

Xiaoxu Meng

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Work Experience

Research Scientist in Tencent America

Feb. 2020 - Now

Education

University of Maryland, College Park

Ph.D. in Computer Science

Advisor: Amitabh Varshney

Jan. 2019 - Dec. 2020

Dean's Scholarship

College Park, MD

University of Maryland, College Park

Master in Electrical and Computer Engineering

Advisors: Joseph F. JaJa & Amitabh Varshney

Sep. 2015 - Dec. 2018

Jimmy H. C. Lin Graduate Scholarship for Entrepreneurship

College Park, MD

Shanghai Jiao Tong University

B.S. in Microelectronics

Sep. 2011 - Jun. 2015

Top 1% B.S. Thesis Award, Outstanding Undergraduate Award

Shanghai, China

Publications

X. Meng, Q. Zheng, A. Varshney, G. Singh, and M. Zwicker. *Real-time Monte Carlo Denoising with the Neural Bilateral Grid.* EGSR 2020

X. Meng, R. Du, and A. Varshney. *Eye-dominance-guided Foveated Rendering.* Appeared in IEEE VR, also published on IEEE TVCG

X. Meng, R. Du, J. F. JaJa, and A. Varshney. *3D-Kernel Foveated Rendering for Light Fields.* IEEE TVCG

X. Meng, R. Du, M. Zwicker, and A. Varshney. *Kernel Foveated Rendering.* Appeared in I3D, also published on PACMCGIT

Research Experience

Hand Mesh Reconstruction from Single RGB Images

Research intern in Facebook Reality Labs, May 2019 - August 2019

- Implemented an end-to-end convolutional neural network that predicts 3D hand shape and pose from a single RGB image.

DRACO Smart Geometry Encoder

Software engineer intern in Google Inc., May 2018 - Aug. 2018

- Participated in the development of DRACO, a library for compressing and decompressing 3D geometric meshes and point clouds. Mainly focused on DRACO Smart Geometry Encoder, which extracts mesh features and uses machine learning techniques to select the best encoding options.

Real-time Monte Carlo Denoising with the Neural Bilateral Grid

Research Assistant in University of Maryland - College Park, Sep. 2017 - Jan. 2020

- Designed a practical deep learning approach to robustly denoise Monte Carlo images using differentiable neural bilateral grids, which have demonstrated better denoising quality and higher speed than existing methods at low sample rates.

Kernel Foveated Rendering

Research Assistant in University of Maryland - College Park, Jan. 2017 - May 2019

- Designed kernel foveated rendering, which parameterizes the foveation level by embedding polynomial kernel functions in the classic log-polar mapping.
- Designed the 3D-kernel foveated rendering and the eye-dominance-guided foveated rendering.

Other Activities

- Served as paper committee member for HPG 2021;
- Served as reviewer for the following conferences: IEEEVIS 2021, IEEEVR 2020, VRST 2020, ICMI 2020, CHI 2020, CAD/Graphics 2019, PG 2018, CGI 2018

** References available upon request.*