

EMNLP 2020

**The 2020 Conference on  
Empirical Methods in Natural Language Processing**

**Tutorial Abstracts**

November 19 - 20, 2020

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## Introduction

Welcome to the Tutorials Session of EMNLP 2020.

The EMNLP tutorials session in 2020 includes courses on a variety of topics reflecting recent advances in Natural Language Processing methods and applications, especially selected to give conference attendees comprehensive overviews ranging from introductory to cutting-edge topics targeted to wide audience and presented by experts from academia and industry.

This year, continuing the tradition of the past few years, the call, submission, reviewing and selection of tutorials were coordinated jointly for multiple conferences: ACL, AACL-IJCNLP, COLING and EMNLP. The reviewing committee consisted of 19 members, among them the tutorial chairs of the various conferences (Agata Savary and Yue Zhang for ACL, Aline Villavicencio and Benjamin Van Durme for EMNLP, Daniel Beck and Lucia Specia for COLING and Timothy Baldwin and Fei Xia for AACL-IJCNMP), and 11 external reviewers (Emily Bender, Erik Cambria, Gaël Dias, Stefan Evert, Yang Liu, João Sedoc, Xu Sun, Yulia Tsvetkov, Taro Watanabe, Aaron Steven White and Meishan Zhang). Each proposal received 3 reviews, that evaluated criteria including clarity, preparedness, novelty, timeliness, instructors' experience, likely audience, open access to the teaching materials, diversity (multilingualism, gender, age and geolocation) and the compatibility of preferred venues. From the 43 tutorial submissions received, 7 were selected for presentation at EMNLP.

We solicited two types of tutorials, including cutting-edge and introductory themes. From the 7 tutorials accepted for EMNLP, 1 is introductory and 6 are cutting-edge tutorials, all reflecting current topics of interest to the community. The introductory tutorial offers an overview of research in fact-checking, “fake news”, and media bias detection (T2). The cutting-edge tutorials present research on methods for interpreting predictions of NLP models (T1), for improving efficiency for high-performance NLP (T3), along with methods for machine reasoning (T4) and spatial language understanding (T5), and the latest advances on applications including simultaneous translation systems (T6) and neural network architectures for text generation (T7).

We would like to thank the ACL, AACL-IJCNLP and COLING tutorial chairs, along with the members of the reviewing committee, who all collaborated to ensure a smooth selection process. Our thanks to the conference organizers for a wonderful and effective collaboration, and in particular to the general chair Bonnie Webber, the website chair Andy MacKinlay, the publicity chairs Anna Rogers and Ruifeng Xu, the ACL anthology director Matt Post, the general publication chair Fei Liu and publication chairs Philippe Muller, Yang Gao and Veronika Laippala, and to the virtual infrastructure chairs Jan-Christoph Klie, Yang Feng, Zhongyu Wei, Eduardo Blanco and Yangsong Feng. Finally, our huge thanks to the tutorial authors for their amazing tutorial proposals, and for their flexibility and collaboration in a period of adaption to virtual conferences.

We hope you enjoy the tutorials.

EMNLP 2020 Tutorial Co-chairs  
Aline Villavicencio  
Benjamin Van Durme



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# Tutorial Program

## November 19, 2020

- 09:00–10:00 *Machine Reasoning: Technology, Dilemma and Future*  
Nan Duan, Duyu Tang and Ming Zhou
- 10:00–11:00 *Fact-Checking, Fake News, Propaganda, and Media Bias: Truth Seeking in the Post-Truth Era*  
Preslav Nakov and Giovanni Da San Martino
- 14:00–15:00 *Fact-Checking, Fake News, Propaganda, and Media Bias: Truth Seeking in the Post-Truth Era*  
Preslav Nakov and Giovanni Da San Martino
- 15:00–19:30 *Interpreting Predictions of NLP Models*  
Eric Wallace, Matt Gardner and Sameer Singh
- 17:00–18:00 *High Performance Natural Language Processing*  
Gabriel Ilharco, Cesar Ilharco, Iulia Turc, Tim Dettmers, Felipe Ferreira and Kenton Lee

## November 20, 2020

- 00:00–01:00 *High Performance Natural Language Processing*  
Gabriel Ilharco, Cesar Ilharco, Iulia Turc, Tim Dettmers, Felipe Ferreira and Kenton Lee
- 01:00–02:00 *Machine Reasoning: Technology, Dilemma and Future*  
Nan Duan, Duyu Tang and Ming Zhou
- 17:00–18:00 *Representation, Learning and Reasoning on Spatial Language for Downstream NLP Tasks*  
Parisa Kordjamshidi, James Pustejovsky and Marie-Francine Moens
- 18:00–19:00 *Simultaneous Translation*  
Liang Huang, Colin Cherry, Mingbo Ma, Naveen Arivazhagan and Zhongjun He
- 19:00–20:00 *The Amazing World of Neural Language Generation*  
Yangfeng Ji, Antoine Bosselut, Thomas Wolf and Asli Celikyilmaz

**November 21, 2020**

00:00–01:00 *Representation, Learning and Reasoning on Spatial Language for Downstream NLP Tasks*

Parisa Kordjamshidi, James Pustejovsky and Marie-Francine Moens

01:00–02:00 *Simultaneous Translation*

Liang Huang, Colin Cherry, Mingbo Ma, Naveen Arivazhagan and Zhongjun He

01:00–02:00 *The Amazing World of Neural Language Generation*

Yangfeng Ji, Antoine Bosselut, Thomas Wolf and Asli Celikyilmaz