

CURRICULUM VITAE

FORMATO EUROPEO/EUROPEAN FORMAT

INFORMAZIONI PERSONALI/ PERSONAL INFORMATION

Nome, Cognome/Name, Surname ALESSANDRO LASCIALFARI
Indirizzo/Address
Via, numero civico, c.a.p., città,
nazione/ House number, street
name, postcode, city, country
Telefono/Telephone +39-0382-987499
Fax +39-0382-987752
E-mail alessandro.lascialfari@unipv.it
Sito web/Website <https://sites.unimi.it/lascialfari/>
Nazionalità/Nationality italian
Luogo e data di nascita/ Place and
Date of birth Firenze, 09/07/1963

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input checked="" type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

In ordine di data /Dates (from – to) 01/10/2019 – current year
Name and address of employer Università degli studi di Pavia, Strada Nuova 65, 27100 Pavia (Italy) c/o Department of Physics,
Via Bassi 6, I-27100 pavia, Italy
Type of business or sector Education and Research
Main activities and responsibilities **Full professor.** Courses for University students in Physics and of Medicine Faculty. Research –
NMR Laboratory scientific responsible.

In ordine di data /Dates (from – to) 01/10/2005 – 30/09/2019
Name and address of employer Università degli studi di Milano, Via Festa del Perdono 7, 20122 Milano (Italy) c/o Department of
Physics, Via Celoria 16, I-20133 Milano, Italy
Type of business or sector Education and Research
Main activities and responsibilities **Full professor** since 01/06/2015 (*Associate Professor from 01/10/2005 to 31/05/2015*)
Courses for University students in Pharmacy, Physics. Research : Laboratories responsible
Director of the Specialization School in Medical Physics

In ordine di data /Dates (from – to) 04/02/2003 – 30/09/2005
Name and address of employer INFN - Consiglio Nazionale delle Ricerche (CNR), Genova (Roma), Italy
Type of business or sector Research
Occupation or position held Primo Ricercatore (2nd level researcher)
Main activities and responsibilities Research
Courses for University students in Physics

In ordine di data /Dates (from – to) 01/04/1999 – 04/02/2003

Name and address of employer Università degli studi di Pavia, Strada Nuova 65, 27100 Pavia (Italy) c/o Department of Physics, Via Bassi 6, I-27100 Pavia, Italy

Type of business or sector Education and Research

Occupation or position held Postdoc grant, assegno di ricerca (01/04/99-04/02/2003) and fellowship (01/01/98-01/04/99)

Main activities and responsibilities Research
Courses for University students in Physics

In ordine di data /Dates (from – to) 16/01/1995 – 16/01/1998

Name and address of employer Consorzio INSTM, Via Giusti 9, I-50121 Firenze, Italy c/o Department of Chemistry, Università degli studi di Firenze, Via Maragliano, Firenze, Italy, and CINS, Roma, Italy

Type of business or sector Education and Research

Occupation or position held Postdoc fellowships

Main activities and responsibilities Research

In ordine di data /Dates (from – to) 01/11/1989 – 31/10/1993

Name and address of employer Università degli studi di Pavia, Strada Nuova 65, 27100 Pavia (Italy) c/o Department of Physics, Via Bassi 6, I-27100 Pavia, Italy

Type of business or sector Education and Research

Occupation or position held PhD in Physics fellowship from Italian Ministry (1 year interruption for Military Service)

Main activities and responsibilities Education and Research

In ordine di data /Dates (from – to) July 1988, October 1988, February 1989, March 1989, September 1989 and October 1989

Name and address of employer Università degli studi di Pavia, Department of Physics (Sept 1989); Università degli studi di Firenze, Department of Physics, Firenze, Italy (Oct 1989) and Europa Metall-LMI, Firenze, Italy

Type of business or sector Education and Research

Occupation or position held Scholarship

Main activities and responsibilities Research

EDUCATION AND TRAINING

In ordine di data /Dates (from – to) 1/11/1989-21/09/1994

Name and type of organisation providing education and training Università degli studi di Pavia, Education and Research Institution

Principal subjects occupational skills covered Physics, Solid State Physics, Magnetism, Superconductivity

Level in National classification PhD degree in Physics (3 years duration, 1 year interrupted, see above)

In ordine di data /Dates (from – to) 1/11/1982-15/06/1989

Name and type of organisation providing education and training Università degli studi di Firenze, Education and Research Institution

Principal subjects occupational skills covered Physics

Level in National classification Master (laurea) degree in Physics

PERSONAL SKILLS

Mother tongue (s) ITALIAN

Other languages (s) ENGLISH

UNDERSTANDING	SPEAKING	WRITING
---------------	----------	---------

Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	C1	C1

Communication skills

Good communication skills gained during my experience the University teacher and as researcher. Communication skills for congresses talks and organization

Organisational / managerial skills

- * Responsible of NMR laboratory c/o Università degli studi di Pavia, since 2021
- * Director of the Interuniversity Center ICAM "International Center of Advanced Computing for Medicine", administrative offices at Department of Physics, Università degli studi di Pavia, since 2021
- * Co-responsible of the Research Commission of Italian Association of Medical Physics (2021-current)
- * Responsible of AFM/NMR research laboratory c/o Università degli studi di Milano, 2007-2019.
- * Director of the Specialization School in Medical Physics c/o Università degli studi di Milano, 2016-2019
- * Member of the Scientific Council of Italian Association of Medical Physics (AIFM), 2018-2021
- * Vice-president of Italian Association of Magnetism (2013-15)
- * member of the national Comitato Ordinatore, SSD FIS/07, 2019-current
- * Organization/management of research projects
- * Organization of congresses and schools
- * Member of Department Councils, Università degli studi di Pavia and Milano
- * Member of the Councils of the PhD School in Physics (UNIMI, 2007-2019, UNIPV 2020-current)

Driving licence

Licence B for car and A for motorcycle

RESEARCH ACTIVITIES

Research fields	<p>MAIN SCIENTIFIC FIELDS OF RESEARCH</p> <p>a) Magnetic properties and spin dynamics via NMR, MUSR spectroscopy and magnetometry of mesoscopic magnetic molecules (nanomagnets) with low and high spin;</p> <p>b) Study through magnetization, susceptibility and NMR/NQR of the role of superconducting fluctuations in HTSC-Fe-based, NbN, SmBa₂Cu₃O₇:Al, YBa₂Cu₃O₇-d, BSCCO, YNi₂B₂C, MgB₂:Al, and metallic nanoparticles;</p> <p>c) Magnetic properties and spin dynamics via NMR, MUSR spectroscopy and magnetometry of molecular magnetic chains including rare-earth ions and/or metals alternated to radical groups, for peculiar phase transitions;</p> <p>d) Magnetic properties and spin dynamics via NMR, MUSR spectroscopy and magnetometry of magnetic nanoparticles (NPs) based on iron oxides with different coatings (sugars, polymers,...) and hybrid Au-iron oxide NPs;</p> <p>e) Magnetic properties and spin dynamics via NMR, MUSR spectroscopy and magnetometry of magnetic dilute systems like LiY_{1-x}HoxF₄, for quantum tunneling and phase transitions analysis;</p> <p>f) Magnetic properties and spin dynamics via NMR, MRI and magnetometry of new paramagnetic and superparamagnetic (NPs) compounds for uses in MRI, Magnetic Fluid Hyperthermia, possibly multifunctional and for Optical Imaging and drug delivery;</p> <p>g) Effects of novel MRI contrast agents based on magnetic NPs, in animal model in vivo;</p> <p>h) novel magnetic-field-effect biosensors, with possible applications in biomedical field;</p> <p>i) analysis of preclinical and clinical images with advanced methods, radiomics and machine learning/AI</p>
	<p>SCIENTIFIC EQUIPMENT</p> <ul style="list-style-type: none">• Spectrometers for Nuclear Magnetic Resonance (NMR) and Nuclear Quadrupolar Resonance (NQR), for Muon Resonance (MUSR), Electronic Paramagnetic Resonance (EPR), MRI• Adiabatic calorimeter• SQUID magnetometer for measurements of magnetization and susceptibility.• Magnetic Fluid Hyperthermia calorimeter for SAR measurements• Mutual Inductance Bridge for AC susceptibility.• Resistivity measurements of bulk systems.• Atomic Force Microscope (AFM)• Electromagnets and superconducting magnetis.• Electronic and cryogenic apparatuses.
Congresses/conferences	* about 200 participations to congresses/workshops, national and international, orals and posters
Talks/Seminars	• more than 60 talks at national/international congresses, workshops, schools and research institutes.
Projects	<p><i>NATIONAL AND INTERNATIONAL RESEARCH PROJECTS</i></p> <p>Responsible of the INFN project « Mather3D » (2023-current)</p> <p>Local responsible (INFN Pavia Unit) of INFN project « next-Artificial Intelligence in Medicine (AIM) » (2022-current) and of the INFN project « NAMASSTE » (2023-current)</p> <p>Local responsible (INFN Pavia Unit) of INFN project «NAMASSTE » (2021-current, on molecular magnets)</p> <p>Local responsible (INFN Pavia Unit) of INFN project «Artificial Intelligence in Medicine (AIM) » (2021)</p> <p>Responsible of the INFN projects « Hadrocombi/Hadromag/Prothyp » (2016-2022)</p> <p>Responsible of the project INSTM-Regione Lombardia “Development of high performances ignition coils for applications in Motorsport”, (2016-2018)</p> <p>Responsible of the project INSTM-Regione Lombardia “Tailoring MAGnetic NANOparticles physical properties for advanced clinical application”, (2013-2015)</p> <p>Responsible for UNIMI Unit, of the project FIRB “Rete Integrata per la Nano Medicina” – RINAME (2012 – 2015)</p> <p>Responsible for UNIMI Unit, of the project Fondazione Cariplo 2010 (2011- 2013) “Chemical synthesis and characterization of magneto-plasmonic nano-heterostructures”</p> <p>Responsible for UNIMI Unit, of the project PRISMA-INSTM (2006-2008) “Nanoparticelle magnetiche funzionali come mezzi di contrasto per Risonanza Magnetica Imaging”</p> <p>Principal Investigator (UNIMI) of the project Fondazione Cariplo (2007-2009) “Progettazione di</p>

nuovi biosensori magnetici per l'applicazione in scienze della salute e ambientali”
Responsible for UNIMI Unit, of the project Fondazione Cariplo (2007-2009) “Processi di funzionalizzazione di polimeri per la modifica della biocompatibilità e dell’adesione di proteine”
Responsible for INSTM-Milano-Pavia Unit, of the European project LSCP-FP7 “Nanother” (2008-2012)
Responsible for INSTM-Milano Unit, of the project INSTM-Regione Lombardia “Nanovettori multifunzionali di nuova sintesi per MRI, rilascio di farmaci e targeting cellulare e molecolare” (2010-2012)
Responsible of grants for projects FIRST/PUR (2006-2008), Università degli studi di Milano
Responsible of sub-project MAGHYP, responsible of WP 2.2 (Instrumentation Platforms) and responsible of sub-project BIOMAG within the NETWORK OF EXCELLENCE “MAGMANET” (2005-2009) - Molecular Approach to Nanomagnets and Multifunctional Materials, European FP6
Responsible of the project Fondazione Banca del Monte di Lombardia (Università degli studi di Milano) “Caratterizzazione tramite Risonanza Magnetica Nucleare e indagine morfo-dimensionale di nuove nanoparticelle magnetiche per applicazioni biomediche” 2007-2009
Scientific local responsible, Università degli studi di Pavia, of the project INTAS (2005-2007) “The quantum dynamics of rare-earth compounds: from a single-ion mesoscopic behavior to many-body effects”
Participant (writing and research) to several Italian FIRB and PRIN projects, European Research Training Network & Training Site Marie Curie , Italian PRA-INFM and PAIS-INFM

Publications and books

Author of more than 230 peer-reviewed articles, 1 abstract, 4 contributions in books (chapters), 4 contributions in proceedings, 1 monograph on General Physics. Presenter of more than 35 invited over >60 orals. *h*-index (Scopus)= 43; citations = 5590

Memberships

- * CNR – Consiglio Nazionale delle Ricerche – Nano Institute-S3, Modena (Italy) (until dec 2022)
- * INFN – Istituto Nazionale di Fisica Nucleare
- * INSTM – Consorzio Interuniversitario Nazionale di Scienza e Tecnologia dei Materiali
- * AiMagn – Associazione Italiana di Magnetismo
- * AIFM – Associazione Italiana di Fisica Medica

TUTORING AND SUPERVISING

Tutor/co-tutor c/o Università degli studi di Milano, Pavia, Torino e Firenze, of :

- * 11 postdoc researchers
- * 16 (+6) PhD students
- * 4 graduate/pre-doc students
- * 5 research collaborators
- * 50 master degree students
- * 34 bachelor degree students

TEACHING

Overall responsibilities and duties

- * Member of the board of the PhD in Physics of the University of Pavia, from 2020
- * Member of Laurea Councils (Physics, Medicine), Università degli studi di Pavia, from 2019
- * Member of CONDIR, national coordination of Specialization Schools in Medical Physics, 2016-2019
- * Member of the board of the PhD in Physics, Astrophysics and Applied Physics of the University of Milan, from 2007 to 2019
- * Member of Laurea Councils (Physics, Pharmacy), Università degli studi di Milano, 2005-2019

Graduate courses

- * Diagnostic techniques (6 CFU), laurea master degree in Physics, Università degli studi di Pavia, AY 2004/05-current
- * Mechanics (6 CFU), laurea bachelor degree in Physics, Università degli studi di Pavia, AY 2020/21-current
- * Physics of Innovative Oncological Therapies (2 CFU), laurea master degree in Physics, Università degli studi di Pavia, AY 2020/21-current
- * ADE “Therapeutic and diagnostic techniques : ECG, Tomographic Imaging and Hadron Therapy” MD course in Medicine, Università degli studi di Pavia, from AY 2021/2022
- * Radiomics (2 CFU), MD course in Medicine, Università degli studi di Pavia, from AY 2022/2023
- * Applied Physics (3 CFU), laurea BD in Radiological Techniques, Università degli studi di Pavia, AY 2019-2021

- * Electric and Electronic Measurements (2+2 CFU), laurea BD in Radiological Techniques and Neurophysiopathological Techniques , Università degli studi di Pavia, AY 2019-2020
- * Physics (6 CFU), laurea degree in Pharmacy, Università degli studi di Milano, AY 2005/2006-2019
- * Medical Physics (2 CFU), laurea master degree in Physics, Università degli studi di Milano, AY 2016-2018
- * Methodologies of Applied Physics (3 CFU), laurea master degree in Physics, Università degli studi di Milano, AY 2016-2018
- * Introduction to health and medical Physics (3 CFU), laurea degree in Physics, Università degli studi di Milano, AY 2018/2019
- * Imaging techniques for Biomedical Applications (3 CFU), laurea master degree in Physics, Università degli studi di Milano, AY 2018/2019
- * Thermodynamics (6 CFU), laurea degree in Physics, , Università degli studi di Milano, AY 2012/2013-current
- * Physics (6 CFU), laurea degree in Chemistry and Pharmaceuticals Techniques, Università degli studi di Milano, AY 2005/2006 – 2012/13

PhD courses

- * Experimental methods for the investigation of systems at the nanoscale, PhD School of Physics, Astrophysics and Applied Physics of the University of Milan AY 2015/16-2020
- * Magnetic Resonance Imaging and other Imaging Techniques, PhD School in Physics, Università degli studi di pavia, since 2004, once every 3 years till 2019
- * IMAGING and MAPPING in APPLIED PHYSICS, PhD School in Physics, Università degli studi di Pavia, 2022

Specialization School courses

Techniques and principles of Magnetic Resonance, Specialization School in Medical Physics, AY 2014/15-current

National and International Schools

Several courses at National and International Schools (1998-current)

ADDITIONAL INFORMATION

Laboratory coordination

Responsible of the NMR laboratory of the Università degli studi di Pavia, Pavia (Italy), since 2021

Responsible of the AFM/NMR laboratory of the Università degli studi di Milano, Milano (Italy), 2007-2019

Head of Research Centers

Director of the Interuniversity Center ICAM "International Center of Advanced Computing for Medicine", administrative offices at Department pf Physics, Università degli studi di Pavia

Referee activity

* Referee for international journals : Physical Review Letters, Physical Review B, Physical Review A, J. Physics: Condensed Matter, New Journal of Physics, J. Chemical Physics, ACS Nano, Chemical Reviews, Nanoletters, Contrast Media and Molecular Imaging, Materials Chemistry and Physics, Journal of Nanoparticle Research, Recent Patents on Nanotechnology, J. Materials Science, Solid State Communications, International Journal of Modern Physics, Journal of Magnetism and Magnetic Materials, MAGMA, IEEE-Transactions on Magnetics, Journal of Chemical Physics, Journal of Nuclear Materials, Review of scientific instruments, Powder Technology, Materials Science and Engineering C, Measurement science and technology, Metals, Biotechnology Research International, Journal of Nuclear Materials, International Journal of Molecular Sciences, Dalton Transactions, Inorganic Chemistry, etc.),
 * Referee for European projects (ERC, COST), Italian and International Universities projects, PRIN-MIUR projects

Abroad experiences

- NMR-NQR-MUSR researches at Dept. of Physics, Iowa State University , RAL (Rutherford Appleton Laboratory) - Chilton (Oxford - UK), LCMI- CNRS, Grenoble (France), PSI (Paul Scherrer Institute) - Villigen (Switzerland). 1993- current year.
- XMCD spectroscopy at LURE (Paris) and ESRF (Grenoble).
- Responsible of more than 15 Experiments muSR, NMR, XMCD at large scale facilities [RAL-ISIS (UK), PSI (Switzerland), LCMI (Grenoble), ESRF (Grenoble)], 1993-current year

Organization/Coordination of Schools/Congresses	CHAIRMAN and CO-ORGANIZATION of several Italian and international congresses and workshops
Patents	<p>1) Patent, leader Colorobbia-CERICOL, Sovigliana (FI). European patent: WO2009/156445, PCT/EP2009/057908, title : "USE OF COBALT FERRITES AS CONTRAST AGENTS FOR MAGNETIC RESONANCE", Baldi G./Bitossi M./Bonacchi D./Lascialfari A.. Italian patent : FI2008A000117: " Uso di cobalto ferriti come agenti di contrasto per risonanza magnetica". Participants: Baldi G./Bitossi M./Bonacchi D./Lascialfari A.</p> <p>2) Patent query (no. 20120100419) joint among Università degli studi di Milano and FORTH (Foundation for Research and Technology Hellas – Greece), c/o patent office of Greece, on 7/8/2012, no. 2012 0100419. Title : "Ferrimagnetic colloidal nanoclusters of maghemite nanocrystals for MRI applications". Participants : A. Lappas, A. Kostopoulou ((Foundation for Research and Technology Hellas – Greece), A. Lascialfari, F. Orsini, S.K.P. Velu, K. Thangavel (Università degli studi di Milano).</p>
Main current national and international collaborations	<ul style="list-style-type: none"> * Dipartimento di Fisica, Università degli studi di Milano, Prof. I. Veronese, D. Bettega, C.Lenardi, F. Groppi • ICCOM-CNR, Firenze, Dr. C. Sangregorio • Dipartimento di Fisica, Università di Firenze, Dr. M. Fittipaldi, prof. A. Rettori * Dipartimento di Chimica, Università di Genova, e ISM-CNR, Prof. D. Peddis • Dipartimento di Chimica, Università di Firenze, prof.s D.Gatteschi, A. Caneschi, R. Sessoli, L. Sorace • Dipartimento di Chimica, Università di Cagliari, Dr. M.F. Casula • Dipartimento di Chimica, Università degli studi di Milano, Prof. E. Licandro, E. Ranucci, Dr.s D. Maggioni, M. Panigati * Dipartimento di Scienze Politiche e Sociali, UNIPV, Prof.ssa Silvia Figini * Dipartimento di Scienze Clinico-Chirurgiche, Diagnostiche e Pediatriche, UNIPV, Prof. Lorenzo Preda * Dipartimento di Scienze del Sistema Nervoso e del Comportamento, UNIPV, Prof.ssa A. Pichiecchio e Prof. S. Bastianello * Dipartimento di Medicina Interna e Terapia Medica, UNIPV, Prof. A. Filippi • Istituto Neurologico "Mondino", Pavia, and Universty of Pavia, Prof.s E. D'Angelo, C. Gandini and Dr F. Palesi * Dipartimento di Biologia, Università di Roma 3, Prof. A. Antoccia • Dipartimento di Scienze Morfologiche-Biomediche, Università degli studi di Verona, Prof.s P. Marzola, A. Sbarbati * Dipartimento di Fisica, Università degli studi di Pavia, Prof. P. Carretta, A. Rigamonti, F. Borsa • Dipartimento di Fisica, Università di Modena, gruppo prof. M. Affronte • Dipartimento di Fisica, Università di Parma, Dr. L. Romano', Prof.s R. De Renzi, G. Amoretti, P. Santini, S. Carretta • Dipartimento di Fisica, Università di Torino, Prof. C. Guiot • INFM-CNR, National Nanotechnology Laboratory, Dr. T. Pellegrino • Université de Mons, Prof. Y. Gossuin, Dr. Q. L. Vuong • FORTH (Foundation for Research and Technology – Heraklion, Greece), Prof. A. Lappas • Dept. Chemistry, Manchester University (UK), Prof. R. Winpenny, Dr. G. Timco • Dept. Chemistry, University of Valencia (Spagna), Prof. E. Coronado • Dept. Physics, University of Oxford, Prof. S. Blundell • Dept. of Physics, Iowa State University, Iowa-USA, Prof. Y. Furukawa • Dept. of Physics, University of Zaragoza (Spagna), Prof. F. Palacio and Dr. A. Millan • Department of Physics, Boston College (USA), Prof. M. J. Graf • CNRS and University of Montpellier (Francia), Dr. J. Larionova, Dr. Y. Guari • Policlinico S. Matteo, Pavia, Dr. R. Di Liberto • Ospedale Niguarda, Milano, Dr. A. Torresin • Istituto Neurologico Besta, Milano, Dr.ssa Bruzzone, Ing. Aquino, Dr. E. De Martin • Policlinico di Milano, Prof. Y. Torrente • Istituto Europeo di Oncologia (IEO), Milano, Dr.ssa D. Origgi, F. Botta, M. Cremonesi • Fondazione CNAO, Pavia, Dr. A. Facchetti e M. Ciocca • Stelar srl, Mede (PV) – Italia, Ing. G. Ferrante
Award and honours	Fellowship "Short-Term Mobility" of CNR for research activity c/o Department of Physics of Ames (Iowa State University –USA), December 1999
Editorial activity	<p>Member of the Editorial Board of the journal « Nanomaterials »</p> <p>Member of the Editorial Board of the journal UJLOPS</p>

Member of the AAPP Editorial Advisory Board

**TRATTAMENTO DEI DATI
PERSONALI, INFORMATIVA E
CONSENSO**

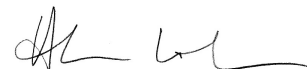
Il D.Lgs. 30/6/2003, n. 196 "Codice in materia di protezione dei dati personali" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento .

La norma in considerazione intende come "trattamento" qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.

In relazione a quanto riportato, autorizzo l'Università degli studi di Pavia al trattamento dei dati contenuti nel presente *curriculum vitae* e nella documentazione della quale fa parte integrante

(*barrare la casella*)

Si, acconsento



Pavia, 24/02/2024