

# Dottorressa Maria Grazia Carrara

## Curriculum Vitae

Born in Milan. Italian citizen

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Research grants

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### **POSITION OF RESEARCH**

Nov. 2013 - Nov. 2018 Research Collaboration at Statistic Department,

University of Milan. Bicocca Master Data Management.

Sep. 2004 - Nov. 2006 Winning Silsis University of Bergamo for teaching Electronic , Elettrotechnical Engineering

• Thesis supervisors Prof. G. Benedek and Prof. L.Miglio

Sept 1989 - March 1997 Undergrad. Student at Physics Dep., Milan Italy.

• **Master Degree in Atomic Physics. on 28 May 1997 with Honour and Dignity of Stamp with. dissertation original theses : Rayleigh waves in Carbonium Clathrates of carbonic symmetric cubic**

**Supervisor: Giorgio Benedek L.Miglio Univerisity of Milan**

**Apr. 1997 - Aug. 1998 Post-grad collaboration at Department of Physics,**

**University of. Milan : Railing waves in symmetric cubic in Carbonium clathrates.**

**Sept1999 - Aug. 2002 Suitability. PHD. in Electric Engineering  
University of. Pavia. Department of. Electric Engineering**

## **Education**

**February 1998. Suitability Ph.D. in Electric Engineer at University  
of  
Pavia , Italy**

- Thesis supervisors prof. G.Benedek and Prof . Miglio.

Sept 1989 - March 1997 Undergrad. Student at Physics Dep., Pavia,  
Italy.

Following Course as visiting guest at. Oxford London at  
2007.08

- Sep. - Oct. 2000 Milan, Italy -

PREDOC, Mathematics School for preparation to Ph. D. Courses. In  
particular I attended the courses: Numerical Analysis, Mathematical  
Physics, Basis of Probability and Statistical Inference.

## **Languages**

Computer Knowledge

Operating Systems Dos, Windows, Linux.

Programming Languages Fortran.

HTML, Javascript.

## **Teaching Experiences**

Ac. year 1999/2016 Physics and and Electronic teacher.

Scientific-technologic

course of High School,

Ac. year 2002/2003 Assistant for the course of Physics. Degree  
course

Ac. year 2001/2002 Assistant for the course of Phisics and. Biologic  
Science at University of Milan

## **Summary of Research Activity**

My research activity began when I graduated, in 1997 on a thesis about

Rayleigh waves in carbonic a symmetry cubic

, Under the super- vision of Prof. G. Benedek. Initially I studied different

way to solve the problem. The development of a theoretical method for calculating the wave propagation velocity in the anisotropic crystalline

cubic symmetry is analyzed. In particular, carbon clathrates will be studied.

## **International Schools**

1. Second School and Workshop on “Mathematical Methods in Quantum

Mechanics”, February 26 - March 3 2015, Bressanone (BZ), Italy.

2. “School in Applications of Effective Field Theories”, 3–8 February 2003, Milan, Italy. Participation

3. “National School of Condensed Matter Physics (INFM): Basic Physics

of Nano-Structures & Quantum Calculus and Information”, 8–21 September 2002, ISI Foundation, Villa Gualino, Torino, Italy.

4. “National School of Condensed Matter Physics (INFM): Quantum and

Nonlinear Optics”, 10–15 September 2001, ISI Foundation, Villa Gualino, Torino, Italy.

## **Presentations at Workshops and Conferences**

1. Frontiers in FEL Physics and Related Topics

September 8 - 14, 2007 Elba Island, Livorno, Italy, Poster Contribution.

2. Bose-Einstein Condensation

EuroConference on the New Trends in Physics of Quantum Gases  
September

13-18, 2003 San Feliu de Guixols, Spain,

Oral contribution: "Entanglement and radiation to atom quantum mapping

by collective recoil in Bose Einstein condensates".

PUBLICATIONS:

1 , M. G Carrara. Fischer Transverse effects in Collective Atomic recoil  
Lasing Laser Physics 17, 174 (2007).

2 , G.R.M. Robb and M.Carrara M Klinger MRossi

Propagation effects in the quantum description of collective recoil  
lasing

Opt. Comm. 252, 381 (2005).

3L. Cassoni, P.Fischer F. S. Klinger and MGCarrara

Collective atomic recoil in a moving Bose-Einstein condensate: From  
superradiance to Bragg scattering Raman

Phys. Rev. A 71, 033612 (2005).

4 M.G Carrara and M.G.A. Paris MKlinger. Fischer

Teleportation of bipartite states using a single entangled pair Phys.  
Lett.

A 337, 10 (2005).

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