

Sihun Cha

Ph.D. student



[🏠 homepage](#)

[🏠 art work](#)

[✉ chacorp@kaist.ac.kr](mailto:chacorp@kaist.ac.kr)

Education

한국과학기술원 | Korea Advanced Institute of Science and Technology

2022 - Present

Ph.D. student in Computer Science, advised by [Junyong Noh](#).

한국과학기술원 | Korea Advanced Institute of Science and Technology

2020 - 2022

M.S. in Computer Science, advised by [Junyong Noh](#).

한국예술종합학교 | Korea National University of Arts

2013 - 2020

B.F.A. in Fine Arts

Experience

CLO Virtual Fashion Inc.

Apr 2026 - Present

Machine Learning Engineer

Seoul, South Korea

Garment generation and manipulation.

Visual Media Lab, KAIST

Jan 2021 - Present

Research Assistant.

Daejeon, South Korea

Topics of texture generation, 3D facial animation.

Flawless AI

Sep 2024 - Dec 2024

Research Scientist Intern

Santa Monica, US

Audio to Mouth Synthesis using Diffusion Model.

Publications

[One-shot Motion Personalization for Audio-driven Portrait Video Generation](#)

In submission

S. Cha, K. Seo, A. Caliskan, P. Garrido, H. Kim, B. Chaudhuri, J. Noh

Finetuning audio-driven portrait video diffusion model using a single view for personalized motion

[X-AVDT: Audio-Visual Cross-Attention for Robust Deepfake Detection](#)

CVPR 2026

Y. Kim, K. Yun, S. Hong, S. Cha, C. Koo, J. Noh

Robust deepfake detection method and cross-generator dataset by leveraging cross-attention features to capture audio-visual correlations.

[Mesh Agnostic Audio-Driven 3D Facial Animation](#)

KCGS 2025 (Best paper)

K. Seo, S. Cha, H. Na, I. Lee, J. Noh

An end-to-end method for animating a 3D face mesh with arbitrary shape and triangulation from a given speech audio.

[Neural Face Skinning for Mesh-agnostic Facial Expression Cloning](#)

Eurographics 2025

S. Cha, S. Yoon, K. Seo, J. Noh

A method that enables direct retargeting between two facial meshes with different shapes and mesh structures.

[Deep Learning-Based Facial Retargeting Using Local Patches](#)

Eurographics 2025

Y. Choi, I. Lee, S. Cha, S. Kim, S. Jung, J. Noh

Retargeting facial expression from a source human performance video to a target stylized 3D character using local patches.

[NeRFFaceSpeech: One-shot Audio-driven 3D Talking Head Synthesis via Generative Prior](#)

CVPRW 2024

G. Kim, K. Seo, S. Cha, J. Noh

One-Shot Audio-driven 3D talking head generation with enhanced 3D consistency using NeRF and generative knowledge from single image input.

[LeGO: Leveraging a Surface Deformation Network for Animatable Stylized Face Generation with One Example](#)

CVPR 2024

S. Yoon, K. Yun, K. Seo, S. Cha, J. Yoo, J. Noh

Creating an animatable stylized 3D face mesh with one example pair.

[Generating Texture for 3D Human Avatar from a Single Image using Sampling and Refinement Networks](#)

Eurographics 2023

S. Cha, K. Seo, A. Ashtari, J. Noh

Generating 3D human texture from a single image using sampling and refinement process by utilizing geometry information.

Reference Based Sketch Extraction via Attention Mechanism

SIGGRAPH Asia 2022

A. Ashtari, C. Seo, C. Kang, S. Cha, J. Noh

Extracting a sketch from an image in the style of a given reference sketch while preserving the visual content of the image.

Generating 3D Human Texture from a Single Image with Sampling and Refinement

SIGGRAPH 2022 Posters

S. Cha, K. Seo, A. Ashtari, J. Noh

A method for generating 3D human texture from a single image based on SMPL model, using sampling and refinement process.

"Anyway,": Two-player Defense Game via Voice Conversation

CHI Play 2021

M. Hong, Y. Choi, S. Cha

A two-player conversational defense game that uses voice conversation as an input.

Projects

Development of Universal Fashion Creation Platform Technology for Avatar Personality Expression (KOCCA)

Jun. 2023 ~ Ongoing

Project Manager (Intra)

Development of Core SW Technology for Realistic 3D Facial Animation Generation (Metaverse Entertainment)

Aug. 2022 ~ Jan. 2024

Project Manager (Intra)

3D Cinemagraph for AR Contents Creation (IITP)

Jun. 2021 ~ Dec. 2022

Software Developer

Development of self-evolving AI Creation Platform (KOCCA)

Jun. 2021 ~ Dec. 2022

Software Developer

Exhibition

Peer to Peer

2022

단체전 (group exhibition)

온수공간, Seoul

Peer to Peer

2021

단체전 (group exhibition)

토포하우스 (Topohaus), Seoul

영구 보존을 위한 휘핑에 샷추가 (레귤러)

2020

개인전 (solo exhibition)

쇼앤티 (show and tell), Seoul

Mass 2020

2020

단체전 (group exhibition)

Czong Institute for Contemporary Art (CICA) Museum, Gimpo-si

ModelHouse: HM05

2020

단체전 (group exhibition)

LOUNGE 32, Seoul

전시후도록 Exhibition Publication

2020

단체전 (group exhibition)

WESS, Seoul

드로잉을 위한 드로잉

2019

단체전 (group exhibition)

Korea National University of Arts Theory Gallery, Seoul

SHOWCASE 2019: Playing the future

2019

단체전 (group exhibition)

성북예술창작터 (Seoungbuk Young Art Space), Seoul