JUNCHEN DENG

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https://slongle.github.io

EDUCATION

SEPT. 2017 - 2021 (Expected)	Bachelor of Science in Computer Science Harbin Institute of Technology Focus: Computational Science

SCHOLARSHIPS AND AWARDS

International Collegiate Programming Contest (ICPC) Regional Contest	Silver Medal
China Collegiate Programming Contest (CCPC) Regional Contest	Gold Medal
Collegiate Computer Systems & Programming Contest	Gold Medal
China Northeast Collegiate Programming Contest	1st Place
The People's Scholarship in China	1st Class

PERSONAL PROJECTS

CPU Offline Renderer	Physically based offline renderer for research.
	Implement volumetric unidirectional path tracing, stochastic progressive photon mapping, metroplis light transport (Kelemen-style MLT-PSSMLT). Implement SAH-BVH accelerate structure. Implement homogeneous and heterogeneous volume, using respectively free-path and null-collision method to do distance sampling, supporting OpenVDB format volume. Implement smooth dielectrics, smooth conductor, microfacet and blend BSDF models. https://slongle.github.io/projects/The-Last-Time
GPU Offline Renderer	CUDA optimized physically based offline renderer.
	Implement Wavefront architecture for unidirectional path tracing, supporting next event estimate(NEE) and mutiple importance sampling(MIS). 4-13x speedup compared with CPU unidirectional path tracing.
	https://slongle.github.io/projects/GPU_Renderer
Jigsaw Puzzle Solver	A genetic algorithm-based jigsaw puzzle solver.
	Use MST model to do crossover operation between two chromosomes.
	https://slongle.github.io/projects/Jigsaw-Puzzle-Solver

TEACHING

Advanced C Language and Programming	Undergraduate TA
Introduction to Algorithm Competition	Undergraduate TA

COMPUTER SKILLS

Program Languages	C/C++, CUDA, Python, JavaScript
Tools	CMake, git, LaTeX
Operating Systems	Linux, Windows