Jeong Joon Park

Assistant Professor
Computer Science and Engineering,
University of Michigan, Ann Arbor, USA.

✉ jjparkcv@umich.edu
⌂ https://jjparkcv.github.io

Education

University of Washington

Ph.D. in Computer Science and Engineering
Advisor: Prof. Steve Seitz
Thesis: *Towards Photo-Realistic 3D Reconstruction from Casual Scanning*
Committee: Steve Seitz, Ira Kemelmacher-Shlizerman, Qi Shan, Richard Szeliski
Apple PhD Fellowship in AI/ML (2020-2021)
UW Reality Lab Facebook Fellow (2018-2019)

Seattle, WA
2015–2021

California Institute of Technology

B.S. in Computer Science, graduated with Honor
Advisors: Pietro Perona, Mathieu Desbrun
Fully Funded by *Samsung Scholarship*

Pasadena, CA
2011–2015

Professional Experience

University of Michigan, Assistant Professor.
Computer Science and Engineering

Ann Arbor, MI
08/2023 –

Stanford University, Postdoctoral Researcher.
Advisors: Leonidas Guibas, Gordon Wetzstein

Palo Alto, CA
09/2021 – 08/2023

Apple Inc. AI/ML Team, Research Intern. Explored neural representation
and reconstruction for indoor scenes. Mentor: Qi Shan, Alex Colburn

Seattle, WA
06/2020 – 09/2020

Facebook Reality Labs, *Research Intern.* Research on developing new
representations of geometry, material, and surface appearance.
Mentor: Steven Lovegrove and Richard Newcombe

Redmond, WA
06/2019 – 09/2019
06/2018 – 09/2018

Adobe Research, *Research Intern.* Research on Augmented Reality under
dynamically changing lighting conditions. Mentor: Duygu Ceylan

San Jose, CA
06/2017 – 09/2017

Facebook, Inc., *Software Engineer Intern.* Developed front-end and back-end components of video thumbnail preview interface.

Menlo Park, CA
06/2015 – 09/2015

Publications (🗎 : clickable link)

[P14]

Generative Novel View Synthesis with 3D-Aware Diffusion Models
Eric Chan*, Koki Nagano*, Matthew Chan*, Alexander Bergman*, **Jeong Joon Park***
Axel Levy, Miika Aittala, Shalini De Mello, Tero Karras, Gordon Wetzstein.
2023 *IEEE International Conference on Computer Vision (ICCV).* 🗎
Oral Presentation

[P13]

CC3D: Layout-Conditioned Generation of Compositional 3D Scenes
Sherwin Bahmani*, **Jeong Joon Park***, Despoina Paschalidou, Xingguang Yan, Gordon Wetzstein, Leonidas Guibas, Andrea Tagliasacchi
2023 IEEE International Conference on Computer Vision (ICCV). 🗎

[P12]

CurveCloudNet: Processing Point Clouds with 1D Structure
Colton Stearns, Jiateng Liu, Davis Rempe, Despoina Paschalidou, **Jeong Joon Park**, Sebastien Mascha, Leonidas J. Guibas
In Submission, 2023. 🗎

[P11]

LEGO-Net: Learning Regular Rearrangements of Objects in Rooms
Qiuhong Anna Wei, Sijie Ding*, **Jeong Joon Park***, Rahul Sajnani, Adrien Poulenard, Srinath Sridhar, Leonidas Guibas.
2023 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR).* 🗎

[P10]

SinGRAF: Learning a 3D Generative Radiance Field for a Single Scene
Minjung Son*, **Jeong Joon Park***, Leonidas Guibas, Gordon Wetzstein.
2023 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR).* 🗎

[P9]

ALTO: Alternating Latent Topologies for Implicit 3D Reconstruction
Zhen Wang, Shijie Zhou, **Jeong Joon Park**, Despoina Paschalidou, Suya You, Gordon Wetzstein, Leonidas Guibas, Achuta Kadambi.
2023 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR).* 🗎

[P8]

Generating Part-Aware Editable 3D Shapes without 3D Supervision
Konstantinos Tertikas, Despoina Paschalidou, Boxiao Pan, **Jeong Joon Park**, Mikaela Angelina Uy, Ioannis Emiris, Yannis Avrithis, Leonidas Guibas.
2023 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR).* 🗎

[P7]

3D-Aware Video Generation
Sherwin Bahmani, **Jeong Joon Park**, Despoina Paschalidou, Hao Tang,
Gordon Wetzstein, Leonidas Guibas, Luc Van Gool, Radu Timofte.

2023 Transactions on Machine Learning Research.

[P6]

StyleSDF: High-Resolution 3D-Consistent Image and Geometry Generation
Roy Or-El, Xuan Luo, Mengyi Shan, Eli Shechtman,
Jeong Joon Park, Ira Kemelmacher-Shlizerman.
2022 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.

Oral Presentation (Top ~3%).

[P5]

BACON: Band-limited Coordinate Networks for Multiscale Scene Representation
David B Lindell, Dave Van Veen, **Jeong Joon Park**, Gordon Wetzstein.
2022 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.

Oral Presentation (Top ~3%).

[P4]

Seeing the World in a Bag of Chips
Jeong Joon Park, Aleksander Holynski, Steve Seitz.
2020 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.

Oral Presentation (Top ~3%).
Covered by *WIRED* and *Scientific American*.

[P3]

DeepSDF: Learning Continuous Signed Distance Functions for Shape Representation
Jeong Joon Park, Peter Florence, Julian Straub, Richard Newcombe, Steven Lovegrove.
2019 *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.

Oral Presentation (Top ~3%), *Best Paper Award Finalist*.

[P2]

Surface Light Field Fusion
Jeong Joon Park, Richard Newcombe, and Steve Seitz.
2018 *IEEE International Conference on 3D Vision (3DV)*.

Oral Presentation.

[P1]

Prevalence and Recoverability of Syntactic Parameters in Sparse Distributed Memories
Jeong Joon Park, Ronnel Boettcher, Andrew Zhao, Alex Mun, Kevin Yuh, Vibhor Kumar,
Matilde Marcolli.
2017 *International Conference on Geometric Science of Information*.

Patents

Realistically illuminated virtual objects embedded within immersive environments
Jeong Joon Park, Zhili Chen, Xin Sun, Vladimir Kim, Kalyan Sunkavalli, Duygu Ceylan
U.S. Patent Number US10600239B2 (2020)

Awards & Honors

Apple PhD Fellow in AI / ML	*2020–2021*
CVPR Best Paper Award Finalist	*2019*
UW Reality Lab Facebook Fellow	*2018--2019*
Samsung Scholarship	*2011--2015*

Teaching Experience

Instructor, *Advanced Topics in Computer Vision*
(EECS 542, University of Michigan).
Co-taught a course on graduate-level computer vision with Stella Yu

Fall 2023

Teaching Assistant, *Neural Models for 3D Geometry.*
(CS348n, Stanford University).
Gave a guest lecture; prepared and graded assignments; hosted office hours

Winter 2022

Teaching Assistant, *Data Structures and Algorithms*.
(CSE373, University of Washington)
Prepared and graded assignments; hosted office hours

Spring 2021

Teaching Assistant, *AR/VR Capstone*.
(CSE 481V, University of Washington)
Advised teams of undergraduate students to develop AR/VR applications

Spring 2020

Student Collaborations

Edward Li (University of Michigan, Intern)

Rishitha Gollamudi (University of Michigan, Master's Student)

Siddharth Rao Appala (University of Michigan, Master's Student)

Jinfan Zhou (University of Michigan, Master's Student)

Xuweiyi Chen (University of Michigan, Master's Student)

Chris Rockwell (University of Michigan, PhD Student. Co-advised with

Justin Johnson and David Fouhey)

Congyue Deng (Stanford University, PhD Student)

Eric Chan (Stanford University, PhD Student)

Colton Stearns (Stanford University, PhD Student)

Sherwin Bahmani (TU Darmstadt, Master Student)

Qiuhong "Anna" Wei (Brown University, Undergraduate)

Rahul Sajnani (Brown University, PhD Student)

Sijie Ding (Stony Brook University, PhD Student)

Zhen Wang (UCLA, PhD student)

Shijie Zhou (UCLA, PhD student)

Roy Or-El (University of Washington, PhD Student)

Service

Reviewer of CVPR, ICCV, SIGGRAPH, SIGGRAPH ASIA, 3DV
Area Chair of 3DV 2024
Thesis committee:
Nilesh Kulkarni (UMichigan CSE PhD, 2023)
William Shen (Stanford CS PhD, 2023)

Invited Talks

University of Michigan, Ann Arbor, MI   *10/2023*
Responsible AI, Responsibility of AI
Host: UMichigan AI Symposium

University of Michigan, Ann Arbor, MI   *09/2023*
3D Generative Models for Medical Imaging
Host: UMichigan AI for Medical Imaging Symposium

Cornell University, Ithaca, NY   *04/2023*
Learning to Re-create Reality in 3D
Host: Bharath Hariharan

University of Michigan, Ann Arbor, MI   *04/2023*
Learning to Re-create Reality in 3D
Host: Stella Yu

Johns Hopkins, Baltimore, MD   *04/2023*
Learning to Re-create Reality in 3D
Host: Alan Yuille

Brown University, Providence, RI   *02/2023*
Learning to Re-create Reality in 3D
Host: Srinath Sridhar

Korea Advanced Institute of Science & Technology (KAIST), Daejeon, South Korea *12/2022*
Learning to Re-create Reality in 3D
Host: Minhyuk Sung

Seoul National University AI Summer School, South Korea *08/2022*
3D Reconstruction and Synthesis for New Media
Host: Hanbyul Joo

Stanford University, Palo Alto CA *06/2022*
Synthesizing Reality
Host: SHTEM: Summer Internships for High Schoolers and Community College
(Guest Lecture to students from underrepresented community)

Apple Inc., Cupertino CA *05/2021*
Reconstructing Reality
Host: Apple Scholars in AI/ML

CV/ML Grad Reality Workshop, University of Washington *04/2021*
Gave a talk on 3D vision to college students from underrepresented community
Host: UW Graphics Lab

Stanford University, Palo Alto CA *01/2021*
Reconstructing Reality
Host: Leonidas Guibas, Gordon Wetzstein

Massachusetts Institute of Technology, Cambridge *07/2020*
Reconstructing Reality
Host: Bill Freeman

University of California, Berkeley *09/2020*
Reconstructing Reality
Host: Angjoo Kanazawa

University of Washington, CSE 576, Guest Lecture. *05/2020*
Depth Camera, 3D Reconstruction, and Applications
Host: Steve Seitz, Richard Szeliski, Harpreet Sawhney

NVIDIA Research, Seattle WA. *05/2019*
DeepSDF: Learning Continuous SDFs for Shape Representation
Host: Dieter Fox