

Anpei CHEN

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[Github](#) [Google Scholar](#)

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ABOUT ME

I am a Ph.D. candidate student of Computer Science at ShanghaiTech University Visual Intelligent Center (VIC), supervised by Prof. [Jingyi Yu](#). I have a great passion for new things and ideas and my research interests lie at the intersection of computer graphics and computer vision, including geometric modeling, reconstruction and rendering. Outside my research, I love photography, badminton, and movie appreciation a lot.

EDUCATION

JULY 2021 PhD candidate of Computer Science at **ShanghaiTech University**, Shanghai, [LAB](#)

JULY 2018 Master of Computer Science at **Chinese Academy of Sciences**, Shanghai, CHINA

Major: Computer Vision & Graphics & Photography

Course: Computer Vision I & II, Computer Graphics II, Machine Learning

Deep Learning, SLAM, Convex Optimization, Computer Photography

TA: Algorithm Analysis Fall 2016

JULY 2016 Bachelor Degree in Electronic Information Science and Technology

Xidian University, China

Projects: Internet of Thing: Intelligent lighting, Embedded project: String puppet

Wearable items: Motion tracking and recognition system based on EMG signal

Bionic self-balancing and visual stabilization anti-seasickness system

Awards: Special Prize of 26th Starfire Cup in Xidian University

The 11th College Outstanding Students of Science and Technology

Third Prize of 2015 National College Student Challenge Cup Academic Competition

TECHNICAL SKILLS

Language: C/C++, Python, Matlab, Pytorch, 3DsMax, Blender, CUDA, OpenGL, OptiX

Research: Face from Single Image; Light Field Rendering; Image Space Refocusing;

Path Tracing; View Synthesis on face and object; Image Synthesis

System: Dome and Light Stage system (e.g., hardware and algorithm design) for

Object, Face and Body geometric reconstruction

PATENTS

- 一种防晕动座椅及其调节平衡性的方法 CN104972932A 2015-10-14
(An Anti-motion sickness seat and method for seat balance adjustment)
- 一种可穿戴肌电臂环 CN104586391A 2015-05-06
(A wearable electromyography arm ring)
- 一种基于深度学习的移动端表面光场渲染方法 CN109829967A 2019-03-06
(A deep learning based surface light field rendering method for mobile device)
- 一种千兆级像素图像的实时渲染方法 CN WO2020063516A1 2020-04-02
(A real-time rendering method for gigapixel images)

ACADEMIC EXPERIENCE

WINTER 2020 1 YEAR	Visiting Student (Remotely) at SU LAB Advisor: Hao Su and Zexiang Xu Working on multi-view stereo reconstruction and neural rendering. More specifically, our goal is to design a fast generalizable radiance field reconstruction from Multi-View Stereo that we can reason new scenes just from a few sparse image samples.
WINTER 2018 4 MONTHS	Intern at DISNEY RESEARCH LA, <i>Lab Associate</i> Mentor: Kenny Mitchell Worked on global illumination rendering and human-to-cartoon body reconstruction system. More specifically, attempt to speed up path tracing process via optimizing the light path sampling algorithm according to its' temporal ray samples. I also took part in a human-to-cartoon project and in charge of recovering dynamic facial wrinkles. We submitted two patents during the internship.
SUMMER 2018 2 WEEKS	Visiting Scholar at LOUISIANA STATE UNIVERSITY Advisor: Jinwei Ye Worked on facial expression estimation from single images, target on narrowing down the ambiguity of morphable parameters from 2D landmarks. This experience opens my mind to computer photography and help me familiar with the social environment abroad a lot.
SUMMER 2016 3 MONTHS	Intern at DGENE, <i>Engineer</i> DGene Worked on virtual reality device, object reconstruction and rendering. Stereo Video player on HTC Vive, fast refocusing algorithm with RGBD panorama input. And preparing a demo of digitalis products (Tang San Cai, bottle and handBag etc.) for Alibaba Buy+Act . Our solution is demonstrated on the conference due to its' high data compression performance (2000 : 1) and we also published a paper on I3D'18.

PUBLICATIONS

- A Portrait Generator with Dynamic Styling
Anpei Chen, Ruiyang Liu, Ling Xie, Zhang Chen, Hao Su and Jingyi Yu
(Under revision) [[code](#)]
- A Neural Rendering Framework for Free-Viewpoint Relighting
Zhang Chen, **Anpei Chen**, Guli Zhang, Chengyuan Wang, Yu Ji, Kiriakos N. Kutulakos, Jingyi Yu
([CVPR'20](#)) [[paper](#)] [[code](#)]
- Photo-Realistic Facial Details Synthesis From Single Image
Anpei Chen, Zhang Chen, Guli Zhang, Ziheng Zhang, Kenny Mitchell, Jingyi Yu
([ICCV'19 Oral](#)) [[paper](#)] [[code](#)] [[slides](#)] [[video](#)]
- Learning Semantics-aware Distance Map with Semantics Layering Network for Amodal Instance Segmentation
Ziheng Zhang, **Anpei Chen**, Ling Xie, Jingyi Yu, Shenghua Gao
([ACM MM'19](#)) [[paper](#)] [[code](#)]
- Refocusable Giga-Pixel Panoramas for Immersive VR Experiences
Wentao Lyu, Peng Ding, Yingliang Zhang, **Anpei Chen**, Minye Wu, Shu Yin, and Jingyi Yu
([TVCG](#)) [[paper](#)]
- Sparse Photometric 3D Face Reconstruction Guided by Morphable Models
Xuan Cao, Zhang Chen, **Anpei Chen**, Xin Chen, Shiyong Li and Jingyi Yu
([CVPR'18](#)) [[paper](#)]
- Deep Surface Light Fields
Anpei Chen, Minye Wu, Yingliang Zhang, Nianyi Li, Jie Lu, Shenghua Gao and Jingyi Yu
([I3D'18](#)) [[paper](#)] [[video](#)] [[slides](#)]