

Mirko Ferrati



Date of birth: 17 September 1987

Nationality: Italian

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Education and Training

October 2012 - present

Phd in Localization and Planning for Humanoid robots and coordinated multi robot systems
Centropiaggio Lab at University of Pisa [www.centropiaggio.unipi.it]

July 2011

Attended a 4-full-day course on Management and Organizational Behavior from *Challenge Learning Italia*

October 2006 - September 2012

Student of the Sant'Anna School of Advanced Studies [<http://www.sssup.it>].

Holding a full scholarship won in a national competition (11 scholarships , 227 participants).

The courses taken are complementary to the ones offered by the University of Pisa and deepen particular topics: Mathematics, Computer Science (parallel computing, μ -controllers, physical modeling/simulation, wireless sensor networks, real-time operating systems, real-time networks, algorithm complexity, neural networks), Automation.

February 2010 - October 2012

Master degree in Robotics and Control Engineering (110/110 cum laude: top marks, full honors)

University of Pisa [<http://www.unipi.it>]

Thesis: Multi-agent collaborative protocol on Time Expanded Networks (Supervisor: A. Bicchi)

In this work I proposed a new algorithm that reduces energy consumption of autonomous vehicles by optimizing the traffic flow on the streets

September 2006 - February 2010

Bachelor's degree in Computer Engineering (110/110 cum laude: top marks, full honors)

University of Pisa [<http://www.unipi.it>]

Thesis: Reactive Behaviors for an autonomous robot in an unknown environment (Supervisor: P. Villella)

[<http://www.youtube.com/watch?v=57TKmCoCYWc>]

Professional skills and competences

Programming skills

Languages: C++, Java, Python

IDE: Eclipse, Visual Studio, QtCreator, Kdevelop

Libraries: Boost, STL, Qt, OpenGL

Team development: Svn, Git, Doxygen

Software profiling and debugging: Pin and PinTools, Valgrind, GDB

Robotics and Automation skills

Software: ROS, YARP, Gazebo, PCL, OpenCV

Systems: Mobile robots, Humanoid robots, Industrial arms, Robotic hands, μ -controllers

Simulation and numerical analysis: Matlab, Simulink, Mathematica

Others

Database: Mysql, SqlLite

Web design: Html5, Javascript

Services administration: Dns, Dhcp

Typesetting: \LaTeX Lyx

Projects and Working Experience

September 2011 - September 2012

Cloud System Engineer at Tagetik [www.tagetik.com]

Development of a cloud management Java application and port of Tagetik On-Premise software to Microsoft Azure virtual machines. Such application port required to understand the whole Tagetik system and go learn new knowledge, like c# programming, cloud systems and Java web servers.

August 2010 - September 2010

Visiting Student at Multimedia lab at EPFL [gr-lsm.epfl.ch]

Development of a novel heuristic for a cache-aware optimized scheduler by graph inspection. Despite the short time, I managed to fit in the lab team and complete the project successfully.

February 2009 - October 2009

Internship at Centro Gustavo Stefanini lab [www.cgsrobotics.it]

Development of an autonomous robot architecture with gps navigation and obstacles avoidance. Me and my team took part in the robotour competition [<http://robotika.cz/competitions/robotour/en>]

video: <http://youtu.be/xrLirflCPus>

2006-2010

- Hardware and software design of an autonomous underwater vehicle for water pollution monitoring at the Research Center on Marine Robots of Livorno [<http://www.mrc.sssup.it>]
- Development of a usb graphic card on an Altera Fpga for Altera Innovate competition [www.innovateitaly.com]
- System Administrator of the intranet facilities and computers on behalf of the students of the Scuola Superiore Sant'Anna
- Implementation of a text-based discrete simulator (similar to Simulink) for a class on advanced c++ programming (templates, patterns, software design)
- Implementation of a chat client/server running on FreeBSD/Linux

Personal interests and other experiences

I am interested in scheduling, statistics, optimization.

I like coding for fun, spending weekends in European cities, doing math competitions and playing both strategic and simulation video-games.

I gave public speeches and took part in the organization of university orientation events. These events took place in various Italian cities and some of them were organized with only three days of notice. Their duration ranged from one to seven days, with hundreds to thousands of high school students attending.

Self-assessment European level^(*)

Mother Tongue: Italian

	Understanding				Speaking				Writing	
	Listening		Reading		Spoken Interaction		Spoken Production			
English	C2	Proficient user	C2	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user
German	B1	Independent user	B1	Independent user	A2	Basic user	A2	Basic user	A2	Basic user
Spanish	B2	Independent user	B2	Independent user	B1	Independent user	B1	Independent user	B1	Independent user

^(*) Common European Framework of Reference (CEF) level

Driving license: Italian car driver license

References

Prof. Lorenzo Natale Researcher at iCub Facilities (IIT) [lorenzo.natale@iit.it]

Prof. Antonio Bicchi Full Professor of Robotics Control [a.bicchi@centropiaggio.unipi.it]

Ing. Duccio Vigolo Chief Developer at Tagetik [ducciovigolo@tagetik.com]

Dott. Paolo Villella Scientific Program Manager of the CGS laboratory [p.villella@sssup.it]