

SCIENTIFIC CURRICULUM VITAE

Name: Marco
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1 Actual activity

ETSF-e-I3 Postdoc
Starting form 1/1/2009
Main institution Università degli Studi di Milano.

2 Educational degree

PhD in physics astrophysics and applied physics XXI cycle
Obtained on 22/12/2008 the Università degli Studi di Milano
Thesis title: *ab-initio approach to density-response and excitation spectra in metallic system*
Supervisor Prof. Giovanni Onida
Stage at the LSI at the Ecole Polytechnique in the period april-july 2007 (Palaiseau F).
Participation at the experiment HE-2277 in the days 14-20 february 2007 at the ESRF (Grenoble F).

Laurea in physics

Obtained on 14-07-2005 at the Università degli studi di Milano, with 110/110 cum laude.
Curriculum of condensed matter physics.
Thesis title *Calculation of electronic properties of metallic surfaces: total energy and quasiparticle excitations*, supervisor prof. G. Onida.

Maturità scientifica

Obtained in the scholastic year 1999/2000 at the liceo classico, scientifico e giuridico economico Don Carlo Gnocchi in Carate Brianza.

3 Publication

- *Ab-initio self-energy corrections in systems with metallic screening*, M. Cazzaniga, N. Manini, L. G. Molinari, and G. Onida, Phys. Rev. B **77**, 035177 (2008)

4 Participation to congresses and schools

- Participation at 356 WE-Heraeus-Seminar *40 Years of the GW approximation for the Electronic Self-Energy: Achievements and Challenges*, Bad-Honnef (D) 12-15 september 2005
- Participation at 3 Nanoquanta Young Researchers meeting, Rome (I) 3-5 may 2006
- Participation at 15 Summer school of parallel computing held at the computing centre CINECA, Casalecchio di Reno (I) 3-14 july 2006
- Participation at 11 Nanoquanta Workshop on Electronic Excitations: A decade of applications of the Bethe-Salpeter Equation, Houffalize (B) 19-22 september 2006
- Participation at CECAM tutorial Electronic excitations and spectroscopies: theory and codes, Lyon (F) 11-15 december 2006
- Participation at 13 International Workshop on Computational Physics and Material Science: Total energy and Force methods at ICTP, Trieste (I) 11-13 january 2007
- Participation at 4 Nanoquanta Young Researchers meeting, Donostia-San Sebastian (E) 15-18 may 2007
- Participation at the summer school *Ab-initio many body theory*, Donostia-San Sebastian (E) 22-28 july 2007
- Participation at 12 Nanoquanta Workshop on Electronic Excitations: Time Dependent Density Functional Theory: Advances and Prospects, Aussois (F) 18-22 september 2007
- Participation at CECAM tutorial *Basic techniques and tools for development and maintenance of atomic-scale software* in Lyon (F) 11-15 february 2008
- Participation at 5 Nanoquanta Young Researchers meeting, Modena (I) 20-23 may 2008
- Participation at EPIOPTICS-10, Erice (I) 21-26 june 2008
- Participation at 13 Nanoquanta-ETSF Workshop on Electronic Excitations: Theoretical spectroscopies and quantum transport, Pugnuchiuso (I) 22-27 september 2008

5 Scientific contribution to congresses e schools

- Poster *Many-body properties of a jellium slab* at 23 ECOSS (Berlin 4-9 september 2005)
- Talk *Many-body properties of a jellium slab* at 356 WE-Heraeus-Seminar (Bad-Honnef 12-15 september 2005)

- Poster *Evaluation of the dielectric response and quasiparticle excitations in bulk and slab jellium with an ab-initio plane-wave numerical tool* at 3 Nanoquanta Young Researchers meeting (Rome 3-5 may 2006)
- Poster *Study of the small-q contribution to the polarizability and the intraband term: from the jellium to the periodic solid* at 11 Nanoquanta Workshop on Electronic Excitations: A decade of applications of the Bethe-Salpeter Equation (Houffalize 19-22 september 2006)
- Poster *Study of the small-q contribution to the polarizability and the intraband term: from the jellium to the periodic solid* at 13 International Workshop on computational Physics and Material Science : Total energy and Force methods (ICTP-Trieste 11-13 january 2007)
- Talk *Study of the small-q contribution to the polarizability and the intraband term: from the jellium to the periodic solid* at 4 Nanoquanta Young Researchers meeting (Donostia-San Sebastian 15-18 may 2007)
- Poster *Ab-initio self-energy correction in systems with metallic screening* at 12 Nanoquanta Workshop on Electronic Excitations: Time Dependent Density Functional Theory: Advances and Prospects (Aussois 18-22 september 2007)
- Poster *Dielectric Function and Dielectric Matrix for Finite Momentum Transfer. Answers and Open Questions* at 12 Nanoquanta Workshop on Electronic Excitations: Time Dependent Density Functional Theory: Advances and Prospects (Aussois 18-22 september 2007)
- Talk *The dynamic structure factor for simple metals: a study of the electronic correlation of solids* at 5 Nanoquanta Young Researchers meeting (Modena 20-23 may 2008)
- Talk *The dynamic structure factor for simple metals: a study of the electronic correlation of solids* at EPIOPTICS 10 (Erice 21-26 june 2008)
- Talk *The dynamic structure factor for simple metals: a study of the electronic correlation of solids* at 13 Nanoquanta-ETSF Workshop on Electronic Excitations: Theoretical spectroscopies and quantum transport (Pugnochiuso 22-27 september 2008)

6 Foreign languages

English

7 Informatic knowledges

Knowledge of the operating systems Windows and Linux and their main programs.

Knowledge of the programming languages FORTRAN and C.

Basic knowledge of the language HTML.

Knowledge of the parallel programming techniques (MPI).

Contribution in the development of the academic codes **abinit** and **dp**.
Knowledge of the tools for developing codes (VCS, debugger).
Basic knowledge of the language Python.

8 Other experiences

Contribution in the creation and maintenance of pages of the web site of the solid state physics theory group of prof. Giovanni Onida