



PAOLO CARESSA: VITA

Generalities

PERSONAL DATA

Generalities I was born in Rome in December 1969, my citizenship is Italian and I am married.

Military Service I accomplished my liability for the Civil Service (alternative for a military service) as a conscientious objector of the Red Cross in Viterbo (I worked on ambulances), from May 31, 1995 to May 31, 1996.

Natural languages Italian (mother tongue), English (spoken, read, written), Spanish (spoken, read), French (read), German (just a little bit).

Programming languages C (*ANSI 89/99* proficient, *Win32*), C++, C#, Java, Fortran 90, Python, HTML, PHP, Maple, Matlab, LaTeX, TeX; I program (med) also with Basic, Forth (83 e FIG), Fortran 77, Javascript, Lisp, Maple, Mathematica, Modula-2, Pascal, PLSQL, SQL, XML.

Operative Systems Windows 9*/200*/NT, UNIX (SUN, AIX, FreeBSD, Linux); Tools: Intel compilers, Intel MKL, Intel IMSL, Maple, Matlab, MS Visual Studio, MS Office, Murex, and on UNIX environments: Eclipse, cvs, doxygen, emacs and several compilers.

EDUCATION

Dottorato di Ricerca (Ph.D.) in Mathematics held in 2001 at Dipartimento di Matematica *U.Dini*, Università di Firenze with thesis *Saggio sulla geometria delle parentesi di Poisson* (*Essay on the Geometry of Poisson Brackets*) advised by Prof. Paolo de Bartolomeis.

Summer School on Noncommutative Geometry and Applications, Monsaraz and Lisboa (Portugal), September 1-10, 1997.

Summer school Quantum Cohomology (CIME 1997), Cetraro (Italy), June 30 - July 8, 1997.

European School of Group Theory (1996 session), in Schloss Hirschberg (Germany), September 2-14, 1996.

Laurea in Mathematics (BS+MS) held in 1994 (summa cum laude) at University of Roma *La Sapienza* with thesis *Strutture di Poisson su algebre associative e gruppi di Lie* (*Poisson Structures on Associative Algebras and Lie Groups*) advised by prof. Claudio Procesi.

Maturità scientifica (high school title) held in 1988 with full marks at *B.Russell* Lyceum, Rome.

RESEARCH AND PROFESSIONAL POSITIONS

2009- Now	Full-time permanent position at <i>Codin s.p.a.</i> as ICT Project Manager.
2008- 2009	Full-time permanent position at Risk Manager of <i>Unicredit</i> (Milan).
2005- 2008	Full-time permanent position at Quantitative Finance of <i>Unicredit</i> (formerly in <i>Capitalia</i> , Rome) as mathematician (IR and Equity models) and developer (C/C++, C#, Matlab, and Murex 2000 API).
2005	Senior consultant at Quantitative Finance of <i>Capitalia</i> (Rome) both for the mathematical and the software development part, aimed at the customization of both Front and Middle Office environments and at the management and reevaluation of exotic derivatives on equities and interest rates (software development in C, C#, Matlab and Murex API).
2004- 2005	Senior consultant at <i>ISINET</i> (Rome) involved in the development of some projects concerning the design and implementation of distributed software architectures: in particular I worked to the design, the documentation and the implementation supervision of software modules and prototypes. Moreover, I have been consultant aimed at monitoring and fixing security of informative systems (public administrations).
2001- 2004	Temporary research position (<i>assegno di ricerca</i>) at Dipartimento di Matematica Applicata <i>G.Sansone</i> , University of Florence, since 2001. Research Topics: symplectic geometry.
2003	I was involved (2003) with <i>EngiWeb</i> to the development of a mobile game, designing and developing the animation engine, and a prototype in Java.
2001	I worked in 2001 (as temporary researcher and developer) for the <i>Research and Development Laboratory</i> of the <i>Engineering</i> (Rome) in the project and implementation of a classifying system for the analysis of text documents: I implemented in ANSI C a classification module based upon the Rocchio algorithm (to be used in performance

comparing tests), and I projected and implemented a more effective text categorization system, not depending on the language of the texts, using statistical and geometric techniques. I released the application both as executable files and as `dll` to be integrated in other programs.

2000-2001	Temporary research positions at Dipartimento di Matematica, University of Rome II <i>Tor Vergata</i> . Research Topic: Geometry.
2000-2001	Temporary teaching positions at University of Rome <i>La Sapienza</i> (faculties of di Engineering and Statistics, 2000-2001) and <i>Rome III</i> (faculty of Architecture, 2000-2001).
1999-2000 1998-1999	Temporary teaching position at University of Rome <i>Tor Vergata</i> .
1996	Temporary teaching position at Istituto Nazionale di Alta Matematica (INDAM, Rome).
1995-2000	Ph.D. at Dipartimento di Matematica <i>U.Dini</i> of the University of Florence, 1995-2001 (interrupted between 1995 and 1996 to accomplish my liability for the military service).

Research

RESEARCH AND PROFESSIONAL INTERESTS

Mathematics - Mathematical models of finance, and stochastic finance.
 - Foliations with complex leaves on real tori, and in their moduli spaces.
 - Poisson Geometry and applications, symplectic and complex structures on differentiable manifolds and Lie groups.
 - History of Mathematics.

Computer Science - Developing of C projects, Machine learning and applications to text categorization.
 - Design and development of software architectures.
 - ICT security: digital signature, etc.

AWARDS

Franco Triccerri Prize for thesis in differential geometry, awarded during the XV congress of U.M.I. (Italian Mathematical Society), in September 1995.

MAIN CONFERENCES

- Microsoft Workshop on *La firma digitale evolve: dalla smartcard al server di firma*, Rome, May 12, 2010.
- International Summer School on *Risk Measurement and Control*, Rome, June 9-17, 2005.
- *GRID and e-Collaboration for the Space Community*, ESA-ESRIN, Frascati, February 2-3, 2005.
- *Trends in Geometry, in memory of Beniamino Segre* at Accademia Nazionale dei Lincei and Università di Roma *La Sapienza*, Rome, June 7-9, 2004.
- *Joint Meeting AMS-UMI*, Pisa, June 2002.
- *Complex, contact and symplectic geometry*, Scuola Normale Superiore, Pisa, June 2002.
- *Perspectives in Complex and Symplectic Geometry*, Cortona (Italy), June 2001.
- *Conference on Symplectic Geometry*, Lisboa, June 21-26, 1999.
- *Perspectives in Symplectic Geometry*, Cortona (Italy), June 14-18, 1999.
- *Complex and Symplectic Geometry*, Cortona (Italy), May 25-30, 1997.
- *Operator Algebras and Quantum Field Theory*, Accademia dei Lincei, Rome, July 1-6, 1996.
- *Gravitation, Electromagnetism and Geometrical Structures* in honour of André Lichnerowicz, Frascati (Rome), October 19-23, 1995.
- *Giornate di Geometria Algebrica ed Analitica* in honour of Francesco Gherardelli, Florence, September 4-6, 1995.

MAIN INVITED TALKS

- Meeting *Scienza Orienta* organized by Facoltà di Scienze dell'Università di Roma *Tor Vergata*, on February 2006, 2007, 2008.
- *The Moduli Space of Complex Foliated Tori*, inside the Complex Analysis Seminar, University of Rome *Tor Vergata*, Settembre 22, 2004.
- *Complex Foliated Tori and their Moduli Spaces*, University of Padova, March 30 2004.
- *Compatibilità fra strutture di Poisson e Complesse: ostruzioni ed esempi*, congress *Proprietà reali e complesse delle varietà differenziabili. Nuovi contributi italiani*, III Mondello (Italy), September 1-8, 2002.
- *Classificazione di testi indipendente dalla lingua*, invited by *Engineering Rome*, April 9, 2001.
- *Omologia di Hochschild e omologia di Poisson*, workshop *Gruppi quantici e dintorni*, Università di Tor Vergata, Rome, May 3-5, 2001.
- *Riflessioni sul formalismo hamiltoniano*, workshop *Gruppi quantici*, Perugia, April 13-15, 2000.

- *L'Algebra delle Parentesi di Poisson*, Y.A.S. (Young Algebra Seminar) Università di Tor Vergata, Rome, January 17, 2000.
- *Sulla geometria delle parentesi di Poisson*, congress *Proprietà reali e complesse delle varietà differenziabili. Nuovi contributi italiani II*, Mondello (Italy), August 29-September 4, 1999.
- *Some remarks on Poisson calculus* congress *Poisson Geometry*, Banach Center, Warsaw, August 2-14, 1998.
- *Sulle varietà di Poisson*, commemoration day in honour of Franco Tricerri, Florence, September 26, 1997.
- Other talks given on invitation at the mathematics departments of the Italian universities of Rome *La Sapienza* (1999), Perugia (1999), Rome *Tor Vergata* (2001, 2002), Sassari (2001), Parma (2001, 2002, 2003).

PUBLICATIONS AND PREPRINT

- *Piccola storia della matematica, 2*, book published by Alphatest, Milan, 2010.
- *Umor nero nel calamaio: La melanconia di Roberto Gigliucci*, review appeared on *Janus* 35 (2009).
- *Gli ultimi giorni di Immanuel Kant*, article appeared on *Janus* 34 (2009).
- *Il fil noir della storia del fumetto*, review appeared on *Janus* 33 (2009).
- *Vita da cadavere: Stiff di Mary Roach*, review appeared on *Janus* 23 (2006).
- *Complex Foliated Tori and their Moduli Spaces*, with Adriano Tomassini, to appear in *Communications in Contemporary Mathematics*, 7 no.3 (2005), 1-15.
- *Examples of Poisson Modules, II*, in *Rendiconti del Circolo Matematico di Palermo*, (2) 53 (2004), 23-60.
- *Examples of Poisson Modules, I*, in *Rendiconti del Circolo Matematico di Palermo*, (2) 52 (2003), 419-452.
- *On Poisson-Kähler structures*, with Adriano Tomassini, preprint Università di Parma, 2001.
- *Omologia di Hoschild, di Poisson (e ciclica?)*, proceedings of the Workshop *TV2001: Gruppi Quantici e Dintorni*, (2001) 5-36, Università Roma *Tor Vergata*.
- *The Algebra of Poisson Brackets*, proceedings of the *Young Algebra Seminar*, (2000), 7-21, preprint Università Roma *Tor Vergata*.

Teaching Experience

- Exercise classes for the courses of Calculus and Linear Algebra of the Engineering Faculty of the University of Florence: I semester 2002/2003, I semester 2003/2004.

- Exercise classes for the courses of Calculus in several variables of the Engineering Faculty of the University of Rome *Tor Vergata* I-II semester 2000/2001.
- Exercise classes for the course of Institutions of Mathematics of the Architecture Faculty of the University of *Roma III*, I semester 2000/2001.
- Exercise classes for the courses of Calculus of the Statistics Faculty of the University of Rome *La Sapienza* I semester 1999/2000, and the Engineering Faculty of the University of Rome *Tor Vergata* I semester 2000/2001.
- Exercise classes for the courses of Geometry of the Engineering Faculty of the University of Rome *Tor Vergata*: II semester 1998/1999, I semester 1999/2000, I semester 2000/2001, and of the Engineering Faculty of the University of Rome *La Sapienza* I semester 2000/2001.
- Exercise classes for the course *Geometry and Topology* at Istituto Nazionale di Alta Matematica, II semester 1996.

Other Interests

- As many others in my family I have a certain talent for ornate drawing, and the passion for paintings, sculptures and figurative arts in general. In 2011 I contributed to the organization of a commemorative exhibition of my father's paintings, held in the palace base of the Provincial Administration of Rome.
- Also I am interested in literature, and I have had some experiences in this field, as an *amateur*. I was between the promoters of F.R.F (*Roman Science Fiction Foundation*) and of the *Rivista di Fantascienza* (SF Magazine) between 1990 and 1994. I have been invited by the city of Matelica (Italy) to give a talk on fantastic literature, on introducing and author.