

20th International Conference on Spoken Language Translation (IWSLT 2023)

Toronto, Canada
13 - 14 July 2023

ISBN: 978-1-7138-8227-5

Printed from e-media with permission by:

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



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

Copyright© (2023) by the Association for Computational Linguistics
All rights reserved.

Printed with permission by Curran Associates, Inc. (2024)

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

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

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

acl@aclweb.org

Additional copies of this publication are available from:

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

Table of Contents

FINDINGS OF THE IWSLT 2023 EVALUATION CAMPAIGN

Sweta Agrawal, Antonios Anastasopoulos, Luisa Bentivogli, Ondřej Bojar, Claudia Borg, Marine Carpuat, Roldano Cattoni, Mauro Cettolo, Mingda Chen, William Chen, Khalid Choukri, Alexandra Chronopoulou, Anna Currey, Thierry Declerck, Qianqian Dong, Kevin Duh, Yannick Estève, Marcello Federico, Souhir Gahbiche, Barry Haddow, Benjamin Hsu, Phu Mon Htut, Hirofumi Inaguma, Dávid Javorský, John Judge, Yasumasa Kano, Tom Ko, Rishu Kumar, Pengwei Li, Xutai Ma, Prashant Mathur, Evgeny Matusov, Paul McNamee, John P. McCrae, Kenton Murray, Maria Nadejde, Satoshi Nakamura, Matteo Negri, Ha Nguyen, Jan Niehues, Xing Niu, Atul Kr. Ojha, John E. Ortega, Proyag Pal, Juan Pino, Lonneke van der Plas, Peter Polák, Elijah Rippeth, Elizabeth Salesky, Jiatong Shi, Matthias Sperber, Sebastian Stüker, Katsuhito Sudoh, Yun Tang, Brian Thompson, Kevin Tran, Marco Turchi, Alex Waibel, Mingxuan Wang, Shinji Watanabe and Rodolfo Zevallos 1

Evaluating Multilingual Speech Translation under Realistic Conditions with Resegmentation and Terminology

Elizabeth Salesky, Kareem Darwish, Mohamed Al-Badrashiny, Mona Diab and Jan Niehues . . 62

The MineTrans Systems for IWSLT 2023 Offline Speech Translation and Speech-to-Speech Translation Tasks

Yichao Du, Guo Zhengsheng, Jinchuan Tian, Zhirui Zhang, Xing Wang, Jianwei Yu, Zhaopeng Tu, Tong Xu and Enhong Chen 79

Improving End-to-End Speech Translation by Imitation-Based Knowledge Distillation with Synthetic Transcripts

Rebekka Hubert, Artem Sokolov and Stefan Riezler 89

The USTC’s Dialect Speech Translation System for IWSLT 2023

Pan Deng, Shihao Chen, Weitai Zhang, Jie Zhang and Lirong Dai 102

KIT’s Multilingual Speech Translation System for IWSLT 2023

Danni Liu, Thai Binh Nguyen, Sai Koneru, Enes Yavuz Ugan, Ngoc-Quan Pham, Tuan Nam Nguyen, Tu Anh Dinh, Carlos Mullov, Alexander Waibel and Jan Niehues 113

The BIGAI Offline Speech Translation Systems for IWSLT 2023 Evaluation

Zhihang Xie 123

Enhancing Video Translation Context with Object Labels

Jeremy Gwinnup, Tim Anderson, Brian Ore, Eric Hansen and Kevin Duh 130

Length-Aware NMT and Adaptive Duration for Automatic Dubbing

Zhiqiang Rao, Hengchao Shang, Jinlong Yang, Daimeng Wei, Zongyao Li, Jiaxin GUO, Shaojun Li, Zhengzhe Yu, Zhanglin Wu, Yuhao Xie, Bin Wei, Jiawei Zheng, Lizhi Lei and Hao Yang 138

NAVER LABS Europe’s Multilingual Speech Translation Systems for the IWSLT 2023 Low-Resource Track

Edward Gow-Smith, Alexandre Berard, Marcelly Zanon Boito and Ioan Calapodescu 144

Direct Models for Simultaneous Translation and Automatic Subtitling: FBK@IWSLT2023

Sara Papi, Marco Gaido and Matteo Negri 159

MT Metrics Correlate with Human Ratings of Simultaneous Speech Translation

Dominik Macháček, Ondřej Bojar and Raj Dabre 169

<i>Improving Neural Machine Translation Formality Control with Domain Adaptation and Reranking-based Transductive Learning</i>	
Zhanglin Wu, Zongyao Li, Daimeng Wei, Hengchao Shang, Jiaxin Guo, Xiaoyu Chen, Zhiqiang Rao, Zhengzhe YU, Jinlong Yang, Shaojun Li, Yuhao Xie, Bin Wei, Jiawei Zheng, Ming Zhu, Lizhi Lei, Hao Yang and Yanfei Jiang	180
<i>HW-TSC at IWSLT2023: Break the Quality Ceiling of Offline Track via Pre-Training and Domain Adaptation</i>	
Zongyao Li, Zhanglin Wu, Zhiqiang Rao, Xie YuHao, Guo JiaXin, Daimeng Wei, Hengchao Shang, Wang Minghan, Xiaoyu Chen, Zhengzhe YU, Li ShaoJun, Lei LiZhi and Hao Yang	187
<i>Submission of USTC’s System for the IWSLT 2023 - Offline Speech Translation Track</i>	
Xinyuan Zhou, Jianwei Cui, Zhongyi Ye, Yichi Wang, Luzhen Xu, Hanyi Zhang, Weitai Zhang and Lirong Dai	194
<i>I2R’s End-to-End Speech Translation System for IWSLT 2023 Offline Shared Task</i>	
Muhammad Huzaifah, Kye Min Tan and Richeng Duan	202
<i>The NiuTrans End-to-End Speech Translation System for IWSLT23 English-to-Chinese Offline Task</i>	
Yuchen Han, Xiaoqian Liu, Hao Chen, Yuhao Zhang, Chen Xu, Tong Xiao and Jingbo Zhu	211
<i>ON-TRAC Consortium Systems for the IWSLT 2023 Dialectal and Low-resource Speech Translation Tasks</i>	
Antoine Laurent, Souhir Gabbiche, Ha Nguyen, Haroun Elleuch, Fethi Bougares, Antoine Thiol, Hugo Riguidel, Salima Mdhaffar, Gaëlle Laperrière, Lucas Maison, Sameer Khurana and Yannick Estève	219
<i>BUT Systems for IWSLT 2023 Marathi - Hindi Low Resource Speech Translation Task</i>	
Santosh Kesiraju, Karel Beneš, Maksim Tikhonov and Jan Černocký	227
<i>CMU’s IWSLT 2023 Simultaneous Speech Translation System</i>	
Brian Yan, Jiatong Shi, Soumi Maiti, William Chen, Xinjian Li, Yifan Peng, Siddhant Arora and Shinji Watanabe	235
<i>Improving Low Resource Speech Translation with Data Augmentation and Ensemble Strategies</i>	
Akshaya Vishnu Kudlu Shanbhogue, Ran Xue, Soumya Saha, Daniel Zhang and Ashwinkumar Ganesan	241
<i>Speech Translation with Style: AppTek’s Submissions to the IWSLT Subtitling and Formality Tracks in 2023</i>	
Parnia Bahar, Patrick Wilken, Javier Iranzo-Sánchez, Mattia Di Gangi, Evgeny Matusov and Zoltán Tüske	251
<i>QUESPA Submission for the IWSLT 2023 Dialect and Low-resource Speech Translation Tasks</i>	
John E. Ortega, Rodolfo Zevallos and William Chen	261
<i>GMU Systems for the IWSLT 2023 Dialect and Low-resource Speech Translation Tasks</i>	
Jonathan Mbuya and Antonios Anastasopoulos	269
<i>The HW-TSC’s Speech-to-Speech Translation System for IWSLT 2023</i>	
Minghan Wang, Yinglu Li, Jiaxin GUO, Zongyao Li, Hengchao Shang, Daimeng Wei, Min Zhang, Shimin Tao and Hao Yang	277
<i>JHU IWSLT 2023 Dialect Speech Translation System Description</i>	
Amir Hussein, Cihan Xiao, Neha Verma, Thomas Thebaud, Matthew Wiesner and Sanjeev Khudanpur	283

<i>Learning Nearest Neighbour Informed Latent Word Embeddings to Improve Zero-Shot Machine Translation</i>	
Nishant Kambhatla, Logan Born and Anoop Sarkar	291
<i>JHU IWSLT 2023 Multilingual Speech Translation System Description</i>	
Henry Li Xinyuan, Neha Verma, Bismarck Bamfo Odoom, Ujvala Pradeep, Matthew Wiesner and Sanjeev Khudanpur	302
<i>The NPU-MSXF Speech-to-Speech Translation System for IWSLT 2023 Speech-to-Speech Translation Task</i>	
Kun Song, Yi Lei, Peikun Chen, Yiqing Cao, Kun Wei, Yongmao Zhang, Lei Xie, Ning Jiang and Guoqing Zhao	311
<i>Low-Resource Formality Controlled NMT Using Pre-trained LM</i>	
Priyesh Vakharia, Shree Vignesh S and Pranjali Basmatkar	321
<i>NAIST Simultaneous Speech-to-speech Translation System for IWSLT 2023</i>	
Ryo Fukuda, Yuta Nishikawa, Yasumasa Kano, Yuka Ko, Tomoya Yanagita, Kosuke Doi, Mana Makinae, Sakriani Sakti, Katsuhito Sudoh and Satoshi Nakamura	330
<i>Language Model Based Target Token Importance Rescaling for Simultaneous Neural Machine Translation</i>	
Aditi Jain, Nishant Kambhatla and Anoop Sarkar	341
<i>The Kyoto Speech-to-Speech Translation System for IWSLT 2023</i>	
Zhengdong Yang, Shuichiro Shimizu, Wangjin Zhou, Sheng Li and Chenhui Chu	357
<i>Tagged End-to-End Simultaneous Speech Translation Training Using Simultaneous Interpretation Data</i>	
Yuka Ko, Ryo Fukuda, Yuta Nishikawa, Yasumasa Kano, Katsuhito Sudoh and Satoshi Nakamura	363
<i>The HW-TSC's Simultaneous Speech-to-Text Translation System for IWSLT 2023 Evaluation</i>	
Jiaxin GUO, Daimeng Wei, Zhanglin Wu, Zongyao Li, Zhiqiang Rao, Minghan Wang, Hengchao Shang, Xiaoyu Chen, Zhengzhe Yu, Shaojun Li, Yuhao Xie, Lizhi Lei and Hao Yang	376
<i>The HW-TSC's Simultaneous Speech-to-Speech Translation System for IWSLT 2023 Evaluation</i>	
Hengchao Shang, Zhiqiang Rao, Zongyao Li, Zhanglin Wu, Jiaxin GUO, Minghan Wang, Daimeng Wei, Shaojun Li, Zhengzhe YU, Xiaoyu Chen, Lizhi Lei and Hao Yang	383
<i>Towards Efficient Simultaneous Speech Translation: CUNI-KIT System for Simultaneous Track at IWSLT 2023</i>	
Peter Polak, Danni Liu, Ngoc-Quan Pham, Jan Niehues, Alexander Waibel and Ondřej Bojar	389
<i>Speech Translation with Foundation Models and Optimal Transport: UPC at IWSLT23</i>	
Ioannis Tsiamas, Gerard I. Gállego, Jose Fonollosa and Marta R. Costa-jussá	397
<i>The Xiaomi AI Lab's Speech Translation Systems for IWSLT 2023 Offline Task, Simultaneous Task and Speech-to-Speech Task</i>	
Wuwei Huang, Mengge Liu, Xiang Li, Yanzhi Tian, Fengyu Yang, Wen Zhang, Jian Luan, Bin Wang, Yuhang Guo and Jinsong Su	411
<i>Improving Formality-Sensitive Machine Translation Using Data-Centric Approaches and Prompt Engineering</i>	
Seugnjun Lee, Hyeonseok Moon, Chanjun Park and Heuseok Lim	420

<i>UM-DFKI Maltese Speech Translation</i>	
Aiden Williams, Kurt Abela, Rishu Kumar, Martin Bär, Hannah Billinghamurst, Kurt Micallef, Ahnaf Mozib Samin, Andrea DeMarco, Lonneke van der Plas and Claudia Borg	433
<i>NVIDIA NeMo Offline Speech Translation Systems for IWSLT 2023</i>	
Oleksii Hrinchuk, Vladimir Bataev, Evelina Bakhturina and Boris Ginsburg	442
<i>SRI-B's Systems for IWSLT 2023 Dialectal and Low-resource Track: Marathi-Hindi Speech Translation</i>	
Balaji Radhakrishnan, Saurabh Agrawal, Raj Prakash Gohil, Kiran Praveen, Advait Vinay Dhopeshwarkar and Abhishek Pandey	449
<i>BIT's System for Multilingual Track</i>	
Zhipeng Wang, Yuhang Guo and Shuoying Chen	455
<i>Matesub: The Translated Subtitling Tool at the IWSLT2023 Subtitling Task</i>	
Simone Perone	461
<i>Augmentation Invariant Discrete Representation for Generative Spoken Language Modeling</i>	
Itai Gat, Felix Kreuk, Tu Anh Nguyen, Ann Lee, Jade Copet, Gabriel Synnaeve, Emmanuel Dupoux and Yossi Adi	465
<i>DePA: Improving Non-autoregressive Translation with Dependency-Aware Decoder</i>	
Jiaao Zhan, Qian Chen, Boxing Chen, Wen Wang, Yu Bai and Yang Gao	478
<i>On the Copying Problem of Unsupervised NMT: A Training Schedule with a Language Discriminator Loss</i>	
Yihong Liu, Alexandra Chronopoulou, Hinrich Schütze and Alexander Fraser	491