Yue Wang

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Summary

Master's student in Computer Science with thesis research in real time rendering. More than 3 years' experience in graphic programming, including rendering, physically based simulation, and 3D printing. Good communication, analytical, and problem-solving skills.

Education

Sep 2016 - Current — Master of Science, **McGill University**
Major: Computer Science • GPA: 3.82/4
Thesis Topic: Light Field Probe Placement Exploration for Global Illumination

Sep 2012 - June 2016 — Bachelor of Science, **Shandong University**
Major: Computer Science, Elite Class • GPA: 92.51/100 • Rank: 1/33
Thesis Topic: High-dimensional Multi-variate Data Visualization

Work Experience

July 2017- Mar 2018 | **3D Programmer Intern** at La Forge, Ubisoft Montreal
- Implemented an cutting-edge GI algorithm and fully integrated into game engine
- Tested with game scenes on PC and PS4, explored use cases and optimized parameters

Jan 2017 - Apr 2018 | **Teaching Assistant** at McGill University, Montreal
- *Computer Graphics:* Maintained office hours providing help on course materials and graphic programming, designed and graded projects on shadow map and ray tracer
- *Computer Organization:* Tutored students on designing and programming in ARM assembly language on FPGA chips, examined student live demo biweekly

Oct 2015 - Feb 2016 | **Research Assistant** at Shandong University, China
- Developed algorithms for identifying fragile and unprintable parts of 3D tree meshes
- Implemented modules for processing and output 3D-printer-friendly tree meshes

Summer 2015 | **Summer Intern** at RTX Lab, University of Alberta, Edmonton
- Implemented FPGA-based 2D Finite Element Method(FEM) for motor simulations
- Optimized the sparse solver for the system of linear equations of FEM

Projects

Mar. 2017 — **Particle Based Fluid Simulation**
- Implemented Smoothed Particle Hydrodynamics(SPH) that simulated fluid waves at real time
- Supported user interactions and different simulation models (faucet and dam)

Sep. 2016 — **Global Illumination Renderer**
- Offline rendering prototype based on Smallpt
- Features: Importance sampling, motion blur, path tracing, volumetric scattering, photon mapping, equal-angular volumetric importance sampling

Feb. 2015 — **StreamVis: Streaming Data Visualization System**
- Developed interactive framework for visualizing time-varying multi-variate data
- Improved algorithm for mapping high-dimensional data into 2D while preserving the correlation between variables
- Won *Honourable Mention Poster* at *IEEE Visualization Conference* 2015, Chicago

Computer Skills

Programming Languages — C++, C, GLSL, HLSL, Java, ARM assembly
Graphic Libraries — OpenGL, DirectX
Applications — Matlab, MeshLab, netfabb, Blender, Mathematica, RenderDoc, SCUI, Perforce