Chen WANG

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EDUCATION

Tsinghua University 09/2020 - 06/2023
Master in Computer Science (GPA: 3.90, Top 10%, Advisor: Prof. Shi-Min Hu)

Tsinghua University 08/2016 - 06/2020
Bachelor in Computer Science (GPA: 3.76, Top 20%, Excellent Graduate), Economics

RESEARCH INTERESTS & OBJECTIVES

Computer Graphics & Vision (focus on 3D scene understanding, modeling and interaction)

PUBLICATIONS

StructNeRF: Neural Radiance Fields for Indoor Scenes with Structural Hints
Zheng Chen, **Chen Wang**, Yuan-Chen Guo, Song-Hai Zhang
Arxiv 2022

NeRF-SR: High Quality Neural Radiance Fields using Supersampling
Chen Wang, Xian Wu, Yuan-Chen Guo, Yu-Wing Tai, Shi-Min Hu
ACM International Conference on Multimedia, 2022

DeepPortraitDrawing: Generating Human Body Images from Freehand Sketches
Xian Wu, **Chen Wang**, Hongbo Fu, Ariel Shamir, Song-Hai Zhang, Shi-Min Hu
Arxiv 2022

On Rotation Gains Within and Beyond Perceptual Limitations for Seated VR
Chen Wang, Song-Hai Zhang, Yi-Zhuo Zhang, Stefanie Zollmann, Shi-Min Hu
IEEE Transactions on Visualization and Computer Graphics, 2022

Learning Implicit Glyph Shape Representation
Ying-Tian Liu, Yuan-Chen Guo, Yi-Xiao Li, **Chen Wang**, Song-Hai Zhang
IEEE Transactions on Visualization and Computer Graphics, 2022

PalmBoard: Leveraging Implicit Touch Pressure in Statistical Decoding for Indirect Text Entry
Xin Yi, **Chen Wang**, Xiaojun Bi, Yuanchun Shi (First student author)
ACM Conference on Human Factors in Computing Systems (CHI), 2020

RESEARCH PROJECTS

Novel View Synthesis
Research Assistant, Tsinghua Computer Graphics and Geometry Group
Advisor: Shi-Min Hu *Aug 2021 - Present*

- Address the problem of synthesizing high-resolution novel views using low-resolution input images
- Proposed a super-sampling strategy to supervise Neural Radiance Fields
- Leveraged the depth maps in NeRF to incorporate additional high-resolution reference images
- Currently focus on few-shot indoor view synthesis and 3D-aware image synthesis

Portrait Image Synthesis from Sketches
Research Assistant, Tsinghua Computer Graphics and Geometry Group
Advisor: Shi-Min Hu *Nov 2020 - Aug 2021*

- Project the input sketch onto the part latent space to constrain each body part, use 3D pose to adjust the global shape of the sketch
- Synthesize images with sketch-guided StyleGAN

3D Scene Exploration in Virtual Reality
Research Assistant, Tsinghua Computer Graphics and Geometry Group
Advisor: Song-Hai Zhang, Shi-Min Hu *Sept 2020 - Aug 2021*

- Quantified the perceptible and imperceptible rotation gains for seated VR (IEEE TVCG 2022)
- Proposed a velocity-guided rotation amplification method to improve task performance and experience (IEEE VR Workshop 2021, patent issued)

Markov-Bayesian Decoder for Text Entry on Flat Surfaces
Research Assistant, Tsinghua Pervasive Human-Computer Interaction Lab
Advisor: Xin Yi, Xiaojun Bi (Stony Brook University) *Nov 2018 - May 2020*

- Developed a platform that features a touch detection algorithm and Markov-bayesian decoder, which enables fast and accurate eyes-free typing on a pressure-image-based pad and table surface
- Fitted collected typing data considering factors such as keyboard layout (BiKey vs. QWERTY), keyboard model (absolute vs. relative), and pressure (with vs. without)
- Proposed a Markov-Bayesian decoder that models pressure image feature vectors as Gaussian distribution and leverages them to enhance touch prediction

HONORS & AWARDS

2022 Siebel Scholar, Class of 2023 (Awarded annually to about 90 students worldwide)
2021 Comprehensive Scholarship (Top 5 out of 69 master students)
2020 Excellent Graduate at Dept. of CST
2019 First Place in Janestreet Beijing Electronic Trade Competition (Top 1 out of 31 Teams)
2019 Philobiblon Scholarship (Top 4 out of 158 in Dept. of CST)
2018 Sohu R&D Scholarship (Top 3 out of 170 in Dept. of CST)
2017 Excellent Academic Performance Scholarship (Top 15 out of 170 in Dept. of CST)

TEACHING AND SERVICE

Reviewer: ICLR 2023, CVMJ 2022
Teaching Assistant: Virtual Reality, Tsinghua University Fall 2022, Fall 2021
Teaching Assistant: Software Engineering, Tsinghua University Fall 2019

LANGUAGES

English TOEFL 109 (S24, 2022.3), 107 (S26, 2022.1), GRE 322 (V153, Q169, AW3.5)
Chinese Native

TECHNICAL SKILLS

Programming Languages Python, C++, C, C#, Go, Java, Matlab, Javascript, Swift
Tools Vim, Git, SVN, LaTeX
Operating Systems macOS, linux, Windows