

Jaemin Kim

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RESEARCH INTEREST

Aiming to improve the controllability of advance generative models, including diffusion models and Large Language Models (LLMs). Recently contributed to this goal by exploring efficient guidance methods, such as training-free approaches and general-purpose strategies.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) <i>Ph.D. in Artificial Intelligence</i>	Mar 2025 - Now <i>Advisor: Prof. Jong Chul Ye</i>
Korea Advanced Institute of Science and Technology (KAIST) <i>M.S. in Artificial Intelligence</i>	Mar 2023 - Feb 2025 <i>Advisor: Prof. Jong Chul Ye</i>
Korea Advanced Institute of Science and Technology (KAIST) <i>B.S. in Bio and Brain Engineering, Electrical Engineering (Double Major)</i>	Mar 2016 - Feb 2023 <i>GPA: 3.96/4.3 (Magna Cum Laude)</i>
Karlsruhe Institute of Technology (KIT) <i>Electrical Engineering and Information Technology (Exchange Student)</i>	Sep 2019 - Feb 2020 <i>Karlsruhe, Germany</i>

PUBLICATIONS *: Equal Contribution

[P4] <u>Dementia-R1: Reinforced Pretraining and Reasoning from Unstructured Clinical Notes for Real-World Dementia Prognosis</u>	<i>Preprint 2026</i>
Choonghan Kim*, Hyunmin Hwang*, Hangeol Chang*, Jaemin Kim* , Jinse Park, Jae-Sung Lim, Jong Chul Ye	
[P3] <u>Training-Free Reward-Guided Image Editing via Trajectory Optimal Control</u>	<i>Preprint 2025</i>
Jinho Chang*, Jaemin Kim* , Jong Chul Ye	
[C4] <u>Free²Guide: Training-Free Text-to-Video Alignment using Image LVL</u>	<i>ICCV 2025</i>
Jaemin Kim , Bryan S Kim, Jong Chul Ye	
[P2] <u>Universal Reasoner: A Single, Composable Plug-and-Play Reasoner for Frozen LLMs</u>	<i>Preprint 2025</i>
Jaemin Kim* , Hangeol Chang*, Hyunmin Hwang*, Choonghan Kim, Jong Chul Ye	
[C3] <u>Optical-Flow Guided Prompt Optimization for Coherent Video Generation</u>	<i>CVPR 2025</i>
Hyelin Nam*, Jaemin Kim* , Dohun Lee, Jong Chul Ye	
[C2] <u>Derivative-Free Diffusion Manifold-Constrained Gradient for Unified XAI</u>	<i>CVPR 2025</i>
Won Jun Kim*, Hyungjin Chung*, Jaemin Kim* , Sangmin Lee, Byeongsu Sim, Jong Chul Ye	
[C1] <u>Generalized Consistency Trajectory Models for Image Manipulation</u>	<i>ICLR 2025</i>
Beomsu Kim*, Jaemin Kim* , Jeongsol Kim, Jong Chul Ye	
[P1] <u>HiCBridge: Resolution Enhancement of Hi-C Data Using Direct Diffusion Bridge</u>	<i>Preprint 2024</i>
Jaemin Kim* , Jong Chul Ye	

PATENTS

Method and Apparatus for Approximating Gradient of Artificial Neural Network Model	2025
• (South Korea) Patent No.10-2025-0145337	
A Single, Composable Plug-and-play Reasoner for Frozen LLMs	2025
• (South Korea) Patent No.10-2025-0132734	

HONORS AND AWARDS

32nd Samsung Humantech Paper Award

Universal Reasoner: A Single, Composable Plug-and-Play Reasoner for Frozen LLMs

Silver Prize

Track: Signal Processing

Dongwon-KAIST scholarship

Full scholarship for tuition and stipend

Mar 2023 - Feb 2025

Baden-Württemberg Stipendium

Scholarship for international students to study at a university in Baden-Württemberg

Sep 2019 - Feb 2020

South Korea National Science & Technology Scholarship

Scholarship for attracting outstanding talents

Mar 2018 - Mar 2020

ACADEMIC ACTIVITIES

Reviewer

ICLR 2026

Persident, Student Council

KAIST AI

May 2025 - Now

Teaching Assistant

KAIST - AI618: Generative Models and Unsupervised Learning

Mar 2025 - Jun 2025

REFERENCES

Jong Chul Ye

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M.S., Ph.D. Advisor

Endowed Chair Professor, Kim Jaechul Graduate School of Artificial Intelligence, KAIST