

Shizhan ZHU

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EDUCATION

UC Berkeley

PhD, Postdoc in BAIR, EECS

Berkeley, CA

Aug 2017 - Dec 2024

- Advisor: Professor Trevor Darrell
- Field of interest: 3D modeling (reconstruction, relighting) with implicit models (e.g. SDF, NeRF)

Chinese University of Hong Kong

Master of Philosophy, Research Assistant in MMLAB, Information Engineering

Hong Kong

Aug 2014 - July 2017

- Advisor: Professor Chen Change Loy
- Field of interest: Facial landmarks localizations, fashion images generation with GAN

Tsinghua University

Bachelor's in the School of Software and Department of Electrical Engineering

Beijing

Aug 2010 - July 2014

- Distinguished graduate award of Tsinghua University (Cum Laude, top 10% in EE dept.)

INTERNSHIPS

Nexar Inc. | *Dashcam Crash Prediction Challenge*

Jan 2025 - Oct 2025

- Co-organized the Nexar Dashcam prediction challenge, surveyed and evaluated various state-of-the-art solutions, and worked toward a strong baseline given the up-to-date video models.

Meta Reality Lab | *Neural Relighting*

June 2022 – Dec 2023

- Proposed the fast image-based (envmap) neural relighting algorithm for neural relighting (envmap) for objects and materials with subsurface scattering effects (e.g. translucency) and specular highlights (particularly with detailed local micro-geometry), optimized from the OLAT setting.

Adobe | *Video Generation for Human Motion Retargeting*

May 2018 - May 2019

- Attempted to generate a video for a human subject from a given input Video A with the action motions from a given input Video B. The project did not lead to publications due to the insufficient research capability and communication skills back at the time, as well as the challenging nature of fitting the under-parameterized SMPL model to clothed humans and the lack of 3D human data. The dimensionality reduction of the high variance vertices inflation (e.g. PCA) should have been proposed.

PUBLICATIONS AND PRE-PRINTS

- **Fast Image-based Neural Relighting with Translucency-Reflection Modeling**
[Shizhan Zhu](#), Shunsuke Saito, Aljaz Bozic, Carlos Aliaga, Trevor Darrell, Christoph Lassner
Arxiv Pre-print (2025). <https://zhusz.github.io/TRHM-Webpage/>
- **Differentiable Gradient Sampling for Learning Implicit 3D Scene Reconstructions from a Single Image**
[Shizhan Zhu](#), Sayna Ebrahimi, Angjoo Kanazawa, Trevor Darrell
International Conference on Learning and Representations (**ICLR**) 2022
- BADAS: Context Aware Collision Prediction Using Real-World Dashcam Data
Roni Goldshmidt, Hamish Scott, Lorenzo Niccolini, [Shizhan Zhu](#), Daniel Moura, Orly Zvitia
- Nexar Dashcam Collision Prediction Dataset and Challenge
Daniel Moura, [Shizhan Zhu](#), Orly Zvitia
CVPR Workshop, WAD (Workshop on Autonomous Driving), 2025
- Voxel-informed Language Grounding
Rodolfo Corona, [Shizhan Zhu](#), Dan Klein, Trevor Darrell
Annual Meeting of the Association for Computational Linguistics (**ACL**), 2022.

- **Be your own Prada: Fashion Synthesis with Structural Coherence**
Shizhan Zhu, Sanja Fidler, Raquel Urtasun, Dahua Lin, Chen Change Loy
 IEEE Conference on International Conference on Computer Vision (**ICCV**), 2017
- **Deep Cascaded Bi-Network for Face Hallucination**
Shizhan Zhu, Sifei Liu, Chen Change Loy, Xiaoou Tang
 European Conference on Computer Vision (**ECCV**), 2016
- **Unconstrained Face Alignment via Cascaded Compositional Learning**
Shizhan Zhu, Cheng Li, Chen Change Loy, Xiaoou Tang
 IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2016
- **Face Alignment by Coarse-to-Fine Shape Searching**
Shizhan Zhu, Cheng Li, Chen Change Loy, Xiaoou Tang
 IEEE Conference on Computer Vision and Pattern Recognition (**CVPR**), 2015

TEACHER ASSISTANT

Introduction to Artificial Intelligence. | CS188, UC Berkeley

Fall 2019, Fall 2022

Web Programming and Security. | IERG4210, CUHK

Spring 2015

Information Engineering Laboratory. | IERG3921, CUHK

Fall 2014

TECHNICAL SKILLS

Languages: Python, C/C++/Cuda, Matlab, Lua, etc.

Libraries: Blender, Mitusb, etc.