Cheng Zhang

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Education

University of California, Irvine   *Irvine, CA*
PH.D. IN COMPUTER SCIENCE   *September 2017 – Present*
- Supervisor: Prof. Shuang Zhao

Columbia University in the City of New York   *New York, NY*
M.S. IN COMPUTER SCIENCE   *September 2015 – February 2017*
- GPA: 3.967/4.0

Beijing University of Technology   *Beijing, China*
B.E. IN ELECTRONICS INFORMATION ENGINEERING   *September 2011 – June 2015*
- GPA: 3.74/4.0
- Exchange student at **University of Illinois at Chicago** (senior year)

Employment

Facebook Reality Labs   *Redmond, WA*
GRAPHICS GROUP: RESEARCH INTERN   *June 2019 - September 2019*
- Topic: 3D reconstruction, differentiable rendering

Robert Bosch LLC   *Sunnyvale, CA*
HMI GROUP: MOTION CAPTURE AND RECOGNITION INTERN   *June 2018 - September 2018*
- Topic: Automatic cycle detection and similarity evaluation of time series data

Robert Bosch LLC   *Palo Alto, CA*
HMI GROUP: GRAPHICS RESEARCH INTERN   *May 2017 - August 2017*
- Topic: Building footprints determination for real-time shadow generation

Columbia University   *New York, NY*
COMPUTER GRAPHICS GROUP: GRADUATE RESEARCH ASSISTANT   *June 2016 - April 2017*
- Topic: Text editing, information embedding

Publications

ANTITHETIC SAMPLING FOR MONTE CARLO DIFFERENTIABLE RENDERING

Cheng Zhang, Zhao Dong, Michael Doggett, Shuang Zhao

*ACM Transactions on Graphics (**SIGGRAPH 2020**), 40(4)*

PATH-SPACE DIFFERENTIABLE RENDERING OF PARTICIPATING MEDIA

Cheng Zhang*, Zihan Yu*, Shuang Zhao (*equal contribution)

*ACM Transactions on Graphics (**SIGGRAPH 2021**), 40(4)*

PATH-SPACE DIFFERENTIABLE RENDERING

Cheng Zhang, Bailey Miller, Kai Yan, Ioannis Gkioulekas, Shuang Zhao

*ACM Transactions on Graphics (**SIGGRAPH 2020**), 39(4)*

MULTI-SCALE APPEARANCE MODELING OF GRANULAR MATERIALS WITH CONTINUOUSLY VARYING GRAIN PROPERTIES

Cheng Zhang, Shuang Zhao

Eurographics Symposium on Rendering (EGSR), 2020

A DIFFERENTIAL THEORY OF RADIATIVE TRANSFER

Cheng Zhang, Lifan Wu, Changxi Zheng, Ioannis Gkioulekas, Ravi Ramamoorthi, Shuang Zhao

*ACM Transctions on Graphics (**SIGGRAPH Asia 2019**), 38(6)*

FONTCODE: EMBEDDING INFORMATION IN TEXT DOCUMENTS USING GLYPH PERTURBATION

Chang Xiao, Cheng Zhang, Changxi Zheng

*ACM Transctions on Graphics (**SIGGRAPH 2018**), 37(2)*

Patents

Systems and methods for steganography based on text fonts

*Changxi Zheng, Chang Xiao, **Cheng Zhang***

US Patent 10,755,375

Method and device for efficient building footprint determination

*Lincan Zou, Liu Ren, Zeng Dai, **Cheng Zhang***

US Patent 10,553,025

Reviewer

2021	**ACM SIGGRAPH**
2020	**ACM SIGGRAPH Asia**

Honors & Awards

2021	**Facebook Fellowship**	*Worldwide*
2013	**Beichuan Academic Scholarship**	*Beijing University of Technology*
2011-2014	**Academic Excellence Award**	*Beijing University of Technology*

Skills

Programming C, C++, Python, Matlab, $\TeX$

Software and Applications Mitsuba, PyTorch, Unity3D, Blender