Resource Supervised MT*

Alexander Fraser

**11:00–12:30 Session 9: Shared Task Posters II**

Friday, November 20, 2020 (continued)

### Automatic Post-Editing Task

- 11:00–12:30 *Cross-Lingual Transformers for Neural Automatic Post-Editing*  
Dongjun Lee
- 11:00–12:30 *POSTECH-ETRI's Submission to the WMT2020 APE Shared Task: Automatic Post-Editing with Cross-lingual Language Model*  
Jihyung Lee, WonKee Lee, Jaehun Shin, Baikjin Jung, Young-Kil Kim and Jong-Hyeok Lee
- 11:00–12:30 *Noising Scheme for Data Augmentation in Automatic Post-Editing*  
WonKee Lee, Jaehun Shin, Baikjin Jung, Jihyung Lee and Jong-Hyeok Lee
- 11:00–12:30 *Alibaba's Submission for the WMT 2020 APE Shared Task: Improving Automatic Post-Editing with Pre-trained Conditional Cross-Lingual BERT*  
Jiayi Wang, Ke Wang, Kai Fan, Yuqi Zhang, Jun Lu, Xin Ge, Yangbin Shi and Yu Zhao
- 11:00–12:30 *HW-TSC's Participation at WMT 2020 Automatic Post Editing Shared Task*  
Hao Yang, Minghan Wang, Daimeng Wei, Hengchao Shang, Jiaxin Guo, Zongyao Li, Lizhi Lei, Ying Qin, Shimin Tao, Shiliang Sun and Yimeng Chen

### Biomedical Translation Task

- 11:00–12:30 *LIMSI @ WMT 2020*  
Sadaf Abdul Rauf, José Carlos Rosales Núñez, Minh Quang Pham and François Yvon
- 11:00–12:30 *Elhuyar submission to the Biomedical Translation Task 2020 on terminology and abstracts translation*  
Ander Corral and Xabier Saralegi
- 11:00–12:30 *YerevaNN's Systems for WMT20 Biomedical Translation Task: The Effect of Fixing Misaligned Sentence Pairs*  
Karen Hambarzumyan, Hovhannes Tamoyan and Hrant Khachatryan
- 11:00–12:30 *Pretrained Language Models and Backtranslation for English-Basque Biomedical Neural Machine Translation*  
Inigo Jauregi Unanue and Massimo Piccardi
- 11:00–12:30 *Lite Training Strategies for Portuguese-English and English-Portuguese Translation*  
Alexandre Lopes, Rodrigo Nogueira, Roberto Lotufo and Helio Pedrini

**Friday, November 20, 2020 (continued)**

- 11:00–12:30 *The ADAPT's Submissions to the WMT20 Biomedical Translation Task*  
Prashant Nayak, Rejwanul Haque and Andy Way
- 11:00–12:30 *FJWU participation for the WMT20 Biomedical Translation Task*  
Sumbal Naz, Sadaf Abdul Rauf, Noor-e- Hira and Sami Ul Haq
- 11:00–12:30 *Huawei's Submissions to the WMT20 Biomedical Translation Task*  
Wei Peng, Jianfeng Liu, Minghan Wang, Liangyou Li, Xupeng Meng, Hao Yang and Qun Liu
- 11:00–12:30 *Addressing Exposure Bias With Document Minimum Risk Training: Cambridge at the WMT20 Biomedical Translation Task*  
Danielle Saunders and Bill Byrne
- 11:00–12:30 *UoS Participation in the WMT20 Translation of Biomedical Abstracts*  
Felipe Soares and Delton Vaz
- 11:00–12:30 *ixamed's submission description for WMT20 Biomedical shared task: benefits and limitations of using terminologies for domain adaptation*  
Xabier Soto, Olatz Perez-de-Viñaspre, Gorra Labaka and Maite Oronoz
- 11:00–12:30 *Tencent AI Lab Machine Translation Systems for the WMT20 Biomedical Translation Task*  
Xing Wang, Zhaopeng Tu, Longyue Wang and Shuming Shi

**Metrics Task**

- 11:00–12:30 *ParBLEU: Augmenting Metrics with Automatic Paraphrases for the WMT'20 Metrics Shared Task*  
Rachel Bawden, Biao Zhang, Andre Tättar and Matt Post
- 11:00–12:30 *Extended Study on Using Pretrained Language Models and YiSi-1 for Machine Translation Evaluation*  
Chi-kiu Lo
- 11:00–12:30 *Machine Translation Reference-less Evaluation using YiSi-2 with Bilingual Mappings of Massive Multilingual Language Model*  
Chi-kiu Lo and Samuel Larkin
- 11:00–12:30 *Unbabel's Participation in the WMT20 Metrics Shared Task*  
Ricardo Rei, Craig Stewart, Ana C Farinha and Alon Lavie

**Friday, November 20, 2020 (continued)**

- 11:00–12:30 *Learning to Evaluate Translation Beyond English: BLEURT Submissions to the WMT Metrics 2020 Shared Task*  
Thibault Sellam, Amy Pu, Hyung Won Chung, Sebastian Gehrmann, Qijun Tan, Markus Freitag, Dipanjan Das and Ankur Parikh
- 11:00–12:30 *Towards a Better Evaluation of Metrics for Machine Translation*  
Peter Stanchev, Weiyue Wang and Hermann Ney
- 11:00–12:30 *Incorporate Semantic Structures into Machine Translation Evaluation via UCCA*  
Jin Xu, Yinuo Guo and Junfeng Hu

**Parallel Corpus Filtering Task**

- 11:00–12:30 *Filtering Noisy Parallel Corpus using Transformers with Proxy Task Learning*  
Haluk Açarçiçek, Talha Çolakoğlu, pınar ece aktan hatipoğlu, Chong Hsuan Huang and Wei Peng
- 11:00–12:30 *Score Combination for Improved Parallel Corpus Filtering for Low Resource Conditions*  
Muhammad ElNokrashy, Amr Hendy, Mohamed Abdelghaffar, Mohamed Afify, Ahmed Tawfik and Hany Hassan Awadalla
- 11:00–12:30 *Bicleaner at WMT 2020: Universitat d’Alacant-Prompsit’s submission to the parallel corpus filtering shared task*  
Miquel Esplà-Gomis, Víctor M. Sánchez-Cartagena, Jaume Zaragoza-Bernabeu and Felipe Sánchez-Martínez
- 11:00–12:30 *An exploratory approach to the Parallel Corpus Filtering shared task WMT20*  
Ankur Kejriwal and Philipp Koehn
- 11:00–12:30 *Dual Conditional Cross Entropy Scores and LASER Similarity Scores for the WMT20 Parallel Corpus Filtering Shared Task*  
Felicia Koerner and Philipp Koehn
- 11:00–12:30 *Improving Parallel Data Identification using Iteratively Refined Sentence Alignments and Bilingual Mappings of Pre-trained Language Models*  
Chi-kiu Lo and Eric Joanis
- 11:00–12:30 *Alibaba Submission to the WMT20 Parallel Corpus Filtering Task*  
Jun Lu, Xin Ge, Yangbin Shi and Yuqi Zhang
- 11:00–12:30 *Volctrans Parallel Corpus Filtering System for WMT 2020*  
Runxin Xu, Zhuo Zhi, Jun Cao, Mingxuan Wang and Lei Li

Friday, November 20, 2020 (continued)

**Quality Estimation Task**

- 11:00–12:30 *PATQUEST: Papago Translation Quality Estimation*  
Yujin Baek, Zae Myung Kim, Jihyung Moon, Hyunjoong Kim and Eunjeong Park
- 11:00–12:30 *RTM Ensemble Learning Results at Quality Estimation Task*  
Ergun Biçici
- 11:00–12:30 *NJU's submission to the WMT20 QE Shared Task*  
Qu Cui, Xiang Geng, Shujian Huang and Jiajun CHEN
- 11:00–12:30 *BERGAMOT-LATTE Submissions for the WMT20 Quality Estimation Shared Task*  
Marina Fomicheva, Shuo Sun, Lisa Yankovskaya, Frédéric Blain, Vishrav Chaudhary, Mark Fishel, Francisco Guzmán and Lucia Specia
- 11:00–12:30 *The NiuTrans System for the WMT20 Quality Estimation Shared Task*  
Chi Hu, Hui Liu, Kai Feng, Chen Xu, Nuo Xu, Zefan Zhou, Shiqin Yan, Yingfeng Luo, Chenglong Wang, Xia Meng, Tong Xiao and Jingbo Zhu
- 11:00–12:30 *Two-Phase Cross-Lingual Language Model Fine-Tuning for Machine Translation Quality Estimation*  
Dongjun Lee
- 11:00–12:30 *IST-Unbabel Participation in the WMT20 Quality Estimation Shared Task*  
João Moura, miguel vera, Daan van Stigt, Fabio Kepler and André F. T. Martins
- 11:00–12:30 *TMUOU Submission for WMT20 Quality Estimation Shared Task*  
Akifumi Nakamachi, Hiroki Shimanaka, Tomoyuki Kajiwara and Mamoru Komachi
- 11:00–12:30 *NICT Kyoto Submission for the WMT'20 Quality Estimation Task: Intermediate Training for Domain and Task Adaptation*  
Raphael Rubino
- 11:00–12:30 *TransQuest at WMT2020: Sentence-Level Direct Assessment*  
Tharindu Ranasinghe, Constantin Orasan and Ruslan Mitkov
- 11:00–12:30 *HW-TSC's Participation at WMT 2020 Quality Estimation Shared Task*  
Minghan Wang, Hao Yang, Hengchao Shang, Daimeng Wei, Jiabin Guo, Lizhi Lei, Ying Qin, Shimin Tao, Shiliang Sun, Yimeng Chen and Liangyou Li



**Friday, November 20, 2020 (continued)**

11:00–12:30 *Tencent submission for WMT20 Quality Estimation Shared Task*  
Haijiang Wu, Zixuan Wang, Qingsong Ma, Xinjie Wen, Ruichen Wang, Xiaoli Wang, Yulin Zhang, Zhipeng Yao and Siyao Peng

11:00–12:30 *Zero-Shot Translation Quality Estimation with Explicit Cross-Lingual Patterns*  
Lei Zhou, Liang Ding and Koichi Takeda

**Unsupervised and Very Low-Resource Translation Task**

11:00–12:30 *NLPRL System for Very Low Resource Supervised Machine Translation*  
Rupjyoti Baruah, Rajesh Kumar Mundotiya, Amit Kumar and Anil kumar Singh

11:00–12:30 *Low-Resource Translation as Language Modeling*  
Tucker Berckmann and Berkan Hiziroglu

11:00–12:30 *The LMU Munich System for the WMT 2020 Unsupervised Machine Translation Shared Task*  
Alexandra Chronopoulou, Dario Stojanovski, Viktor Hangya and Alexander Fraser

11:00–12:30 *UdS-DFKI@WMT20: Unsupervised MT and Very Low Resource Supervised MT for German-Upper Sorbian*  
Sourav Dutta, Jesujoba Alabi, Saptarashmi Bandyopadhyay, Dana Ruiter and Josef van Genabith

11:00–12:30 *Data Selection for Unsupervised Translation of German–Upper Sorbian*  
Lukas Edman, Antonio Toral and Gertjan van Noord

11:00–12:30 *The LMU Munich System for the WMT20 Very Low Resource Supervised MT Task*  
Jindřich Libovický, Viktor Hangya, Helmut Schmid and Alexander Fraser

11:00–12:30 *NRC Systems for Low Resource German-Upper Sorbian Machine Translation 2020: Transfer Learning with Lexical Modifications*  
Rebecca Knowles, Samuel Larkin, Darlene Stewart and Patrick Littell

11:00–12:30 *CUNI Systems for the Unsupervised and Very Low Resource Translation Task in WMT20*  
Ivana Kvapilíková, Tom Kocmi and Ondřej Bojar

11:00–12:30 *The University of Helsinki and Aalto University submissions to the WMT 2020 news and low-resource translation tasks*  
Yves Scherrer, Stig-Arne Grönroos and Sami Virpioja

**Friday, November 20, 2020 (continued)**

11:00–12:30 *The NITS-CNLP System for the Unsupervised MT Task at WMT 2020*  
Salam Michael Singh, Thoudam Doren Singh and Sivaji Bandyopadhyay

11:00–12:30 *Adobe AMPS's Submission for Very Low Resource Supervised Translation Task at WMT20*  
Keshaw Singh

**12:30–13:00** *Break*

**13:00–14:00** **Session 10: Invited Talk: "Low-resourcedness" Beyond Data**

**Ignatius Ezeani, Jade Abbott, Julia Kreutzer, Salomon Kabongo, Perez Ogayo, Shamsuddeen Hassan Muhammad, Rubungo Andre Niyongabo, Jamiil Toure Ali, Kathleen Siminyu, Salomey Osei, Wilhelmina Nekoto, Arshath Ramkilowan, Masabata Mokgesi-Seling, Bonaventure Dossou, Ayodele Olabiyi, Blessing Sibanda, Akinola Oluwole, Vukosi Marivate, Orevaoghene Ahia**

**14:00–15:30** **Session 11: Panel Discussion (Moderator: Lexi Birch)**

**Panel: Jade Abbott, Anoop Kunchukuttan, Kathleen Siminyu and Jörg Tiedemann**

**15:30–16:00** *Break*

**16:00–17:00** **Session 12: Shared Task Overview II (Chair: Matt Post)**

Friday, November 20, 2020 (continued)

17:00–18:30 **Session 13: Shared Task Posters II**

18:30–19:00 *Break*

19:00–20:00 **Session 14: Research Papers IV (Chair: Michael Auli)**

*On the Same Page? Comparing Inter-Annotator Agreement in Sentence and Document Level Human Machine Translation Evaluation*

Sheila Castilho

*How Should Markup Tags Be Translated?*

Greg Hanneman and Georgiana Dinu

*The Tatoeba Translation Challenge – Realistic Data Sets for Low Resource and Multilingual MT*

Jörg Tiedemann

*Human-Paraphrased References Improve Neural Machine Translation*

Markus Freitag, George Foster, David Grangier and Colin Cherry

*Incorporating Terminology Constraints in Automatic Post-Editing*

David Wan, Chris Kedzie, Faisal Ladhak, Marine Carpuat and Kathleen McKeown

