

# Sukwon Yun

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## RESEARCH INTEREST

### AI for Science, Efficient ML

- Addressing inductive bias of AI (GNNs, LLMs, MoE) with their application in Computational Biology

## EDUCATION

**University of North Carolina at Chapel Hill**, Chapel Hill, NC, USA

Aug 2024 – Present

- Ph.D. in Computer Science
  - Research Interest: AI4Science, Efficient ML
  - Advisor: [Prof. Tianlong Chen](#)

**Korea Advanced Institute of Technology (KAIST)**, Daejeon, South Korea

Aug 2021 – Aug 2023

- M.S. in Industrial & Systems Engineering
  - Research Interest: Graph Neural Networks, Recommender Systems
  - Advisor: [Prof. Chanyoung Park](#)

**Hanyang University**, Seoul, South Korea

Mar 2015 – Aug 2021

- B.S. in Industrial Engineering
  - *Summa Cum Laude*, Period includes two years of military service

## PUBLICATIONS (\*: Equal contribution)

### CONFERENCES

- [C7] DALK: Dynamic Co-Augmentation of LLMs and KG to answer Alzheimer’s Disease Questions with Scientific Literature  
Dawei Li, Shu Yang, Zhen Tan, Jae Young Baik, **Sukwon Yun**, Joseph Lee, Aaron Chacko, Bojian Hou, Duy Duong-Tran, Ying Ding, Huan Liu, Li Shen, Tianlong Chen  
EMNLP 2024 Findings
- [C6] Mew: Multiplexed Immunofluorescence Image Analysis through an Efficient Multiplex Network  
**Sukwon Yun**, Jie Peng, Alexandro Trevino, Chanyoung Park, Tianlong Chen  
ECCV 2024
- [C5] DEGNN: Dual Experts Graph Neural Network Handling Both Edge and Node Feature Noise  
Tai Hasegawa, **Sukwon Yun**, Xin Liu, Yin Jun Phua, Tsuyoshi Murata  
PAKDD 2024
- [C4] MUSE: Music Recommender System with Shuffle Play Recommendation Enhancement  
Yunhak Oh\*, **Sukwon Yun**\*, Dongmin Hyun, Sein Kim, Chanyoung Park  
CIKM 2023
- [C3] S-Mixup: Structural Mixup for Graph Neural Networks  
Junghurn Kim\*, **Sukwon Yun**\*, Chanyoung Park  
CIKM 2023 Short
- [C2] MELT: Mutual Enhancement of Long-Tailed User and Item for Sequential Recommendation  
Kibum Kim, Dongmin Hyun, **Sukwon Yun**, Chanyoung Park  
SIGIR 2023
- [C1] LTE4G: Long-Tail Experts for Graph Neural Networks  
**Sukwon Yun**, Kibum Kim, Kanghoon Yoon, Chanyoung Park  
CIKM 2022

### JOURNALS

- [J1] Single-cell RNA sequencing data imputation using bi-level feature propagation  
Junseok Lee\*, **Sukwon Yun**\*, Yeongmin Kim, Tianlong Chen, Manolis Kellis, Chanyoung Park  
Briefings in Bioinformatics 2024

### WORKSHOPS

- [W3] Subgraph Federated Learning for Local Generalization  
Sungwon Kim, Yoonho Lee, Yunhak Oh, Namkyeong Lee, **Sukwon Yun**, Junseok Lee, Sein Kim, Carl Yang, Chanyoung Park  
KDD FedKDD 2024 **Best Paper Award**

- [W2] Noise Robust Graph Learning under Feature-Dependent Graph-Noise  
Yeonjun In, Kanghoon Yoon, **Sukwon Yun**, Kibum Kim, Sungchul Kim, Chanyoung Park  
WWW DCAI 2024 *Oral*
- [W1] Single-cell RNA-seq data imputation using Feature Propagation  
**Sukwon Yun\***, Junseok Lee\*, Chanyoung Park  
ICML 2023 WCB **Best Paper Award**

RESEARCH EXPERIENCES	<b>Massachusetts Institute of Technology (MIT)</b> , Cambridge, MA	Aug 2023 – Jul 2024
	<ul style="list-style-type: none"> <li>Remote Research Intern in Kellis Lab.</li> <li>Mentors: <a href="#">Dr. Tianlong Chen</a>, <a href="#">Dr. Zunpeng Liu</a>, <a href="#">Dr. Leandro Z. Agudelo</a>, <a href="#">Dr. Lei Xiong</a></li> </ul>	
	<b>Tokyo Institute of Technology (Tokyo Tech)</b> , Tokyo, Japan	Oct 2022 – Feb 2023
	<ul style="list-style-type: none"> <li>Visiting Researcher in Murata Lab.</li> <li>Host: <a href="#">Prof. Tsuyoshi Murata</a></li> </ul>	
	<b>Korea Advanced Institute of Technology (KAIST)</b> , Daejeon, South Korea	Dec 2020 – Feb 2021
	<ul style="list-style-type: none"> <li>Research Intern in Data Science &amp; Artificial Intelligence Lab. (DSAIL)</li> <li>Mentor: <a href="#">Prof. Chanyoung Park</a></li> </ul>	
	<b>Hanyang University</b> , Seoul, South Korea	Sep 2020 – Aug 2021
	<ul style="list-style-type: none"> <li>Student Researcher in Intelligent Data Systems Lab. (IDSL)</li> <li>Mentor: <a href="#">Prof. Kichun Lee</a></li> </ul>	
TEACHING EXPERIENCE	<b>KAIST</b>	
	<ul style="list-style-type: none"> <li>IE343: Statistical Machine Learning</li> </ul>	Spring, 2022
AWARDS & SCHOLARSHIPS	<b>Best Paper Award</b>	2024
	<ul style="list-style-type: none"> <li>KDD Workshop on Federated Learning for Data Mining and Graph Analytics, Barcelona, Spain</li> </ul>	
	<b>Best Paper Award</b>	2023
	<ul style="list-style-type: none"> <li>ICML Workshop on Computational Biology, Honolulu, Hawai'i, USA</li> </ul>	
	<b>Korea National Scholarship</b>	2021 – 2023
	<ul style="list-style-type: none"> <li>Awarded by the Ministry of Science and ICT, South Korea</li> </ul>	
	<b>Poster Competition Excellence Award</b>	2022
	<ul style="list-style-type: none"> <li>Awarded at Industrial/Social Problem Solving Session held by Department of ISysE, KAIST</li> </ul>	
	<b>SIGIR Student Travel Award</b>	2022
	<ul style="list-style-type: none"> <li>ACM International Conference on Information and Knowledge Management, Georgia, USA</li> </ul>	
	<b>Merit Based Scholarship</b>	2021
	<ul style="list-style-type: none"> <li>Awarded by the Department of Industrial Engineering, Hanyang University</li> </ul>	
PROFESSIONAL SERVICES	<b>Hanyang Academic Achievement Award</b>	2021
	<ul style="list-style-type: none"> <li>Awarded within the top 3% among the College of Engineering, Hanyang University</li> </ul>	
	<b>Certificate of Recognition</b>	2018
	<ul style="list-style-type: none"> <li>Awarded when serving military service as an auxiliary police by Seoul Metropolitan Police</li> </ul>	
	<b>Event Organizations</b>	
	<ul style="list-style-type: none"> <li>Session Chair, Knowledge Representation 3, CIKM 2023, Birmingham, UK</li> </ul>	
	<b>Program Committee</b>	
	<ul style="list-style-type: none"> <li>AAAI Conference on Artificial Intelligence (AAAI)</li> </ul>	2025
	<b>Conference Reviews</b>	
	<ul style="list-style-type: none"> <li>The European Conference on Computer Vision (ECCV)</li> </ul>	2024
	<ul style="list-style-type: none"> <li>International Conference on Machine Learning (ICML)</li> </ul>	2024
	<ul style="list-style-type: none"> <li>The International Conference on Learning Representations (ICLR)</li> </ul>	2024, 2025
	<ul style="list-style-type: none"> <li>Conference on Parsimony and Learning (CPAL)</li> </ul>	2024
	<ul style="list-style-type: none"> <li>Conference on Neural Information Processing Systems (NeurIPS)</li> </ul>	2023, 2024
	<b>Workshop Reviews</b>	
	<ul style="list-style-type: none"> <li>ML4LMS Workshop @ ICML</li> </ul>	2024
	<ul style="list-style-type: none"> <li>ASEA Workshop @ AAAI</li> </ul>	2024