

KnowledgeNLP 2024

**The 3rd Workshop on Knowledge Augmented Methods for  
NLP**

**Proceedings of the Workshop**

August 16, 2024

©2024 Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)  
317 Sidney Baker St. S  
Suite 400 - 134  
Kerrville, TX 78028  
USA  
Tel: +1-855-225-1962  
[acl@aclweb.org](mailto:acl@aclweb.org)

ISBN 979-8-89176-129-2

## Preface by the Organizers

Welcome to the 3rd International Workshop on Knowledge-Augmented Methods for Natural Language Processing (KnowledgeNLP'24), held in conjunction with ACL 2024. KnowledgeNLP will take place on August 16th, 2024, allowing for both virtual and in-person attendance in Thailand.

Recent progress in large-scale models like ChatGPT has significantly advanced NLP capabilities. However, these models face limitations in memorizing rare information, are prone to hallucinations, and cannot access up-to-date information. Additionally, their fixed parameter size prevents them from fully encapsulating the continuously evolving world knowledge.

The field of knowledge-augmented NLP spans a wide array of techniques and applications. Acquiring relevant knowledge is challenging due to its diversity and distribution across numerous sources. Once acquired, effectively representing and utilizing this knowledge to support model predictions presents another major challenge. This workshop seeks to bring researchers together to share their insights and progress in this domain, aiming to highlight the importance of knowledge-augmented NLP.

In response to our call for papers, we received 35 submissions. Each submission was rigorously reviewed by at least two Program Committee members selected for their expertise. Based on the reviewers' feedback, we accepted 30 papers, including 8 oral presentations and 22 poster presentations. We are honored to invite six keynote speakers: Prof. Minlie Huang (Tsinghua University), Dr. Scott Yih (Meta AI), Prof. Yulia Tsvetkov (University of Washington), Prof. Greg Durrett (University of Texas Austin), Prof. Minjoon Seo (KAIST AI), and Prof. Zhuosheng Zhang (Shanghai Jiaotong University).

We hope you find the workshop papers insightful and inspiring. We express our gratitude to the keynote speakers for their engaging talks, the authors for their valuable contributions, and the Program Committee members for their thorough reviews. Special thanks to the emergency reviewers for their expertise and to the ACL 2024 workshop chairs for their support during the organization process.

*Wenhao Yu, Tencent AI Seattle Lab*  
*Weijia Shi, University of Washington*  
*Michihiro Yasunaga, Stanford University*  
*Meng Jiang, University of Notre Dame*  
*Chenguang Zhu, Zoom AI*  
*Hannaneh Hajishirzi, University of Washington*  
*Luke Zettlemoyer, University of Washington*  
*KnowledgeNLP-ACL24 Workshop Chairs*

# Organizing Committee

## Program Chairs

Wenhao , Tencent AI Seattle Lab  
Weijia Shi, University of Washington  
Michihiro Yasunaga, Stanford University  
Meng Jiang, University of Notre Dame  
Chenguang Zhu, Zoom AI  
Hannaneh Hajishirzi, University of Washington  
Luke Zettlemoyer, University of Washington

## Publication Chairs

Zhihan Zhang, University of Notre Dame

## Program Committee

### Reviewers

Tong Chen, University of Washington  
Zhehui Huang, University of Southern California  
Mengzhao Jia, University of Notre Dame  
Pengwei Li, Meta  
Zheyuan Liu, University of Notre Dame  
Xiao Liu, University of California, Davis  
Renze Lou, Pennsylvania State University  
Bang Nguyen, University of Notre Dame  
Siru Ouyang, University of Illinois Urbana-Champaign Champaign  
Zhaoxuan Tan, University of Notre Dame  
Jiaxiang Tang, University of Minnesota  
Qingyun Wang, University of Illinois, Urbana Champaign  
Zijie Wang, University of Arizona  
Zhepeng Wang, Yahoo and George Mason University  
Zhenyu Wu, University of Notre Dame and Xi'an Jiaotong University  
Di Wu, University of California, Los Angeles  
Zilin Xiao, Rice University  
Mengxia Yu, University of Notre Dame  
Wenhao Yu, Tencent AI Lab  
Zhihan Zhang, University of Notre Dame  
Daoan Zhang, University of Rochester  
Yuwei Zhang, University of California, San Diego  
Yunxiang Zhang, University of Michigan - Ann Arbor  
Anni Zou, Shanghai Jiao Tong University

## Table of Contents

<i>GADePo: Graph-Assisted Declarative Pooling Transformers for Document-Level Relation Extraction</i> Andrei Catalin Coman, Christos Theodoropoulos, Marie-Francine Moens and James Henderson	1
<i>KaPQA: Knowledge-Augmented Product Question-Answering</i> Swetha Eppalapally, Daksh Dangi, Chaithra Bhat, Ankita Gupta, Ruiyi Zhang, Shubham Agarwal, Karishma Bagga, Seunghyun Yoon, Nedim Lipka, Ryan A. Rossi and Franck Dernoncourt	15
<i>Collecting High-quality Multi-modal Conversational Search Data for E-Commerce</i> Marcus D. Collins, Oleg Rokhlenko, Eugene Agichtein and Shervin Malmasi	30
<i>Learning to Trust Your Feelings: Leveraging Self-awareness in LLMs for Hallucination Mitigation</i> Yuxin Liang, Zhuoyang Song, Hao Wang and Jiaxing Zhang	44
<i>Aggregating Impressions on Celebrities and their Reasons from Microblog Posts and Web Search Pages</i> Hibiki Yokoyama, Rikuto Tsuchida, Kosei Buma, Sho Miyakawa, Takehito Utsuro and Masaharu Yoshioka	59
<i>DSLRL: Document Refinement with Sentence-Level Re-ranking and Reconstruction to Enhance Retrieval-Augmented Generation</i> Taeho Hwang, Soyeong Jeong, Sukmin Cho, SeungYoon Han and Jong C. Park	73
<i>Enhancing Robustness of Retrieval-Augmented Language Models with In-Context Learning</i> SeongIl Park, Seungwoo Choi, Nahyun Kim and Jay-Yoon Lee	93

# Program

## Friday, August 16, 2024

09:00 - 09:10 *Opening Remarks*

09:10 - 09:45 *Keynote Talk 1 by Minlie Huang (Tsinghua University)*

09:45 - 10:20 *Keynote Talk 2 by Scott Yih (Meta AI)*

10:20 - 11:20 *Poster Session (including break)*

11:20 - 11:55 *Keynote Talk 3 by Yulia Tsvetkov (University of Washington)*

11:55 - 12:30 *Keynote Talk 4 by Greg Durrett (UT Austin)*

12:30 - 14:00 *Lunch Break*

14:00 - 14:40 *Keynote Talk 5 by Minjoon Seo (KAIST AI)*

14:40 - 15:30 *Oral Presentation Session 1*

*How Easily do Irrelevant Inputs Skew the Responses of Large Language Models?*  
Siye Wu, Jian Xie, Jiangjie Chen, Tinghui Zhu, Kai Zhang and Yanghua Xiao

*Editing Conceptual Knowledge for Large Language Models*  
Xiaohan Wang, Shengyu Mao, Shumin Deng, Yunzhi Yao, Yue Shen, Lei Liang, Jinjie GU, Huajun Chen and Ningyu Zhang

*How Well Do Large Language Models Truly Ground?*  
Hyunji Lee, Doyoung Kim, Se June Joo, Chaeun Kim, Joel Jang, Kyoung-Woon On and Minjoon Seo

*INSTRUCTIR: A Benchmark for Instruction Following of Information Retrieval Models*  
Hanseok Oh, Hyunji Lee, Seonghyeon Ye, Haebin Shin, Hansol Jang, ChangWook Jun and Minjoon Seo

15:30 - 16:00 *Coffee Break*

**Friday, August 16, 2024 (continued)**

16:00 - 16:40     *Keynote Talk 6 by Zhuosheng Zhang (Shanghai Jiao Tong University)*

16:40 - 17:30     *Oral Presentation Session 2*

*Repoformer: Selective Retrieval for Repository-Level Code Completion*

Di Wu, Wasi Uddin Ahmad, Dejiao Zhang, Murali Krishna Ramanathan and Xiaofei Ma

*KnowAgent: Knowledge-Augmented Planning for LLM-Based Agents*

Yuqi Zhu, Shuofei Qiao, Yixin Ou, Shumin Deng, Ningyu Zhang, Shiwei Lyu, Yue Shen, Lei Liang, Jinjie GU and Huajun Chen

*Merging Facts, Crafting Fallacies: Evaluating the Contradictory Nature of Aggregated Factual Claims in Long-Form Generations*

Cheng-Han Chiang and Hung-yi Lee

*Agent Planning with World Knowledge Model*

Shuofei Qiao, Runnan Fang, Ningyu Zhang, Yuqi Zhu, Xiang Chen, Shumin Deng, Yong Jiang, Pengjun Xie, Fei Huang and Huajun Chen

17:30 - 17:35     *Closing Remarks*