

# Short Curriculum of Luca Salasnich

Born in Padova (Italy): 14-05-1967. Italian citizen.

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## Academic Degrees

- ★ **M.Sc. in Physics** with full marks (110/110), University of Padova, 23-07-1991. Supervisor: Prof. V.R. Manfredi. Thesis: ”Fluttuazioni della densità dei livelli in sistemi quantistici: transizione ordine-caos nel modello SU(3) nucleare”.
- ★ **Ph.D. in Theoretical Physics** with full marks, University of Firenze, 16-11-1995. Supervisor: Prof. M. Rosa-Clot. Thesis: ”Studio della transizione ordine-caos nei nuclei atomici”.

## Present Positions

From 28-01-2011 Associate Professor of Condensed Matter Physics at the University of Padova.

From 01-11-2003 Research Scientist (III level) of the Italian National Research Council (CNR). Presently on leave of absence.

## Previous Positions

2001-2004 Adjunct Professor of *Epistemology of Physics* and *Laboratory of New Technologies for Teaching Mathematics* at the Faculty of Education of the Free University of Bozen-Bolzano. One-year faculty appointment in the academic years 2001-2002 and 2003-2004.

1997-2003 Postdoctoral Research Associate in the group of Prof. L. Reatto at the Department of Physics of the University of Milano.

2000-2001 Adjunct Professor of *General Physics II*, at the Reggio-Emilia Faculty of Engineering of the University of Modena and Reggio Emilia. One-year faculty appointment in the academic year 2000-2001.

1996-1997 Postdoctoral Fellow in the group of Prof. M. Morandi-Cecchi, at the Department of Pure and Applied Mathematics of the University of Padova.

1996 Postdoctoral Research Associate in the group of Prof. M. Robnik at the Center for Applied Mathematics and Theoretical Physics of the University of Maribor.

1994-1995 Visiting Researcher in the group of Prof. J.M.G. Gomez, at the Department of Physics of Complutense University of Madrid.

## Research Activity

I am working in statistical physics and many-body theory. In particular:

- i) trapped cold atoms, Bose-Einstein condensation and superfluidity;
- ii) statistics of energy levels and quantum chaos;
- iii) nonlinear dynamics in quantum field theory.

From June 2003, upon invitation of Prof. Marko Robnik, director of CAMTP, I am associate member of CAMTP (Center for Applied Mathematics and Theoretical Physics), University of Maribor. I gave about 20 invited talks at workshops and conferences and about 20 invited seminars at Universities and Research Centers. I am referee of many international scientific journals; among them: Physical Review Letters, Physical Review A and E, Europhysics Letters, Journal of Physics A and B, Physics Letters A and B, Journal of Low temperature Physics, Optics Communications. I was also referee of the Royal Society (United Kingdom) and of the United States - Israel Binational Science Foundation.

Up to now I have published 134 papers (36 single-authored) in peer-reviewed ISI-Indexed journals. According to ISI Web of Knowledge of the Thomson Corporation, my papers got more than 2000 citations. My Hirsch index is  $h = 25$ , i.e. I have 25 papers which have at least 25 citations each. Five significant publications are:

- 1) L. Salasnich, A. Parola, and L. Reatto, "Effective wave equations for the dynamics of cigar-shaped and disk-shaped Bose-Einstein condensates", Physical Review A, vol. **65**, 043614 (2002).
- 2) L. Salasnich, A. Parola, and L. Reatto, "Modulational instability and complex dynamics of confined matter-wave solitons", Physical Review Letters, vol. **91**, 080405 (2003).
- 3) N. Manini and L. Salasnich, "Bulk and collective properties of a dilute Fermi gas in the BCS-BEC crossover", Physical Review A, vol. **71** 033625 (2005).
- 4) L. Salasnich, A. Parola, and L. Reatto, "Condensate bright solitons under transverse harmonic confinement", Physical Review A, vol. **66**, 043603 (2002).
- 5) J.M.G. Gomez, A. Relano, J. Retamosa, E. Faleiro, L. Salasnich, M. Vranicar, and M. Robnik, " $1/f(\alpha)$  noise in spectral fluctuations of quantum systems", Physical Review Letters, vol. **94**, 084101 (2005).