

Kim Youwang

youwang.kim@postech.ac.kr

[Website](#) | [Scholar](#) | [Github](#)



RESEARCH INTEREST

Understanding 3D human, object shape & appearance for creating immersive virtual world:

Generative model, Shape & appearance synthesis and reconstruction, Multi-modal vision & graphics applications

EDUCATION

Pohang University of Science and Technology, POSTECH <i>Integrated M.S. & Ph.D., Electrical Engineering (Advisor: Prof. Tae-Hyun Oh)</i>	Sep. 2020 – Present Pohang, Korea
Pohang University of Science and Technology, POSTECH <i>Bachelor of Science., Major: Electrical Engineering</i>	Mar. 2016 – Aug. 2020 Pohang, Korea

EXPERIENCE

Research Scientist Intern <i>Meta Reality Labs - Codec Avatars team (Manager: Chen Cao, Yaser Sheikh)</i> <ul style="list-style-type: none">Conducted research about photorealistic avatar generation.	Oct. 2024 – Mar. 2025 Pittsburgh, PA, US
Visiting Researcher <i>Real Virtual Humans group (PI: Gerard Pons-Moll)</i> <ul style="list-style-type: none">Research collaboration with Gerard Pons-Moll and his group.	Oct. 2023 – Mar. 2024 Tübingen, Germany
Student Representative <i>Algorithmic Machine Intelligence Lab (AMI Lab) at Dept. of EE</i> <ul style="list-style-type: none">Served as the student representative of AMI Lab.	Jul. 2021 – Jun. 2022 POSTECH, Korea
Exchange Student <i>Nanyang Technological University (NTU)</i> <ul style="list-style-type: none">Studied as an exchange student at NTU, Singapore for one semester.	Aug. 2019 – Dec. 2019 Nanyang, Singapore
Undergraduate Student Representative <i>Department of Electrical Engineering</i> <ul style="list-style-type: none">Worked as an undergraduate student representative of Dept. of EE at POSTECH for a year.	Jan. 2018 – Dec. 2018 POSTECH, Korea
Samsung Electronics Undergraduate Research Internship <i>Air Lab in Network Division</i> <ul style="list-style-type: none">Research on 5G NR base station's Uplink vector-X-check algorithm.	Jul. 2018 – Aug. 2018 Suwon, Korea

AWARD & HONOR

Best Poster Award, BMVC 2024 <i>"MeTTA: Single-View to 3D Textured Mesh Reconstruction with Test-Time Adaptation".</i>	Nov. 2024
Excellence Prize, Electronics Times ICT Paper Awards <i>"Feed-Forward Photorealistic Style Transfer for Large-Scale 3D Neural Radiance Field".</i>	Nov. 2024
Best Poster Award, Winner of POSTECH-KAIST joint ML workshop 2024 <i>"Paint-it: Text-to-Texture Synthesis via Deep Convolutional Texture Map Optimization and ...".</i>	Jul. 2024

Grand Prize (Minister's award, \$12K prize), Electronics Times ICT Paper Awards "CLIP-Actor: Text-Driven Recommendation and Stylization for Generating Virtual Human Avatars".	Dec. 2023
Outstanding Reviewer Award, ICCV 2023	Oct. 2023
Winner of Qualcomm Innovation Fellowship Korea (QIFK 2022, \$4,000 prize) "CLIP-Actor: Text-Driven Recommendation and Stylization for Animating Human Meshes"	Oct. 2022
Selected poster at International Computer Vision Summer School (ICVSS 2022) "Unified 3D Mesh Recovery of Humans and Animals by Learning Animal Exercise"	Jul. 2022

PUBLICATION (INTERNATIONAL)

(Equal contribution are denoted by "*")

Abbreviations

TPAMI	<i>IEEE Trans. on Pattern Analysis and Machine Intelligence</i>
IJCV	<i>International Journal of Computer Vision</i>
TMLR	<i>Trans. on Machine Learning Research</i>
CVPR	<i>IEEE Conf. on Computer Vision and Pattern Recognition</i>
ECCV	<i>European Conf. on Computer Vision</i>
ICCV	<i>IEEE Int. Conf. on Computer Vision</i>
ICLR	<i>International Conference on Learning Representation</i>
AAAI	<i>AAAI Conference on Artificial Intelligence</i>
BMVC	<i>British Machine Vision Conference</i>

The top CV/AI/ML conferences (CVPR, ECCV, ICCV, NIPS, ICLR) are highly competitive with acceptance rates between 20-30%, and their oral and spotlight papers have acceptance rates of <2% and <9%, respectively.

Journal

[J4] G. Kim, **Kim Youwang**, L. Hyoseok, T.-H. Oh, "FPGS: Feed-Forward Semantic-aware Photorealistic Style Transfer of Large-Scale Gaussian Splatting," *IJCV*, *under review*.

([Excellence Prize at the Electronics Times ICT Paper Awards 2024.](#))

[J3] **Kim Youwang***, T. Byun*, K. Ji-Yeon, S. Choi, T.-H. Oh, "CLIP-Actor-X: Text-driven 4D Human Avatar Generation via Cross-modal Synthesis-through-Optimization," *TPAMI*, *under review*.

[J2] **Kim Youwang**, L. Hyun*, K. Sung-Bin*, S.-K. Nam, J.-H. Joo, T.-H. Oh, "A Large-Scale 3D Face Mesh Video Dataset via Neural Re-parameterized Optimization," *TMLR*, 2024.

([Invited to ICLR 2025 as a poster presentation.](#))

[J1] D. H. Ryou, **Kim Youwang**, T.-H. Oh, "Multi-stage Adaptive Rank Statistic Pruning for Lightweight Human 3D Mesh Recovery Model," *The Visual Computer Journal (TVCIJ)*, *Springer*, 2023

Conference

[C12] A paper on "High-quality 3D avatar generation", *submitted*

[C11] J. Cho, **Kim Youwang**, H. M. Yang, T.-H. Oh, "Robust 3D Shape Reconstruction in Zero-Shot from a Single Image in the Wild" *CVPR*, 2025.

[C10] **Kim Youwang**, L. Hyun*, K. Sung-Bin*, S.-K. Nam, J.-H. Joo, T.-H. Oh, "A Large-Scale 3D Face Mesh Video Dataset via Neural Re-parameterized Optimization," *ICLR*, 2025.

([TMLR 2024 paper](#), [NeuFace](#), [invited as a poster presentation](#). [Top 5.0% TMLR papers in 2 years invited.](#))

[C9] K. Yu-Ji, H. Ha, **Kim Youwang**, J. Surh, H. Ha, T.-H. Oh, "MeTTA: Single-View to 3D Textured Mesh Reconstruction with Test-Time Adaptation," *BMVC*, 2024.

([Best Poster Award at BMVC 2024.](#))

[C8] **Kim Youwang**, T.-H. Oh, G. Pons-Moll, "Paint-it: Text-to-Texture Synthesis via Deep Convolutional Texture Map Optimization and Physically-Based Rendering," *CVPR*, 2024.

(Best Poster Award at POSTECH-KAIST joint ML workshop 2024. Also, presented in Workshop on AI4CC: AI for Content Creation & in Workshop on AI3DG: AI for 3D Generation, in conjunction with CVPR 2024.)

[C7] J. Cho, **Kim Youwang**, H. Yang, T.-H. Oh, “ObjectDR: Object-Centric Domain Randomization for 3D Shape Reconstruction in the Wild,” *Workshop on Foundation Model (in conj. with CVPR)*, 2024.

[C6] G. Kim, **Kim Youwang**, T.-H. Oh, “Feed-Forward Photorealistic Style Transfer for Large-Scale 3D Neural Radiance Field,” *AAAI*, 2024.

[C5] **Kim Youwang**, T.-H. Oh, “Text-driven Human Avatar Generation by Neural Re-parameterized Texture Optimization,” *Workshop on AI3DCC: AI for 3D Content Creation (in conj. with ICCV)*, 2023.

[C4] **Kim Youwang**, L. Hyun*, K. Sung-Bin*, S.-K. Nam, J.-H. Joo, T.-H. Oh, “Spatio-Temporally Consistent Face Mesh Reconstruction on Videos,” *Workshop on 3DMV: Learning 3D with Multi-View Supervision (in conj. with CVPR)*, 2023.

[C3] **Kim Youwang***, K. Ji-Yeon*, T.-H. Oh, “CLIP-Actor: Text-Driven Recommendation and Stylization for Animating Human Meshes,” *ECCV*, 2022.

(Winner of the Electronics Times ICT Paper Awards 2023, Qualcomm Innovation Award Winner 2022. Also, presented in Workshop on AI4CC: AI for Content Creation, in conjunction with CVPR 2023.)

[C2] J. Cho, **Kim Youwang**, T.-H. Oh, “Cross-Attention of Disentangled Modalities for 3D Human Mesh Recovery with Transformers” *ECCV*, 2022.

(Featured as a representative trend in the “Weekly ICT Trends” report, Vol. 2086 (2023.04.05) published by Institute for Information & communication Technology Planning & evaluation(IITP), Korea.)

[C1] **Kim Youwang**, K. Ji-Yeon, K. Joo, T.-H. Oh, “Unified 3D Mesh Recovery of Humans and Animals by Learning Animal Exercise,” *BMVC*, 2021. (Accepted poster at ICVSS 2022)

PATENT

Text-driven motion recommendation and neural mesh stylization system ...	US 18/440,889 - Filed
Method and apparatus for generating mesh model of human or quadrupeds	KR10-2459293
Method and apparatus for obtaining segmentation of object included in image frame	KR10-2416218

MEDIA COVERAGE

Dec., 2023. (CLIP-Actor extension) Featured by Korean Internet news, including Veritas- α , etnews, ZUM News, and Daegu News Paper.

Apr., 2023. (FastMETRO, ECCV 2022, IPIU 2021, IPIU 2022) Featured as a representative trend in the “Weekly ICT Trends” report, Vol. 2086 (2023.04.05) published by Institute for Information & communication Technology Planning & evaluation(IITP), Korea.

ACADEMIC SERVICE

Journal Reviewer

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2024, 2025
- ACM TOG/SIGGRAPH ASIA, 2024
- International Journal of Computer Vision (IJCV), 2024, 2025
- Transactions on Machine Learning Research (TMLR), 2025
- IEEE Transactions on Multimedia (TMM), 2023

Conference Reviewer

- IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), 2024, 2025

- IEEE/CVF International Conference on Computer Vision (ICCV), 2023, 2025
(**Outstanding reviewer award 2023**)
- European Conference on Computer Vision (ECCV), 2024
- Conference on Neural Information Processing Systems (NeurIPS), 2024, 2025
- British Machine Vision Conference (BMVC), 2024

INVITED TALK

Towards Efficient & Realistic Virtual World Communication

INNERVERZ, Korea, Feb. 2023

PROJECTS

Efficient neural radiance fields 3D scene modeling Mar. 2023 – Oct. 2023

- Developing efficient neural radiance fields for reconstructing 3D scenes.
- funded by the LG Display, Korea.

3D Face Mesh Reconstruction on Videos Mar. 2022 – Jan. 2023

- Developing a multi-view and temporally consistent 3D face reconstruction method for videos.
- funded by the KRAFTON, Korea.

Optimal Shape Model for Deformable Object Recognition Aug. 2020 – Dec. 2022

- Developed a 3D pose and shape estimation methods for deformable objects in-the-wild.
- funded by the Agency for Defense Development (ADD), Korea.

Automatic Netlist Generator and Circuit Comparison via Graph Isomorphism Sep. 2019 – May. 2020

- Developed an learning-based analogue circuit-to-netlist converter.
- Undergraduate thesis project.

REFERENCE

Prof. Tae-Hyun Oh, Professor, KAIST
Relationship: M.S. & Ph.D. advisor
E-mail: thoh.kaist.ac.kr@gmail.com

Prof. Kyungdon Joo, Professor, UNIST
Relationship: Collaborator
E-mail: kyungdon@unist.ac.kr