Sheng Yang (杨升)

Ph.D. student

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Job Intention

- Algorithm Engineer / R&D Engineer

Research Interests

Computer Graphics: Physics based animation

- Fast and accurate simulation of fluids
- GPU-based real-time fluids
- Fast rendering technique of fluids

Education

Peking University **September 2011 - June 2016 (expected)**

- Ph.D. Candidate in Computer Science
- Advisor: Prof. Guoping Wang

Sun Yat-sen University **September 2007 - June 2011**

- B.E. in Computer Science with honors (rank 5th /171)
- Thesis: GPU-based parallel computing of fluid physics Simulation

Honors & Awards

- Programming Contest of SYSU, 2nd prize and 3rd prize 2009-2010
- Citi Cup Financial Innovation Contest of SYSU, 1st prize 2009
- Outstanding Scholarship, Sun Yat-sen University 2008-2009
- Tencent Technology Scholarship, Sun Yat-Sen University 2009
- Outstanding Scholarship, Peking University 2014

Research Projects

Physika：A versatile physics simulation library

- One of the project organizer and maintainer
- Designed architecture of the library and define the coding standards
- Serve as major code contributor for fluids and some basic data-structure and algorithm

Capillary waves of SPH simulation

- A novel algorithm for enriching fluids with capillary waves

• Outperform previous methods in computational efficiency and the choice of basic method

GPU-based large scale simulation of fluids

• Study the simulation of fluid with large time step and large scale

• Proposed a new framework of SPH to simulate fluid with GPU, which improved the efficiency greatly

•Parallel construction of signed distance field

• Study the construction of signed distance field with CUDA

• Proposed a new algorithm to accelerate the constructing, the speed up ratio could be 10-20 compare to traditional method perform on CPU

• This method could be used to handle boundary collision in simulation of solid and fluids

Internship/Venture Projects

•Geyo Technical Company (2013.4 ~ 2014.7)

• Developer of the SLG-SIM games: The battle of the Three Kingdoms

• Responsible for particle effects and the design of the system of mission and social

•Dynamic Signature Verification(2014.4 ~ 2014.12)

• Developer of the algorithm performed on the android, responsible for the Chinese improvements

• This Project has been applied in some bank with the purpose of 'Paperless Office'

Skills

• **Languages:** Mandarin Chinese (native), English (professional working proficiency)

• **Programming Languages：** C/C++

• **Tools：** CUDA, Gcc/G++, Scons, Git, LaTeX, OpenGL, Unity3D

Personal Profile

• Sports, GYM, Study, Life!