YIHENG ZHANG

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EDUCATION

Master of Science in Computer Science　　　　　　　　　　　　　　Sept. 2019 - Present
Stanford University, Palo Alto, California, U.S.
Real-Wold Computing specialization

Honors Bachelor of Science in Computer Science and Technology　　　Sept. 2015 - Jun. 2019
Shanghai Jiao Tong University, Shanghai, P.R. China
Overall GPA: 3.95/4.0
Thesis: Denoising in Monte Carlo Path Tracing Rendered Images

RESEARCH EXPERIENCE

Lab of Digital Media and Computer Vision (DMCV)　　　　　　　　Feb. 2017 - Present
Shanghai Jiao Tong University, Shanghai, China
Advisor: Lizhuang Ma (Distinguished Professor)
Research Topic: physically-based rendering, rendering denoise

WORKING EXPERIENCE

Graphics Game R&D Intern　　　　　　　　　　　　　　　　Sept. 2018 - Mar. 2019
Visual Computing Enabling, Intel APAC R&D, Shanghai, China

· Game engine parallel rendering optimization and hardware interface module C++ R&D
· DirectX 11/12 threaded rendering development with Intel TBB and Microsoft WTP
· Created a public demo on UE4 to demonstrate the VCE group's improved parallel rendering

PUBLICATIONS

Light Transport Simulation via Generalized Multiple Importance Sampling　　Apr. 2018
*Qi Liu, **Yiheng Zhang**, Lizhuang Ma - CVM 2018 Oral*

· A generalized multiple importance sampling in path tracing
· Improved the efficiency of vertex connecting and merging algorithm by about 20%

SELECTED PROJECTS

Progressive Multiple Network Rendering Denoise　　　　　　　　　Apr. 2018 - Present
DMCV Individual Research (ongoing)

· A CNN-based offline rendering denoise network system with noise pixel prediction and few-shot training

Interactive Object Selection　　　　　　　　　　　　　　　　Oct. 2017 - Jan. 2018
Computer Graphics Course Group Project (top 1%)

· An open-source deep learning solution for interactive object selection
· Increased accuracy by 15.91% on salient object compared with *Deep Interactive Object Selection*.

Simple Path Tracer　　　　　　　　　　　　　　　　　　　　Nov. 2017
Computer Graphics Course Individual Project (top 1%)

· Scene built and core algorithm implemented by myself, mathematical utilities courtesy: SmallVCM
· Specular, diffuse, refraction and Phong are included

Isochart-based Auto Geometry Mesh Cutting and UV Alignment　　　Apr. 2017 - Jun. 2017
Lab of Digital Media Project

· An interactive approach to generate UV alignment of object mesh charts
· Responsible for testing and optimizing the mesh texture coordinate processing part

SKILLS

Programming	C++(primary), Python(good), Matlab(good), SQL(limited), D3D11(limited), JS(entry level)
Technology	Ray Tracing, Real-time Rendering, Audio Mixing
Software	Adobe Photoshop, Illustrator, Premiere; Autodesk Maya; Presonus Studio One

HONORS

Zhiyuang Honors Bachelor Degree (top 0.5%)   Jun. 2019
Shanghai Jiao Tong University

SCSK Scholarship (top 6%)   Oct. 2018
SCSK Corporation

Zhiyuan Honors Scholarship   Dec. 2017
Zhiyuan College, Shanghai Jiao Tong University

Wish Scholarship (top 3%)   Sept. 2017
Wish Ltd.

Meritorious Winner   Jan. 2017
MCM/ICM Mathematical Contest in Modeling

Zhiyuan Honors Scholarship   Dec. 2016
Zhiyuan College, Shanghai Jiao Tong University

Tung OOCL Scholarship Scholarship (top 6%)   Oct. 2016
The Tung Foundation & Orient Overseas Container Line Ltd.