

Charles de Rousiers

Key skills

- Computer graphics
- Applied mathematics
- Proficient in C++
- Graphics hardware programming
- Software design
- Technology scouting

R&D rendering engineer

Experiences

2008 - 2011

R&D rendering engineer (3 years - Ph.D student) - INRIA Rhone-Alpes, France

- Development of a material model for rendering **rough refraction** in real-time
- Development of a complex platform for analyzing radiative transfer in **discrete media**
- Analysis of **BSSRDF** representations for complex material
- Development of a representation for efficient operations on **spherical harmonic** functions
- Implementation of several **high-end rendering techniques**

Skills : C++, Multi-threading, OpenGL, CUDA, OptiX

2009

Lecturer - Ubisoft, Annecy, France

- Courses on **advanced C++** programming techniques (memory management, optimization, etc)

R&D engineer (6 month internship) - LIGUM Research Labs, Montreal, Canada

- Studying of **importance sampling** of illumination applied to **photon mapping** and complex lights

Skills : C++, OpenGL, PBRT

2008

Software engineer (Scholar project) - LIRIS Research Labs, Lyon, France

- Development of a **real-time raytracer** on CPU

Skills : C++, SSE

2007

Software engineer (4 month internship) - Active 3D, Dijon, France

- Designing and implementation of a **3D rendering engine** for complex **streamed scenes**

Skills : Java, OpenGL

2006

Software engineer (3 month internship) - LIRIS Research Labs, Lyon, France

- Designing and implementation of a collaborative educational application

Skills : C++, Multi-threading, Client-Server

2008 - 2011

Ph.D in Computer Graphics - Grenoble Universities, France

- Advisor : **Nicolas Holzschuch**, INRIA, France
- Advisor : **Ravi Ramamoorthi**, UC Berkeley, USA (Visiting scholar)

2008

M.S in Computer Graphics (with honors) - INSA de Lyon, France

- Advisor : **Pierre Poulin**, Montreal, Canada

2006

B.S in Computer Sciences (with honors) - INSA de Lyon, France

Code : C++, C, C#, Java, PHP, SQL ...
API : OpenGL 4.x, DirectX 11, Boost, CUDA, Optix, PBRT, ...
Script : CMake, Make, LUA, Bash
Other : XML, JSON, SVN, 3DS Max, ...
Design : Object Oriented Design, Data Oriented Design
Language : **French** - Native
English - Fluent (writing/speaking)
German - Notion (writing/speaking)

Education

Skills

Hobbies

Video games
Climbing
Skiing
Movies



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