

# ENGINEER - PHD IN COMPUTER GRAPHICS

## PIERRE-EDOUARD LANDES

### EMPLOYMENT HISTORY

#### R&D ENGINEER (CURRENT)

SUPAMONKS

5/2014>...

conceiving the studio's **physically-based renderer**, its **real-time viewport**, and dynamic scene management  
occasionally implemented plug-ins for major 3D CG software

C++ Python CPython  
Maya V-Ray Nuke

#### R&D RENDERING ENGINEER (1 YEAR)

AERYS

3/2013>4/2014

took part in the port and development of new features for the **Minko 3D game engine**  
worked on solutions for **interactive global illumination** and **physically-based animation** integration  
occasionally participated in client projects involving the Minko (3D) and Orbit (object interconnection) solutions

C++11 Qt  
OpenGL ES2, GLSL  
ActionScript3

#### RESEARCH ASSOCIATE (1 YEAR)

LABORATORY OF INFORMATICS PARIS DESCARTES

1/2012>2/2013

participated in the conception of a novel **discrete texture statistical model**  
designed its fitting and sampling procedures  
published results in peer-reviewed international symposium (EGSR 2013)  
implemented state-of-the-art discrete texture synthesis techniques (Siggraph 2011, Eurographics 2008)

C++ Qt  
OpenGL3 GLSL  
Python

#### RESEARCH ASSOCIATE (6 MONTHS)

INRIA RHONE-ALPES GRENOBLE (RENDERING TEAM)

3/2011>10/2011

worked on **epitome-based image compression** in collaboration with Eden Games for the GENAC engine

C++ Qt OpenGL3 GLSL

#### RESEARCH ASSISTANT (PHD)

INRIA RHONE-ALPES GRENOBLE (RENDERING TEAM)

2006>2010

worked on **example-based texture synthesis** for raster and vector discrete textures  
worked on color appearance for **perception-relevant greyscale conversion** of images and video  
worked on an **interactive illustration assistant** for feature line renditions of 3D models

C++ Qt  
OpenGL2 GLSL  
Lapack CGAL GSL

#### RENDERING ENGINEER (MASTERS)

INRIA RHONE-ALPES GRENOBLE (RENDERING TEAM)

2006

worked on artistic style transfer via image analogies, implemented a CPU-based raytracer

C++ Qt OpenGL2

#### SOFTWARE ENGINEER (INTERNSHIP)

BEEBUZZINESS

2005

### SKILLS & KNOWLEDGE

#### PROGRAMMING

Languages **C/C++>C++11, Python**, Lua, C#, Latex  
CG libraries **OpenGL, OpenSceneGraph, Embree**, Alembic, OpenSubDiv  
Other libs. **Qt, Boost**, OpenMP, Bullet, CGAL, Lapack  
Toolchain Premake, CMake, Visual Studio, Very Sleepy, GDB, Gprof, Valgrind

#### ABILITIES

**Bilingual French-English**  
Notions of German  
Scientific scouting  
Good social skills  
Solid theoretical background

#### THEORY

**Physically-based offline rendering**  
**Realistic and expressive real-time rendering**  
**Procedural and key-based animation**  
**3D modeling**  
Real-time shading, and physically-accurate lighting techniques  
Eulerian, and Lagrangian fluid simulation  
Differential geometry  
Image processing (filtering theory, colorimetry)  
Computer vision (object detection, classification)  
Statistical modeling of spatial patterns (point processes)

### EDUCATION

#### PHD IN COMP. SCIENCE & APPLIED MATHEMATICS (COMP. GRAPHICS)

INRIA RHONE-ALPES & GRENOBLE UNIVERSITIES

2/2011

Information Extraction for Editing and By-Example Synthesis in Expressive Rendering

François Sillion & Cyril Soler (advisors)

Thomas Hurtut, Amit Shesh, Kaleigh Smith & Joëlle Thollot (collaborators)

#### MASTER'S DEGREE IN COMPUTER GRAPHICS with honors

INRIA RHONE-ALPES & GRENOBLE UNIVERSITIES

2006

Image Analogies for Stroke-based Rendering By Example (in French)

Cyril Soler (advisor)

#### ENGINEERING DEGREE with honors

ENSIMAG (GRENOBLE IT)

2006

## PUBLICATIONS

- A SHAPE-AWARE MODEL FOR DISCRETE TEXTURE SYNTHESIS** ..... EuroGraphics Symposium on Rendering'13  
Pierre-Edouard Landes, Bruno Galerne, Thomas Hurtut
- INFORMATION EXTRACTION FOR EDITING AND BY-EXAMPLE SYNTHESIS IN EXPRESSIVE RENDERING** ..... PhD manuscript  
Pierre-Edouard Landes
- APPEARANCE-GUIDED SYNTHESIS OF ELEMENT ARRANGEMENTS BY EXAMPLE** NPAR'09 (international conference on expressive rendering)  
Thomas Hurtut, Pierre-Edouard Landes, Joëlle Thollot, Yann Gousseau, Rémy Drouilhet, Jean-François Coeurjolly
- APPARENT GREYSCALE: A SIMPLE AND FAST CONVERSION TO PERCEPTUALLY ACCURATE IMAGES AND VIDEO** ..... EuroGraphics'08  
Kaleigh Smith, Pierre-Edouard Landes, Joëlle Thollot, Karol Myszkowski (2nd best paper award)
- CONTENT-AWARE TEXTURE SYNTHESIS** ..... Technical Report  
Pierre-Edouard Landes, Cyril Soler
- ANALYSE ET SYNTHÈSE DE TEXTURES À BASE DE MOTIFS RÉPÉTITIFS** ..... Revue Electronique Francophone d'Informatique Graphique 2008  
Pierre-Edouard Landes, Cyril Soler (in French)

**Drawing & painting**  
Video games & cinema  
Jazz & orchestral music


**HOBBIES**

California, Louisiana  
Crete, Canada  
Spain, Italy, Germany

**TRAVELS**

[pierre-landes.net](http://pierre-landes.net)   
[pe.landes@gmail.com](mailto:pe.landes@gmail.com) 

**WEB**

Paris, 14th arrondissement  
Montparnasse district 

**RESIDENCE**