

MMTLRL 2021

Proceedings
of the
**First Workshop on Multimodal Machine Translation for Low
Resource Languages (MMTLRL 2021)**

in conjunction with

**International Conference on Recent Advances in Natural
Language Processing (RANLP 2021)**

Edited by

Thoudam Doren Singh, Cristina España i Bonet, Sivaji Bandyopadhyay, Josef Van Genabith

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Preface

Language does not exist in a vacuum. Yet, for a long time, large parts of NLP have focused on text- (or speech-) only scenarios: most work on machine translation (MT) e.g. is on text-to-text MT. In principle, the inclusion of additional context in the form of other modalities offers the promise of improving a translation. In practice, this is often hard (Lala et al. 2017, Elliott 2018). In this workshop, we would like to combine two strands of research that are hitherto not well connected: research on low-resource MT and research on multi-modal MT (MMMT). The reason why we would like to explore the connection is the following: while there has been important progress on both sides, including unsupervised (Artetxe et al. 2018, Lample et al. 2018) and self-supervised MT (Ruiter et al. 2019), and neural-network based modality combinations in MMMT (Çağlayan et al. 2019), the potential of mustering information in other modalities (such as images, videos and spoken language) to complement the text signal in low-resource MT has not yet been explored extensively. However, a combination may hold promise: a richer multimodal signal may help address some of the challenges that come with low-resource scenarios. Of course, there are no guarantees: a richer multimodal signal and with it an increase in the dimensionality of the data may make the problem worse.

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Thoudam Doren Singh, Cristina España i Bonet, Sivaji Bandyopadhyay, Josef Van Genabith (organizers of MMTLRL 2021)

Keynote Speakers

- Marine Carpuat, University of Maryland, USA
- Lucia Specia, Imperial College London, England

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- Jörg Tiedeman, University of Helsinki, Finland
- Deyi Xiong, Tianjin University, China
- Jingyi Zhang, DFKI, Germany

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Conference Program

- 6:00 *Models and Tasks for Human-Centered Machine Translation*
Marine Carpuat
- 7:20 *Multiple Captions Embellished Multilingual Multi-Modal Neural Machine Translation*
Salam Michael Singh, Loitongbam Sanayai Meetei, Thoudam Doren Singh and Sivaji Bandyopadhyay
- 7:40 *Malta National Language Technology Platform: A vision for enhancing Malta's official languages using Machine Translation*
Keith Cortis, Judie Attard and Donatienne Spiteri
- 7:55 *Low Resource Multimodal Neural Machine Translation of English-Hindi in News Domain*
Loitongbam Sanayai Meetei, Thoudam Doren Singh and Sivaji Bandyopadhyay
- 8:30 *Multimodal Simultaneous Machine Translation*
Lucia Specia
- 9:50 *Multimodal Neural Machine Translation System for English to Bengali*
Shantipriya Parida, Subhadarshi Panda, Satya Prakash Biswal, Ketan Kotwal, Arghyadeep Sen, Satya Ranjan Dash and Petr Motlicek
- 10:05 *Experiences of Adapting Multimodal Machine Translation Techniques for Hindi*
Baban Gain, Dibyanayan Bandyopadhyay and Asif Ekbal

