

Jiin Im

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RESEARCH INTERESTS

My research interests center on understanding the dynamic 3D world. I am interested in how visual systems can reason about the structure of a scene over time and learn representations that connect observations across time. Looking forward, I hope to study 4D scene understanding and representations that capture meaningful changes in the physical world.

EDUCATION

Hanyang University

M.S. in Electronic Engineering

Seoul, South Korea

Mar 2024 – Feb 2026

◦ GPA: 4.31 / 4.50

◦ Advisor: Prof. Je Hyeong Hong

Hanyang University

B.S. in Electronic Engineering

Seoul, South Korea

Mar 2020 – Feb 2024

◦ GPA: 4.15 / 4.50 (Major GPA: 4.22 / 4.50)

◦ *Summa Cum Laude*

PUBLICATIONS

Chebyshev Differential Flows for Shape Matching and Interpolation with Endpoint Guidance

[Jiin Im](#), Sisung Liu, Je Hyeong Hong. *Advances in Neural Information Processing Systems (NeurIPS)*, 2026.

Shape-of-You: Fused Gromov-Wasserstein Optimal Transport for Semantic Correspondence in-the-Wild

[\[arXiv\]](#)

[Jiin Im](#), Sisung Liu, Je Hyeong Hong. *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2026.

Presented at KCCV 2026, KAIA 2026.

FUN-AD: Fully Unsupervised Learning for Anomaly Detection with Noisy Training Data [\[arXiv\]](#)

[Jiin Im](#)^{*}, Yongho Son^{*}, Je Hyeong Hong. *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2025.

^{*} Equal contribution.

RESEARCH EXPERIENCE

Spatial AI Lab, Hanyang University

Seoul, South Korea

Researcher

Mar 2024 – Present

Advisor: Prof. Je Hyeong Hong

- Investigating monocular dynamic 3D reconstruction with a focus on recovering temporally consistent explicit meshes and surface motion correspondence. Exploring how dynamic Gaussian representations can be coupled with explicit surface geometry to maintain geometric and temporal consistency.
- Found that temporal rigidity priors in joint shape matching and interpolation can regularize the trajectory at the expense of endpoint fitting. Introduced Chebyshev Jacobian trajectories with endpoint-null regularization to separate path regularity from endpoint alignment, leading to *Chebyshev Differential Flows* (NeurIPS 2026).
- Observed that local pseudo-label matching for semantic correspondence ignores global structure and remains ambiguous under 2D appearance cues. Reformulated matching as a 3D geometry-guided Fused Gromov-Wasserstein problem, leading to *Shape-of-You* (CVPR 2026).
- Addressed the dependence of standard one-class anomaly detection on clean normal training data, which makes it vulnerable to contamination. Leveraged pairwise feature statistics for fully unsupervised anomaly detection, leading to *FUN-AD* (WACV 2025). *Supported by Samsung Electronics DS and Korea Evaluation Institute of Industrial Technology (KEIT)*.
- Observed that certain feature manifolds preserve matching performance while substantially limiting reconstruction network learnability. Conducted a preliminary investigation into the underlying failure of reconstruction decoders and

explored corresponding attack scenarios, with initial results indicating successful attacks. *Supported by the National Research Foundation of Korea (NRF).*

- Built a pipeline for registering deformed partial point clouds from single-view depth observations to undeformed CAD models. Used learned 3D correspondences and RANSAC to obtain rigid initialization, selecting among alignment hypotheses by Chamfer distance before non-rigid registration. *Supported by CMES.*

Korea Institute of Science and Technology (KIST)
Undergraduate Researcher
Advisor: Dr. Yoonseob Lim

Seoul, South Korea
Jun 2022 – Aug 2022

- Analyzed nonverbal behavior in interview videos using optical flow and developed a MATLAB pipeline for real-time EEG acquisition and analysis of responses to auditory stimuli.

PATENTS

[PT1] **Method for Anomaly Detection Based on Unsupervised Learning and System Thereof I.** [Jiin Im](#), Je Hyeong Hong. *KR Application No. 10-2024-0069569.*

[PT2] **Method for Anomaly Detection Based on Unsupervised Learning and System Thereof II.** [Jiin Im](#), Yongho Son, Je Hyeong Hong. *KR Application No. 10-2024-0140579.*

AWARDS & HONORS

BK21 Best Paper Award , Hanyang University Selected as the sole recipient from the lab.	2026
BK21 IC-PBL+ Research Excellence Award , Hanyang University Placed among the top three of approximately 20 teams in a graduate research presentation course.	2025
Graduate Scholarship in Artificial Intelligence Selected for a scholarship supporting graduate research in advanced technology.	2025
HY-IN Scholarship (Graduate) , Hanyang University Awarded approximately KRW 20 million (approx. USD 14,000).	2024
LG Electronics Paper Award , IEIE Summer Annual Conference One of five papers recognized with the award, for work developed from my undergraduate thesis; approximately 850 papers were presented.	2023
Honorable Mention, Graduation Project Competition , Hanyang University Selected as a top-8 finalist project among approximately 131 graduating students in Electronic Engineering.	2023
Hanyang Learning Pacemaker Scholarship , Hanyang University Four-time recipient through semester-long collaborative learning in four-member teams.	2021–2023
Department of Electronic Engineering Scholarship (Undergraduate) , Hanyang University Full tuition scholarship totaling approximately KRW 19 million (approx. USD 13,300).	2020

ACADEMIC SERVICE

Reviewer
NeurIPS 2026; 3DV 2026, 2027
External Reviewer: CVPR 2024, 2025; ICCV 2025; ICASSP 2025; AAAI 2024; BMVC 2024; ICIP 2023

Teaching Assistant, Hanyang University
APA4055, Introduction to Artificial Intelligence (Spring 2024, Spring 2025); ELE4092, Introduction to Computer Vision (Fall 2024); MAT2003, Linear Algebra (Spring 2024)

SKILLS

Programming Languages | Python, C, C++, Java, MATLAB
Research Tools | PyTorch, NumPy, OpenCV, Open3D, Blender, Docker, Linux, Git