

DLG4NLP 2022

**The 2nd Workshop on Deep Learning on Graphs for Natural  
Language Processing**

**Proceedings of the Workshop**

July 15, 2022

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## Introduction

We are excited to welcome you to DLG4NLP 2022, the 2nd Workshop on Deep Learning on Graphs for Natural Language Processing, to be held on July 15, 2022 as part of NAACL in Seattle. The DLG4NLP workshop aims to bring together both academic researchers and industrial practitioners from different backgrounds and perspectives to solve challenges in deep learning on graphs for NLP. This workshop intends to share visions of investigating new approaches and methods at the intersection of graph machine learning and NLP. The workshop will consist of contributed talks, invited talks, position talks, and panelists on a wide variety of novel GNN methods and NLP applications.

The NAACL conference is a premier publication venue for research in NLP. This year, the DLG4NLP workshop includes four keynote talks, eight presentation sessions, two position talks, and a panel discussion. We have a big “thank you” to say to the authors and speakers (Prof. Jiawei Han, Prof. Heng Ji, Prof. Meng Jiang, and we are inviting more speakers when writing our preface).

This year, we had 12 Program Committee (PC) members who were responsible for reviewing 2 papers each. Every submission received at least three reviews. The members of the Program Committee did an excellent job in reviewing the submitted papers, and we thank them (Zhong Zhang, Sijie Cheng, Suyuchen Wang, Sifan Wu, Haochen Shi, Qianggang Ding, Yu Chen, Qingkai Zeng, Yile Wang, Yulong Chen, Meng Qu, Yuyan Chen) for their essential role in reviewing the papers and helping produce a high quality program for the conference.

In addition, we thank Ryan Cotterell, the Publications Chair, and Ashish Sabharwal, Yunyao Li, Dan Goldwasser, the Workshop Chairs for NAACL 2022, for their dedicated work in assisting workshop organizers to produce high quality proceedings.

Finally, we thank all the conference organizers and participants for making DLG4NLP workshop at NAACL 2022 a success and for growing the research areas of NLP with their fine work.

Lingfei Wu, Bang Liu, Rada Mihalcea, Jian Pei, Yue Zhang, Yunyao Li, workshop co-organizers.

# Organizing Committee

## Program Chairs

Lingfei Wu, JD.COM Silicon Valley Research Center

Bang Liu, University of Montreal

Rada Mihalcea, University of Michigan

Jian Pei, Simon Fraser University

Yue Zhang, Westlake University

Yun Yao Li, Apple

# Program Committee

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# Program

## Friday, July 15, 2022

09:00 - 09:15 *Welcome + Opening Remarks*

09:15 - 10:00 *Keynote Talk 1*

10:00 - 10:45 *Keynote Talk 2*

10:45 - 11:00 *Coffe Break/Social Networking*

11:00 - 11:45 *Panel Discussion*

11:45 - 12:45 *Paper Presentations Session A*

*Diversifying Content Generation for Commonsense Reasoning with Mixture of Knowledge Graph Experts*

Wenhao Yu, Chenguang Zhu, Lianhui Qin, Zhihan Zhang, Tong Zhao and Meng Jiang

*Continuous Temporal Graph Networks for Event-Based Graph Data*

Jin Guo, Zhen Han, su Zhou, Jiliang Li, Volker Tresp and Yuyi Wang

*Scene Graph Parsing via Abstract Meaning Representation in Pre-trained Language Models*

Woo Suk Choi, Yu-Jung Heo, Dharani Punithan and Byoung-Tak Zhang

*Explicit Graph Reasoning Fusing Knowledge and Contextual Information for Multi-hop Question Answering*

Zhenyun Deng, Yonghua Zhu, Qianqian Qi, Michael Witbrock and Patricia J. Riddle

14:00 - 14:45 *Keynote Talk 3*

14:45 - 15:30 *Keynote Talk 4*

15:30 - 15:45 *Coffe Break/Social Networking*

15:45 - 16:15 *Two Position Talks*

**Friday, July 15, 2022 (continued)**

16:15 - 17:15 *Paper Presentations Session B*

*Improving Neural Machine Translation with the Abstract Meaning Representation by Combining Graph and Sequence Transformers*

Changmao Li and Jeffrey Flanigan

*Graph Neural Networks for Adapting Off-the-shelf General Domain Language Models to Low-Resource Specialised Domains*

Merieme Bouhandi, Emmanuel Morin and Thierry Hamon

*GraDA: Graph Generative Data Augmentation for Commonsense Reasoning*

Adyasha Maharana and Mohit Bansal

*LiGCN: Label-interpretable Graph Convolutional Networks for Multi-label Text Classification*

Irene Li, Aosong Feng, Hao Wu, Tianxiao Li, Toyotaro Suzumura and Ruihai Dong

17:15 - 17:30 *Closing Remarks*