

# Wonjoon Lee

PH.D CANDIDATE

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## RESEARCH INTERESTS

### 3D Vision

- Depth Estimation
- Neural Rendering & View Synthesis
- 3D/4D Scene Reconstruction
- Dynamic Scene Understanding

## EDUCATION

### Yonsei University | College of Engineering

INTERATED M.S./PH.D IN ELECTRICAL AND ELECTRONIC ENGINEERING

Seoul, South Korea

Mar. 2023 - Feb. 2028 (Expected)

- Image and Video Pattern Recognition Lab.
- Advisor: Prof. Sangyoun Lee

### Korea Aerospace University | College of Engineering

B.S. IN ELECTRICAL & ELECTRONIC ENGINEERING

Seoul, South Korea

Mar. 2017 - Aug. 2022

- 2-Year Military Service (2018-2020)

## PUBLICATIONS

### First-Author Papers

#### MoRGs: Efficient Per-Gaussian Motion Reasoning for Streamable Dynamic 3D Scenes

2026

WONJOON LEE, SUNGMIN WOO, DONHYEONG KIM, JUNGHO LEE, SANGHEON PARK, SANGYOUN LEE

Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition (CVPR)

#### Prodepth: Boosting Self-Supervised Multi-Frame Monocular Depth with Probabilistic Fusion

2024

SUNGMIN WOO\*, WONJOON LEE\*, WOJIN KIM, DOGYOON LEE, SANGYOUN LEE

Proceedings of the IEEE/CVF European Conference on Computer Vision (ECCV)

#### MSV-RGNN: Multiscale Voxel Graph Neural Network for 3D Object Detection

2023

WONJOON LEE, SUNGMIN WOO, DONHYEONG KIM, SANGYOUN LEE

Proceedings of the IEEE International Conference on Image Processing (ICIP)

### Conference Proceedings

#### CoMoGaussian: Continuous Motion-Aware Gaussian Splatting from Motion-Blurred Images

2025

JUNGHO LEE, DONGHYEONG KIM, DOGYOON LEE, SUHWAN CHO, MINHYEOK LEE, WONJOON LEE, TAEHO KIM, DOGYOON WEE, SANGYOUN LEE

Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)

### Preprinted Papers

- W. Lee, S. Woo, D. Kim, J. Lee, S. Lee. Spurf-GS: View-Consistent Geometry Adaptation for Sparse-View Surface Reconstruction via Gaussian Splatting. 2025.

## PATENTS

### Domestic Patent

- Geometry-Based Multi-Domain Object Detection Method. KR-Application No.10-2026-0026131, Feb., 2026.

## PROJECTS

### Research on Robust Neural Rendering-Based Large-Scale 3D Ultra-Precision Virtual Space Generation and Spatial Registration for Low-Quality Noisy Data

National Research Foundation of Korea

DEEP LEARNING RESEARCHER

May. 2024 - Apr. 2027

- Development of large scene reconstruction by 3D Gaussian Splatting.

**Research on Core Technologies for Egocentric Remote Empathic Interaction and Dynamic Object Extraction for Photorealistic Novel View Synthesis**

*Electronics and Telecommunications Research Institute*

DEEP LEARNING RESEARCHER

*Apr. 2024 - Nov. 2027*

- Development of dynamic scene reconstruction by 3D Gaussian Splatting.

**Research on Robust AI for Anomaly and Risk Behavior Recognition Under Nighttime and Adverse Weather Condition**

*Electronics and Telecommunications Research Institute*

DEEP LEARNING RESEARCHER

*July. 2024 - Mar. 2027*

- Development of robust object detection using depth sensors.

## Professional Services

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**Journal Reviewer**

- IEEE Transactions on Image Processing (**TIP**) 2025
- IEEE Transactions on Circuits and System for Video Technology (**TCSVT**) 2023
- Knowledge Based System (**KBS**) 2023

**Conference Reviewer**

- IEEE/CVF Winter Conference on Applications of Computer Vision (**WACV**) 2025

## TEACHING EXPERIENCES

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**Basic Digital Logic Experiments**

TEACHING ASSISTANT

*Yonsei University*

*Fall 2024 - Fall 2025*

**Digital Logic Circuit**

TEACHING ASSISTANT

*Yonsei University*

*Fall 2023 - Spring 2024*

## SKILLS

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**Research and Development Stacks**

**Main Languages** Python, C/C++, MATLAB

**Machine Learning** PyTorch, TensorFlow

**Computer Vision** OpenCV