

## Curriculum vitae - Maria Luisa Chiofalo

**Personal data:** Born in Reggio C. on 1968, married with Massimiliano Labardi and mother of Anna.

### Scientific area

**Education.** Graduation in Physics (University of Pisa, Italy, 1992, 110/110 *magna cum laude*). PhD degree in Physics (Scuola Normale Superiore - SNS, Pisa, Italy, 70/70 *magna cum laude*).

**Positions.** PhD in Condensed Matter Physics - CMP (SNS, 1993-1996). Post-doc (INFM, 1996-1998) and temporary research position (SNS, 1998-2002) in CMP. Research grant on space tests for general relativity (University of Pisa, 2002-2004). Temporary research position (SNS, 2004-2008). Associate professor (University of Pisa, 2007 - ). She has got the National Abilitation as a Full Professor.

**Teaching.** General Physics, also through novel educational methods. Statistical Physics. Mathematics. Physics in everyday life. Many-body physics.

**Projects leading.** Two projects granted by INFM-CINECA and two granted by SNS. Project WP4250 granted by ASI, within the WP4000 on “Fundamental Physics in Space”.

**Awards.** Italian Physical Society prize for young researchers (1997).

**International collaborations and visiting:** IRC (Cambridge, UK), ICTP (Trieste, Italy), ACP (Aspen, US), ECT and BEC-CRS (Trento, Italy), KITP (Santa Barbara, US), LANL (NM, US). Invitation, almost every year since 1995 through 2008, for short-period working at JILA (Boulder, US), in Holland (theoretical) or Debbie Jin (experimental) group.

**Research topics.** High-temperature superconductivity. Quantum degenerate Fermi and Bose atomic gases with tunable interactions and density and spin effects, also in reduced dimensions. Application of the physics of quantum degenerate gases to fundamental physics and to technological devices.

**Popular science activity.** Lectures at Corso di Orientamento Universitario di Cortona (1993-1996). Publication of popular-science papers on music and physics, superfluidity, and Galileo contributions to science. Participation to the live broadcast “Il Terzo Anello Scienza” on RAI-Radio 3. Scientific director of “Musical...mente”, festival of music and science in Sangemini (2008). Coauthor with Sara Maggi of the 5-minutes radio broadcast format *Piacere, Scienza!* (about 35 episodes broadcast) and of the video format *La Fisica al Bar*, aimed to make a full course of basic physics that uses Galileian method (though with no mathematical formal tools) and cooperative learning in an informal context to acquire the scientific method and the basic ideas of physics through the understanding of how everyday-life phenomena work (inspired by the seminal experience of Lou Bloomfield *How things work*).

**Publications. Books:** M.L. Chiofalo, *Screening effects in bipolaron theory and high temperature superconductivity*, Scuola Normale Superiore ed. (1997) (research book as author); G. Iadonisi, G. Cantele, M.L. Chiofalo, *Introduction to Solid State Physics and Crystalline Nanostructures*, Springer (2014) (textbook); G. Iadonisi, J.R. Schrieffer, M.L. Chiofalo, *Models and Phenomenology for conventional and high-Tc superconductivity*, vol. CXXXVI Proc. E. Fermi Intl. School, IOS (1998) (research book as co-editor). **Papers:** more than 70 mostly on international peer-reviewed journals also with high-impact factors, resulting in more than 1400 citations, about 300 referring to the paper on the



predicted resonance superfluidity in atomic Fermi gases, later observed in several laboratories worldwide (JILA, ENS Paris, MIT, Innsbruck, LENS, Duke, Rice).

### **Political and Institutional area**

**Women Associations.** Co-founder of the MAMI- Pisa, Italian expression of the UNICEF World Alliance for Breastfeeding Actions, where she has: (i) contributed to conceive projects to promote WHO health-care recommendations; (ii) worked as MAMI representative in the City-Hall Council for Equal Opportunities (CPO) of the Comune di Pisa (1998-2002). Member of the Italian Association of Women and Science and of the network Women for Intelligent and Smart TERritories.

**Institutional activity** as president of the CPO of the Comune di Pisa (2003-2008), elected by representatives of all parties, trade unions and more than 30 social and cultural associations, where she has: (i) conducted routine institutional activity within a network-based approach with all the governance institutions and several associations; (ii) coordinated or promoted more than ten projects, most funded by FSE, aimed to operate gender mainstreaming in all the City-Hall competences: health-care, environment, quality of life and work-life balance (one of the projects being awarded at the CPO Forum of Public Administration), communication, gender budgeting, education, promotion of women in decision-making positions (through campaigns, political and leadership training and support to candidates), multiculturalism, working opportunities for convicted women, contrast to domestic violence. She has also collaborated with ADI to conceive and organize *Cervelli in gabbia, cervelli in...cinti. Una generazione di precari ed il futuro della ricerca in Italia* (Pisa, June 2006) and with AIDAcP introducing *La donna e il tumore al polmone...* (Roma, Palazzo San Macuto, November 2006).

**Political activity.** Since 2004 member of directional boards of the DL party of Pisa. Co-founder of the Associazione per il Partito Democratico di Pisa. Contribution to the national DL group *Università e Ricerca* led by Franca Bimbi, publishing an invited article on this subject on Toscana Europa.

**Administrational activity.** Since May 2008 she has been asked by the Pisa mayor Marco Filippeschi as councillor with competences on educational policies, promotion of digital technologies for education, gender policies, citizenship values and culture of legality. This appointment has been renovated in 2013, adding the competences on scientific education and initiatives to contrast corruption in the Public Administration.

### **Personal interests**

I have been playing several sports at a competitive level, among which volleyball (professional), soccer and table tennis, and I like so much horse-riding. Loving role-playing, I read whatever is readable, though I'm especially fond of comics and fantasy. I studied flute at Conservatorio of Reggio Calabria, and I love playing piano and tenor sax. In Pisa I' dashing wherever by bike.