

Personal information

birth April, 5th 1982, Trieste, Italy
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ORCID 0000-0002-5845-1301

Current position

from 07/2020 Staff Researcher, Level III, CNR - Istituto Officina dei Materiali, Trieste, Italy
affiliation Structure and Reactivity group at Atomic Scale
activity - operating a Low-Temperature Scanning Tunneling Microscope and the relative sample preparation equipment
- design, preparation and implementation of surface science experiments, particularly on atom-thick materials and thin films of organic molecules
- management of scientific collaboration with national and international research groups and organizations
- proposal evaluation and technical support of external users for the EU-H2020 NFFA-Europe program
- supervision of master and bachelor thesis
- organization and management of divulgation activities

Career

from 07/2020 Staff Researcher, Level III, CNR - Istituto Officina dei Materiali, Trieste, Italy
2017-2020 Postdoctoral fellowship at Structure and Reactivity at the Atomic Scale group, University of Trieste and CNR-IOM, Trieste, Italy
2013-2016 Postdoctoral fellowship at Nanospectroscopy beamline, Elettra Sincrotrone Trieste, Italy
2008-2013 Doctoral degree in Physics, Free University Berlin, Germany, mark *magna cum laude*
2005-2008 Master degree in Condensed Matter Physics, mark 110/110 *cum laude*, University of Trieste, Italy
2006 Stage at Elettra Sincrotrone Trieste
2001-2004 Bachelor degree in Physics, mark 110/110 *cum laude*, University of Trieste, Italy

Education

Doctorate thesis

title Characterization of iron oxide thin films as support for catalytically active nanoparticles

supervisors Prof. Hans-Joachim Freund and Prof. Paul Fumagalli

university Physics Department, Free University, Berlin, Germany

scholarship International Max Planck Research School "Complex Surfaces in Materials Science"

facility Fritz Haber Institute and SMART beamline, BESSY-II, Helmholtz Zentrum Berlin, Germany

techniques UV-PEEM, XPEEM, LEEM, MEM, LEED, LEED-IV, SPA-LEED, NEXAFS, ARPES, XPD

thesis <https://refubium.fu-berlin.de/handle/fub188/2358>

timeline 30/06/2008 - 24/06/2013

Master thesis

title Development of a new energy electron analyzer for photoemission measure with synchrotron radiation

supervisors Prof. Alessandro Baraldi and Dr. Silvano Lizzit

university Physics Department, University of Trieste, Italy

facility SuperESCA beamline, Elettra Sincrotrone Trieste, Italy

techniques fastXPS, LEED

timeline 15/06/2007 - 18/03/2008

Stage at Sincrotrone Trieste S.p.A. (2006)

title Characterization of $\text{Ni}_3\text{Al}(111)$ surface with XPD technique

supervision Prof. A. Baraldi

techniques XPS, XPD

Bachelor thesis

title STM analysis of nanostructures in semiconductors

supervisor Prof. S. Modesti

university Physics Department, University of Trieste, Italy

facility Scanning Tunnelin Spectroscopy laboratory, University of Trieste, Italy

techniques STM

timeline 01/07/2004 - 22/09/2004

Publication list

Metrics

h-index 15
citations 1017 (Scopus) at 25/11/2020
ORCID 0000-0002-5845-1301

Book chapters

- o [A. Sala](#), *Imaging at the mesoscale (LEEM/PEEM)*, in M. Rocca, T. Rahman and L. Vattuone (Eds.): *Springer Handbook of Surface Science*, Springer International Publishing, ISBN 978-3-030-46904-7 (2020)

Articles

- 1 E. Vesselli, L. Bianchettin, A. Baraldi, [A. Sala](#), G. Comelli, S. Lizzit, L. Petaccia and S. de Gironcoli: *The Ni₃Al(111) surface structure: experiment and theory*, J. Phys. Cond. Matt. **20**, 195223 (2008) DOI:10.1088/0953-8984/20/19/195223
- 2 E. Golfetto, A. Baraldi, M. Pozzo, D. Alfè, [A. Sala](#), P. Lacovig, E. Vesselli, S. Lizzit, G. Comelli and R. Rosei: *Determining the chemical reactivity trends of Pd/Ru(0001) pseudomorphic overlayers: core level shift measurements and DFT calculations*, J. Phys. Chem. C **114**(1), 436-441 (2010) DOI:10.1021/jp908568v
- 3 [A. Sala](#), H. Marchetto, Z.-H. Qin, Sh. Shaikhutdinov, Th. Schmidt and H.-J. Freund: *Defects and inhomogeneities in Fe₃O₄(111) thin film growth on Pt(111)*, Phys. Rev. B **86**, 155430 (2012) DOI:10.1103/PhysRevB.86.155430
- 4 Th. Schmidt, [A. Sala](#), H. Marchetto, E. Umbach, H.-J. Freund: *First experimental proof for aberration correction in XPEEM: Resolution, transmission enhancement, and limitation by space charge effects*, Ultramicroscopy **126**, 23 (2013) DOI:10.1016/j.ultramic.2012.11.004
- 5 F. Genuzio, [A. Sala](#), Th. Schmidt, D. Menzel, H.-J. Freund: *Interconversion of α -Fe₂O₃ and Fe₃O₄ Thin Films: Mechanisms, Morphology, and Evidence for Unexpected Substrate Participation*, J. Phys. Chem. C **118**, 29068 (2014) DOI:10.1021/jp504020a
- 6 M. Nevius, F. Wang, C. Mathieu, N. Barrett, [A. Sala](#), T. O. Menteş, A. Locatelli, E. H. Conrad: *The bottom-up growth of edge specific graphene nanoribbons.*, Nano Lett. **14**, 6080 (2014) DOI:10.1021/nl502942z

- 7 T. O. Menteş, G. Zamborlini, A. Sala, A. Locatelli: *Cathode lens spectromicroscopy: methodology and applications*, Beilstein J. Nanotechnol. **5**, 1873 (2014) DOI:10.3762/bjnano.5.198
- 8 F. Wang, G. Liu, S. Rothwell, M. S. Nevius, C. Mathieu, N. Barrett, A. Sala, T. O. Menteş, A. Locatelli, P. I. Cohen, L. C. Feldman, E. H. Conrad: *Pattern induced ordering of semiconducting graphene ribbons grown from nitrogen-seeded SiC*, Carbon **82**, 360 (2015) DOI:10.1016/j.carbon.2014.10.081
- 9 A. Sala (Corresponding author), G. Zamborlini, T. O. Menteş, A. Locatelli: *Fabrication of a 2D heterojunction in graphene via low energy N_2^+ irradiation*, Small **11**, 5927 (2015) DOI:10.1002/smll.201501473
- 10 G. Zamborlini, M. Imam, L. L. Patera, T. O. Menteş, N. Stojić, C. Africh, A. Sala, N. Binggeli, G. Comelli, A. Locatelli: *Nanobubbles at GPa Pressure under Graphene*, Nano Letters **15**, 6162 (2015) DOI:10.1021/acs.nanolett.5b02475
- 11 M. Hesse, B. von Böhn, A. Locatelli, A. Sala, T. O. Menteş, R. Imbihl: *Island Ripening via a Polymerization/Depolymerization Mechanism*, Phys. Rev. Lett. **115**, 136102 (2015) DOI:10.1103/PhysRevLett.115.136102
- 12 J. Hoecker, T. O. Menteş, A. Sala, A. Locatelli, Th. Schmidt, J. Falta, S. D. Senanayake J. I. Flege: *Unraveling the dynamic nanoscale reducibility of CeO_x -Ru in hydrogen activation*, Advanced Materials Interfaces **2**, 1500314 (2015) DOI:10.1002/admi.201570089
- 13 T. O. Menteş, A. Sala, A. Locatelli, E. Vescovo, J. M. Ablett, M. A. Niño: *Phase Coexistence in Two-Dimensional $Fe_{0.70}Ni_{0.30}$ Films on $W(110)$* , e-J. Surf. Sci. Nanotech. **13**, 256 (2015) DOI:10.1380/ejssnt.2015.256
- 14 W. Jin, P.-C. Yeh, N. Zaki, D. Chenet, G. Arefe, Y. Hao, A. Sala, T. O. Menteş, J. I. Dadap, A. Locatelli, J. Hone, and R. M. Osgood, Jr., *Tuning the electronic structure of monolayer graphene/ MoS_2 van der Waals heterostructures via inter-layer twist*, Phys. Rev. B **92**, 201409 (2015) DOI:10.1103/PhysRevB.92.201409
- 15 O. Boulle, S. Pizzini, J. Vogel, A. Locatelli, T. O. Menteş, A. Sala, L. Buda-Prejbeanu, O. Klein, M. Belmeguenai, H.-X. Yang, M. Chshiev, S. Auffret, M. Miron, G. Gaudin, *Room temperature chiral magnetic skyrmion in ultrathin magnetic nanostructure*, Nature Nanotechnology **11**, 449 (2016) DOI:10.1038/nnano.2015.315

- 16 S. Nappini, I. Pis, T. O. Menteş, [A. Sala](#), M. Cattelan, S. Agnoli, F. Bondino, E. Magnano: *Formation of quasi-free-standing single layer of graphene and hexagonal boron nitride on Pt(111) by a single molecular precursor*, *Advanced Functional Materials* **26**, 1120 (2016) DOI:10.1002/adfm.201503591
- 17 F. Genuzio, [A. Sala](#), Th. Schmidt, D. Menzel, H.-J. Freund: *Phase transformations in thin iron oxide films: Spectromicroscopic study of velocity and shape of the reaction fronts*, *Surface Science* **648**, 177 (2016) DOI:10.1016/j.susc.2015.11.016
- 18 C. Africh, C. Cepek, L.L. Patera, G. Zamborlini, T.O. Menteş, [A. Sala](#), A. Locatelli, G. Comelli: *Switchable graphene-substrate coupling through formation/dissolution-of an intercalated Ni-carbide layer*, *Scientific Reports* **6**, 19734 (2016) DOI:10.1038/srep19734
- 19 J. I. Flege, J. Höcker, B. Kaemena, T. O. Menteş, [A. Sala](#), A. Locatelli, S. Gangopadhyay, J. T. Sadowski, S. D. Senanayake, J. Falta: *Growth and characterization of Epitaxially Stabilized Ceria(001) Nanostructures on Ru(0001)*, *Nanoscale* **8**, 10849 (2016) DOI:10.1039/C6NR02393B
- 20 D. C. Grinter, C. Muryn, [A. Sala](#), C.-M. Yim, C. L. Pang, T. O. Menteş, A. Locatelli, G. Thornton: *Spillover Reoxidation of Ceria Nanoparticles*, *J. Phys. Chem. C* **120**, 11037 (2016) DOI:10.1021/acs.jpcc.6b03670
- 21 C. Bäumer, R. Valenta, C. Schmitz, A. Locatelli, T. O. Menteş, S. P. Rogers, [A. Sala](#), N. Raab, S. Nemsak, M. Shim, C. M. Schneider, S. Menzel, R. Waser, R. Dittmann: *Subfilamentary Networks Cause Cycle-to-Cycle Variability in Memristive Devices*, *ACS Nano* **11**, 6921 (2017) DOI:10.1021/acsnano.7b02113
- 22 B. von Böhn, A. Locatelli, T. O. Menteş, [A. Sala](#), R. Imbihl: *Growth of Vanadium and Vanadium Oxide on a Rh(110) Surface*, *J. Phys. Chem. C* **121**, 19774 (2017) DOI:10.1021/acs.jpcc.7b04809
- 23 S. Forti, A. Rossi, H. Büch, T. Cavallucci, [A. Sala](#), T. O. Menteş, A. Locatelli, F. Bisio, M. Canepa, K. Müller, S. Link, U. Starke, V. Tozzini, C. Coletti: *Electronic properties of single-layer tungsten disulfide on epitaxial graphene on silicon carbide*, *Nanoscale* **9**, 16412 (2017) DOI:10.1039/c7nr05495e

- 24 R. Juge, S.-G. Je, D. de Souza Chaves, S. Pizzini, L. D. Buda-Prejbeanu, L. Aballe, M. Foerster, A. Locatelli, T. O. Menteş, A. Sala, F. Maccherozzi, S. S. Dhesi, S. Auffret, E. Gautier, G. Gaudin, J. Vogel, O. Boulle: *Magnetic skyrmions in confined geometries: Effect of the magnetic field and the disorder*, J. Magn. Magn. Mat. **455**, 3 (2018) DOI:10.1016/j.jmmm.2017.10.030
- 25 M. Stredansky, A. Sala, T. Fontanot, R. Costantini, C. Africh, G. Comelli, L. Floreano, A. Morgante, A. Cossaro: *On-surface synthesis of a 2D boroxine framework: A route to a novel 2D material?*, Chem. Comm. **54**, 3971 (2018) DOI:10.1039/C8CC01372A
- 26 S. Agnoli, A. Ambrosetti, T. O. Menteş, A. Sala, A. Locatelli, P. Silvestrelli, M. Cattelan, S. Eichfeld, D. D. Deng, J. A. Robinson, J. Avila, C. Chen, M. C. Asensio: *Unraveling the Structural and Electronic Properties at the WSe₂-Graphene Interface for a Rational Design of van der Waals Heterostructures*, ACS Appl. Nano Mater. **1**, 1131 (2018) DOI:10.1021/acsnm.7b00315
- 27 Z. Zou, V. Carnevali, M. Jugovac, L. L. Patera, A. Sala, M. Panighel, C. Cepek, G. Soldano, M. M. Mariscal, M. Peressi, G. Comelli, C. Africh: *Graphene on nickel (100) micrograins: Modulating the interface interaction by extended moiré superstructures*, Carbon **130**, 441 (2018) DOI:10.1016/J.CARBON.2018.01.010
- 28 P. Genoni, F. Genuzio, T. O. Menteş, B. Santos, A. Sala, C. Lenardi, A. Locatelli: *Magnetic Patterning by Electron Beam-Assisted Carbon Lithography*, ACS Appl. Mater. Interfaces **10**, 27178 (2018) DOI:10.1021/acsnm.8b07485
- 29 B. von Böhn, T. O. Menteş, A. Locatelli, A. Sala, R. Imbihl: *Reactive Phase Separation during Methanol Oxidation on a V-Oxide-Promoted Rh(100) Surface*, J. Phys. Chem. C **122**, 10482 (2018) DOI:10.1021/acs.jpcc.8b02544
- 30 M. Stano, S. Schaefer, A. Wartelle, M. Rioult, R. Belkhou, A. Sala, T. O. Menteş, A. Locatelli, L. Cagnon, B. Trapp, S. Bochmann, S. Y. Martin, E. Gautier, J.-C. Toussaint, W. Ensinger, O. Fruchart: *Flux-closure domains in high aspect ratio electroless-deposited CoNiB nanotubes*, SciPost Phys. **5**, 038 (2018) DOI:10.21468/SciPostPhys.5.4.038
- 31 I. Piš, S. Nappini, F. Bondino, T. O. Menteş, A. Sala, A. Locatelli, E. Magnano: *Fe intercalation under graphene and hexagonal boron nitride in-plane heterostructure on Pt(111)*, Carbon **134**, 274 (2018) DOI:10.1016/j.carbon.2018.03.086

- 32 F. Genuzio, P. Genoni, T. O. Menteş, B. Santos, A. Sala, C. Lenardi, A. Locatelli: *Stimulated CO Dissociation and Surface Graphitization by Micro-focused X-ray and Electron Beams*, J. Phys. Chem. C **123**, 8360 (2019) DOI:10.1021/acs.jpcc.8b09043
- 33 V. Yu. Aristov, A. N. Chaika, O. V. Molodtsova, S. V. Babenkov, A. Locatelli, T. O. Menteş, A. Sala, D. V. Potorochin, D. Marchenko, B. Murphy, B. Walls, I. V. Shvets: *Layer-by-Layer Graphene Growth on β -SiC/Si(001)*, ACS Nano **13**, 526 (2019) DOI:10.1021/acsnano.8b07237
- 34 A. Wartelle, B. Trapp, M. Stano, C. Thirion, S. Bochmann, J. Bachmann, M. Foerster, L. Aballe, T. O. Menteş, A. Locatelli, A. Sala, L. Cagnon, J.-C. Toussaint, O. Fruchart: *Bloch-point-mediated topological transformations of magnetic domain walls in cylindrical nanowires*, Phys. Rev. B **99**, 024433 (2019) DOI:10.1103/PhysRevB.99.024433
- 35 H. M. Sturmeit, I. Cojocariu, M. Jugovac, A. Cossaro, A. Verdini, L. Floreano, A. Sala, G. Comelli, S. Moro, M. Stredansky, M. Corva, E. Vesselli, P. Puschnig, C. M. Schneider, V. Feyer, G. Zamborlini, M. Cinchetti: *Molecular anchoring stabilizes low valence Ni(i)TPP on copper against thermally induced chemical changes*, J. Mater. Chem. C **8**, 8876 (2020) DOI:10.1039/D0TC00946F
- 36 S. Fiori, D. Perilli, M. Panighel, C. Cepek, A. Ugolotti, A. Sala, H. Liu, G. Comelli, C. Di Valentin, C. Africh: *"Inside out" growth method for high-quality nitrogen-doped graphene*, Carbon **171**, 704 (2020) DOI:10.1016/j.carbon.2020.09.056

Participation at conferences, schools and workshops

- Summer School "Reactivity of nanoparticles for more efficient and sustainable energy production", Sandbjerg Estate, Denmark 2009 (poster)
- 15th Meeting of the Fachbeirat, Fritz-Haber-Institute of MPG, Berlin, Germany 2009 (poster)
- IWOX-VII 7th International Workshop on Oxide Surfaces, Echigo-Yuzawa, Japan 2010 (poster)
- DPG Frühjahrstagung, Regensburg, Germany 2010 (poster)
- 2nd Joint BER II and BESSY II Users Meeting, Berlin, Germany 2010 (poster)
- 16th Meeting of the Fachbeirat, Fritz-Haber-Institute of MPG, Berlin, Germany 2011 (talk)
- 3rd Joint BER II and BESSY II Users Meeting, Berlin, Germany 2011 (poster)
- DPG Frühjahrstagung, Berlin, Germany 2012 (poster)
- 8th International Workshop on LEEM/PEEM, Hong Kong 2012 (talk)
- 4th Joint BER II and BESSY II Users Meeting, Berlin, Germany 2012 (poster)
- International conference on Solid Films and Surfaces, Rio de Janeiro, Brazil 2014 (talk)

- 9th International Workshop on LEEM/PEEM, Berlin, Germany 2014 (poster)
- 1st International Conference of Applied Surface Science, Shanghai, China 2015 (talk)
- 31st European Conference on Surface Science, Barcelona, Spain 2015 (talk)
- GraphITA, Bologna, Italy 2015 (talk)
- 12th European Conference on Surface Crystallography and Dynamics, Trieste, Italy 2015 (poster)
- ALBA/CELLS seminars, Barcelona, Spain 2016 (invited talk)
- FisMat, Italian national conference on the Physics of Matter, Trieste, Italy 2017 (talk)
- EWEG2D 4th European Workshop on Epitaxial Graphene and 2D Materials, Salamanca, Spain 2018 (talk)
- CHEM2DMAT 2nd European Conference on Chemistry of 2D Materials, Dresden, Germany 03-06/09/2019: *Mimic 1D properties on continuous 2D materials: the pilot case of graphene on NiC_x/Ni(100)*

Organization of workshops

Co-organizer of 2nd IMPRS workshop "Complex to Comprehensive: Vision for Surface Science", Ringberg Castle, Germany, 21-25 February 2011

Accepted Proposals

Technical evaluation and assistance as resident scientist for:

- 43 beamtime proposals for Nanospectroscopy beamline, Elettra Sincrotrone Trieste, Italia (from 01/09/2013 to 31/08/2016)
- 4 proposal for STM experiments included in the NFFA-Europe program (from 01/01/2017)

Partecipation as user:

- 1 Growth and characterization of self-assembled magnetic nanowires on graphene - 30/01/2014 ID 20135498 Nanospectroscopy beamline @ Elettra Sincrotrone Trieste, Italy - Participant
- 2 Role of the metal-oxide interplay in the enhancement of catalytic activity of iron oxide thin films - 09/05/2014 ID 20135463 Nanospectroscopy beamline @ Elettra Sincrotrone Trieste, Italy - PI
- 3 In-situ growth and electronic structure of graphene on Ni(100) - 13/02/2017 ID 20165430 Nanospectroscopy beamline @ Elettra Sincrotrone Trieste, Italy - Participant

- 4 Molecular spin hybrids at the organic/ferromagnetic interface - 05/08/2018 ID 20175438 NanoESCA beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipant](#)
- 5 Adsorption dynamics of NO at the NiTPP/Cu(100) interface - 11/09/2018 ID 20180306 SUPERESCA beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipant](#)
- 6 Selective binding site of toxic gases at a porphyrin array for chemical sensors application - 19/11/2018 ID 20180298 ALOISA beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipant](#)
- 7 Probing the polymerization of small hydrocarbons on a Ni model catalyst - 29/05/2020 ID 20195053 SuperESCA beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipant](#)
- 8 N-doped Graphene on Ni(111): Growth and Reactivity - 10/03/2020 ID 20195192 ALOISA beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipante](#)
- 9 A novel route for growing Blue Phosphorene on Au(111) - 03/08/20 ID 20195322 NANOSPECTROSCOPY beamline @ Elettra Sincrotrone Trieste, Italy - [Partecipante](#)

Review activity

2015- Proposal reviewer for the Canadian Light Source, Saskatoon, Canada

Didactic activity

- 03-06/2020 Teacher assistant for the course "Physics I", ID 006IN, B. Sc. program in Engineering, University of Trieste - Contract Prot. 21892 12/02/20
- 03-06/2020 Teacher assistant for the course "Physics II", ID 038IN, B. Sc. program in Engineering, University of Trieste - Contract Prot. 125472 23/10/19
- 10-12/2018 Teacher assistant for the course "Physics II", ID 038IN, B. Sc. program in Engineering, University of Trieste - Contract Prot. 109283 25/10/18
- 03-05/2018 Teacher assistant for the course "Physics I", ID 006IN, B. Sc. program in Engineering, University of Trieste - Contract Prot. 49491 18/12/17
- 10-12/2017 Teacher assistant for the course "Methods for signal analysis", B. Sc. program in Physics, University of Trieste - Contract Prot. 17896 24/05/17

Thesis supervision

Supervision of two Bachelor thesis in Physics, University of Trieste

- o Laurea Triennale in Physics, "Low temperature STM on bidimensional materials: from imaging to spectroscopy", Francesco Armillotta, 18/09/17 - Certificate Prot. 1300/2018 Dip. Fis. UniTS 04/12/18

- Laurea Triennale in Physics, "Analysis of tunneling current decay on one-dimensional nanostructure of graphene", Pietro Biasin, 20/07/18 - Certificate Prot. 1300/2018 Dip. Fis. UniTS 04/12/18

Consultancy

Consultancy agreement for the scaling of a photoemission electron microscope coupled with a femtosecond laser, for the evaluation of the dimension and the noise sources - Contract Italian Institute of Technology Prot. 0003303/18 23/03/18, activity related to project SOPHY, ERC Consolidator Grant 2017, P.I. Annamaria Petrozza, IIT CNST@PoliMi

Scientific Interests

- Production, characterization and spatial functionalization of 2D materials as models for electronic devices and catalysts
- Dynamics of surface and interface processes (epitaxial growth, material transport, self-organization, catalysis)
- Electronic and magnetic properties of nano-structured thin films and model devices for catalysis, energy production and spintronics
- Development of hardware and software upgrades in surface science systems
- Science education and divulgation

Experimental techniques and skills

- Wide experience in experimental surface science techniques: Low Energy Electron Microscopy (LEEM), Mirror Electron Microscopy (MEM), Low Energy Electron Diffraction (LEED), LEED Spot Profile Analysis (SPA-LEED), X-ray and UltraViolet Photo Electron Emission Microscopy (XPEEM and UV-PEEM), X-ray and Ultraviolet Photoelectron Spectroscopy (XPS and UPS), X-ray Photoelectron Diffraction (XPD), Near Edge X-ray Adsorption Fine Structure (NEXAFS), Scanning Tunneling Microscopy and Spectroscopy (STM-STs), Inelastic Electron Tunneling Spectroscopy (IETS). Basic experience in Atomic Force Microscopy (AFM), Scanning Electron Microscopy (SEM), Temperature Programmed Desorption (TPD), Infrared Reflection Adsorption Spectroscopy (IRAS)
- Computer simulation and analysis of LEED-IV spectra (SATLEED and TensEr-LEED codes) and LEEM images (Fourier Optics and Contrast Transfer Function algorithms on IDL, LabVIEW and Igor Pro programs)
- Image analysis (filtering, particle tracking, PCA, drift compensation) via self-made IDL, LabVIEW and Igor Pro programs
- Analysis of XPS spectra, SPA-LEED profiles, LEEM/PEEM image profiles and STS/IETS spectra via self-made IDL and Igor Pro programs
- Experienced in hardware construction, maintenance and repairment

Awards

- 2008-2013 International Max Planck Research School "Complex Surface in Materials Science" scholarship
- 2008 Poropat Prize of the Department of Physics for the best Master thesis, University of Trieste

Collaborations

- Dr. Andrea Locatelli, Elettra Sincrotrone Trieste, Italia
- Prof. Maria Peressi, Università degli Studi di Trieste, Italia
- Prof. Erik Vesselli, Università degli Studi di Trieste, Italia
- Dr. Vitaly Feyer, Forschungszentrum Jülich, Peter Grünberg Institut PGI-6, Germania
- Dr. Giovanni Zamborlini, TU Dortmund, Germania
- Dr. Albano Cossaro, CNR-IOM, Trieste, Italia
- Dr. Alberto Verdini, CNR-IOM, Trieste, Italia
- Dr. Giancarlo Panaccione, CNR-IOM, Trieste, Italia
- Dr. Annamaria Petrozza, IIT, Milan, Italia

Languages

Italian, native language.

English, fluent - reading, listening, writing, speaking.

German, fluent - reading, listening, writing, speaking.

Computer skills

platforms Mac OS X, UNIX(Linux), Windows

languages Fortran 77 and 90/95

SW Igor Pro, Origin Pro, LabVIEW, IDL, Gwyddion, Quantum Espresso, office programs, Corel Draw

Other Interests

Physics, music, history, geography, economics, IT, essays reading, intelligence games, cooking, traveling

Extra

Professional musician

Private teaching and public lectures of math, physics and music

IQ 160 Cattell (99.4 percentile). Mensa member since 2001