

Pierre-Luc Manteaux

Project manager, R&D Engineer

Applied Maths and Computer Science

10 Avenue de Verdun
38240 Meylan

☎ 06 66 04 79 55

✉ pierreluc.manteaux@gmail.com

📄 manteapi.github.io

Born on 11/13/1989 at Dijon



Curiosity, perseverance and innovation

Along the years, I have built a wide panel of skills in applied maths and computer science which have allowed me to solve numerous numerical problems. I have used these skills to explore and create numerical models for physics-based simulation in various projects along my PhD. More recently, I have been interested in project management. Learning agile methods by self-studying, I have been able to test these new knowledges while managing the development of a general public cross-platform drawing application. Naturally curious, I am able to quickly adapt to new scientific and human environments while being a source of proposals on the usage and conception of new technologies for innovative projects.

Technical skills

Advanced

Languages C++, C

Libraries Qt, QML, GoogleTest, GoogleBenchmark, OpenGL, Sofa

Tools Git, Gitlab, Testlink, Gantt, CMake, LaTeX, Blender, Adobe Premiere

Platforms Linux, Android

Intermediary

Languages Python, Java

Libraries Eigen, R

Tools SVN, Jenkins, Matlab, Adobe Photoshop

Methodologies Scrum, Test Driven Development

Platforms OSX, Windows, iOS

Professional experience

Since 2018 **Software project manager**, *ISKN*, Grenoble.

Architecture and management of a general public cross-platforms drawing application.

Technologies : UML, GoogleTest, GoogleBenchmark, Testlink, TeamGantt

Methodologies : Scrum, TDD

Since 2017 **R&D Engineer**, *ISKN*, Grenoble.

Development of a general public cross-plaforms application.

Platforms : Windows, MacOS, Linux, iOS, Android

Technologies : C++, Qt, QML, Python, Git

Context: Multidisciplinary team (Design, Marketing, Hardware)

2012-2016 **Junior Research Scientist**, *INPG-University of Grenoble*.

Topic: Simulation and control of physical phenomena

Keywords : Adaptive simulation, topological changes, simulation control

Phenomena : Liquids and deformable objects

Numerical models : FEM, SPH, FLIP

Computer skills : C++, Python, OpenGL, Sofa, CMake, Git, Jenkins

2012-2016 **Grad student teaching position at ENSIMAG, UFR-IMAG, Polytech Grenoble**, *Grenoble*.

Teaching hours : 72h

Content: Scientific visualisation, numerical geometry, image synthesis, procedural and physics-based animation, procedural and descriptive modeling, local illumination

- 2015 **Junior research scientist - Visiting PhD student, IST Austria, Austria.**
 3 weeks visit
 Topic : International collaboration about the control of liquid animations
 Keywords : Liquid simulation, control of animation
 Result : Publication in a peer reviewed international conference [Man+16a]
- 2014 **Junior research scientist - Visiting PhD student, University of California, Berkeley, USA.**
 3 months visit
 Topic: International collaboration about the interactive cutting of deformable objects
 Keywords : Topological changes, interactive application
 Result : Publication in a peer-reviewed international conference [Man+15]
- 2012 **Research assistant at Laboratoire Jean Kuntzmann, Grenoble.**
 6 months internship
 Topic : Stochastic optimization for data assimilation
 Keywords : Adjoint method, particle swarm optimization
- 2011 **Research and development engineer at MANN+HUMMEL, Laval.**
 3 months internship
 Topic : Optimal task scheduling
 Keywords: Branch and bound algorithm

Diploma

- 2012–2016 **Doctor of philosophy (PhD), Computer Graphics, INPG, Laboratoire Jean Kuntzmann.**
 Topic : Simulation and control of physical phenomena
 Advisors : François Faure et Marie-Paule Cani, Fund : ERC
- 2010–2012 **Engineer's degree in mathematics and computer science, ENSIMAG, Grenoble.**
 Option : Modeling, computing, simulation
- 2007–2010 **Bachelor's degree in sciences and techniques, Université de Bourgogne, Dijon.**
 Option : Mathematics, High honors

Personal project

Aside my professional activities, I initiated and participated to several projects.

Tutoring.

Since 2018, I support a high-school student. This implies courses and homeworks assistance as well as proposing field trips to discover culture, science or companies.

SPH Library.

A C++ library that implements the implicit incompressible SPH model proposed by Ihmsen et al. for the simulation of liquids.

Video editing.

I frequently used the *Adobe Premiere* software to edit scientific videos and short movies (*Dessins de môme*).

Reading group.

Inside my research team, I organized and animated reading sessions of scientific articles.

Science fest event.

I participated to the *INRIA* booth for the *Fête de la science* event which aimed at initiating high-school students to rendering and image synthesis.

Languages & Hobbies

- French Mother tongue
 English Read, spoken, written (TOEIC score : 830/990)
 German Notions
 Arabic Learning
 Hobbies Short movies creation, story writing, badminton, swimming, ...