

PAOLO FERRARIS

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EDUCATION

The University of Texas at Austin
PhD in Computer Science

Aug 2007
GPA: 3.91

University of Genova, Italy
Laurea in Computer Engineering

Dec 1999
Score (~GPA): 110/110

SKILLS

- *Programming languages*: *proficient* in C/C++, Pascal, Answer Set Programming and assembly (especially Z80); *skilled* in Modula 2 and Prolog; *knowledge* of Java, Hypertalk, SQL and Common Lisp.
- *Algorithms*: data structures (hash tables, graphs, etc...), dynamic programming, binary search, simplex, basic computer graphics, etc...
- *Operating systems*: advanced user of DOS, Windows, *NIX, OS/2.
- *Applications*: knowledge of Word, Excel, 123, Visual Studio (C++) and others.
- *Spoken languages*: Italian – native language.
- Experience in **public presentations**.

ACHIEVEMENTS

8-bit minigame competitions (<http://www.ffd2.com/minigame>) 2002 – 2005

- Developed several 1-kilobyte and 4-kilobyte games for an 8-bit computer.
- **1st place** twice with a **joint project** with a professional graphical designer.

Topcoder Programming Contests 2002 – 2003

- 120th among 4046 participants (last time I participated).
- First (at least at that time) among the students of The U. of Texas at Austin.

ACM Collegiate Programming Contest (U. of Texas at Austin) 2002 – 2003

- **World finalist at both participations.**
- Finished 27th and 21st among 64-70 teams.

ACM Collegiate Programming Contest (University of Genova) 1995 – 1999

- Team member at the ACM Southwest European Regional Programming Contest.
- **First several times** among Italian teams.
- In the top positions (4th and 5th) against teams from Germany, Czech Republic, Switzerland, France, Spain and Portugal.

Italian Math Olympiads 1991

- **Arrived in the top 23 in Italy.**
- Took part at a week of preparation for the 2001 International Math Olympiads.

EXPERIENCE

The University of Texas at Austin – Department of Computer Sciences

Teaching Assistant 2001-2006 (6 semesters)

- 303H Logic, sets & functions (honor), 336 Analysis of programs, 341H Automata theory (honor), 388L Introduction to mathematical logic (graduate class).
- Occasional instructor replacement.
- **Discussion sessions held weekly** for 303H.

Marconi Communications, Genova, Italy

Software Engineer Oct 2000 – Jul 2001

- SmartPhotoniX PLT80 optical system for long haul, point-to-point data transport.
- Developed the “agent” layer of the control software (developed in C++, under **Unix** environment) embedded into the main board.
- **Strong interaction** with application and device driver developers, and with the test group.

RESEARCH

PhD thesis: “Expressiveness of answer set languages”

Supervisor: Vladimir Lifschitz

- Relative to answer set programming (ASP), a declarative programming language for solving complex combinatorial search problems.
- Showed the differences between various “dialects” of ASP invented by researchers from several countries.
- **Invented a new and simple extension** of ASP that is more expressive than most of the other extensions.
- Showed how causal theories – a declarative language able to express actions and effects of actions (useful for instance in planning) – can be rewritten in ASP.

Laurea thesis: “Advanced planning techniques in complex domains” (English title)

Supervisor: Enrico Giunchiglia

- **Developed** planner Cplan (<http://www.star.dist.unige.it/~otto/cplan.html>).
- **6500 lines of C code.**
- Capable of solving complex conformant planning problems: the initial state is only partially known, and actions effects are nondeterministic.

University of Genova – Artificial Intelligence *class project*

Feb 1999

- Relative to robot navigation based on Artificial Potential Fields.
- **Developed** (in C++) two navigation techniques able to avoid local minima, in case of **minimal memory, no positioning information.**

ACTIVITIES

- *Reviewer* for several scientific publications from 2002 to 2007.
- *Italian fellowship* for a 3-month visit to the United States from Italy in 2000.
- *Google fellowship* to participate to NRAC workshop in Hyderabad, India, 2007.
- *Tutor* for high school and university students in Spring 2000.