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**Fabien Chéreau**

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## Fabien Chéreau : Research Engineer

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### Education:

**July 2003** : Master's Degree (Diplôme d'Ingénieur) in Computer Science at the National Institute of Applied Sciences of Lyon, France.

**2002-2003** : Final year of studies as an exchange student in the Tampere University of Technology, Finland.

**1998-2002** : Engineer student in Computer Science at INSA of Lyon.

**1998** : Baccalauréat Scientifique at Lycée du Val de Saône, Trévoux, France.

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### Professional Experience:

**Oct 2010-Present** : Independent developer. Work on several projects: development and release of [Stellarium Mobile](#), an astronomy application for Nokia phones. Development of [LoveAtFirstChat](#) a webcam chat web application (not yet launched: client in JavaScript/flash and server in python). Development of [RetroCosmos](#) a game for Symbian and Android devices. Design and construction of a prototype mini-planetarium (software and hardware).

**Oct 2006-Oct 2010** : Research Engineer at ESO in the Virtual Observatory Project Office.  
**2010** Design and implementation of [VirGO](#), a visual browser for the ESO [Science Archive Facility](#) based on Virtual Observatory standards (C++ code based on my open source project Stellarium, design and implementation of data interfaces with astronomical archives). Since 2009, design and implementation of the [Survey Visualization and Monitoring Tool](#) needed by ESO for monitoring the progress of the [VISTA](#) and [VST](#) sky surveys operations (C++/Java). In parallel to the software projects, involvement in the re-design of the infrastructure for dealing

with complex meta-data in the ESO archive.

- Oct 2003-Oct 2006** : Research Engineer at the Paris Astronomical Observatory on the [GAIA](#) satellite of the European Space Agency. Design and implementation of the [Payload Data Handling System](#) of the satellite, design of on-board algorithms (C code, real times constraints, testing environment), definition of technical specifications and calibration procedures (Analysis of CCD images), interface with industry, writing of technical reports, presentations at international meetings. Since August 2005: design and implementation of a detailed image simulator for Gaia (Java software engineering, CCD and spacecraft instruments modeling, image processing).
- Jun-Sep 2003** : Modification of my open source software Stellarium for use in planetariums produced by [Digitalis Education Solutions, Inc.](#). Real time OpenGL rendering using non-linear "fisheye" projection, realistic simulation of eye adaptation to luminance (for day and night vision), very fast atmosphere rendering, user interface. See "Personal Projects" below for more info about Stellarium.
- Jan-May 2003** : 5 months Final Project in the Signal Processing Laboratory of the Tampere University of Technology. Research in Signal Processing and Neural Networks.
- May-Aug 2002** : 4 months traineeship at the Paris Astronomical Observatory. Design and coding of an on-board Stars/Nebulae detection algorithm for the satellite [GAIA](#) of European Space Agency. C coding, image processing, code optimisation, scientific documentation.
- Jun-Aug 2001** : 3 months internship at [eQweb](#) in Villeurbanne, France. Secure hosting, ssl, C coding, cgi, shell, documentation.

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## Personal Projects:

- 2000-Present** : Aside from my professional duties, I am the author and lead of the Stellarium project, an award-winning open source planetarium in C++/Qt used by more than 15M users. For this project I coordinate since 10 years a team of decentralized developers (currently 5-7 active developers).

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## Computer skills:

- OS** : Unix/Linux, Windows, VxWorks, Mac OS.
- Coding** : C/C++, Java, Qt, OpenGL, Python, JavaScript, Matlab/Octave, Perl, PHP, Delphi, Prolog.
- Design & Project management** : Object Oriented design, management of distributed teams, UML, version control systems (CVS, SVN, bsr, git).

**Softwares** : GNU Tools, QtCreator, Netbeans, Eclipse, K-Develop, VisualC++, Matlab.  
**Data Base** : SQL, Tokyo Cabinet, Sybase, Oracle.  
**Networks/Web** : Web design, HTML/JavaScript/Flash, ajax, jquery, PHP/MySQL, Apache, cgi, JSON, XML.  
**Others** : Office tools, Latex, Audio/MIDI and graphics creation (Logic Audio, Gimp, Photoshop).

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## Languages:

**French** : Mother tongue.  
**English** : Fluent.  
**German** : Good level.  
**Spanish** : Basic knowledge.

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## Awards:

**Apr 2011** : Nominated "Qt Ambassador" as recognition for my "accomplishment and demonstrated skill as a Qt developer" (see [here](#)).

**Oct 2010** : Named as a member of "Forum Nokia Champion" recognition and reward programme

**Sep 2010** : Winner of [Forum Nokia's 2010 Calling All Innovators contest](#) in the *Best application for the Nokia N900* category for the [Stellarium Mobile](#) application.

**May 2006** : Stellarium awarded [project of the month](#) on sourceforge.net

**Oct 2006** : Stellarium won a gold award in the Education category of the [Les Trophées du Libre](#) free software competition

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## Interests/Personal Projects:

**Sciences** : Astronomy: Observation, calculations.  
**Culture** : Reading (Classics, philosophy, SF), pencil drawing, play the Darbouka.  
**Sports** : Roller, hiking, tennis.

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## Other:

Driving license.