EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

Name	**FEDERICO SPADONI**
Address	**85 rue Henri Poincaré, Biot 06410 France**
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Nationality	Italian
Date of birth	7TH NOVEMBER 1978

Personal Website

Videos and Demos   http://www.simstep.it

WORK EXPERIENCE

• Dates (from – to)	June 2011 - June 2014
• Name and address of employer	**INRIA – Asclepios team** 2004 route des Lucioles – BP 93 Sophia Antipolis - 06560 France *www.inria.fr*
• Occupation or position held	Software Engineer
• Main activities and responsibilities	Development of an endovascular simulator for radiofrequency ablation based on the open source platform *SOFA* (*http://www.sofa-framework.org*):

- Deformable structures
- Endovascular navigation
- Haptics rendering
- 3D rendering of images and devices
- Multi-threading
- Graphical User Interface

• Dates (from – to)	April 2006 – May 2011
• Name and address of employer	**Dies Group** via della stamperia 68/a - 00187 Rome, Italy *www.diesgroup.com*
• Occupation or position held	Physics Software Engineer
• Main activities and responsibilities	C++ physics engine development for real-time training surgical simulators:

- Soft body dynamics: *Finite Element Method* and *Mesh Free Method* implementation
- Multi-body systems
- GPU (*Cuda*) implementation of *Finite Element Based* soft body dynamics
- Haptic devices interaction
- Collision detection
- Multi-core implementation
- *SSE* optimization

• Dates (from – to)	October 2004 – December 2005
• Name and address of employer	**G.D** S.p.A.
	via battindarno 91 – Bologna , Italy *www.gidi.it*
• Type of business or sector	Packaging (cigarette making and packing lines)
• Occupation or position held	Software Developer
• Main activities and responsibilities	Main project:

- Software development in *C++* for numerical and graphic simulation of items flow in the conveyor lines. This simulation program will be used to manage the cigarette pockets queue processes between the automatic machines plants.

EDUCATION AND TRAINING

• Dates (from – to)	January 2004 – September 2004
• Name and type of organisation providing education and training	**University of Bologna**
	Department of Mathematics
• Principal subjects/occupational skills covered	**Master in Applied Mathematics** aim is to provide the required mathematical skills for the development of mathematical models typical of computer science and engineering problems.
	www.dm.unibo.it/master
• Title of qualification awarded	**Universitary Master** in **Applied Mathematics**
• Level in national classification	II level Universitary Master

• Dates (from – to)	October 1997 – March 2003
• Name and type of organisation providing education and training	**University of Bologna**
	Department of Physics
• Principal subjects/occupational skills covered	**Condensed Matter Physics**

- **Thesis title:** *"Neutron Scattering on nanostructured magnetic materials"*. During the thesis development I've been in Berlin (at Helmholtz Centrel institute) to carry out a neutron scattering experiment.

• Title of qualification awarded	**Physics MSc degree** (final grade **108/110**)
• Level in national classification	italian graduation equivalent for Master's degree

MOTHER TONGUE	**ITALIAN**

OTHER LANGUAGES	

ENGLISH

• Reading skills	GOOD
• Writing skills	GOOD
• Verbal skills	GOOD

FRENCH

• Reading skills	BASIC
• Writing skills	BASIC
• Verbal skills	BASIC

TOPICS OF INTEREST	
	• Physically based real-time simulations
	• Physically based computer games
	• Computer graphics
	• Numerical computation and algorithms
	• Real-time interactive applications

COMPUTER SCIENCE SKILLS AND COMPETENCES	
	• *C++* Object Oriented Programming : *Templates, STL, Boost, Simd assembly.*
	• Physics and Rendering Engines: *Ode, Bullet, Sofa, Ogre.*
	• Game Engines: *Cocos2d-x, Unity3d.*
	• GPU programming: *CUDA.*
	• Graphics api: *OpenGL*, and *3ds Max sdk.*
	• GUI library: *Qt.*
	• Scripting language: *Python.*
	• Revision control: *svn, git.*
	• Tools: *Visual Studio, Xcode, CMake, Intel VTune.*
	• Mobile development: *Android ndk.*

PERSONAL SKILLS AND COMPETENCES *not covered by formal certificates.*	
	• I play swing and blues fingerpicking guitar and I am always eager to play football.

2nd February 2015