

WMT 2022

**Seventh Conference
on Machine Translation**

December 7–8, 2022

©2022 The Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)
209 N. Eighth Street
Stroudsburg, PA 18360
USA
Tel: +1-570-476-8006
Fax: +1-570-476-0860
acl@aclweb.org

ISBN 978-1-959429-29-6

Introduction

The Seventh Conference on Machine Translation (WMT 2022) took place on Wednesday, December 7 and Thursday, December 8, 2022 immediately preceding the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP 2022).

This is the seventh 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, the fourth time at ACL 2019 in Florence, Italy, the fifth time at EMNLP-2020, which was held as an online event due to the COVID-19 pandemic, and the sixth time at EMNLP 2021 at Punta Cana, Dominican Republic. 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 13 shared tasks. These consisted of 10 translation tasks: General Machine Translation of News, Similar Language Translation, Biomedical Translation, Large-Scale Machine Translation Evaluation for African Languages, Translation Efficiency, Sign Language Translation, Code-mixed Machine Translation, Chat Translation Task, Unsupervised MT and Very Low Resource Supervised Machine Translation, Metrics for Machine Translation, Quality Estimation of Translation, Word-Level Auto-Completion, Translation Suggestion, and the Automatic Post-Editing task.

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 2022 has received 46 full research paper submissions (not counting withdrawn submissions). In total, WMT 2022 featured 16 full research paper presentations and 96 shared task presentations.

The invited talk entitled was given by Ondřej Bojar from Charles University, Prague, Czech Republic

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, Rachel Bawden, Ondřej Bojar, Fethi Bougares, Rajen Chatterjee, Marta R. Costa-jussà, Anton Dvorkovich, Christian Federmann, Mark Fishel, Alexander Fraser, Markus Freitag, Yvette Graham, Roman Grundkiewicz, Paco Guzman, Barry Haddow, Matthias Huck, Antonio Jimeno Yepes, Rebecca Knowles, Tom Kocmi, Philipp Koehn, André Martins, Christof Monz, Makoto Morishita,

Masaaki Nagata, Toshiaki Nakazawa, Matteo Negri, Aurélie Névéol, Mariana Neves, Martin Popel, Matt Post, Mariya Shmatova, Marco Turchi, and Marcos Zampieri

Co-Organizers

Organizing Committee

Loïc Barrault (University of Sheffield)
Rachel Bawden (Inria)
Ondřej Bojar (Charles University in Prague)
Fethi Bougares (University of Le Mans)
Rajen Chatterjee (Apple)
Marta R. Costa-jussà (Universitat Politècnica de Catalunya)
Anton Dvorkovich (Neurodub)
Christian Federmann (MSR)
Mark Fishel (University of Tartu)
Alexander Fraser (LMU Munich)
Markus Freitag (Google)
Yvette Graham (DCU)
Roman Grundkiewicz (MSR)
Paco Guzman (Facebook)
Barry Haddow (University of Edinburgh)
Matthias Huck (LMU Munich)
Antonio Jimeno Yepes (IBM Research Australia)
Rebecca Knowles (NRC)
Tom Kocmi (MSR)
Philipp Koehn (Johns Hopkins University)
André Martins (Unbabel)
Christof Monz (University of Amsterdam)
Makoto Morishita (NTT)
Masaaki Nagata (NTT)
Toshiaki Nakazawa (University of Tokyo)
Matteo Negri (FBK)
Aurélie Névéal (LIMSI, CNRS)
Mariana Neves (German Federal Institute for Risk Assessment)
Martin Popel (Charles University in Prague)
Matt Post (Microsoft)
Mariya Shmatova (Neurodub)
Marco Turchi (FBK)
Marcos Zampieri (Rochester Institute of Technology)

Invited Speaker:

Ondřej Bojar, Charles University, Prague, Czech Republic

Program Committee:

Sadaf Abdul Rauf (Fatima Jinnah Women University)
David Adelani (University College London)
Jesujoba Alabi (Saarland University)
Antonios Anastasopoulos (George Mason University)

Philip Arthur (Oracle Digital Assistant)
Duygu Ataman (New York University)
Eleftherios Avramidis (German Research Center for Artificial Intelligence (DFKI))
Parnia Bahar (AppTek)
Maximiliana Behnke (The University of Edinburgh)
Meriem Beloucif (Uppsala University)
Toms Bergmanis (Tilde)
Frédéric Blain (University of Wolverhampton)
Laurie Burchell (University of Edinburgh)
Bill Byrne (University of Cambridge)
Ozan Caglayan (Imperial College London)
Sheila Castilho (Dublin City University)
Pinzhen Chen (University of Edinburgh)
Colin Cherry (Google)
Vishal Chowdhary (MSR)
Chenhui Chu (Kyoto University)
Ann Clifton (Spotify)
Marta R. Costa-jussà (Meta AI)
Josep Crego (SYSTRAN)
Raj Dabre (NICT)
Steve DeNeefe (RWS Language Weaver)
Michael Denkowski (Amazon)
Shuoyang Ding (Johns Hopkins University)
Miguel Domingo (Universitat Politècnica de València)
Kevin Duh (Johns Hopkins University)
Hiroshi Echizen'ya (Hokkai-Gakuen University)
Cristina España-Bonet (DFKI GmbH)
Miquel Esplà-Gomis (Universitat d'Alacant)
Natalia Fedorova (Toloka)
Yang Feng (Institute of Computing Technology, Chinese Academy of Sciences)
Orhan Firat (Google AI)
Mikel L. Forcada (Universitat d'Alacant)
George Foster (Google)
Atsushi Fujita (National Institute of Information and Communications Technology)
Mercedes García-Martínez (Pangeanic)
Ekaterina Garmash (Huawei)
Jesús González-Rubio (WebInterpret)
Isao Goto (NHK)
Cyril Goutte (National Research Council Canada)
Mandy Guo (Google)
Jeremy Gwinnup (Air Force Research Laboratory)
Viktor Hangya (Ludwig-Maximilians-Universität München)
Greg Hanneman (Amazon)
Jindřich Helcl (Charles University in Prague)
John Henderson (MITRE)
Amr Hendy (Microsoft)
Dam Heo (Neosapience. Inc.)

Nico Herbig (German Research Center for Artificial Intelligence (DFKI), Saarland Informatics Campus)
Christian Herold (RWTH Aachen University)
Felix Hieber (Amazon)
Cong Duy Vu Hoang (Oracle)
Hieu Hoang (Microsoft)
Yongkeun Hwang (Seoul National University)
Kenji Imamura (National Institute of Information and Communications Technology)
Josef Jon (Charles University)
Diptesh Kanojia (University of Surrey)
Hyunjoong Kim (NAVER Corporation)
Yunsu Kim (POSTECH)
Elizaveta Korotkova (University of Tartu)
Julia Kreutzer (Google)
Mateusz Krubiński (Charles University)
Roland Kuhn (National Research Council of Canada)
Gaurav Kumar (Bloomberg LP)
Shankar Kumar (Google)
Anoop Kunchukuttan (Microsoft AI and Research)
Wen Lai (Ludwig-Maximilians-Universität München)
Surafel M. Lakew (Amazon.com, Inc)
Ekaterina Lapshinova-Koltunski (Stiftung Universität Hildesheim)
Samuel Larkin (National Research Council Canada)
Giang Le (University of Illinois Urbana-Champaign)
WonKee Lee (LG AI Research)
Els Lefever (LT3, Ghent University)
Gregor Leusch (eBay)
Bei Li (Northeastern University)
Zhenhao Li (Imperial College London)
Jindřich Libovický (Charles Univeristy)
Seunghyun Lim (Naver Papago)
Patrick Littell (National Research Council of Canada)
Danni Liu (Karlsruhe Institute of Technology)
Qun Liu (Huawei Noah's Ark Lab)
Samuel Lüubli (Zurich University of Applied Sciences)
Vivien Macketanz (German Research Center for Artificial Intelligence (DFKI))
Jean Maillard (Meta AI)
Gideon Maillette de Buy Wenniger (Bernoulli Institute for Mathematics, Computer Science and Artificial Intelligence, University of Groningen, Groningen, The Netherlands)
Andreas Maletti (Universität Leipzig)
Vukosi Marivate (Department of Computer Science, University of Pretoria)
Arne Mauser (Snowflake)
Arya D. McCarthy (Johns Hopkins University)
Antonio Valerio Miceli Barone (The University of Edinburgh)
Kenton Murray (Johns Hopkins University)
Tomáš Musil (Charles University)
Mathias Müller (University of Zurich)

Ajay Nagesh (DiDi Labs)
Graeme Nail (University of Edinburgh)
Graham Neubig (Carnegie Mellon University)
Jan Niehues (Karlsruhe Institut of Technology)
Vassilina Nikoulina (Naver Labs Europe)
Xing Niu (Amazon AI)
Michal Novák (Charles University, Faculty of Mathematics and Physics)
Tsuyoshi Okita (Kyushu institute of technology)
Santanu Pal (Wipro)
Carla Parra Escartín (RWS Language Weaver)
Pavel Pecina (Charles University)
Stephan Peitz (Apple)
Sergio Penkale (Lingo24)
Mārcis Pinnis (Tilde)
Maja Popović (ADAPT, Dublin City University)
Vikas Raunak (Microsoft)
Matīss Rikters (National Institute of Advanced Industrial Science and Technology)
Annette Rios (University of Zurich)
Safiyyah Saleem (Meta AI)
Elizabeth Salesky (Johns Hopkins University)
Hassan Sawaf (aixplain, inc.)
Carolina Scarton (University of Sheffield)
Holger Schwenk (Facebook Artificial Intelligence Research)
Rico Sennrich (University of Zurich)
Patrick Simianer (Lilt)
Felix Stahlberg (Google Research)
David Stap (University of Amsterdam)
Katsuhito Sudoh (Nara Institute of Science and Technology (NAIST))
V́ctor M. Sánchez-Cartagena (Universitat d'Alacant)
Felipe Sánchez-Martínez (Universitat d'Alacant)
Aleš Tamchyna (Memsources)
Gongbo Tang (Beijing Language and Culture University; Uppsala University)
Brian Thompson (Amazon)
Jörg Tiedemann (University of Helsinki)
Antonio Toral (University of Groningen)
Ke Tran (Amazon)
Ferhan Ture (Comcast Applied AI Research)
Masao Utiyama (NICT)
David Vilar (Google)
Ekaterina Vylomova (University of Melbourne)
Wei Wang (Apple AI/ML)
Weiyue Wang (RWTH Aachen University)
Taro Watanabe (Nara Institute of Science and Technology)
Marion Weller-Di Marco (Ludwig-Maximilians-Universität München)
Guillaume Wenzek (Meta AI)
Hua Wu (Baidu)
Tong Xiao (Northeastern University)

Jinan Xu (Beijing Jiaotong University)
Jitao Xu (LISN, CNRS, Paris-Saclay University)
Yinfei Yang (Google)
Hyeongu Yun (LG AI Research)
François Yvon (LISN CNRS & Univ. Paris Saclay)
Xianfeng Zeng (Pattern Recognition Center, WeChat AI, Tencent)
Dakun Zhang (SYSTRAN)
Zhong Zhou (Carnegie Mellon University)

Table of Contents

<i>Findings of the 2022 Conference on Machine Translation (WMT22)</i> Tom Kocmi, Rachel Bawden, Ondřej Bojar, Anton Dvorkovich, Christian Federmann, Mark Fishel, Thamme Gowda, Yvette Graham, Roman Grundkiewicz, Barry Haddow, Rebecca Knowles, Philipp Koehn, Christof Monz, Makoto Morishita, Masaaki Nagata, Toshiaki Nakazawa, Michal Novák, Martin Popel, Maja Popović and Mariya Shmatova	1
<i>Results of WMT22 Metrics Shared Task: Stop Using BLEU - Neural Metrics Are Better and More Robust</i> Markus Freitag, Ricardo Rei, Nitika Mathur, Chi-kiu Lo, Craig Stewart, Eleftherios Avramidis, Tom Kocmi, George Foster, Alon Lavie and André F. T. Martins	46
<i>Findings of the WMT 2022 Shared Task on Quality Estimation</i> Chrysoula Zerva, Frédéric Blain, Ricardo Rei, Piyawat Lertvittayakumjorn, José G. C. de Souza, Steffen Eger, Diptesh Kanojia, Duarte Alves, Constantin Orăsan, Marina Fomicheva, André F. T. Martins and Lucia Specia	69
<i>Findings of the WMT 2022 Shared Task on Efficient Translation</i> Kenneth Heafield, Biao Zhang, Graeme Nail, Jelmer van der Linde and Nikolay Bogoychev ..	100
<i>Findings of the WMT 2022 Shared Task on Automatic Post-Editing</i> Pushpak Bhattacharyya, Rajen Chatterjee, Markus Freitag, Diptesh Kanojia, Matteo Negri and Marco Turchi	109
<i>Embarrassingly Easy Document-Level MT Metrics: How to Convert Any Pretrained Metric into a Document-Level Metric</i> Giorgos Vernikos, Brian Thompson, Prashant Mathur and Marcello Federico	118
<i>Searching for a Higher Power in the Human Evaluation of MT</i> Johnny Wei, Tom Kocmi and Christian Federmann	129
<i>Test Set Sampling Affects System Rankings: Expanded Human Evaluation of WMT20 English-Inuktitut Systems</i> Rebecca Knowles and Chi-kiu Lo	140
<i>Continuous Rating as Reliable Human Evaluation of Simultaneous Speech Translation</i> Dávid Javorský, Dominik Macháček and Ondřej Bojar	154
<i>Gender Bias Mitigation for NMT Involving Genderless Languages</i> Ander Corral and Xabier Saralegi	165
<i>Exploring the Benefits and Limitations of Multilinguality for Non-autoregressive Machine Translation</i> Sweta Agrawal, Julia Kreutzer and Colin Cherry	177
<i>Learning an Artificial Language for Knowledge-Sharing in Multilingual Translation</i> Danni Liu and Jan Niehues	188
<i>Don't Discard Fixed-Window Audio Segmentation in Speech-to-Text Translation</i> Chantal Amrhein and Barry Haddow	203
<i>Additive Interventions Yield Robust Multi-Domain Machine Translation Models</i> Elijah Rippeth and Matt Post	220

<i>Inria-ALMANaCH at WMT 2022: Does Transcription Help Cross-Script Machine Translation?</i> Jesujoba Alabi, Lydia Nishimwe, Benjamin Muller, Camille Rey, Benoît Sagot and Rachel Bawden	233
<i>NAIST-NICT-TIT WMT22 General MT Task Submission</i> Hiroyuki Deguchi, Kenji Imamura, Masahiro Kaneko, Yuto Nishida, Yusuke Sakai, Justin Vasselli, Huy Hien Vu and Taro Watanabe	244
<i>Samsung R&D Institute Poland Participation in WMT 2022</i> Adam Dobrowolski, Mateusz Klimaszewski, Adam Myśliwy, Marcin Szymański, Jakub Kowalski, Kornelia Szypuła, Paweł Przewłocki and Paweł Przybysz	251
<i>Tencent AI Lab - Shanghai Jiao Tong University Low-Resource Translation System for the WMT22 Translation Task</i> Zhiwei He, Xing Wang, Zhaopeng Tu, Shuming Shi and Rui Wang	260
<i>Lan-Bridge MT's Participation in the WMT 2022 General Translation Shared Task</i> Bing Han, Yangjian Wu, Gang Hu and Qiulin Chen	268
<i>Manifold's English-Chinese System at WMT22 General MT Task</i> Chang Jin, Tingxun Shi, Zhengshan Xue and Xiaodong Lin	275
<i>CUNI-Bergamot Submission at WMT22 General Translation Task</i> Josef Jon, Martin Popel and Ondřej Bojar	280
<i>KYB General Machine Translation Systems for WMT22</i> Shivam Kalkar, Yoko Matsuzaki and Ben LI	290
<i>Analyzing the Use of Influence Functions for Instance-Specific Data Filtering in Neural Machine Translation</i> Tsz Kin Lam, Eva Hasler and Felix Hieber	295
<i>The AISP-SJTU Translation System for WMT 2022</i> Guangfeng Liu, Qinpei Zhu, Xingyu Chen, Renjie Feng, Jianxin Ren, Renshou Wu, Qingliang Miao, Rui Wang and Kai Yu	310
<i>NT5 at WMT 2022 General Translation Task</i> Makoto Morishita, Keito Kudo, Yui Oka, Katsuki Chousa, Shun Kiyono, Sho Takase and Jun Suzuki	318
<i>Adam Mickiewicz University at WMT 2022: NER-Assisted and Quality-Aware Neural Machine Translation</i> Artur Nowakowski, Gabriela Pałka, Kamil Guttman and Mikołaj Pokrywka	326
<i>Evaluating Corpus Cleanup Methods in the WMT'22 News Translation Task</i> Marilena Malli and George Tambouratzis	335
<i>PROMT Systems for WMT22 General Translation Task</i> Alexander Molchanov, Vladislav Kovalenko and Natalia Makhamalkina	342
<i>eTranslation's Submissions to the WMT22 General Machine Translation Task</i> Csaba Oravecz, Katina Bontcheva, David Kolovratnik, Bogomil Kovachev and Christopher Scott	346

<i>CUNI Systems for the WMT 22 Czech-Ukrainian Translation Task</i>	
Martin Popel, Jindřich Libovický and Jindřich Helcl	352
<i>The ARC-NKUA Submission for the English-Ukrainian General Machine Translation Shared Task at WMT22</i>	
Dimitrios Roussis and Vassilis Papavassiliou	358
<i>The NiuTrans Machine Translation Systems for WMT22</i>	
Wei qiao Shan, Zhiquan Cao, Yuchen Han, Siming Wu, Yimin Hu, jie wang, Yi Zhang, Hou Baoyu, Hang Cao, Chenghao Gao, Xiaowen Liu, Tong Xiao, Anxiang Ma and Jingbo Zhu	366
<i>Teaching Unseen Low-resource Languages to Large Translation Models</i>	
Maali Tars, Taïdo Purason and Andre Täätar	375
<i>Can Domains Be Transferred across Languages in Multi-Domain Multilingual Neural Machine Translation?</i>	
Thuy-Trang Vu, Shahram Khadivi, Xuanli He, Dinh Phung and Gholamreza Haffari	381
<i>DUTNLP Machine Translation System for WMT22 General MT Task</i>	
Ting Wang, Huan Liu, Junpeng Liu and Degen Huang	397
<i>HW-TSC's Submissions to the WMT 2022 General Machine Translation Shared Task</i>	
Daimeng Wei, Zhiqiang Rao, Zhanglin Wu, Shaojun Li, Yuanchang Luo, Yuhao Xie, Xiaoyu Chen, Hengchao Shang, Zongyao Li, Zhengzhe Yu, Jinlong Yang, Miaomiao Ma, Lizhi Lei, Hao Yang and Ying Qin	403
<i>Vega-MT: The JD Explore Academy Machine Translation System for WMT22</i>	
Changtong Zan, keqin Peng, Liang Ding, Baopu Qiu, Boan Liu, Shwai He, Qingyu Lu, Zheng Zhang, Chuang Liu, Weifeng Liu, Yibing Zhan and Dacheng Tao	411
<i>No Domain Left behind</i>	
Hui Zeng	423
<i>GTCOM Neural Machine Translation Systems for WMT22</i>	
Hao Zong and Chao Bei	428
<i>Linguistically Motivated Evaluation of the 2022 State-of-the-art Machine Translation Systems for Three Language Directions</i>	
Vivien Macketanz, Shushen Manakhimova, Eleftherios Avramidis, Ekaterina Lapshinova-Koltunski, Sergei Bagdasarov and Sebastian Möller	432
<i>Automated Evaluation Metric for Terminology Consistency in MT</i>	
Kirill Semenov and Ondřej Bojar	450
<i>Test Suite Evaluation: Morphological Challenges and Pronoun Translation</i>	
Marion Weller-Di Marco and Alexander Fraser	458
<i>Robust MT Evaluation with Sentence-level Multilingual Augmentation</i>	
Duarte Alves, Ricardo Rei, Ana C Farinha, José G. C. de Souza and André F. T. Martins	469
<i>ACES: Translation Accuracy Challenge Sets for Evaluating Machine Translation Metrics</i>	
Chantal Amrhein, Nikita Moghe and Liane Guillou	479
<i>Linguistically Motivated Evaluation of Machine Translation Metrics Based on a Challenge Set</i>	
Eleftherios Avramidis and Vivien Macketanz	514

<i>Exploring Robustness of Machine Translation Metrics: A Study of Twenty-Two Automatic Metrics in the WMT22 Metric Task</i>	
Xiaoyu Chen, Daimeng Wei, Hengchao Shang, Zongyao Li, Zhanglin Wu, Zhengzhe Yu, Ting Zhu, Mengli Zhu, Ning Xie, Lizhi Lei, Shimin Tao, Hao Yang and Ying Qin	530
<i>MS-COMET: More and Better Human Judgements Improve Metric Performance</i>	
Tom Kocmi, Hitokazu Matsushita and Christian Federmann	541
<i>Partial Could Be Better than Whole. HW-TSC 2022 Submission for the Metrics Shared Task</i>	
Yilun Liu, Xiaosong Qiao, Zhanglin Wu, Su Chang, Min Zhang, Yanqing Zhao, Song Peng, shimin tao, Hao Yang, Ying Qin, Jiabin Guo, Minghan Wang, Yinglu Li, Peng Li and Xiaofeng Zhao	549
<i>Unsupervised Embedding-based Metric for MT Evaluation with Improved Human Correlation</i>	
Ananya Mukherjee and Manish Shrivastava	558
<i>REUSE: REference-free UnSupervised Quality Estimation Metric</i>	
Ananya Mukherjee and Manish Shrivastava	564
<i>MaTESe: Machine Translation Evaluation as a Sequence Tagging Problem</i>	
Stefano Perrella, Lorenzo Proietti, Alessandro Scirè, Niccolò Campolungo and Roberto Navigli	569
<i>COMET-22: Unbabel-IST 2022 Submission for the Metrics Shared Task</i>	
Ricardo Rei, José G. C. de Souza, Duarte Alves, Chrysoula Zerva, Ana C Farinha, Taisiya Glushkova, Alon Lavie, Luisa Coheur and André F. T. Martins	578
<i>Alibaba-Translate China’s Submission for WMT2022 Metrics Shared Task</i>	
Yu Wan, Keqin Bao, Dayiheng Liu, Baosong Yang, Derek F. Wong, Lidia S. Chao, Wenqiang Lei and Jun Xie	586
<i>Quality Estimation via Backtranslation at the WMT 2022 Quality Estimation Task</i>	
Sweta Agrawal, Nikita Mehandru, Niloufar Salehi and Marine Carpuat	593
<i>Alibaba-Translate China’s Submission for WMT 2022 Quality Estimation Shared Task</i>	
Keqin Bao, Yu Wan, Dayiheng Liu, Baosong Yang, Wenqiang Lei, Xiangnan He, Derek F. Wong and Jun Xie	597
<i>KU X Upstage’s Submission for the WMT22 Quality Estimation: Critical Error Detection Shared Task</i>	
Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo and Heuseok Lim	606
<i>NJUNLP’s Participation for the WMT2022 Quality Estimation Shared Task</i>	
Xiang Geng, Yu Zhang, Shujian Huang, shimin tao, Hao Yang and Jiajun CHEN	615
<i>BJTU-Toshiba’s Submission to WMT22 Quality Estimation Shared Task</i>	
Hui Huang, Hui Di, Chunyou Li, Hanming Wu, Kazushige Ouchi, Yufeng Chen, Jian Liu and Jinan Xu	621
<i>Papago’s Submission to the WMT22 Quality Estimation Shared Task</i>	
Seunghyun Lim and Jeonghyeok Park	627
<i>CometKiwi: IST-Unbabel 2022 Submission for the Quality Estimation Shared Task</i>	
Ricardo Rei, Marcos Treviso, Nuno M. Guerreiro, Chrysoula Zerva, Ana C Farinha, Christine Maroti, José G. C. de Souza, Taisiya Glushkova, Duarte Alves, Luisa Coheur, Alon Lavie and André F. T. Martins	634

<i>CrossQE: HW-TSC 2022 Submission for the Quality Estimation Shared Task</i>	
shimin tao, Su Chang, Ma Miaomiao, Hao Yang, Xiang Geng, Shujian Huang, Min Zhang, Jiabin Guo, Minghan Wang and Yinglu Li	646
<i>Wlocalize-ARC/NKUA's Submission to the WMT 2022 Quality Estimation Shared Task</i>	
Eirini Zafeiridou and Sokratis Sofianopoulos	653
<i>Edinburgh's Submission to the WMT 2022 Efficiency Task</i>	
Nikolay Bogoychev, Maximiliana Behnke, Jelmer van der Linde, Graeme Nail, Kenneth Heafield, Biao Zhang and Sidharth Kashyap	661
<i>CUNI Non-Autoregressive System for the WMT 22 Efficient Translation Shared Task</i>	
Jindřich Helcl	668
<i>The RoyalFlush System for the WMT 2022 Efficiency Task</i>	
Bo Qin, Aixin Jia, Qiang Wang, Jianning Lu, Shuqin Pan, Haibo Wang and Ming Chen	671
<i>HW-TSC's Submission for the WMT22 Efficiency Task</i>	
Hengchao Shang, Ting Hu, Daimeng Wei, Zongyao Li, Xianzhi Yu, Jianfei Feng, Ting Zhu, Lizhi Lei, Shimin Tao, Hao Yang, Ying Qin, Jinlong Yang, Zhiqiang Rao and Zhengzhe Yu	677
<i>IIT Bombay's WMT22 Automatic Post-Editing Shared Task Submission</i>	
Sourabh Deoghare and Pushpak Bhattacharyya	682
<i>LUL's WMT22 Automatic Post-Editing Shared Task Submission</i>	
Xiaoying Huang, Xingrui Lou, Fan Zhang and Tu Mei	689
<i>Findings of the WMT 2022 Biomedical Translation Shared Task: Monolingual Clinical Case Reports</i>	
Mariana Neves, Antonio Jimeno Yepes, Amy Siu, Roland Roller, Philippe Thomas, Maika Vicente Navarro, Lana Yeganova, Dina Wiemann, Giorgio Maria Di Nunzio, Federica Vezzani, Christel Gerardin, Rachel Bawden, Darryl Johan Estrada, Salvador Lima-Lopez, Eulalia Farre-Maduel, Martin Krallinger, Cristian Grozea and Aurelie Neveol	694
<i>Findings of the WMT 2022 Shared Task on Chat Translation</i>	
Ana C Farinha, M. Amin Farajian, Marianna Buchicchio, Patrick Fernandes, José G. C. de Souza, Helena Moniz and André F. T. Martins	724
<i>Findings of the First WMT Shared Task on Sign Language Translation (WMT-SLT22)</i>	
Mathias Müller, Sarah Ebling, Eleftherios Avramidis, Alessia Battisti, Michèle Berger, Richard Bowden, Annelies Braffort, Necati Cihan Camgöz, Cristina España-Bonet, Roman Grundkiewicz, Zifan Jiang, Oscar Koller, Amit Moryossef, Regula Perrollaz, Sabine Reinhard, Annette Rios, Dimitar Shterionov, Sandra Sidler-Miserez, Katja Tissi and Davy Van Landuyt	744
<i>Findings of the WMT'22 Shared Task on Large-Scale Machine Translation Evaluation for African Languages</i>	
David Adelani, Md Mahfuz Ibn Alam, Antonios Anastasopoulos, Akshita Bhagia, Marta R. Costajussà, Jesse Dodge, Fahim Faisal, Christian Federmann, Natalia Fedorova, Francisco Guzmán, Sergey Koshelev, Jean Maillard, Vukosi Marivate, Jonathan Mbuya, Alexandre Mourachko, Safiyah Saleem, Holger Schwenk and Guillaume Wenzek	773
<i>Findings of the WMT 2022 Shared Tasks in Unsupervised MT and Very Low Resource Supervised MT</i>	
Marion Weller-Di Marco and Alexander Fraser	801
<i>Overview and Results of MixMT Shared-Task at WMT 2022</i>	
Vivek Srivastava and Mayank Singh	806

<i>Findings of the Word-Level AutoCompletion Shared Task in WMT 2022</i>	
Francisco Casacuberta, George Foster, Guoping Huang, Philipp Koehn, Geza Kovacs, Lemao Liu, Shuming Shi, Taro Watanabe and Chengqing Zong	812
<i>Findings of the WMT 2022 Shared Task on Translation Suggestion</i>	
Zhen Yang, Fandong Meng, Yingxue Zhang, Ernan Li and Jie Zhou	821
<i>Focused Concatenation for Context-Aware Neural Machine Translation</i>	
Lorenzo Lupo, Marco Dinarelli and Laurent Besacier	830
<i>Does Sentence Segmentation Matter for Machine Translation?</i>	
Rachel Wicks and Matt Post	843
<i>Revisiting Locality Sensitive Hashing for Vocabulary Selection in Fast Neural Machine Translation</i>	
Hieu Hoang, Marcin Junczys-Dowmunt, Roman Grundkiewicz and Huda Khayrallah	855
<i>Too Brittle to Touch: Comparing the Stability of Quantization and Distillation towards Developing Low-Resource MT Models</i>	
Harshita Diddee, Sandipan Dandapat, Monojit Choudhury, Tanuja Ganu and Kalika Bali	870
<i>Data Augmentation for Inline Tag-Aware Neural Machine Translation</i>	
Yonghyun Ryu, Yoonjung Choi and Sangha Kim	886
<i>The SPECTRANS System Description for the WMT22 Biomedical Task</i>	
Nicolas Ballier, Jean-Baptiste Yunès, Guillaume Wisniewski, Lichao Zhu and Maria Zimina	895
<i>SRT's Neural Machine Translation System for WMT22 Biomedical Translation Task</i>	
Yoonjung Choi, jiho shin, Yonghyun Ryu and Sangha Kim	901
<i>Examining Large Pre-Trained Language Models for Machine Translation: What You Don't Know about It</i>	
Lifeng Han, Gleb Erofeev, Irina Sorokina, Serge Gladkoff and Goran Nenadic	908
<i>Summer: WeChat Neural Machine Translation Systems for the WMT22 Biomedical Translation Task</i>	
Ernan Li, Fandong Meng and Jie Zhou	920
<i>Optum's Submission to WMT22 Biomedical Translation Tasks</i>	
Sahil Manchanda and Saurabh Bhagwat	925
<i>Huawei BabelTar NMT at WMT22 Biomedical Translation Task: How We Further Improve Domain-specific NMT</i>	
Weixuan Wang, Xupeng Meng, Suqing Yan, Ye TIAN and Wei Peng	930
<i>HW-TSC Translation Systems for the WMT22 Biomedical Translation Task</i>	
Zhanglin Wu, Jinlong Yang, Zhiqiang Rao, Zhengzhe Yu, Daimeng Wei, Xiaoyu Chen, Zongyao Li, Hengchao Shang, Shaojun Li, Ming Zhu, Yuanchang Luo, Yuhao Xie, Miaomiao Ma, Ting Zhu, Lizhi Lei, Song Peng, Hao Yang and Ying Qin	936
<i>Unbabel-IST at the WMT Chat Translation Shared Task</i>	
João Alves, Pedro Henrique Martins, José G. C. de Souza, M. Amin Farajian and André F. T. Martins	943
<i>Investigating Effectiveness of Multi-Encoder for Conversational Neural Machine Translation</i>	
Baban Gain, Ramakrishna Appicharla, Soumya Chennabasavaraj, Nikesh Garera, Asif Ekbal and Muthusamy Chelliah	949

<i>BJTU-WeChat's Systems for the WMT22 Chat Translation Task</i>	
Yunlong Liang, Fandong Meng, Jinan Xu, Yufeng Chen and Jie Zhou	955
<i>HW-TSC Translation Systems for the WMT22 Chat Translation Task</i>	
Jinlong Yang, Zongyao Li, Daimeng Wei, Hengchao Shang, Xiaoyu Chen, Zhengzhe Yu, Zhiqiang Rao, Shaojun Li, Zhanglin Wu, Yuhao Xie, YUanchang Luo, Ting Zhu, Yanqing Zhao, Lizhi Lei, Hao Yang and Ying Qin	962
<i>Clean Text and Full-Body Transformer: Microsoft's Submission to the WMT22 Shared Task on Sign Language Translation</i>	
Subhadeep Dey, Abhilash Pal, Cyrine Chaabani and Oscar Koller	969
<i>Spatio-temporal Sign Language Representation and Translation</i>	
Yasser HAMIDULLAH, Josef van Genabith and Cristina España-Bonet	977
<i>Experimental Machine Translation of the Swiss German Sign Language via 3D Augmentation of Body Keypoints</i>	
Lorenz Hufe and Eleftherios Avramidis	983
<i>TTIC's WMT-SLT 22 Sign Language Translation System</i>	
Bowen Shi, Diane Brentari, Gregory Shakhnarovich and Karen Livescu	989
<i>Tackling Low-Resourced Sign Language Translation: UPC at WMT-SLT 22</i>	
Laia Tarres, Gerard I. Gállego, Xavier Giro-i-Nieto and Jordi Torres	994
<i>Separating Grains from the Chaff: Using Data Filtering to Improve Multilingual Translation for Low-Resourced African Languages</i>	
Idris Abdulmumin, Michael Beukman, Jesujoba Alabi, Chris Chinenye Emezue, Everlyn Chimoto, Tosin Adewumi, Shamsuddeen Muhammad, Mofetoluwa Adeyemi, Oreen Yousuf, Sahib Singh and Tajuddeen Gwadabe	1001
<i>Language Adapters for Large-Scale MT: The GMU System for the WMT 2022 Large-Scale Machine Translation Evaluation for African Languages Shared Task</i>	
Md Mahfuz Ibn Alam and Antonios Anastasopoulos	1015
<i>Samsung Research Philippines - Datasaur AI's Submission for the WMT22 Large Scale Multilingual Translation Task</i>	
Jan Christian Blaise Cruz and Lintang Sutawika	1034
<i>University of Cape Town's WMT22 System: Multilingual Machine Translation for Southern African Languages</i>	
Khalid N. Elmadani, Francois Meyer and Jan Buys	1039
<i>Tencent's Multilingual Machine Translation System for WMT22 Large-Scale African Languages</i>	
Wenxiang Jiao, Zhaopeng Tu, Jiarui Li, Wenxuan Wang, Jen-tse Huang and Shuming Shi	1049
<i>DENTRA: Denoising and Translation Pre-training for Multilingual Machine Translation</i>	
Samta Kamboj, Sunil Kumar Sahu and Neha Sengupta	1057
<i>The VolcTrans System for WMT22 Multilingual Machine Translation Task</i>	
Xian Qian, Kai Hu, Jiaqiang Wang, Yifeng Liu, Xingyuan Pan, Jun Cao and Mingxuan Wang	1068
<i>WebCrawl African : A Multilingual Parallel Corpora for African Languages</i>	
Pavanpankaj Vegi, Sivabhavani J, Biswajit Paul, Abhinav Mishra, Prashant Banjare, Prasanna Kumar K R and Chitra Viswanathan	1076

<i>ANVITA-African: A Multilingual Neural Machine Translation System for African Languages</i> Pavanpankaj Vegi, Sivabhavani J, Biswajit Paul, Prasanna Kumar K R and Chitra Viswanathan	1090
<i>HW-TSC Systems for WMT22 Very Low Resource Supervised MT Task</i> Shaojun Li, Yuanchang Luo, Daimeng Wei, Zongyao Li, Hengchao Shang, Xiaoyu Chen, Zhanglin Wu, Jinlong Yang, Zhiqiang Rao, Zhengzhe Yu, Yuhao Xie, Lizhi Lei, Hao Yang and Ying Qin . . .	1098
<i>Unsupervised and Very-Low Resource Supervised Translation on German and Sorbian Variant Languages</i> Rahul Tangsali, Aditya Jagdish Vyawahare, Aditya Vyankatesh Mandke, Onkar Rupesh Litake and Dipali Dattatray Kadam	1104
<i>MUNI-NLP Systems for Lower Sorbian-German and Lower Sorbian-Upper Sorbian Machine Translation @ WMT22</i> Edoardo Signoroni and Pavel Rychlý	1111
<i>The AIC System for the WMT 2022 Unsupervised MT and Very Low Resource Supervised MT Task</i> Ahmad Shapiro, Mahmoud Tarek Salama, Omar Khaled Abdelhakim, Mohamed Essam Fayed, Ayman Khalafallah and Noha Adly	1117
<i>NICT at MixMT 2022: Synthetic Code-Mixed Pre-training and Multi-way Fine-tuning for Hinglish-English Translation</i> Raj Dabre	1122
<i>Gui at MixMT 2022 : English-Hinglish : An MT Approach for Translation of Code Mixed Data</i> Akshat Gahoi, Jayant Duneja, Anshul Padhi, Shivam Mangale, Saransh Rajput, Tanvi Kamble, Dipti Misra Sharma and Vasudev Varma	1126
<i>MUCS@MixMT: IndicTrans-based Machine Translation for Hinglish Text</i> Asha Hegde and Shashirekha Hosahalli Lakshmaiah	1131
<i>SIT at MixMT 2022: Fluent Translation Built on Giant Pre-trained Models</i> Abdul Khan, Hrishikesh Dinkar Kanade, Girish Amar Budhrani, Preet Jhanglani and Jia Xu .	1136
<i>The University of Edinburgh’s Submission to the WMT22 Code-Mixing Shared Task (MixMT)</i> Faheem Kirefu, Vivek Iyer, Pinzhen Chen and Laurie Burchell	1145
<i>CNLP-NITS-PP at MixMT 2022: Hinglish-English Code-Mixed Machine Translation</i> Sahinur Rahman Laskar, Rahul Singh, Shyambabu Pandey, Riyanka Manna, Partha Pakray and Sivaji Bandyopadhyay	1158
<i>Domain Curricula for Code-Switched MT at MixMT 2022</i> Lekan Raheem, Maab Elrashid, Melvin Johnson and Julia Kreutzer	1162
<i>Lingua Custodia’s Participation at the WMT 2022 Word-Level Auto-completion Shared Task</i> Melissa Ailem, Jingshu Liu, Jean-Gabriel Barthelemy and Raheel Qader	1170
<i>Translation Word-Level Auto-Completion: What Can We Achieve Out of the Box?</i> Yasmin Moslem, Rejwanul Haque and Andy Way	1176
<i>PRHLT’s Submission to WLAC 2022</i> Angel Navarro, Miguel Domingo and Francisco Casacuberta	1182
<i>IIGROUP Submissions for WMT22 Word-Level AutoCompletion Task</i> Cheng Yang, Siheng Li, Chufan Shi and Yujiu Yang	1187

<i>HW-TSC's Submissions to the WMT22 Word-Level Auto Completion Task</i>	
Hao Yang, Hengchao Shang, Zongyao Li, Daimeng Wei, Xianghui He, Xiaoyu Chen, Zhengzhe Yu, Jiaxin Guo, Jinlong Yang, Shaojun Li, Yuanchang Luo, Yuhao Xie, Lizhi Lei and Ying Qin . . .	1192
<i>TSMind: Alibaba and Soochow University's Submission to the WMT22 Translation Suggestion Task</i>	
Xin Ge, Ke Wang, Jiayi Wang, Nini Xiao, Xiangyu Duan, Yu Zhao and Yuqi Zhang	1198
<i>Transn's Submissions to the WMT22 Translation Suggestion Task</i>	
Mao Hongbao, Zhang Wenbo, Cai Jie and Cheng Jianwei	1205
<i>Improved Data Augmentation for Translation Suggestion</i>	
Hongxiao Zhang, Siyu Lai, Songming Zhang, Hui Huang, Yufeng Chen, Jinan Xu and Jian Liu	1211

Conference Program

Wednesday, December 7, 2022

9:00–9:10 *Opening Remarks*

9:10–10:30 Session 1: Shared Task Overview Papers I

9:10–9:30

Findings of the 2022 Conference on Machine Translation (WMT22)

Tom Kocmi, Rachel Bawden, Ondřej Bojar, Anton Dvorkovich, Christian Federmann, Mark Fishel, Thamme Gowda, Yvette Graham, Roman Grundkiewicz, Barry Haddow, Rebecca Knowles, Philipp Koehn, Christof Monz, Makoto Morishita, Masaaki Nagata, Toshiaki Nakazawa, Michal Novák, Martin Popel, Maja Popović and Mariya Shmatova

9:30–9:50

Results of WMT22 Metrics Shared Task: Stop Using BLEU - Neural Metrics Are Better and More Robust

Markus Freitag, Ricardo Rei, Nitika Mathur, Chi-kiu Lo, Craig Stewart, Eleftherios Avramidis, Tom Kocmi, George Foster, Alon Lavie and André F. T. Martins

9:50–10:00

Findings of the WMT 2022 Shared Task on Quality Estimation

Chrysoula Zerva, Frédéric Blain, Ricardo Rei, Piyawat Lertvittayakumjorn, José G. C. de Souza, Steffen Eger, Diptesh Kanojia, Duarte Alves, Constantin Orăsan, Marina Fomicheva, André F. T. Martins and Lucia Specia

10:00–10:15

Findings of the WMT 2022 Shared Task on Efficient Translation

Kenneth Heafield, Biao Zhang, Graeme Nail, Jelmer van der Linde and Nikolay Bogoychev

10:15–10:30

Findings of the WMT 2022 Shared Task on Automatic Post-Editing

Pushpak Bhattacharyya, Rajen Chatterjee, Markus Freitag, Diptesh Kanojia, Matteo Negri and Marco Turchi

10:30–11:00 *Coffee Break*

Wednesday, December 7, 2022 (continued)

11:00–12:40 Session 2: Research Papers on Evaluation and Bias

11:00–11:20 *Embarrassingly Easy Document-Level MT Metrics: How to Convert Any Pretrained Metric into a Document-Level Metric*

Giorgos Vernikos, Brian Thompson, Prashant Mathur and Marcello Federico

11:20–11:40 *Searching for a Higher Power in the Human Evaluation of MT*

Johnny Wei, Tom Kocmi and Christian Federmann

11:40–12:00 *Test Set Sampling Affects System Rankings: Expanded Human Evaluation of WMT20 English-Inuktitut Systems*

Rebecca Knowles and Chi-kiu Lo

12:00–12:20 *Continuous Rating as Reliable Human Evaluation of Simultaneous Speech Translation*

Dávid Javorský, Dominik Macháček and Ondřej Bojar

12:20–12:40 *Gender Bias Mitigation for NMT Involving Genderless Languages*

Ander Corral and Xabier Saralegi

12:40–14:00 Lunch Break

14:00–15:30 Session 3: Research Papers on Multilingual, Multimodal, Multidomain Translation

14:00–14:20 *Exploring the Benefits and Limitations of Multilinguality for Non-autoregressive Machine Translation*

Sweta Agrawal, Julia Kreutzer and Colin Cherry

14:20–14:40 *Learning an Artificial Language for Knowledge-Sharing in Multilingual Translation*

Danni Liu and Jan Niehues

14:40–15:00 *Don't Discard Fixed-Window Audio Segmentation in Speech-to-Text Translation*

Chantal Amrhein and Barry Haddow

15:00–15:20 *Additive Interventions Yield Robust Multi-Domain Machine Translation Models*

Elijah Rippeth and Matt Post

Wednesday, December 7, 2022 (continued)

15:20–16:00 *Coffee Break*

16:00–17:30 **Session 4: Shared Task System Description Posters I**

16:00–17:30 **News Translation Task**

16:00–17:30 *Inria-ALMAnaCH at WMT 2022: Does Transcription Help Cross-Script Machine Translation?*

Jesujoba Alabi, Lydia Nishimwe, Benjamin Muller, Camille Rey, Benoît Sagot and Rachel Bawden

16:00–17:30 *NAIST-NICT-TIT WMT22 General MT Task Submission*

Hiroyuki Deguchi, Kenji Imamura, Masahiro Kaneko, Yuto Nishida, Yusuke Sakai, Justin Vasselli, Huy Hien Vu and Taro Watanabe

16:00–17:30 *Samsung R&D Institute Poland Participation in WMT 2022*

Adam Dobrowolski, Mateusz Klimaszewski, Adam Myśliwy, Marcin Szymański, Jakub Kowalski, Kornelia Szypuła, Paweł Przewłocki and Paweł Przybysz

16:00–17:30 *Tencent AI Lab - Shanghai Jiao Tong University Low-Resource Translation System for the WMT22 Translation Task*

Zhiwei He, Xing Wang, Zhaopeng Tu, Shuming Shi and Rui Wang

16:00–17:30 *Lan-Bridge MT's Participation in the WMT 2022 General Translation Shared Task*

Bing Han, Yangjian Wu, Gang Hu and Qiulin Chen

16:00–17:30 *Manifold's English-Chinese System at WMT22 General MT Task*

Chang Jin, Tingxun Shi, Zhengshan Xue and Xiaodong Lin

16:00–17:30 *CUNI-Bergamot Submission at WMT22 General Translation Task*

Josef Jon, Martin Popel and Ondřej Bojar

16:00–17:30 *KYB General Machine Translation Systems for WMT22*

Shivam Kalkar, Yoko Matsuzaki and Ben LI

16:00–17:30 *Analyzing the Use of Influence Functions for Instance-Specific Data Filtering in Neural Machine Translation*

Tsz Kin Lam, Eva Hasler and Felix Hieber

Wednesday, December 7, 2022 (continued)

- 16:00–17:30 *The AISP-SJTU Translation System for WMT 2022*
Guangfeng Liu, Qinpei Zhu, Xingyu Chen, Renjie Feng, Jianxin Ren, Renshou Wu, Qingliang Miao, Rui Wang and Kai Yu
- 16:00–17:30 *NT5 at WMT 2022 General Translation Task*
Makoto Morishita, Keito Kudo, Yui Oka, Katsuki Chousa, Shun Kiyono, Sho Takase and Jun Suzuki
- 16:00–17:30 *Adam Mickiewicz University at WMT 2022: NER-Assisted and Quality-Aware Neural Machine Translation*
Artur Nowakowski, Gabriela Pałka, Kamil Guttmann and Mikołaj Pokrywka
- 16:00–17:30 *Evaluating Corpus Cleanup Methods in the WMT'22 News Translation Task*
Marilena Malli and George Tambouratzis
- 16:00–17:30 *PROMT Systems for WMT22 General Translation Task*
Alexander Molchanov, Vladislav Kovalenko and Natalia Makhamalkina
- 16:00–17:30 *eTranslation's Submissions to the WMT22 General Machine Translation Task*
Csaba Oravecz, Katina Bontcheva, David Kolovratnik, Bogomil Kovachev and Christopher Scott
- 16:00–17:30 *CUNI Systems for the WMT 22 Czech-Ukrainian Translation Task*
Martin Popel, Jindřich Libovický and Jindřich Helcl
- 16:00–17:30 *The ARC-NKUA Submission for the English-Ukrainian General Machine Translation Shared Task at WMT22*
Dimitrios Roussis and Vassilis Papavassiliou
- 16:00–17:30 *The NiuTrans Machine Translation Systems for WMT22*
Weiqiao Shan, Zhiquan Cao, Yuchen Han, Siming Wu, Yimin Hu, jie wang, Yi Zhang, Hou Baoyu, Hang Cao, Chenghao Gao, Xiaowen Liu, Tong Xiao, Anxiang Ma and Jingbo Zhu
- 16:00–17:30 *Teaching Unseen Low-resource Languages to Large Translation Models*
Maali Tars, Taido Purason and Andre Tättar
- 16:00–17:30 *Can Domains Be Transferred across Languages in Multi-Domain Multilingual Neural Machine Translation?*
Thuy-Trang Vu, Shahram Khadivi, Xuanli He, Dinh Phung and Gholamreza Haffari
- 16:00–17:30 *DUTNLP Machine Translation System for WMT22 General MT Task*
Ting Wang, Huan Liu, Junpeng Liu and Degen Huang

Wednesday, December 7, 2022 (continued)

- 16:00–17:30 *HW-TSC's Submissions to the WMT 2022 General Machine Translation Shared Task*
Daimeng Wei, Zhiqiang Rao, Zhanglin Wu, Shaojun Li, Yuanchang Luo, Yuhao Xie, Xiaoyu Chen, Hengchao Shang, Zongyao Li, Zhengzhe Yu, Jinlong Yang, Miaomiao Ma, Lizhi Lei, Hao Yang and Ying Qin
- 16:00–17:30 *Vega-MT: The JD Explore Academy Machine Translation System for WMT22*
Changtong Zan, keqin Peng, Liang Ding, Baopu Qiu, Boan Liu, Shwai He, Qingyu Lu, Zheng Zhang, Chuang Liu, Weifeng Liu, Yibing Zhan and Dacheng Tao
- 16:00–17:30 *No Domain Left behind*
Hui Zeng
- 16:00–17:30 *GTCOM Neural Machine Translation Systems for WMT22*
Hao Zong and Chao Bei
- 16:00–17:30 Test Suites**
- 16:00–17:30 *Linguistically Motivated Evaluation of the 2022 State-of-the-art Machine Translation Systems for Three Language Directions*
Vivien Macketanz, Shushen Manakhimova, Eleftherios Avramidis, Ekaterina Lapshinova-Koltunski, Sergei Bagdasarov and Sebastian Möller
- 16:00–17:30 *Automated Evaluation Metric for Terminology Consistency in MT*
Kirill Semenov and Ondřej Bojar
- 16:00–17:30 *Test Suite Evaluation: Morphological Challenges and Pronoun Translation*
Marion Weller-Di Marco and Alexander Fraser

Wednesday, December 7, 2022 (continued)

16:00–17:30 Metrics Task

- 16:00–17:30 *Robust MT Evaluation with Sentence-level Multilingual Augmentation*
Duarte Alves, Ricardo Rei, Ana C Farinha, José G. C. de Souza and André F. T. Martins
- 16:00–17:30 *ACES: Translation Accuracy Challenge Sets for Evaluating Machine Translation Metrics*
Chantal Amrhein, Nikita Moghe and Liane Guillou
- 16:00–17:30 *Linguistically Motivated Evaluation of Machine Translation Metrics Based on a Challenge Set*
Eleftherios Avramidis and Vivien Macketanz
- 16:00–17:30 *Exploring Robustness of Machine Translation Metrics: A Study of Twenty-Two Automatic Metrics in the WMT22 Metric Task*
Xiaoyu Chen, Daimeng Wei, Hengchao Shang, Zongyao Li, Zhanglin Wu, Zhengzhe Yu, Ting Zhu, Mengli Zhu, Ning Xie, Lizhi Lei, Shimin Tao, Hao Yang and Ying Qin
- 16:00–17:30 *MS-COMET: More and Better Human Judgements Improve Metric Performance*
Tom Kocmi, Hitokazu Matsushita and Christian Federmann
- 16:00–17:30 *Partial Could Be Better than Whole. HW-TSC 2022 Submission for the Metrics Shared Task*
Yilun Liu, Xiaosong Qiao, Zhanglin Wu, Su Chang, Min Zhang, Yanqing Zhao, Song Peng, shimin tao, Hao Yang, Ying Qin, Jiabin Guo, Minghan Wang, Yinglu Li, Peng Li and Xiaofeng Zhao
- 16:00–17:30 *Unsupervised Embedding-based Metric for MT Evaluation with Improved Human Correlation*
Ananya Mukherjee and Manish Shrivastava
- 16:00–17:30 *REUSE: Reference-free UnSupervised Quality Estimation Metric*
Ananya Mukherjee and Manish Shrivastava
- 16:00–17:30 *MaTESe: Machine Translation Evaluation as a Sequence Tagging Problem*
Stefano Perrella, Lorenzo Proietti, Alessandro Scirè, Niccolò Campolungo and Roberto Navigli
- 16:00–17:30 *COMET-22: Unbabel-IST 2022 Submission for the Metrics Shared Task*
Ricardo Rei, José G. C. de Souza, Duarte Alves, Chrysoula Zerva, Ana C Farinha, Taisiya Glushkova, Alon Lavie, Luisa Coheur and André F. T. Martins
- 16:00–17:30 *Alibaba-Translate China's Submission for WMT2022 Metrics Shared Task*
Yu Wan, Keqin Bao, Dayiheng Liu, Baosong Yang, Derek F. Wong, Lidia S. Chao, Wenqiang Lei and Jun Xie

Wednesday, December 7, 2022 (continued)

16:00–17:30 Quality Estimation Task

- 16:00–17:30 *Quality Estimation via Backtranslation at the WMT 2022 Quality Estimation Task*
Sweta Agrawal, Nikita Mehandru, Niloufar Salehi and Marine Carpuat
- 16:00–17:30 *Alibaba-Translate China’s Submission for WMT 2022 Quality Estimation Shared Task*
Keqin Bao, Yu Wan, Dayiheng Liu, Baosong Yang, Wenqiang Lei, Xiangnan He, Derek F. Wong and Jun Xie
- 16:00–17:30 *KU X Upstage’s Submission for the WMT22 Quality Estimation: Critical Error Detection Shared Task*
Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo and Heuseok Lim
- 16:00–17:30 *NJUNLP’s Participation for the WMT2022 Quality Estimation Shared Task*
Xiang Geng, Yu Zhang, Shujian Huang, shimin tao, Hao Yang and Jiajun CHEN
- 16:00–17:30 *BJTU-Toshiba’s Submission to WMT22 Quality Estimation Shared Task*
Hui Huang, Hui Di, Chunyou Li, Hanming Wu, Kazushige Ouchi, Yufeng Chen, Jian Liu and Jinan Xu
- 16:00–17:30 *Papago’s Submission to the WMT22 Quality Estimation Shared Task*
Seunghyun Lim and Jeonghyeok Park
- 16:00–17:30 *CometKiwi: IST-Unbabel 2022 Submission for the Quality Estimation Shared Task*
Ricardo Rei, Marcos Treviso, Nuno M. Guerreiro, Chrysoula Zerva, Ana C Farinha, Christine Maroti, José G. C. de Souza, Taisiya Glushkova, Duarte Alves, Luisa Coheur, Alon Lavie and André F. T. Martins
- 16:00–17:30 *CrossQE: HW-TSC 2022 Submission for the Quality Estimation Shared Task*
shimin tao, Su Chang, Ma Miaomiao, Hao Yang, Xiang Geng, Shujian Huang, Min Zhang, Jiaxin Guo, Minghan Wang and Yinglu Li
- 16:00–17:30 *Welocalize-ARC/NKUA’s Submission to the WMT 2022 Quality Estimation Shared Task*
Eirini Zafeiridou and Sokratis Sofianopoulos

Wednesday, December 7, 2022 (continued)

16:00–17:30 Efficient Translation Task

16:00–17:30 *Edinburgh’s Submission to the WMT 2022 Efficiency Task*
Nikolay Bogoychev, Maximiliana Behnke, Jelmer van der Linde, Graeme Nail,
Kenneth Heafield, Biao Zhang and Sidharth Kashyap

16:00–17:30 *CUNI Non-Autoregressive System for the WMT 22 Efficient Translation Shared Task*
Jindřich Helcl

16:00–17:30 *The RoyalFlush System for the WMT 2022 Efficiency Task*
Bo Qin, Aixin Jia, Qiang Wang, Jianning Lu, Shuqin Pan, Haibo Wang and Ming
Chen

16:00–17:30 *HW-TSC’s Submission for the WMT22 Efficiency Task*
Hengchao Shang, Ting Hu, Daimeng Wei, Zongyao Li, Xianzhi Yu, Jianfei Feng,
Ting Zhu, Lizhi Lei, Shimin Tao, Hao Yang, Ying Qin, Jinlong Yang, Zhiqiang Rao
and Zhengzhe Yu

16:00–17:30 Automatic Post-Editing Task

16:00–17:30 *IIT Bombay’s WMT22 Automatic Post-Editing Shared Task Submission*
Sourabh Deoghare and Pushpak Bhattacharyya

16:00–17:30 *LUL’s WMT22 Automatic Post-Editing Shared Task Submission*
Xiaoying Huang, Xingrui Lou, Fan Zhang and Tu Mei

Thursday, December 8, 2022

9:00–10:30 Session 5: Shared Task Overview Papers I

- 9:00–9:10 *Findings of the WMT 2022 Biomedical Translation Shared Task: Monolingual Clinical Case Reports*
Mariana Neves, Antonio Jimeno Yepes, Amy Siu, Roland Roller, Philippe Thomas, Maika Vicente Navarro, Lana Yeganova, Dina Wiemann, Giorgio Maria Di Nunzio, Federica Vezzani, Christel Gerardin, Rachel Bawden, Darryl Johan Estrada, Salvador Lima-Lopez, Eulalia Farre-Maduel, Martin Krallinger, Cristian Grozea and Aurelie Neveol
- 9:10–9:20 *Findings of the WMT 2022 Shared Task on Chat Translation*
Ana C Farinha, M. Amin Farajian, Marianna Buchicchio, Patrick Fernandes, José G. C. de Souza, Helena Moniz and André F. T. Martins
- 9:20–9:35 *Findings of the First WMT Shared Task on Sign Language Translation (WMT-SLT22)*
Mathias Müller, Sarah Ebling, Eleftherios Avramidis, Alessia Battisti, Michèle Berger, Richard Bowden, Annelies Braffort, Necati Cihan Camgöz, Cristina España-Bonet, Roman Grundkiewicz, Zifan Jiang, Oscar Koller, Amit Moryossef, Regula Perrollaz, Sabine Reinhard, Annette Rios, Dimitar Shterionov, Sandra Sidler-Miserez, Katja Tissi and Davy Van Landuyt
- 9:35–9:50 *Findings of the WMT'22 Shared Task on Large-Scale Machine Translation Evaluation for African Languages*
David Adelani, Md Mahfuz Ibn Alam, Antonios Anastasopoulos, Akshita Bhagia, Marta R. Costa-jussà, Jesse Dodge, Fahim Faisal, Christian Federmann, Natalia Fedorova, Francisco Guzmán, Sergey Koshelev, Jean Maillard, Vukosi Marivate, Jonathan Mbuya, Alexandre Mourachko, Safiyyah Saleem, Holger Schwenk and Guillaume Wenzek
- 9:50–10:00 *Findings of the WMT 2022 Shared Tasks in Unsupervised MT and Very Low Resource Supervised MT*
Marion Weller-Di Marco and Alexander Fraser
- 10:00–10:10 *Overview and Results of MixMT Shared-Task at WMT 2022*
Vivek Srivastava and Mayank Singh
- 10:10–10:20 *Findings of the Word-Level AutoCompletion Shared Task in WMT 2022*
Francisco Casacuberta, George Foster, Guoping Huang, Philipp Koehn, Geza Kovacs, Lemao Liu, Shuming Shi, Taro Watanabe and Chengqing Zong
- 10:20–10:30 *Findings of the WMT 2022 Shared Task on Translation Suggestion*
Zhen Yang, Fandong Meng, Yingxue Zhang, Ernan Li and Jie Zhou
- 10:30–11:00 Coffee Break**

Thursday, December 8, 2022 (continued)

11:00–12:40 Session 6: Research Papers on Practical Aspect of Machine Translation

11:00–11:20 *Focused Concatenation for Context-Aware Neural Machine Translation*

Lorenzo Lupo, Marco Dinarelli and Laurent Besacier

11:20–11:40 *Does Sentence Segmentation Matter for Machine Translation?*

Rachel Wicks and Matt Post

11:40–12:00 *Revisiting Locality Sensitive Hashing for Vocabulary Selection in Fast Neural Machine Translation*

Hieu Hoang, Marcin Junczys-Dowmunt, Roman Grundkiewicz and Huda Khayrallah

12:00–12:20 *Too Brittle to Touch: Comparing the Stability of Quantization and Distillation towards Developing Low-Resource MT Models*

Harshita Diddee, Sandipan Dandapat, Monojit Choudhury, Tanuja Ganu and Kalika Bali

12:20–12:40 *Data Augmentation for Inline Tag-Aware Neural Machine Translation*

Yonghyun Ryu, Yoonjung Choi and Sangha Kim

12:40–14:00 *Lunch Break*

14:00–15:30 Session 7: Invited Talk by Ondrej Bojar on "Speech Translation: When Two Superhuman Technologies Combined Fail"

15:30–16:00 *Coffee Break*

Thursday, December 8, 2022 (continued)

16:00–17:30 **Session 8: Shared Task System Description Posters II**

16:00–17:30 **Biomedical Translation Task**

16:00–17:30 *The SPECTRANS System Description for the WMT22 Biomedical Task*
Nicolas Ballier, Jean-Baptiste Yunès, Guillaume Wisniewski, Lichao Zhu and Maria Zimina

16:00–17:30 *SRT's Neural Machine Translation System for WMT22 Biomedical Translation Task*
Yoonjung Choi, jiho shin, Yonghyun Ryu and Sangha Kim

16:00–17:30 *Examining Large Pre-Trained Language Models for Machine Translation: What You Don't Know about It*
Lifeng Han, Gleb Erofeev, Irina Sorokina, Serge Gladkoff and Goran Nenadic

16:00–17:30 *Summer: WeChat Neural Machine Translation Systems for the WMT22 Biomedical Translation Task*
Ernan Li, Fandong Meng and Jie Zhou

16:00–17:30 *Optum's Submission to WMT22 Biomedical Translation Tasks*
Sahil Manchanda and Saurabh Bhagwat

16:00–17:30 *Huawei BabelTar NMT at WMT22 Biomedical Translation Task: How We Further Improve Domain-specific NMT*
Weixuan Wang, Xupeng Meng, Suqing Yan, Ye TIAN and Wei Peng

16:00–17:30 *HW-TSC Translation Systems for the WMT22 Biomedical Translation Task*
Zhanglin Wu, Jinlong Yang, Zhiqiang Rao, Zhengzhe Yu, Daimeng Wei, Xiaoyu Chen, Zongyao Li, Hengchao Shang, Shaojun Li, Ming Zhu, Yuanchang Luo, Yuhao Xie, Miaomiao Ma, Ting Zhu, Lizhi Lei, Song Peng, Hao Yang and Ying Qin

Thursday, December 8, 2022 (continued)

16:00–17:30 Chat Translation Task

- 16:00–17:30 *Unbabel-IST at the WMT Chat Translation Shared Task*
João Alves, Pedro Henrique Martins, José G. C. de Souza, M. Amin Farajian and André F. T. Martins
- 16:00–17:30 *Investigating Effectiveness of Multi-Encoder for Conversational Neural Machine Translation*
Baban Gain, Ramakrishna Appicharla, Soumya Chennabasavaraj, Nimesh Garera, Asif Ekbal and Muthusamy Chelliah
- 16:00–17:30 *BJTU-WeChat’s Systems for the WMT22 Chat Translation Task*
Yunlong Liang, Fandong Meng, Jinan Xu, Yufeng Chen and Jie Zhou
- 16:00–17:30 *HW-TSC Translation Systems for the WMT22 Chat Translation Task*
Jinlong Yang, Zongyao Li, Daimeng Wei, Hengchao Shang, Xiaoyu Chen, Zhengzhe Yu, Zhiqiang Rao, Shaojun Li, Zhanglin Wu, Yuhao Xie, YUanchang Luo, Ting Zhu, Yanqing Zhao, Lizhi Lei, Hao Yang and Ying Qin

16:00–17:30 Sign Language Translation Task

- 16:00–17:30 *Clean Text and Full-Body Transformer: Microsoft’s Submission to the WMT22 Shared Task on Sign Language Translation*
Subhadeep Dey, Abhilash Pal, Cyrine Chaabani and Oscar Koller
- 16:00–17:30 *Spatio-temporal Sign Language Representation and Translation*
Yasser HAMIDULLAH, Josef van Genabith and Cristina España-Bonet
- 16:00–17:30 *Experimental Machine Translation of the Swiss German Sign Language via 3D Augmentation of Body Keypoints*
Lorenz Hufe and Eleftherios Avramidis
- 16:00–17:30 *TTIC’s WMT-SLT 22 Sign Language Translation System*
Bowen Shi, Diane Brentari, Gregory Shakhnarovich and Karen Livescu
- 16:00–17:30 *Tackling Low-Resourced Sign Language Translation: UPC at WMT-SLT 22*
Laia Tarres, Gerard I. Gállego, Xavier Giro-i-Nieto and Jordi Torres

Thursday, December 8, 2022 (continued)

16:00–17:30 African Languages Translation Task

16:00–17:30 *Separating Grains from the Chaff: Using Data Filtering to Improve Multilingual Translation for Low-Resourced African Languages*

Idris Abdulmumin, Michael Beukman, Jesujoba Alabi, Chris Chinenye Emezue, Evelyn Chimoto, Tosin Adewumi, Shamsuddeen Muhammad, Mofetoluwa Adeyemi, Oreen Yousuf, Sahib Singh and Tajuddeen Gwadabe

16:00–17:30 *Language Adapters for Large-Scale MT: The GMU System for the WMT 2022 Large-Scale Machine Translation Evaluation for African Languages Shared Task*

Md Mahfuz Ibn Alam and Antonios Anastasopoulos

16:00–17:30 *Samsung Research Philippines - Datasaur AI's Submission for the WMT22 Large Scale Multilingual Translation Task*

Jan Christian Blaise Cruz and Lintang Sutawika

16:00–17:30 *University of Cape Town's WMT22 System: Multilingual Machine Translation for Southern African Languages*

Khalid N. Elmadani, Francois Meyer and Jan Buys

16:00–17:30 *Tencent's Multilingual Machine Translation System for WMT22 Large-Scale African Languages*

Wenxiang Jiao, Zhaopeng Tu, Jiarui Li, Wenxuan Wang, Jen-tse Huang and Shuming Shi

16:00–17:30 *DENTRA: Denoising and Translation Pre-training for Multilingual Machine Translation*

Samta Kamboj, Sunil Kumar Sahu and Neha Sengupta

16:00–17:30 *The VolcTrans System for WMT22 Multilingual Machine Translation Task*

Xian Qian, Kai Hu, Jiaqiang Wang, Yifeng Liu, Xingyuan Pan, Jun Cao and Mingxuan Wang

16:00–17:30 *WebCrawl African : A Multilingual Parallel Corpora for African Languages*

Pavanpankaj Vegi, Sivabhavani J, Biswajit Paul, Abhinav Mishra, Prashant Banjare, Prasanna Kumar K R and Chitra Viswanathan

16:00–17:30 *ANVITA-African: A Multilingual Neural Machine Translation System for African Languages*

Pavanpankaj Vegi, Sivabhavani J, Biswajit Paul, Prasanna Kumar K R and Chitra Viswanathan

Thursday, December 8, 2022 (continued)

16:00–17:30 Unsupervised and Very Low Resource Translation Task

- 16:00–17:30 *HW-TSC Systems for WMT22 Very Low Resource Supervised MT Task*
Shaojun Li, Yuanchang Luo, Daimeng Wei, Zongyao Li, Hengchao Shang, Xiaoyu Chen, Zhanglin Wu, Jinlong Yang, Zhiqiang Rao, Zhengzhe Yu, Yuhao Xie, Lizhi Lei, Hao Yang and Ying Qin
- 16:00–17:30 *Unsupervised and Very-Low Resource Supervised Translation on German and Sorbian Variant Languages*
Rahul Tangsali, Aditya Jagdish Vyawahare, Aditya Vyankatesh Mandke, Onkar Rupesh Litake and Dipali Dattatray Kadam
- 16:00–17:30 *MUNI-NLP Systems for Lower Sorbian-German and Lower Sorbian-Upper Sorbian Machine Translation @ WMT22*
Edoardo Signoroni and Pavel Rychlý
- 16:00–17:30 *The AIC System for the WMT 2022 Unsupervised MT and Very Low Resource Supervised MT Task*
Ahmad Shapiro, Mahmoud Tarek Salama, Omar Khaled Abdelhakim, Mohamed Essam Fayed, Ayman Khalafallah and Noha Adly

16:00–17:30 Code-Mixed Translation Task

- 16:00–17:30 *NICT at MixMT 2022: Synthetic Code-Mixed Pre-training and Multi-way Fine-tuning for Hinglish-English Translation*
Raj Dabre
- 16:00–17:30 *Gui at MixMT 2022 : English-Hinglish : An MT Approach for Translation of Code Mixed Data*
Akshat Gahoi, Jayant Duneja, Anshul Padhi, Shivam Mangale, Saransh Rajput, Tanvi Kamble, Dipti Misra Sharma and Vasudev Varma
- 16:00–17:30 *MUCS@MixMT: IndicTrans-based Machine Translation for Hinglish Text*
Asha Hegde and Shashirekha Hosahalli Lakshmaiah
- 16:00–17:30 *SIT at MixMT 2022: Fluent Translation Built on Giant Pre-trained Models*
Abdul Khan, Hrishikesh Dinkar Kanade, Girish Amar Budhrani, Preet Jhanglani and Jia Xu
- 16:00–17:30 *The University of Edinburgh’s Submission to the WMT22 Code-Mixing Shared Task (MixMT)*
Faheem Kirefu, Vivek Iyer, Pinzhen Chen and Laurie Burchell
- 16:00–17:30 *CNLP-NITS-PP at MixMT 2022: Hinglish-English Code-Mixed Machine Translation*
Sahinur Rahman Laskar, Rahul Singh, Shyambabu Pandey, Riyanka Manna, Partha Pakray and Sivaji Bandyopadhyay

Thursday, December 8, 2022 (continued)

- 16:00–17:30 *Domain Curricula for Code-Switched MT at MixMT 2022*
Lekan Raheem, Maab Elrashid, Melvin Johnson and Julia Kreutzer
- 16:00–17:30 Word-Level Autocompletion Task**
- 16:00–17:30 *Lingua Custodia’s Participation at the WMT 2022 Word-Level Auto-completion Shared Task*
Melissa Ailem, Jingshu Liu, Jean-Gabriel Barthelemy and Raheel Qader
- 16:00–17:30 *Translation Word-Level Auto-Completion: What Can We Achieve Out of the Box?*
Yasmin Moslem, Rejwanul Haque and Andy Way
- 16:00–17:30 *PRHLT’s Submission to WLAC 2022*
Angel Navarro, Miguel Domingo and Francisco Casacuberta
- 16:00–17:30 *IIGROUP Submissions for WMT22 Word-Level AutoCompletion Task*
Cheng Yang, Siheng Li, Chufan Shi and Yujiu Yang
- 16:00–17:30 *HW-TSC’s Submissions to the WMT22 Word-Level Auto Completion Task*
Hao Yang, Hengchao Shang, Zongyao Li, Daimeng Wei, Xianghui He, Xiaoyu Chen, Zhengzhe Yu, Jiabin Guo, Jinlong Yang, Shaojun Li, Yuanchang Luo, Yuhao Xie, Lizhi Lei and Ying Qin
- 16:00–17:30 Translation Suggestion Task**
- 16:00–17:30 *TSMind: Alibaba and Soochow University’s Submission to the WMT22 Translation Suggestion Task*
Xin Ge, Ke Wang, Jiayi Wang, Nini Xiao, Xiangyu Duan, Yu Zhao and Yuqi Zhang
- 16:00–17:30 *Transn’s Submissions to the WMT22 Translation Suggestion Task*
Mao Hongbao, Zhang Wenbo, Cai Jie and Cheng Jianwei
- 16:00–17:30 *Improved Data Augmentation for Translation Suggestion*
Hongxiao Zhang, Siyu Lai, Songming Zhang, Hui Huang, Yufeng Chen, Jinan Xu and Jian Liu

