

CURRICULUM VITAE ET STUDIORUM

Luciano Ortenzi

Contact Information

Istituto dei Sistemi Complessi (ISC)-CNR,
c/o Dipartimento di Fisica, edificio Fermi
“Sapienza” Università di Roma.
Phone: +39 06 4991 3489
e-mail: Luciano.Ortenzi@Sapienza.isc.cnr.it

Personal Data

Name: Luciano
Surname: Ortenzi
Gender: Male
Marital status: Married
Place and Date of Birth: Rome (Italy), 11 March 1981
Nationality: Italian
Languages: Italian (native), English (fluent), German (basic knowledge)

Education

- 17 October 2013, PhD in Physics , University of Stuttgart (De).
Title of the thesis: “Phenomenological approach to spin fluctuations in itinerant magnets and superconductors from *ab initio* calculations”.
Supervisors: Dr. Lilia Boeri e Prof. Dr. Ole Krogh Andersen.
- 17 July 2009, Master Degree in Physics, University of Rome “La Sapienza”.
Title of the thesis: “Band Shift, Particle-Hole Asymmetry and Multi-Band Effects in the new Fe-based Superconductors”.
Supervisors: Dr. Emmanuele Cappelluti, Prof. Luciano Pietronero.
- 1 March 2006, Bachelor in Physics, University of Rome “La Sapienza”.
Title of the thesis: “Degenerate Fermi-systems”.
Supervisor: Prof. Silvano Petrarca;

Present Position

- Postdoc position at “Istituto dei Sistemi complessi” (ISC)-CNR of Rome.

Former professional appointments

- 15 December 2014 Postdoc position at “Istituto dei Sistemi complessi” (ISC)-CNR, Rome (It).
- 18 October 2013 Postdoc position at the “Max Planck Institute Für Festkörperforschung”, Stuttgart (De).
- 9 November 2009 PhD student at the “Max Planck Institute Für Festkörperforschung”, Stuttgart (De).

Publications on international refereed journals and preprint:

1. L. Ortenzi, E. Cappelluti, and L. Pietronero,
“Band structure and electron-phonon coupling in H_3S : a tight-binding model”
arXiv:1511.04304 (2015).
2. L. Ortenzi, H. Gretarsson, S. Kasahara, Y. Matsuda, T. Shibauchi, K. D. Finkelstein, W. Wu, S.R. Julian, Young-June Kim, I. I. Mazin, L. Boeri
“Structural origin of the anomalous temperature dependence of the local magnetic moments in the CaFe_2As_2 family of materials”
Phys. Rev. Lett. **114**, 047001 (2015).
3. Alaska Subedi, Luciano Ortenzi, Lilia Boeri
“Electron-phonon superconductivity in APt_3P (A=Sr, Ca, La) compounds: From weak to strong coupling”
Phys. Rev. B **87**, 144504 (2013).
4. L. Ortenzi, I.I. Mazin, P. Blaha and L. Boeri
“Accounting for spin fluctuations beyond LSDA in the density functional theory”
Phys. Rev. B **86**, 064437 (2012).
5. L. Benfatto, E. Cappelluti, L. Ortenzi and L. Boeri
“Extended Drude model and role of interband transitions in the midinfrared spectra of pnictides”
Phys. Rev. B **83**, 224514 (2011).
6. L. Ortenzi, S. Biermann, O. K. Andersen, I.I. Mazin, L. Boeri
“Competition between electron-phonon coupling and spin fluctuations in superconducting hole-doped CuBiSO ”
Phys. Rev. B **83**, 100505(R) (2011).
7. L. Ortenzi, E. Cappelluti, L. Benfatto and L. Pietronero,
“Fermi-Surface Shrinking and Interband Coupling in Iron-Based Pnictides”
Phys. Rev. Lett. **103**, 046404 (2009).

Conference Proceedings

1. E. Cappelluti, L. Ortenzi, L. Benfatto,
“Fermi-surface shrinking, interband coupling and multiple gaps in iron-based pnictides”,
J. Sup. Nov. Mag. **24**, 229-233 (2011).

2. E. Cappelluti, L. Ortenzi, L. Benfatto and L. Pietronero,
“Fermi surface shrinking, band shifts and interband coupling in iron-based pnictides”
Physica C, **470**, S508-S510 (2010).

Invited talk at international conference:

1. “Cu_{1-x}BiSO: the first Fe-pnictide-structured compound without Fe or pnictogen” at the
E-MRS 2011 FALL MEETING, Warsaw University of Technology, Poland 19/9/2011.

Other talks and seminars:

1. 29 September 2015 “Non-adiabatic effects in transition metal dichalcogenides”, at “Fis-Mat 2015” Palermo (Pa) Italy.
2. 24 September 2015 “Tight-binding model for H₃S”, at “101° Congresso SIF”, Rome (Rm) Italy.
3. 3 March 2015 “Spin fluctuations-corrected DFT for Fe-based superconductors”, at “APS March meeting” San Antonio (Tx) U.S.A.
4. 3 October 2014 “Structural origin of the anomalous temperature dependence of the local magnetic moments in the CaFe₂As₂ family of materials”, at the “Workshop on Correlations, Criticality, and Coherence in Quantum Systems”, Évora (Portugal).
5. 26 September 2014 “Spin fluctuations-corrected DFT for itinerant systems and Fe-based superconductors” presso “Superfox conference 2014” at the “La Sapienza” University of Rome (It).
6. 10 September 2012 “Effect of Spin Fluctuations in Itinerant Systems” at the Ludwig-Maximilian University of Munich (De).
7. 22 May 2012 “Multiband Effects and Interband Coupling in Iron-Based Superconductors”, at the University of Augsburg (De).
8. 27 February 2012 “Cu_{1-x}BiSO: the first Fe-pnictide-structured compound without Fe or Pnictogen”, at “APS March meeting” Boston (Ma) U.S.A.
9. 26 August 2009 “Fermi-Surface Shrinking and Interband Coupling in Iron-Based Pnictides” at the “Max Planck Institute Für Festkörperforschung” of Stuttgart (De).

Poster Prize:

1. First prize as the best poster presented at the European Conference on the “Physics of Magnetism” from 27/6/2011 to 1/7/2011 Poznan, Poland.

Teaching activity:

1. Tutorship activity for the “Advanced Physical Laboratory course” of the International Master of Science in Physics at the University of Stuttgart, winter semester 2011.

2. Since Spring 2015, I work as a tutor at the “Camplus” university residence (<http://www.camplus.it/en>).

Posters:

1. “Structural Origin of the Anomalous Temperature Dependence of the Local Magnetic Moments in the CaFe_2As_2 Family of Materials” presented at:
“Electronic structure at the cutting edge with the Elk code”, from 10/08/2015 to 14/08/2015, Lausanne, Switzerland.
2. “Multiband Effects and Interband Coupling in Iron-Based Superconductors” presented at:
 - (a) International workshop “Iron based Superconductors”, from 21/3/2012 to 23/3/2012, Munich Germany.
 - (b) “2nd Iron Pnictide Theory Meeting” 26/1/2012 “Goethe-Universität” Frankfurt, Germany
 - (c) Mini-workshop on “Phase Diagrams and Competing Orders in Iron-based Superconductors” on 11/10/2011, “KIT Campus Nord”, Karlsruhe, Germany
3. “Competition between Electron Phonon coupling and Spin Fluctuations in superconducting CuBiSO ” presented at:
 - (a) “Superconductivity 100 Years Later: a Computational Approach” from 15/9/2011 to 18/9/2011 Alghero, (It).
 - (b) “Iron Pnictide Theory Meeting” from 24/8/2011 to 25/8/2011 Frankfurt, (De).
 - (c) “European Conference on the Physics of Magnetism” from 27/6/2011 to 1/7/2011 Poznan, (Pl).
 - (d) 477. Heraeus-Seminar “Unconventional Superconductivity” from 11/4/2011 to 13/4/2011 Bad Honnef (De).
 - (e) Workshop on “Electron-phonon interaction in metals, superconductors and semi-conducting nanostructures” from 29/11/2010 to 30/11/2010 Paris, (Fr).
4. “Fermi-Surface Shrinking and Interband Coupling in Iron-Based Pnictides” presented at:
 - (a) “ Ψ -k Conference 2010” from 13/9/2010 to 16/9/2010 Berlin, (De).
 - (b) “Electronic Structure of Fe-based Superconductors” from 10/5/2010 to 12/5/2010 Stuttgart, (De).

Schools and Tutorials:

1. “Electronic structure at the cutting edge with the Elk code”, from 10/08/2015 to 14/08/2015, Lausanne, Switzerland.
2. Hands-on Tutorial Workshop 2011 on Ab Initio Molecular Simulations: “Toward a First-Principles Understanding of Materials Properties and Functions” from 12/6/2011 to 21/7/2011 Berlin, (De).

3. “Summer School on Quantum Materials” from 5/10/2010 to 8/10/2010 Stuttgart (De).
4. “Cecam Tutorial: Computational spectroscopy using Quantum Espresso and related codes” from 26/7/2010 to 30/7/2010, Trieste, (It).
5. “Correlation Phenomena, Exotic Phases and Novel Functionalities” from 9/3/2010 to 19/3/2010, Jülich, (De).

Other activities

- Since Fall 2014 I’m the Technical Manager of the BBA s.r.l., a small company started up by people under 35 , the BBA s.r.l (BBA facebook page: <http://www.facebook.com/BBApneus>) selling and mounting tires for agricultural machinery.

References

- Dr. Lilia Boeri Ass. Prof.:
Institute for Theoretical and
Computational Physics,
TU Graz.
Petersgasse 16, 8010 Graz (Austria).
Phone: +43-316-873 8181
e-mail: l.boeri@tugraz.at
web page:<https://itp.tugraz.at/lilia/>
- Dr. Igor I. Mazin:
Center for Computational Materials Science
Naval Research Laboratory, Code 6390
4555 Overlook Ave, SW
Washington, DC 20375-5320, USA
Phone: (202) 767-6990
Fax: (202) 404-7546
e-mail: mazin@nrl.navy.mil
web page: <http://cst-www.nrl.navy.mil/users/mazin/>
- Prof. Luciano Pietronero
Full Professor of Condensed Matter Physics,
University of Rome “La Sapienza”,
Department of Physics, P.le A. Moro 2, 00185 Rome (Italy)
Phone: +39-06-49913488
Fax: +39-06-4463158
e-mail: luciano.pietronero@roma1.infn.it;
- Dr. Emmanuele Cappelluti:
Institute for Complex Systems (ISC), CNR,
via dei Taurini 19, 00185 Rome, Italy
Phone: +39-06-49937453
Fax: +39-06-49937440
e-mail: emmanuele.cappelluti@roma1.infn.it

Rome, November 24, 2015