Youngjoong Kwon

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Research Interests
Digital Humans, 3D/4D Reconstruction, Computer Vision and Graphics

Academic Appointments

Emory University, Department of Computer Science — Sep. 2025 – Present
Assistant Professor — Georgia, United States
Director, Emory Vision and Graphics Lab (EVGL) [lab website]

Stanford University, Stanford Translational AI (STAI) Lab and Stanford Vision and Learning (SVL) Lab — Jul. 2024 – Aug. 2025
Postdoctoral Scholar — California, United States
Advisor: Prof. Ehsan Adeli

Carnegie Mellon University, Robotics Institute — Jul. 2023 – Jun. 2024
Postdoctoral Fellow — Pennsylvania, United States
Advisor: Prof. Fernando De la Torre

Education

University of North Carolina at Chapel Hill — Aug. 2018 – Dec. 2023
Ph.D. in Computer Science — North Carolina, United States
Advisor: Prof. Henry Fuchs

University of North Carolina at Chapel Hill — Apr. 2020
M.S. in Computer Science — North Carolina, United States
Advisor: Prof. Henry Fuchs

Yonsei University — Mar. 2015 – Aug. 2017
B.S. in Computer Science and Engineering — Seoul, South Korea

Peer-Reviewed Publications

Youngjoong Kwon, Yao He, Heejung Choi, Chen Geng, Zhengmao Liu, Jiajun Wu, and Ehsan Adeli
GenFusion: Feed-forward Human Performance Capture via Progressive Canonical Space Updates,
ICLR 2026 [*paper*] [*project*]

Donghyun Kim, Chanyoung Kim, **Youngjoong Kwon**†, Seong Jae Hwang†
Delaunay Canopy: Building Wireframe Reconstruction from Airborne LiDAR Point Clouds via Delaunay Graph,
ECCV 2026 (†Co-corresponding authors) [*paper*] [*project*]

Yixing Lu, Junting Dong, **Youngjoong Kwon**, Qin Zhao, Bo Dai, and Fernando De la Torre
GAS: Generative Avatar Synthesis from a Single Image,
ICCV 2025 [*paper*] [*project*]

Shengze Wang, Ziheng Wang, Ryan Schmelzle, Liujie Zheng, **Youngjoong Kwon**, Roni Sengupta, Henry Fuchs
Learning View Synthesis for Desktop Telepresence with Few RGBD Cameras,
TVCG 2025 [*paper*] [*project*]

Youngjoong Kwon, Baole Fang, Yixing Lu, Haoye Dong, Cheng Zhang, Francisco Vicente Carrasco, Albert Mosella-Montoro, Jianjin Xu, Shingo Takagi, Daeil Kim, Aayush Prakash, and Fernando De la Torre
Generalizable Human Gaussians for Sparse View Synthesis,
ECCV 2024 [*paper*] [*project*]

Youngjoong Kwon, Lingjie Liu, Henry Fuchs, Marc Habermann, Christian Theobalt
DELIFFAS: Deformable Light Fields for Fast Avatar Synthesis,
NeurIPS 2023 [*paper*] [*project*]

Youngjoong Kwon, Dahun Kim, Duygu Ceylan, Henry Fuchs,
Neural Image-based Avatars: Generalizable Radiance Fields for Human Avatar Modeling,
ICLR 2023 [*paper*] [*project*]

Youngjoong Kwon, Stefano Petrangeli, Dahun Kim, Haoliang Wang, Viswanathan Swaminathan, Henry Fuchs,
Tailor Me: An Editing Network for Fashion Attribute Shape Manipulation,
WACV 2022 [*paper*]

Youngjoong Kwon, Dahun Kim, Duygu Ceylan, Henry Fuchs,
Neural Human Performer: Learning Generalizable Radiance Fields for Human Performance Rendering,
NeurIPS 2021 Spotlight [*paper*] [*project*]

Youngjoong Kwon, Stefano Petrangeli, Dahun Kim, Haoliang Wang, Henry Fuchs, Viswanathan Swaminathan,
Rotationally-Consistent Novel View Synthesis for Humans,
ACM MM 2020 [*paper*]

Youngjoong Kwon, Stefano Petrangeli, Dahun Kim, Haoliang Wang, Eunbyung Park, Viswanathan Swaminathan, Henry Fuchs,
Rotationally-Temporally Consistent Novel View Synthesis of Human Performance Video,
ECCV 2020 Spotlight [*paper*] [*data*]

Young-Joong Kwon, Dae-Yong Kim, In-Kwon Lee,
Real-time Animation of Rain-wet Cloth Material,
CASA 2017 [*paper*]

Manuscripts Under Review

Donghyun Kim, Chanyoung Kim, Junhyeok Kim, Eunseo Jeong, Hyunah Ko, **Youngjoong Kwon**†, Seong Jae Hwang†
Point Clouds in the Frequency Domain: Color in Amplitude, Geometry in Phase,
Under review at ICLR 2027 (†Co-corresponding authors) [*paper*]

Yao He, **Youngjoong Kwon**, Tiange Xiang, Wenxiao Cai, and Ehsan Adeli
Repurposing 2D Diffusion Models for 3D Shape Completion,
Under review at 3DV; earlier version accepted at an ICCV 2025 Workshop
[*paper*] [*project*]

Manuscripts in Preparation

Yilin Xu, Donghyun Kim, Chanyoung Kim, Zikai Zhou, Sejung Kwon, Ike Choi, Jinho Choi, and **Youngjoong Kwon**
Sparse-View 4D Human-Scene Reconstruction with Geometric Alignment

Chanyoung Kim, Donghyun Kim, Yilin Xu, Jooyoung Yoo, Shengze Wang, JoonSeok Kim, and **Youngjoong Kwon**
Light Shouldn't Distort Geometry in Feed-Forward 3D Reconstruction

Donghyun Kim, Chanyoung Kim, Zhengyang Shen, Mingsong Dou, Chris Riehm, Hyeokhyen Kwon, SeongJae Hwang†, and **Youngjoong Kwon**†
Rendering a Monocular Human Video in Novel Views and Poses via Body Part Collages
(† Co-corresponding authors)

Research Funding

Awarded Internal Grants

GUM-V: A Physically-Grounded, Urban-Scale World Model for Autonomous Vehicle Simulation 2026
PI, University Research Committee (URC) Grant, Emory University, $30,000 total

Immersive 3D Video Capture for High-Fidelity Medical Training and Simulation 2026
PI, Program to Enhance Research and Scholarship (PERS), Emory University, $12,000

Research Recognition

IARPA Solutions Marketplace 2026
Deemed Awardable following technical assessment
Who Reappeared? Person Identification Across Camera Blind Gaps

Ph.D. Students

Emory University

Yilin Xu 2026 – Present
Chanyoung Kim 2026 – Present

Teaching

Emory University

Computer Vision, CS 442/584	Fall 2026
Computer Graphics, CS 485/560	Spring 2026
Computer Vision, CS 485/584	Fall 2025

Invited Talks

Yonsei University Everyday Human Digitization: The Bridge to 4D World Models	2026
4D World Models: Bridging Generation and Reconstruction, CVPR 2026 Workshop Everyday Human Digitization: The Bridge to 4D World Models	2026
ICXR Research Series 3D human digitization from an XR perspective	2026
Seoul National University Hospital Neural Rendering	2025
MyoSuite Affordable and Efficient Human Digitization	2025
Brown University Affordable and Efficient Human Digitization	2024
Texas A&M University Affordable and Efficient Human Digitization	2024
NVIDIA Affordable and Efficient Human Digitization	2024
Adobe Research Affordable and Efficient Human Digitization	2024
Stanford University Modeling Efficient Representation for Human Digitization with Affordable Setup	2023
Max Planck Institute for Intelligent Systems (MPI-IS) Learning to Create Digital Humans	2022
The University of British Columbia (UBC) Learning to Create Digital Humans	2022

Academic Service

Area Chair, Conference on Computer Vision and Pattern Recognition (CVPR)	2027
Area Chair, International Conference on 3D Vision (3DV)	2026
Workshop Co-organizer, MoCHA (ECCV 2026): Human Motion Challenges in Real-World and Clinical Settings	
Workshop Co-organizer, PhysHuman (CVPR 2026): Physically Grounded Human Perception and Modeling	
Jury Member, AI Cine Fest	2025
Reviewer: NeurIPS, ICML, ACM TOG, CVPR, ECCV, ICCV, SIGGRAPH Asia, IEEE TVCG, 3DV, IEEE VR, ICLR Workshops	

Honors and Awards

Bronze Award, 28th HumanTech Paper Award, Samsung Electronics ($5,000)	2022
Collaborative Research Funding, Adobe Research	2019
High Honors, Yonsei University	2016
Best Graduation Project Award, Yonsei University	2016

Patents

View synthesis with spatial and rotational consistency
US Patent 12,051,175

Techniques for image attribute editing using neural networks
US Patent 11,967,049

Prior Research Experience

Max Planck Institute for Informatics, VCAI	May. 2022 – Aug. 2022
Research Intern	Saarbrucken, Germany
Adobe Research, Real-time Algorithms Lab	Jun. 2019 – Nov. 2020
Research Intern	California, United States