

INFORMAZIONI PERSONALI

Campani Marco



Data di nascita 05/10/1961 | Nazionalità Italiana

ESPERIENZA
PROFESSIONALE

01/02/2010–alla data attuale

Responsabile dell'Ufficio per il Supporto Tecnico Amministrativo agli Istituti SPIN, IOM e NANO di Genova

Consiglio Nazionale delle Ricerche
Piazzale Aldo Moro, 7, 00185 Roma (Italia)
<http://www.cnr.it>

Coordinamento attività ufficio (Servizi Generali, Gare e Appalti, Gestione Progetti di Ricerca, Reclutamento Personale, Consulenza Fiscale)

Attività o settore Ente pubblico di ricerca

06/2010–05/2012

Membro del CdA della Società Columbus Superconductors SpA

Consiglio Nazionale delle Ricerche, Roma (Italia)

2003–2014

Consulente servizi e infrastrutture ICT (supporto alla realizzazione della manifestazione)

Associazione Festival della Scienza, Genova (Italia)

Supporto tecnico-logistico per la progettazione e realizzazione di collegamenti dati/fonia per i diversi allestimenti della manifestazione. Supporto tecnico-logistico per i sistemi di web ticketing, e-commerce e pos.

01/02/2010–31/12/2011

Responsabile per gli adempimenti di chiusura dell'ex Centro di Responsabilità Scientifica di primo livello INFM - CNR

Consiglio Nazionale delle Ricerche, Roma (Italia)

Gestione del trasferimento delle disponibilità finanziarie verso altre strutture CNR; organizzazione della suddivisione del patrimonio;

01/12/2009–31/01/2010

Direttore f.f. Istituto Nazionale della Fisica della Materia - CNR

Consiglio Nazionale delle Ricerche, Roma (Italia)

Coordinamento gestione amministrativa

01/02/2009–30/11/2009

Responsabile delegato Istituto Nazionale per la Fisica della Materia - CNR - Sede di Genova

Consiglio Nazionale delle Ricerche, Roma (Italia)

Coordinamento funzionale delle attività della sede (gestione amministrativa, del personale e delle attività di supporto alla rete scientifica)

04/2008–07/2010

Membro commissione Spin-Off progetto UNI.T.I.

Consorzio UNI.T.I.

Via Balbi, 5 c/o Università degli Studi di Genova, 16100 Genova (Italia)
<http://www.progettouniti.it/>

Attività di valutazione di progetti per il trasferimento tecnologico e la creazione di spin off accademici; valutazione di business plan finalizzati alla creazione di impresa

Attività o settore Promozione del trasferimento tecnologico

09/2004–12/2005

Consulente ICT

Fondazione Istituto Italiano di Tecnologia
Via Morego, 30, 16163 Genova (Italia)
<http://www.iit.it>

Analisi e progettazione dei servizi ICT collegati alla fase di start-up della Fondazione IIT

Attività o settore Ente pubblico di ricerca

01/10/2010–31/01/2009

Coordinatore responsabile nazionale ICT dell'Istituto Nazionale per la Fisica della Materia

Istituto Nazionale per la Fisica della Materia (in seguito Consiglio Nazionale delle Ricerche)
Corso F. M. Perrone, 24, 16152 Genova (Italia)

Responsabile progettazione e sviluppo servizi ICT su rete geografica distribuita; coordinamento gestione banche dati; coordinamento attività di formazione e aggiornamento su tematiche ICT. Da gennaio 2006 incaricato anche del coordinamento dell'Area Servizi Generali INFN (supporto giuridico, coordinamento amministrativo).

Attività o settore Ricerca scientifica

2006–alla data attuale

Gare e Appalti - Impianti e strumentazione scientifica

In qualità di esperto, nell'ambito dell'UO Supporto Giuridico Appalti e Gare dell'Ufficio per il Supporto Tecnico Amministrativo agli Istituti SPIN, IOM e NANO del CNR, svolge le seguenti attività:

- Supporto alla definizione e stesura di Capitolati
- Supporto alla definizione di contratti
- Partecipazione a Commissioni di Gara (oltre 50 alla data odierna)

01/12/1996–30/09/2000

Responsabile dipartimentale servizi ICT - Dipartimento di Fisica

Università degli Studi di Genova, Genova (Italia)

Gestione ed amministrazione dei servizi ICT su rete locale e rete distribuita; progettazione e sviluppo reti dei servizi ICT; coordinamento del personale tecnico di supporto

01/10/1992–30/11/1996

Ricercatore

Istituto Nazionale per la Fisica della Materia
Corso F. M. Perrone, 24, 16152 Genova (Italia)

Attività di ricerca focalizzata sia nelle tecniche di imaging e di misura ottiche presso il gruppo di biofisica INFN - Università di Genova sia nel settore della machine vision presso il locale Gruppo di robotica ed intelligenza artificiale

Attività o settore Ente pubblico di ricerca

10/1992–06/1996

Docente universitario a contratto

Università degli Studi di Genova, Genova (Italia)

Attività di docenza sia in moduli del corso di Riconoscimento Automatico delle Forme - Corso di Laurea in Informatica - Facoltà di Scienza M.F.N. sia in corsi seminari sulla programmazione e sui sistemi di elaborazione dati

1986–1992 Consulente ICT

Assitecno s.n.c, Genova (Italia)

Attività di consulenza e sviluppo nel settore ICT prestate ad operatori pubblici e privati (progettazione e sviluppo di sistemi per la gestione amministrativa; progettazione e sviluppi di sistemi per l'analisi di mercato; progettazione e sviluppo di sistemi di controllo per la produzione).

ISTRUZIONE E FORMAZIONE
09/2010 None - 3rd Summer School on Network and Information Security

Foundation for Research and Technology - Institute of Computer Science, Heraklion (Grecia)

10/1980–12/1990 Laurea in Fisica

Università degli Studi di Genova, Genova (Italia)

COMPETENZE PERSONALI

Lingua madre italiano

Altre lingue

	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
inglese	B2	C2	B2	B2	B2

Livelli: A1 e A2: Utente base - B1 e B2: Utente autonomo - C1 e C2: Utente avanzato
Quadro Comune Europeo di Riferimento delle Lingue

Competenze comunicative Ottime capacità relazionali e comunicative; buona capacità di adattamento in ambienti multiculturali favorita dal costante contatto con una comunità ampia di collaboratori.

Competenze organizzative e gestionali Buone capacità di coordinamento di persone (attualmente responsabile di un gruppo di 21 persone) e gestione progetti, maturate in tutte le esperienze lavorative su tematiche anche profondamente differenti. Buone capacità organizzative maturate nel contesto lavorativo. Buone esperienze di gestione del bilancio acquisite nel contesto lavorativo (logistica, facility management).

Competenze professionali Competenza in contabilità pubblica e nel settore gare e appalti acquisite nel contesto lavorativo. Esperienza nel controllo di gestione amministrativa e contabile, nel monitoraggio della spesa e nella programmazione.

Competenza digitale Networking - dalla progettazione alla direzione della realizzazione ed al collaudo di cablaggi strutturati. Installazione e configurazione di apparati attivi (Router, Switch, Access Point) e relativi servizi (aggregazione di banda, failover, redundant path, ...); segmentazione del traffico ed instradamento. Installazione e configurazione di appliance (VoIP, Firewall, Proxy, VPN).

SysAdm - dall'analisi delle necessità alla progettazione ed implementazione del parco server. Dimensionamento delle risorse Hardware e Software. Configurazione ed installazione di Server (Directory Server, Email, Web, FTP, PBX VoIP, NAS, SAN) sia utilizzando tecnologie proprietarie (Microsoft, Apple) sia tecnologie Open Source.

Database, Middleware, System Integration -dall'analisi delle esigenze alla proposta delle piattaforme applicative. Installazione ed amministrazione di DBMS e sistemi Web based (ERP, Propone le piattaforme applicative più adatte alle esigenze del cliente. Installa ed amministra DBMS e sistemi evoluti Web Based (ERP, ECM, CMS, CRM).

ULTERIORI INFORMAZIONI

Pubblicazioni

1) Learning To Recognize Visual Dynamic Events From Examples

Pittore M, Campani M, Verri A

INTERNATIONAL JOURNAL OF COMPUTER VISION

2000, VL 38 IS 1 PP 35-44

DOI: 10.1023/A:1008114700759

2) The Use Of Optical Flow For Road Navigation

Giachetti A, Campani M, Torre V

IEEE TRANSACTIONS ON ROBOTICS AND AUTOMATION

1998, VL 14 IS 1 PP 34-48

DOI: 10.1109/70.660838

3) Ccd Imaging Of The Electrical Activity In The Leech Nervous System

Canepari M, Campani M, Spadavecchia L, Torre V

EUROPEAN BIOPHYSICS JOURNAL WITH BIOPHYSICS LETTERS

1996, VL 24 IS 6 PP 359-370

DOI: 10.1007/BF00576708

4) Electrical Activity In The Leech Nervous System Can Be Studied Using A Ccd Imaging Technique

Canepari M, Campani M

NEUROBIOLOGY: IONIC CHANNELS, NEURONS, AND THE BRAIN

NATO SCIENCE SERIES A 1996, VL 289 PP 265-275

5) Robust Method For Road Sign Detection And Recognition

Piccioli G, De Micheli E, Parodi P, Campani M

IMAGE AND VISION COMPUTING

1996, VL 14 IS 3 PP 209-223

DOI: 10.1016/0262-8856(95)01057-2

6) Optic Flow And Autonomous Navigation

Campani M, Giachetti A, Torre V

PERCEPTION 1995, VL 24 IS 3 PP 253-267

DOI: 10.1068/p240253

7) Color Cues For Traffic Scene Analysis

De Micheli E, Prevete R, Piccioli G, Campani, M

IEEE Intelligent Vehicles Symposium 1995, Proceedings PP 466-471

8) Artificial Systems And Complex Behaviours

Martinengo A, Campani M, Torre V

IROS 1994 – Intelligent Robots and Systems PP 194-201

9) Complex Tasks And Control Strategies Of Robots

Martinengo A, Campani M, Torre V

1994 IEEE INTL Conference on Robotics and Automation PP 861-866

DOI: 10.1109/ROBOT.1994.351381

10) Robust Road Sign Detection And Recognition From Image Sequences

Piccioli G, De Micheli E, Parodi P, Campani M

IEEE Intelligent Vehicles Symposium 1994, Proceedings PP 278-283

11) Recovery Of Optical Flow For Intelligent Cruise Control

Giachetti A., Campani M., Sanni R., Succi A.,

IEEE Intelligent Vehicles Symposium 1994, Proceedings PP 91-96

12) Detection Of Lane Boundaries, Intersections And Obstacles

Cappello M., Campani M., Succi A.

IEEE Intelligent Vehicles Symposium 1994, Proceedings PP 284-289

13) The Use Of Optical Flow For Autonomous Navigation

Giachetti, A; Campani, M; Torre, V

Proceedings of ECCV 1994 Springer Lecture Notes in Computer Science

PP 146-151 DOI: 10.1007/3-540-57956-7_16

14) **A Robust Method For Road Sign Detection And Recognition**

Piccioli, G.; De Micheli, E.; Campani, M.

Proceedings of ECCV 1994 Springer Lecture Notes in Computer Science

PP 493-500 DOI: 10.1007/3-540-57956-7_55

15) **Extraction Of Vanishing Points From Images Of Indoor And Outdoor Scenes**

Straforini, M; Coelho, C; Campani, M

IMAGE AND VISION COMPUTING

1993 VL 11 IS 2 PP 91-99

DOI: 10.1016/0262-8856(93)90075-R

16) **Complex Tasks And Robots**

Martinengo, A; Campani, M; Torre, V.

International Conference on Artificial Neural Networks PP 319

DOI: 10.1007/978-1-4471-2063-6_75

17) **Visual Routines For Outdoor Navigation**

Campani, M.; Cappello, M.; Piccioli, G.; Reggi, E.; Straforini, M.; Torre, V.

IEEE Intelligent Vehicles Symposium 1993, Proceedings PP 107-112

DOI: 10.1109/IVS.1993.697306

18) **Complex Tasks And Robots**

Martinengo A, Campani M, Torre, V

IEEE Intelligent Vehicles Symposium 1993, Proceedings

PP 267-270 DOI: 10.1109/IVS.1993.697334

19) **Identifying Multiple Motions From Optical-Flow**

Rognone, A; Campani, M; Verri, A

Proceedings of ECCV 1992 Springer Lecture Notes in Computer Science 1992 VL 588 PP 256-266

20) **Motion Analysis From 1St-Order Properties Of Optical-Flow**

Campani, M; Verri, A

CVGIP-IMAGE UNDERSTANDING 1992 VL 56 IS 1

PP 90-107 DOI: 10.1016/1049-9660(92)90088-K

21) **Organic Cation Selectivity Of The Cgmp-Activated Channel In Retinal Rods**

Menini, A; Picco, C; Campani, M

FASEB JOURNAL 1992 VL 6 IS 1 PP A427

22) **The Recovery And Understanding Of A Line Drawing From Indoor Scenes**

Straforini, M; Coelho, C; Campani, M; Torre, V

IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE

1992 VL 3 PP 121-137

DOI: 10.1109/34.121797

23) **The Use Of Optical-Flow For The Autonomous Navigation**

Malisia, A; Baghino, A; Campani, M; Straforini, M; Torre, V

INTERNATIONAL JOURNAL OF NEURAL SYSTEMS

1992 VL 3 PP 121-137

DOI: 10.1142/S0129065792000450

24) **A Quantitative Model Of Phototransduction And Light Adaptation In Amphibian Rod Photoreceptors**

Torre V., Straforini M., Campani M.,

Seminars in Neuroscience 1992 VL 4 IS 1 PP 5-13

25) **A 1St Order Differential Technique For Optical-Flow**

Campani, M; Straforini, M; Verri, A

MOBILE ROBOTS V - Proceedings of SPIE - The International Society for Optical Engineering

1991 VL 1388 PP 409-414

DOI: 10.1117/12.48095

26) **A Fast And Precise Method To Extract Vanishing Points**

Coelho, C; Straforini, M; Campani, M

MOBILE ROBOTS V - Proceedings of SPIE - The International Society for Optical Engineering

1991 VL 1388 PP 398-408

DOI: 10.1117/12.48094

27) A Fast And Precise Method To Extract Vanishing Points

Straforini, M; Coelho, C; Campani, M

CLOSE-RANGE PHOTOGRAMMETRY MEETS MACHINE VISION, PTS 1 AND 2 1990 VL 1395
PP 266-274

28) Computing Optical-Flow From An Overconstrained System Of Linear Algebraic Equations

Campani, M; Verri, A

THIRD INTERNATIONAL CONFERENCE ON COMPUTER VISION - ICCV 90 PP 22-26

29) Model Of Phototransduction In Retinal Rods

Torre, V; Forti, S; Menini, A; Campani, M

COLD SPRING HARBOR SYMPOSIA ON QUANTITATIVE BIOLOGY

1990 VL 55 PP 563-573

DOI: 10.1101/SQB.1990.055.01.054

30) Using Geometrical Rules And A Priori Knowledge For The Understanding Of Indoor Scenes

Coelho, C; Straforini, Marco; Campani, M

Proceedings of the British Machine Vision Conference - BMVC 1990

PP 41.1-41.6

DOI: <http://dx.doi.org/10.5244/C.4.41>



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Curriculum Vitae et Studiorum Giancarlo Panaccione

Giancarlo Panaccione

Birthplace and date: Rome - 1962, December the 8th.

Nationality: Italian

Address: Lab. TASC –IOM-CNR, S.S . 14, Km. 163.5 , in Area Science Park, 34149 Basovizza, Italy.

Tel. +39/040/3758409 or 8075

E-mail: panaccione@iom.cnr.it, giancarlo.panaccione@elettra.eu;

Career History

28/11/1991: University of Rome "LA SAPIENZA", Faculty of Science:

Degree in Physics with 110 marks out of 110.

Thesis: "Spettroscopia di sistemi a bassa funzione lavoro"

(Low work function systems spectroscopy); Advisor: Prof. S.Nannarone.

From January 1992 to March 1993, University of Rome "LA SAPIENZA", Faculty of Science

- INFN fellowship: "Project of an electron analyser for metastable atoms deexcitation experiments".

- INFN fellowship: "Characterization and tests with electron analysers to coincidence experiments on solids and surfaces." Scientific Responsible: Prof. G. Stefani

From May 1993 to September 1993, LURE Lab., Orsay, France.

Fellowship of the CIES (Centre International pour les Etudiantes et Stagiares): "Stage at the Superaco Synchrotron Radiation Facility at Orsay", France. Supervisor Dr. G. Rossi

From September 1993 to September 1995, LURE Lab., Orsay, France.

CEE fellowship of the Human Capital and Mobility Program (doctoral level),

'Surface Magnetometry with Synchrotron Radiation', Supervisor Dr. G. Rossi

16/10/1995: Doctoral thesis in Material Science at the University P.M.Curie Paris VI,

with marks: "Mention très honorable et felicitations du Jury".

Title: "Magnétométrie de Surface en Rayonnement Synchrotron"

(Surface Magnetometry with Synchrotron Radiation).

Advisor: Dr. G. Rossi (LURE, Orsay and ETH, Zürich).

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Sede di Istituto Trieste: Area Science Park–Basovizza, Ed. MM Strada Statale14 Km 163.5 – 34149 Trieste, Italy, ☎ (+39)040 3756411, fax (+39) 040 226767

UOS Trieste: Via Bonomea 265, 34136 Trieste, Italy, ☎ (+39)0403787443, fax (+39)0403787528

UOS Cagliari: Dipartimento di Fisica, Cittadella Universitaria – 09042 Monserrato, Cagliari, Italy ☎ +39-0706754893, fax (+39)0706754892

Sede di lavoro OGG Grenoble: c/o ESRF, 6 rue J. Horowitz, BP220 F-38043 Grenoble Cedex 9 ☎ +33 (0)476 882857, fax +33 (0)476 882855

Sede di lavoro Perugia: Dipartimento di Fisica – Università di Perugia, Via A. Pascoli, 06123 Perugia, Italy ☎ (+39)0755853060, fax (+39)0755852737

Unità trasversale di supporto: Corso Perrone 24, 16152 Genova, ☎ (+39)0106598750, fax –(+39)0106506302

Partita IVA IT 02118311006 – C.F. 80054330586



From October 1995 to October 1998. Scientific collaborator of the Physics Dep. at the Univ. of Neuchâtel (Switzerland), Grant of the National Swiss Found, as beamline scientist on the French-Swiss SU3 beamline at LURE, and local responsible of the Swiss experiments and organisation.

(French Responsible : Dr. A. Taleb-Ibrahimi, Swiss scientific coordinator: Prof Y. Baer).

From October 1998: Permanent Position as researcher at INFM (National Institute for the Physics of Matter); beamline scientist of the APE beamline INFM (Headproject : G. Rossi)

From October 2001, Senior Researcher (Primo ricercatore) at INFM (now CNR), Laboratorio TASC, IOM, Trieste.

Research Interests

Total > 190 published papers in leading international peer-reviewed journals, 2 invited review papers, 1 contributed book chapter as of August 2018.

Work cited >3175 times (without self-citations) [source: ISI Web of Science, August 2018], with a Hirsch (h-) index of 31. In the past ten years, this includes 4 published papers in Nature family journals, 10 Phys. Rev. Lett., 3 Advanced Materials and 4 NanoLetters. Co-author of the international patent (US61/133344-2008) 'Dilute magnetic semiconductor material with ferromagnetic order and device therewith as well as method of production thereof'

My present research interests are focused on the electronic and magnetic properties of quantum materials and nanomaterials, where emerging properties arise from strong interactions between constituent particles. In particular, the activity is focused on achieving control of these properties via external tuning parameters, growth and fabrication of nanoscale heterostructures, possibly leading to new applications in quantum electronics and spintronics. My research activity is mostly devoted to the exploitation of Synchrotron Radiation spectroscopies, following three main axes: (1) electronic and magnetic properties of low dimensional systems (surfaces and interfaces), (2) electron confinement and topological properties, and (3) complex oxides and highly correlated systems.

Primary techniques applied:

- Photoemission Spectroscopy (ARPES, spin resolved-ARPES, XPS, Hard x-ray Photoemission)
- Mott scattering experiment for the analysis of the spin polarization of electrons,
- Time-resolved Spectroscopies with laser and Synchrotron Radiation
- X-ray Absorption Spectroscopy, XMCD (X-rays Magnetic Circular Dichroism)



Role and responsibilities

Scientific Coordinator of the Volume Photoemission Project

Following the Eu Grant VOLPE (HPRI-CT-2001-50032) (From 2001 to 2005), design, commissioning and users' operation of a new electron analyser, capable to measure high kinetic energy electrons up to 10 keV, including the development of a new 2D detector (collaboration with G. Cauero, Elettra). The VOLPE analyser, open to users at beamline ID16 of ESRF from 2005 to 2011, provided the best energy resolution and photon flux at European level in Hard X-ray Photoemission (HAXPES) experiments and has been on a par with instrumentation offered at the Spring-8 facility, playing a pivotal role in the development of the HAXPES technique worldwide. In the period 2005-2011, the HAXPES activity of the CNR-staff resulted in: a) more than 25 publications in peer reviewed journals, b) more than 25 invited talk at national and international conference, more than 35 proposal submitted, and d) 2005-2006-2007 ESRF highlights.

Principal investigator of Long Term Project HE-1953 presso ESRF (2005-2009), Title: Study of strongly correlated systems by High Energy Photoemission, in collaboration with ELETTRA (Trieste-Italy), EPFL (Lausanne, CH), Univ. Rome III, S3-INFM (Italy), LCP-Paris (France), Univ. Koln (Germany), Dep. Physics Bangalore (India), Univ. Davis (CA, USA)

Scientific Coordinator of a bilateral Brazil-Italy project, funded by MIUR (Italy); Joint research project between the Italian TASC Laboratory of Istituto Nazionale per la Fisica della Materia - INFM, and the Brazilian Applied Physics Laboratory (LFA) of CDTN/CNEN (Comissão Nacional de Energia Nuclear), coordinated by Prof. Waldemar Augusto de Almeida Macedo. The experiments were performed at the Advanced Photoemission Experiment (APE) beamline in Elettra Synchrotron Light Laboratory (Trieste/Italy), from September to December 2002.

Subject of the project: Analysis of ultra thin ferromagnetic film with polarised synchrotron radiation

Scientific Coordinator of a bilateral Russia-Italy project, funded by MIUR (Italy). Collaboration with the Technical University of S. Petersburg (Dr. M. Galaktionov). From December 2003 to December 2005.

Subject of the project: Analysis of fast magnetization reversal processes in magnetic nanostructures by means of Synchrotron Radiation

Beamline Manager at the Advanced Photoelectric Effect Beamline (APE beamline). (Lab. TASC - CNR) at Elettra Synchrotron Source. Coordination of research group (3 permanent researchers, technical unit, post docs), organization of in-house research, users' beamtime, maintenance and developments. November 2001-May 2007.

Scientific Coordinator of the Commessa CNR MD.P04.006 (Progetto: MD.P04 / Materiali magnetici funzionali) "Studio della correlazione fra proprietà strutturali e morfologiche di film ultrasottili (pseudomorfismo, epitassia) e loro proprietà elettroniche e magnetiche", and **of Modulo MD.P04.006.001** "Transizioni di fase e proprietà magnetiche in ossidi fortemente correlati, interfacce metallo-semiconduttore, metalli anomali e superconduttori", at Lab. TASC-IOM. Coordination of research group (5 permanent researchers, technical unit, post docs) January 2005-December 2015.



Scientific Coordinator of the Ultraspin project (2012-2015), focused on magnetization reversal dynamics in ultra-fast regime on thin films and magnetic nanostructures near phase transitions, with the objective to build an experimental station dedicated to ultrafast spin polarization dynamics from nanostructured-solids and surfaces with capability of measuring the spin polarization (SP) of the photoelectron yield as excited by individual Free Electron Laser radiation pulses and/or table top laser. The experimental station is operational since 2015.

Scientific Coordinator of the (SPRINT) project “Spin Polarized Research Instrument in the Nanoscale and Time domain” at CNR-IOM (GAE P0000395), within the NFFA-Trieste activities. The SPRINT laboratory is designed to perform pump-probe photoelectron spectroscopy (ARPES and Spin Polarimetry) based on a table top apparatus, with a regenerative amplified Yb:KGW femtosecond laser source delivering up to 20 W average power and up to 2 mJ per pulse at a 1028 nm wavelength. From 2016 to present.

Member of the Executive Board in the Nanoscience Foundries and Fine Analysis (NFFA.europe) H2020-RIA project (Grant agreement No 654360), coordinated by CNR-IOM. NFFA-EUROPE integrates 20 Partners, half of which are nano-foundries that are co-located with Analytical Large Scale facilities. NFFA-Europe received funding from 1/9/2015 to 31/8/2019 to set out a platform to carry out comprehensive projects for multidisciplinary research at the nanoscale extending from synthesis to nanocharacterization to theory and numerical simulation.

Manager of the Joint Research Activities in NFFA-Europe. Joint Research Activities (JRAs) develop methods and tools at the frontier in nanoscience research and feeds back into an improved offer of the research infrastructure to carry out academic as well as industrial projects.

Deputy Manager of JRA1: In-operando and high throughput methods.

Operating Manager of the NFFA-Trieste project idea at CNR-IOM and Elettra Sincrotrone Trieste. NFFA - Nano Foundry and Fine Analysis Trieste is a shared CNR-Sincrotrone Trieste initiative funded by FOE (Coordinator Prof. Giorgio Rossi), for integrating nanolaboratories and fine analysis of matter in an open-access scheme, including large scale facilities as Synchrotron Radiation and Free Electron Lasers. NFFA develops chemical synthesis, nano-fabrication and nano-metrology.

Funding ID and grants awarded

- **Nov 2001- Feb 2005.** RTD project (5th European Framework : Improving Human Potential IHP, FP5 HRPI-CT-2001-50032. Title: Volume Photoemission from Solids (VOLPE)
900 keuro Scientific Coordinator
- **Sep-Dec 2002.** Bilateral Brazil-Italy project, funded by MIUR (Italy); Convenzione tra la Direzione Generale per la Promozione e la Cooperazione Culturale del Ministero per gli Affari Esteri e l'Istituto Nazionale per la Fisica della Materia (INFN)
Title: Analysis of ultra thin ferromagnetic film with polarised synchrotron radiation.
24.35 keuro Scientific Coordinator
- **Dec 2010 – April 2015.** FP7-NMP-2009-LARGE-3, Contract n. CP-IP 246102-2 IFOX,



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Title: Interfacing Oxides

248 keuro, Scientific Coordinator of the CNR-IOM activity

- **April 2012-April 2015** Progetto PRIN-Oxides ; Responsible L. Marrucci, Univ Federico II, Napoli;
58 keuro, CNR-IOM unit coordinator
- **Oct 2012- Feb 2015** PIK Project in Kind, Sincrotrone Trieste,
Title: UltraSpin: Magnetization reversal dynamics in ultra-fast regime on thin films and magnetic nanostructures
230 keuro Scientific Coordinator
- **Jul 2016- present**, NFFA-MIUR project
Title: Spin Polarization Research Instrumentation in the Nanoscale and Time domain - SPRINT
Scientific Coordinator

Selected Professional Activities

Funding Proposal Referee:

PRIN 2015, Anvur 2015 to present SEED project INFM (2007-2009),

Agence National de la Recherche (France), since 2012, Lab. d'excellence en Nanoscience et Nanotechnologie (Paris) since 2013,

UEFISCDI (Romanie) (2013-2015), National Science Center of Poland (from 2016),

Nano-net Swiss National Funding Agency (2015-present),

Deutsche Forschungsgemeinschaft (DFG-Germany) 2013,

M.J. Murdock Charitable Trust Foundation (US) 2013,

Research Foundation Flanders, Belgium, from 2017

Journal Referee for more than 10 major international journals, including Nature communication, Phys Rev. Letters, Phys Rev. B, Review Sci. Instrum., Journal El. Spectr., New Journal of Physics, Journal of Synchrotron Radiation.

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Sede di lavoro Perugia: Dipartimento di Fisica - Università di Perugia, Via A. Pascoli, 06123 Perugia, Italy ☎ (+39)0755853060, fax (+39)0755852737

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Partita IVA IT 02118311006 - C.F. 80054330586



Committee/Panels/Consortia

- Member of Steering Committee of the Harwell-XPS national UK Facility at Harwell Campus, UK . 2017 to present
- Chair of the Beamline Review Panel of I07-I09 Beamlines, Diamond Light Source, Didcot, UK, Oct 2017
- Member of referee panel 'magnetic and electronic properties' at Advanced Light Source ALS, US, from 2014 to present.
- Member of 'Comitato Bilaterale dell'accordo Quadro Elettra-Sincrotrone Trieste e Consiglio Nazionale delle Ricerche', 2016-2018.
- Chair of Peer Review Panel at Diamond Light Source. (Panel 3, Surface and Interfaces) April 2014- November 2015
- Member of Peer Review Panel at Diamond Light Source. (Panel 3, Surface and Interfaces) April 2013 April 2014
- Member of the Beamline Review Panel of Galaxies Beamline , April 24th 2015, SOLEIL Synchrotron, France
- Member of the TR-XPES user consortium for developing Photoemission Spectroscopy at X-FEL Hamburg.
- Member of Proposal Committee SOLEIL synchrotron (PRC2, electronic and magnetic properties) 2009-2012
- Member of the Beamline Review Panel of Cassiopee Beamline , November 9th 2012, SOLEIL Synchrotron, France
- Chair, Presidente di commissione giudicatrice, CNR-SPIN, bando 010/2010 NA, PROT. SPIN-CNR N. 153 DEL 24/01/2011 per 1 unità di personale con profile professionale di Ricercatore III livello. Marzo 2011.
- Member of Coordination Board of Nanoscience Foundries and Fine Analysis NFFA_design study FP7 Collaborative Project INFRA-2007-2.1.1 . FP7-212348. (2008-2009)
- Member and expert Reviewer at European Commission / FP6-2004-Infrastructures-5 Research Infrastructures, May 2005



Member (membro di commissione giudicatrice)

(Assegno di ricerca, CNR-IOM)

- Bando CNR/INFM AR 58/2006, Bando CNR/INFM AR 59/2006 Bando AR002/2011 TS; Bando AR 001/2013 TS, INFM 27/2006, INFM 22/2006, CNR-INFM 28/2006, CNR-INFM 59/2006
- bando IOM AR 6/TS, 2016 (presidente)

(Borsa di studio per laureati CNR-INFM)

- Bando BS 28/2008 (protocollo 851 del 27/01/2009)

(Tecnologo o ricercatore III livello CNR-INFM)

- Bando n.451/2001 per un posto da Tecnologo III livello (decreto del presidente n.45/01)
- Bando INFM n. 713/2003 per Tecnologo III livello TD (decreto del presidente n.33/03)
- Bando CNR-INFM n. 20/2008 per Tecnologo III livello TD (protocollo 0020886 del 30/12/2008)
- Bando INFM n. 17/2008 per Ricercatore III livello TD (protocollo 0019437 del 5/12/2008)

(Collaboratore tecnico CNR)

- Bando n. 003/2016 TS per collaboratore tecnico-livello V

Committee at Conferences/Workshops/Schools:

- Member of Program Committee 5th International school on Synchrotron Radiation and Magnetism, Mittelwhir – France, October 19-24, 2008 and of Mittelwhir 2018.
- Member of Scientific Committee, Superfox conference, Superconductivity and Functional Oxides, (biennial conference), 2012 to present
- Member of the international advisory committee. Hard X-ray Photoelectron spectroscopy conference HAXPES (biennial conference), 2009 to present
- Chairman MATCOR summer school (Univ. of Mainz and CNR) 'Quantum Properties of Anomalous Metals' San Servolo island (Venice, Italy) from May 29 - June 3, 2011)
- Chairman of the workshop 'Properties of Magnetic Nanostructures', Satellite of the 10th ELETTRA Users' meeting, ICTP, Trieste (Italy). Oct 28-30, 2002.
- Co-chair, TPES – Workshop 'Time-resolved Photoelectron Spectroscopy', Trieste (25-27 Jan, 2017)
- Member of Organizing Committee, Workshop 'Technologically relevant Quantum Materials: growth, experiments and theory' 19-20 december 2016.
- Member of the Scientific Committee, Workshop 'COEX-Combining electrons with X-rays for integrated in-operando experiments', Trieste, 23-24 September 2017.



Teaching and supervision

- **Lecturer Doctoral Course:** a) X ciclo seconda serie (2009-2012), Univ. degli studi di Salerno, Synchrotron Radiation spectroscopies for materials science, b) Univ. Studi di Roma III, Synchrotron Radiation spectroscopies for materials science c) University of British Columbia, UBC, Vancouver (Canada) Synchrotron Radiation Techniques, June-July 2007
- **Tutor doctoral thesis,**
Tesi di Dottorato di Ricerca in Fisica VII Ciclo - Seconda Serie (2005-2008) **Title:** Investigation of the electron-doped cuprate $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$ from thin films growth and characterization to spectroscopic analysis (Anita Guarino)
Tesi di Dottorato in Fisica, Univ. Milano 2014-present (Tommaso Pincelli)
- **Member** of Commission (Habilitation a diriger les Recherches) di M.C. Richter, Univ. Cergy Pontoise (France). Title: etude de couches minces par photons et electrons polarises, December 2006
- **Member** of Committee, PhD thesis. (Science des Matériaux, Univ. Paris XI, Orsay, France). Title: Diffusion résonante des rayons X polarisés et couplage magnétique dans les multicouches Co/Cu (Carlo Spezzani) Nov 2003
- **Member** of Committee, PhD thesis. (Politecnico di Milano). Title: Spectroscopic investigation of ferromagnetic surfaces and ferromagnet/antiferromagnet interfaces (Giulia Berti) Jan 2016
- **Tutor** Practical Course of HERCULES: Higher European Research Course for Users of Large Experimental Systems. March 2005, March 2004

Visiting periods, awards

- **January- March 2001, CNRS 'Post Rouge'** as invited researcher at the Laboratoire de Chimie Physique (CNRS-Univ. Paris VI, Jussieu), Paris, France.
- **January- February 2004,** invited researcher at the European Synchrotron Radiation Facility ESRF, Grenoble, France.
- **April -Nov 2007,** visiting Professor at University of British Columbia UBC (Vancouver- Canada), Lab. AMPEL, (Prof. A. Damascelli, Prof. G. Sawatzky)
- **June 2012- July 2013,** Award as International Visiting Scholar of the Peter Wall Institute for Advanced Studies at the University of British Columbia, Quantum Matter Institute (Prof. G. Sawatzky) on project 'Spintronics with topological insulators?' - 6 weeks stay to establish scientific collaboration and perform joint experiments.



- **April 2014**, Award for invited speaker at the International Research Colloquium at the Peter Wall Institute for Advanced Studies at the University of British Columbia.
- **February 2017**, Award as European Visiting Researcher at Imperial College, London, on project 'Research on Quantum Materials', for a maximum of 4 weeks over two years to consolidate research collaboration with UK partners.

Invited talks

More than 50 invited talks/seminar/ in national and international conferences/workshop/universities

- 1) September 1996, Univ. Rome I, Italy, '*Surface Magnetometry with Synchrotron Radiation*'.
- 2) Quinto Convegno Annuale della Società Italiana Luce di Sincrotrone SILS, Pavia (Italy), July 20-22, 1997. '*Magnetic Dichroism with Linearly Polarized Light*'.
- 3) December 98, ETH Zuerich-Honggerberg, Solid State Talks, '*Surface Magnetism with Synchrotron Radiation*'
- 4) 18 May 2001, LURE, Journée photoémission de spin : '*Advanced Photoemission Experiment at ELETTRA: a tool for 2D magnetism studies with synchrotron radiation*'.
- 5) 21-22 May 2001, IPCMS Strasbourg, Workshop « Le Magnétisme à SOLEIL », '*Spin Polarized Photoemission with Synchrotron Radiation*'.
- 6) 26, 27 November 2001, Univ. Regensburg, Germany, '*Surface vs. bulk properties with Synchrotron Radiation*'.
- 7) December 2001, Politecnico di Milano, Dip. Di Fisica '*APE beamline at ELETTRA*'.
- 8) 4-8 May 2002, Tunis INSAT, '*Introduction to Synchrotron Radiation*', two invited talks in the framework of the bilateral Italo-Tunisian collaboration.
- 9) 4-5 June 2002, Lab. Chimie-Physique, Univ. P.M. Curie, Paris, France, Workshop '*Diffusion Inelastique des Rayons X et Photoemission a Haute Energie*', invited talk : 'Status of the VOLPE Project'
- 10) 11-12 September 2003, ESRF, Grenoble, France, 1st International Workshop on hard x-ray photoelectron spectroscopy, : '*Status and perspectives of the VOLPE Project*'.
- 11) 21-24 September 2003, ICTP Trieste, Dyproso XXIX, '*Status and perspectives of the VOLPE Project*'
- 12) 27-30 June 2004, Venice, ICSS-IVC Conference, '*VOLPE project: first results and perspectives*'
- 13) 22-24 September 2004, SOLEIL, France, '*VOLPE project: first results and perspectives*'
- 14) 1-2 February 2005, Paris, France, Lab. Milieux Condenses Electron Spectroscopies with Synchrotron Radiation: '*From Angular Resolved Photoemission to Hard X-ray Photoemission Sensitive Photoemission: first results of VOLPE project at ESRF*'.
- 15) 8-9 February 2005, ESRF, Grenoble, France , 15th ESRF Users' Meeting *High Energy/High Resolution Photoemission Spectroscopy from Solids*
- 16) 10-11 February 2005, Trieste, Italy, 2nd Italo-Australian Workshop, *Results and Perspectives in Hard X-ray Photoemission Spectroscopy (HAXPES) from solids*
- 17) 26-28 February 2005, Mainz, Germany, workshop on Heusler compounds. *Results and Perspectives in Hard X-ray Photoemission Spectroscopy (HAXPES) from solids*.
- 18) June 2005, Strasbourg, France. EMRS conference, symposium O, material science, 'Results and perspectives in Hard X-Ray Photoemission Spectroscopy (HAXPES) from solids.
- 19) 12-14 September 2005, Manchester, UK, workshop on 'New Frontiers in X-Ray Science', Volume sensitive photoemission from solids with Hard X-Rays: results and perspectives'.



- 20) 3-4 November 2005, Synchrotron SOLEIL, Saint Aubain, France, Atelier conférences 'Théorie et Expériences a SOLEIL', *Spectroscopie d'électrons et diffusion inélastique en matière condensée: vers une meilleure compréhension des effets de corrélation*,
- 21) March 2nd, 2006, Diamond presentation workshop, Science & Innovation Officer British Embassy, Rome, 'High energy and resonant photoemission'
- 22) 9-12 March 2006 LMU Munich, Workshop: First-principles approaches to optical and photoelectron spectra, 'Surface vs. bulk electronic properties of strongly correlated system'
- 23) 28 August-Sept 1st 2006, ICES10 International Conference of electronic spectroscopy and structure, Foz du Iguacu (Brasile) 'Hard X-Ray Photoelectron Spectroscopy'
- 24) 19-20 September 2006, SPring-8 Hyogo Giappone, 2nd International Workshop on hard x-ray photoelectron spectroscopy, 'Bulk Sensitive Photoemission of Transition Metal Oxides'
- 25-26) 25-30 September 2006, 1st International Summerschool of MAINZ - MATCOR - "New Materials with High Spin Polarisation" Johannes Gutenberg - University, Mainz, Germany 'Magnetic Dichroism in Photoemission at ELETTRA' and 'New results from the VOLPE project at ESRF'
- 27) 25 July 2007 Simon Fraser University, Vancouver Canada 'Magnetic and interfacial properties of GaMnAs'
- 28) 12,13 November 2007, Annual user group meeting at XPS facility, Daresbury and Inorganic Chemistry Laboratory, Univ. of Oxford, 'Hard X-ray Photoemission spectroscopy on complex oxides: from surface to bulk sensitivity'
- 28) 11,12 Dec 2007, Max Plack Institut, Halle, Germany, 'Synchrotron radiation electron spectroscopies on correlated systems: From surface to bulk sensitivity'
- 29) 5-6 June 2008, Madrid, Workshop on Angle Resolved Photoemission. an ARPES beamline for ALBA: *Electronic Properties of Novel Materials*
- 30) 15-19 June 2008, Satra Brunn, Sweden, International Workshop on Photoionization (IWP2008), 'Hard X-ray Photoemission spectroscopy on complex oxides: from surface to bulk sensitivity'
- 31) 12-16 October 2008, workshop Workshop on Hard X-ray Photoemission in Materials Science: Recent Progress and Future Directions, as part of the ALS users meeting, Berkeley, US, 'Recent studies from the VOLPE Project at ESRF Workshop on Hard X-ray Photoemission in Materials Science: Recent Progress and Future Directions'
- 32) Dec. 3rd, 2008, Workshop on High Energy Photoemission, BESSY, Berlin, Germany *Hard X-ray Photoemission Spectroscopy on complex systems and buried interfaces: bulk sensitive results and the VOLPE project*
- 33) May 20 - May 22, 2009, Brookhaven Lab. USA. International Workshop for New Opportunities in Hard X-ray Photoelectron Spectroscopy: HAXPES 2009, *Disentangling bulk and surface contribution in correlated systems and buried interfaces*
- 34) 18-19 January, 2010 Workshop HAXPES, Synchrotron SOLEIL, Paris, France. *Tailored electronic properties in complex materials studied by volume sensitive PES*
- 35) 22-23 February 2010, 20th Annual users' meeting (RAU) LNLS, Campinas, Brasil, *Hard X-ray Photoemission Spectroscopy on complex systems: from surface to bulk sensitivity*
- 36) 26-27 February 2010, Workshop-Winter School on Photoemission, Dijon (France), *Novel electronic properties of strongly correlated systems studied by X-ray electron spectroscopies*
- 37) 6 February 2012, ESRF users' meeting, XSW-HAXPES workshop, *Electronic properties of buried interfaces and diluted systems probed by HAXPES*
- 38) 20-23 March, 2012, MAMA-protheo workshop, Vietri sul mare (Italy), *Electronic properties of buried interfaces and diluted systems probed by X-ray based spectroscopies*
- 39) 28th April 2014, International Research Colloquium at the Peter Wall Institute for Advanced Studies, University of British Columbia (Vancouver, Canada). *The (Re)volution of topological insulators: a new state of matter'*
- 40) 4 July 2014, Research Opportunities at the European XFEL, CNISM and Univ. Bologna (Italy), *Status of*

Consiglio Nazionale delle Ricerche - Istituto Officina dei Materiali

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the Ultraspin PIK Project

- 41) 3-4 October 2014, International Workshop 'New science from time-focusing neutron scattering spectroscopy at the ESS' Taormina Italy, *Science drivers from Synchrotron Radiation*
- 42) 24-25 November 2014, Magnetism at Large Facilities, headquarter CNR, Rome Italy, *Electronic properties and magnetism in quantum materials and their interfaces: an X-ray perspectives*
- 43) 28 September- 2 October 2015, FISMAT 2015, Palermo, Italy, *Electronic and magnetic properties of quantum materials as seen by X-ray electron spectroscopies.*
- 44) 12-18 November 2015, New TRENDS in Correlated OXIDES and Interfaces, Brescia (Italy), *Critical thickness of electronic screening in LSMO thin films*
- 45) 28 September 2016, Macro Region Innovation Week JRC-European Commission, Trieste, *Integrating Nanoscience laboratories and research infrastructure for future industrial challenges*
- 46) 7-9 June 2017, Electron correlations from Gases to solids (EICoGS 2017), Rome (Italy), *Localized and delocalized electronic character in correlated systems as seen by HAXPES*
- 47) 6-10 August 2017, SPIE Optics and Photonics 2017, San Diego CA, *Understanding magnetization relaxation dynamics in half ferromagnet LSMO*
- 48) 23-24 Nov. 2017, Workshop Hard X-Ray Photoelectron Spectroscopy at PETRA III: new possibilities at the dedicated P22 beamline. DESY Hamburg, *Electron correlation and magnetisation dynamics in oxides as seen by HAXPES*
- 49) 8-12 June 2018, 7th International Symposium on Structure-Property Relationship in Solid State Materials (SPSSM-2018), Montesilvano- Pescara, Italy, *'Dimensionality effects in quantum materials and oxide interfaces as seen by X-ray Electron spectroscopies'*
- 50) 14 Jun 2018, SFB seminar at Univ. Wurzburg (Germany), *'Dimensionality effects in quantum materials and interfaces as seen by X-ray based Electron spectroscopies'*
- 51) 21-27 July 2018, Majorana Fermions and topological materials science, Erice workshop, Italy *'Dimensionality effects in 2D materials as seen by X-ray spectroscopies'*

Most representative papers (number of citations as of August 2018)

1. Sacchi, M. *et al.* Quantifying the effective attenuation length in high-energy photoemission experiments. *Phys. Rev. B* **71**, (2005).
62 times cited. Experimental determination of the escape depth at high kinetic energy, in the bulk sensitive range, showing universal and/or element specific behaviour. **Last author, leader of the experiment at Synchrotron Radiation Facilities.**
2. Panaccione, G. *et al.* Coherent peaks and minimal probing depth in photoemission spectroscopy of Mott-Hubbard systems. *Phys. Rev. Lett.* **97**, (2006).
54 times cited. First experimental determination, supported by model calculation, of the gap opening at the MIT in V2O3 obtained via valence band high energy photoemission, making possible the determination of a realistic value for Hubbard U in this prototype of Mott-transition. **First author and corresponding author**
3. Schattschneider, P. *et al.* Detection of magnetic circular dichroism using a transmission electron microscope. *Nature* **441**, 486–488 (2006).
179 times cited. Discovery and characterization of the EMCD effect in TEM spectroscopy, in analogy with the X-ray Magnetic Circular dichroism measured with Synchrotron. **Co-author, leader of the experiment performed at Synchrotron Radiation.**



4. Maccherozzi, F. *et al.* Evidence for a Magnetic Proximity Effect up to Room Temperature at Fe/(Ga,Mn)As Interfaces. *Phys. Rev. Lett.* **101**, (2008).
59 times cited. Results of this work led to an **international patent (US61/133344-2008)**, where I am co-inventor. Work selected for Viewpoint in Physics December 22, 2008, Physics 1, 43. Selected for Eletttra Highlight. We observe induced magnetic order in the Fe/(Ga; Mn)As interface that extends over more than 2 nm at room temperature; We show by experiment as well as by theory that the magnetic moment of the Mn ions couples antiparallel to the moment of the Fe overlayer. **Co-author, leader of the experiment at Synchrotron Radiation Facilities**
5. Walsh, A. *et al.* Nature of the band gap of In₂O₃ revealed by first-principles calculations and x-ray spectroscopy. *Phys. Rev. Lett.* **100**, 167402 (2008).
379 times cited. First experimental determination of the band gap in In₂O₃, previously quoted at 3.75 eV. By using HAXPES and other bulk sensitive techniques the upper limit of the fundamental band-gap in In₂O₃ is set at 2.9 eV. **Co-author, leader of the HAXPES experiments**
6. Manchon, A. *et al.* Analysis of oxygen induced anisotropy crossover in Pt/Co/Mox trilayers, *Journ. Appl. Phys.* **104**, 992 (2008).
113 times cited. Determination of anisotropy crossover in oxide-based trilayer, as due to oxygen content, relevant for spintronics and electronic applications. **Last Author**
7. Vobornik, I. *et al.* Magnetic Proximity Effect as a Pathway to Spintronic Applications of Topological Insulators. *NANO Lett.* **11**, 4079–4082 (2011).
89 times cited. First experimental evidence of a magnetic proximity effect between a ferromagnetic overlayer and a ferromagnetic topological insulator. The effect persists up to room temperature. **Last Author**
8. Gray, A. X. *et al.* Bulk electronic structure of the dilute magnetic semiconductor Ga_{1-x}Mn_xAs through hard X-ray angle-resolved photoemission. *Nat. Mater.* **11**, 957–962 (2012).
69 times cited. First experimental determination, supported by model calculation, of the bulk valence band structure of (Ga,Mn)As. **Co-author**
9. Fujii, J. *et al.* Identifying the Electronic Character and Role of the Mn States in the Valence Band of (Ga,Mn)As. *Phys. Rev. Lett.* **111**, (2013).
22 times cited, Editor Selection. Determination of the electronic character of states near the Fermi level in (Ga,Mn)As with valence band Hard x-ray Photoemission Experiments, showing that neither the impurity band model nor the merged one are fully applicable at (Ga,Mn)As. **Corresponding and last author.**
10. Radaelli, G. *et al.* Electric control of magnetism at the Fe/BaTiO₃ interface. *Nat. Commun.* **5**, (2014).
82 times cited. Selected for Eletttra Highlights and covered by national press (**Repubblica, Corriere della Sera**). Observation of giant magnetoelectric response at Fe/BaTiO₃ interface. Potential effect for optimizing interfacial magnetoelectric coupling in view of efficient, low-power spintronic devices. **Co-author**
11. Das, P. K. *et al.* Layer-dependent quantum cooperation of electron and hole states in the anomalous semimetal WTe₂. *Nat. Commun.* **7**, (2016).

9 times cited. First experimental evidence, supported by model calculation of dimensionality effect in WTe₂, previously considered a 2D layered material. Implication with the giant magnetoresistance observed are discussed. Comunicato stampa CNR (16/03/2016). **Last author and corresponding author, shared with Prof. R. J. Cava**

12. D. Di Sante *et al.* Three-Dimensional Electronic Structure of the Type-II Weyl Semimetal WTe₂, *Phys. Rev. Lett.* **119**, 026403 (2017)

9 times cited. First experimental evidence, supported by model calculation of 3D character in WTe₂, previously. Comunicato stampa CNR (16/03/2016). **Last author**

13. T. Pincelli, *et al.*, Quantifying the critical thickness of electron hybridization in spintronics materials, *Nat. Commun.* **8**, 16051 (2017).

1 times cited. First reliable quantification, supported by model calculation, of a critical thickness in spintronics materials, corresponding to a less metallic character in layers close to the surface. Comunicato stampa CNR (28/07/2017). Highlight Diamond light source UK. **Last author**

14. M. Oura, *et al.*, Picosecond Time-Resolved Hard X-ray Photoelectron Spectroscopy System at the 27-m-long Undulator Beamline BL19LXU of SPring-8, *Synchrotron Radiation News*, pp. 36-41, July 2018, review article

First demonstration of a Hard X-ray time resolved experiment coupling laser and synchrotron light.

Co- author

PERSONAL INFORMATION

Alberto Verdini

 verdini@iom.cnr.it <http://p.iom.cnr.it/verdini>, <https://www.iom.cnr.it/aloina>, <http://www.elettra.trieste.it/elettra-beamlines/aloina.html>

Sex M | Date of birth 19/09/1969 | Nationality Italian

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR
PERSONAL STATEMENT

WORK EXPERIENCE

From 2004 to now

Permanent position as beamline scientist at the ALOISA Beamline - IOM-CNR in Trieste

The tenure track position as been evaluated positively by a scientific panel and the position became permanent. Meantime the INFM (Italian National Condensed Matter Institute) was incorporated inside CNR (Italian National Research Council) and a part of its research activities, including those related to synchrotron radiation, moved to the IOM-CNR (Institute workshop Of Materials). As beamline scientist I run, maintain and implement the ALOISA (Advanced Line for Overlayer, Interface and Surface Analysis) beamline at Elettra, the Italian Synchrotron Facility, and I follow the experiments (selected from a scientific external panel) of the external users performed at the ALOISA beamline

From Dec 2001 to Nov 2004

Tenure-Track position as beamline scientist at the INFM (now IOM-CNR) in Trieste
For duties and activities, see above

June 2000 to Dec. 2001

Collaboration and Term contracts as beamline scientist at the ALOISA beamline
For duties and activities, see above

1999-2000

Collaboration contract and post-doc fellow as beamline scientist at the ALOISA beamline
For duties and activities, see above

EDUCATION AND TRAINING

1998-1999

Proficiency Course in Physics - Condensed Matter Research and Study
Department of Physics, University of Perugia (Italy)

- Jan 1999 PhD in Physics, discussing the thesis "Surface Structure Determination by Photoelectron Diffraction. A new geometrical configuration at ALOISA beamline."
University of Trieste . Italy
- March 1995 Graduation - ~~Laurea~~ ~~cum laude~~ in Physics, discussing the thesis "Studio delle proprietà elastiche dei superreticoli a semiconduttore mediante spettroscopia Brillouin".
Department of Physics, University of Perugia (Italy)

Schools

- Sept 1997 VIII Italian National School of Condensed Matter Physics
Torino, Italy
- Sept 1996 Structural Techniques for Advanced Radiation Sources - STARS
Physics and Mathematics Department and CIMA, University of Camerino, Italy
- May 1995 Italian National School on Superconductivity - Scuola Nazionale di Superconduttività
EniRisorse - Porto Marghera, Venezia, Italy
- Oct-Nov 1992 III Italian National School of X-ary and Neutron Diffraction - III Scuola Nazionale di Diffrazione di Neutroni e Raggi X
CNR Research Area of Montelibretti - Rome, Italy

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	Good	Very Good	Good	Good	Good
French	Basic	Basic	Basic	Basic	Basic
German	Basic	Basic	Basic	Basic	Basic

Communication skills

- Very good communication skills gained through my experience, in many scientific publications and presentations, in teaching, in training graduating, phd students and young researchers, in setting and maintaining the Institutional web site of IOM-CNR

Organisational / managerial skills

- Organization of an experiment in a scientific facility with international users. This consists in the helping users in the preparation of a proposal for a scientific panel, in preparing the instrumentation and materials needed, in the organization of the scientific staff and also in the decisions to be taken during the experiment.
- Leadership (currently responsible for the maintenance of the Institutional web site of IOM-CNR)
- I have been involved in the organization of the following Congress/Workshops:
 - -NanoTechYoung (2003) . organization of the visits and also prepared a running PowerPoint presentation for the public, showing and explaining the Nanotechnology
 - First IOM-CNR Workshop (2010)
 - Congress of SIF, Societa' Italiana di Fisica, Italian Physics Society held in Trieste (2013)
 - Congress of SILS, Societa' Italiana Luce di Sincrotrone . Italian Society of Synchrotron Light (2012, 2013, 2014, 2014)
- Oct 2010. Elected in the IOM Board of the Institute (Consiglio di Istituto) until May 2016. As a member of the Board I assisted the Director in the activities and organization of the IOM, such as evaluating internal projects, checking documentation and requests for association, correcting the drafts of the Activity Report.
- In the Steering Committee of the SILS, Societa' Italiana Luce di Sincrotrone . Italian Society of Synchrotron Light 2012-2015

-Financial Administration of the SILS, Societa' Italiana Luce di Sincrotrone . Italian Society of Synchrotron Light as Treasurer (2013-2014)
 -Organization of the selection of the new Logo for the IOM-CNR institute in 2010)

Job-related skills

- Very good experience in general laboratory equipment (Oscilloscope, solder, RHEED/LEED systems, δ), low temperature (Liquid Nitrogen) equipment, Ultra High Vacuum systems (pumps, materials, experimental chambers), equipment for synchrotron radiation-based techniques (Photoemission, Absorption, Diffraction, δ), lasers

Research Activities

During my work for the *laurea* thesis (1994-1995) I participated in the research activities of the Optical Spectroscopy Laboratory of the Physics Department of the University of Perugia (Italy), under the supervision of prog. G. Socino and G. Carlotti, setting up the acquisition systems of a laser and a Sandercock Fabry-Perot interferometer for Brillouin spectroscopy measurements. From 1996 I joined the research group lead by prof. F. Tommasini (my PhD supervisor) during the initial phase of alignment, characterisation and commissioning of the Beamline ALOISA (Advanced Line for Overlay Interface and Surface Analysis) of the CNR-IOM (former INFN) TASC National Laboratory at Elettra National Laboratory (Trieste, Italy). ALOISA is a multipurpose beamline for surface science experiments. It has been designed to work in a wide spectral range (130-8000 eV) with the light beam impinging on the sample surface at grazing incidence. Since March 1998 ALOISA is open to external users and the available beamtime is dedicated to experiments with 70% assigned to external users via a scientific committee and 30% left to the local research unit (GdR) for in-house research, maintenance and development. ALOISA is specialised for the study of surfaces by means of several different and complementary experimental techniques, such as angle-resolved photoemission, photoelectron diffraction, electron coincidence spectroscopy, X-ray absorption, X-ray diffraction and X-ray specular reflectivity. It should be noted that I work in a team that runs, handles and implements ALOISA which is an experimental equipment worth about 4-5 MEuro and it is available for national and international research groups. As staff member I have participated in the several experiments (more than 200 beamtime up to now) performed from when the beamline has become operative, with about 20 experiments/year assigned to external users. I follow the external users in the procedures of proposing experiments, in the organization and preparation of the beamtime, in performing the measurements and in the data analysis during and after the beamtime. In many cases I teach external users the experimental techniques available on the ALOISA beamline as well as how to properly analyse the data obtained, contributing to the formation of PhD and graduating students who make part or all of their thesis on the beamline ALOISA. This has permitted to start many collaborations with Italian and international groups and to study different systems, gaining experience and enriching my bag of scientific knowledge. Working on photoelectron diffraction, I have improved and adapted the existing codes for the simulation in order to include properly the polarisation/detection conditions available only at ALOISA. Moreover I have developed and implemented two new measuring methods of photoelectron diffraction: the first consists in measuring the photoelectron diffraction by aligning the synchrotron light polarization with respect to the detector in order to minimize the so-called forward focusing effects with respect to higher diffraction orders, thus allowing a very clear holographic reconstruction of the system under study [see publications]; the second one combines the photoelectron diffraction with the X-ray on resonance absorption measurements which are site and chemical selective of the emitting atom, allowing to find the position of the atoms in a particular state [see publications]. In my years of research activity as beamline scientist I developed the skills required to work with different research groups and to tackle the experimental needs of many different systems. In particular I followed the experiments of photoelectron diffraction for studying surfaces and films or adsorbates on surfaces. I developed several routines for the preliminary analysis and for a quick evaluation of the data during the experiments, and, moreover, I have followed the successive and more complete analysis of the data, improving and adapting the existing codes for the simulation of photoelectron diffraction in order to include properly the polarisation/detection conditions available only at ALOISA. During the 2002 year I have followed the migration to the new control and data acquisition system of ALOISA, developed with LabView on a PC computer, in order to have a faster and more efficient system, with the synchronization of all the measuring instruments during the measurements. In the 2003 I have collaborated to the alignment and characterization of the branchline HASPES (He Atom Scattering and Photo-Emission Spectroscopy), and to the tests of a new 150mm electron analyzer mounted on the HASPES chamber. In the 2004, during the installation of a new manipulator for ALOISA, I followed the control of its motion and its interface with the existing acquisition system. In the 2006 I followed the software control and data analysis of a new two-dimensional detector of electrons for the photoemission spectroscopies. In 2009 I implemented a fast algorithm in a Perl script in order to separate the spectra measured during the Resonant Photoemission experiment and later I followed its implementation in the data analysis software together with the research group lead by prof. D. Cvetko (University of Ljubljana). The request of the Resonant Photoemission technique has

increased in the last years by the users in order to study the charge transfer times at interfaces and the software package for the data analysis is distributed freely to the users. In 2013 I contributed to the mounting and alignment of the new experimental chamber of the national project ANCHOR (AmiNo Carboxyl Hetero-Organic aRchitectures, ref. dr. A.Cossaro) at the ALOISA branchline. In July 2016 a new Insertion Device has been inserted and it has been necessary to realign and recharacterize the beamline (flux, resolution, calibrations,...). Between 2017 and 2018 the motors for the rotation of the sample holder and of the experimental chamber have been substituted. It has been necessary to implement in the acquisition system the control of the motors via TCP/IP and the recalibration of the movements. From Sept 2016 I participate to the SUNDYN national project (ref. dr. M. Dell'Angela) and I followed the setting up and alignment of the laser and the security procedures. The main research activity is the study of the growth and of the electronic and structural properties of surfaces and thin films (organic and inorganic), deposited on metals and semiconductors, such as for example the growth of Fe on Cu₃Au(001), Cu(110), Cu(111), Ag(001), Sn on Ge(111) and Pb on Ge(100), Mn on CdTe(110) and Ge(111), the growth and the electronic properties of fullerenes, thiols and metal-organic molecules (phthalocyanines and porphyrins) on different substrates, such as Cu(111), Au(110), Si(100), Ag(100), Au(111), and recently on oxidized metal substrates such as Cu(111), Pd(100), the structure and the electronic properties of TiO₂(110) surfaces, the charge transfer times of C₆₀ and Zinc-Porphyrins or Hexabenzocoronene, the polymerization of molecules with halogens (Br,I,Cl) on Cu(110) as a function of the temperature. See the publications list for a more complete view.

Computer Skills Very good knowledge of Windows Operating Systems (95,98,2000,NT, XP, Vista, 7)
 Very good knowledge of Linux-based operating systems (Debian, Ubuntu, Mint)
 Very Good knowledge of Fortran77 language programming
 Good knowledge of C, Perl, HTML language programming
 Basic knowledge of Python, Java and Labview language programming
 Good knowledge of embedded systems (Arduino, BeagleBoard, Raspberry Pi, Orange Pi)
 Very good knowledge of different instrument protocols (RS232, RS422, RS485, GPIB, Ethernet,...) for the communication with instruments for data acquisition
 good knowledge of Microsoft Office tools
 good knowledge of OpenOffice/LibreOffice tools
 good knowledge of many software programs for drawing (Inkscape), image treating (GIMP), DVD production (movies, photo galleries,...)
 Good knowledge of many scientific software packages, such as Wavemetrics Igor, Avogadro, Xcrysden, EDAC, MSCD,...

Teaching Experience: Academic year 2004-2005: 8 hours of lessons in the course %Introduzione alla Fisica+ (Introduction to physics) of the %Laurea in Informatica+course (Faculty of Science - University of Trieste).
 Academic year 2005-2006: 10 hours of lessons in the course %Elementi di fisica moderna e di microscopia+(Elements of modern physics and microscopy) of the %Laurea in Biotecnologie Mediche+course (Faculty of Medicine -University of Trieste)
 Academic year 2006-2007: 10 hours of lessons in the course %Elementi di fisica moderna e di microscopia+(Elements of modern physics and microscopy) of the %Laurea in Biotecnologie Mediche+course (Faculty of Medicine -University of Trieste)
 Academic year 2007-2008: 10 hours of lessons in the course %Elementi di fisica moderna e di microscopia+(Elements of modern physics and microscopy) of the %Laurea in Biotecnologie Mediche+course (Faculty of Medicine -University of Trieste)
 Academic year 2008-2008: 10 hours of lessons in the course %Elementi di fisica moderna e di microscopia+(Elements of modern physics and microscopy) of the %Laurea in Biotecnologie Mediche+course (Faculty of Medicine -University of Trieste)
 Academic year 2010-2011: 10 hours of lessons in the course %Elementi di fisica moderna e di microscopia+(Elements of modern physics and microscopy) of the %Laurea in Biotecnologie Mediche+course (Faculty of Medicine -University of Trieste)
 During the international school HERCULES 2004 (Higher European Research Course for Users of Large Experimental System) on the use of synchrotron light and neutrons: two practical sessions on %Thin film structural analysis with combined use of Photoelectron Diffraction (PED) and Grazing Incidence X-ray Diffraction (GIXD)+at the ALOISA beamline
 During the VIII Scuola Nazionale di Luce di Sincrotrone (Frascati - Roma, 10-21 Ottobre 2005): one practical session about the photoelectron diffraction
 During the international school HERCULES 2006 (Higher European Research Course for Users of Large Experimental System) on the use of synchrotron light and neutrons: two practical sessions on %Thin organic film structural analysis performed by multi-technique approach+at the

ALOISA beamline

-Professeur Invité - Invited Professor by the Laboratoire Interdisciplinaire Carnot, University of Burgundy (Dijon, France), one month stay in Summer 2009, Summer 2011, Summer 2014, Summer 2017. During these times at the University of Burgundy It has been possible to strengthen the collaboration with the research groups of prof. B. Domenichini e S. Bourgeois. The resulting main publications are related to the studies of TiO₂ (see publications 43,73, and 100 in the publication list)

-(Feb. 2014) Substitute member of the PhD in Physics Exam Commission University of Bologna

-(Feb. 2014) External Reviewer for the PhD thesis "Structure and Electronics of Donor-Acceptor Blends" by Ms. Elizabeth Goiri, University of the Basque Country

-(Aug. 2016) Reviewer for the PhD thesis "Characterization of 2D architectures on metallic substrates by electron spectroscopy and microscopy" by Daniel Beato Medina, University of Aix-Marseille. (Oct 2016) Member of the Exam Commission of the "Ecole Doctorale de Physique et Sciences de la Matière"

-(Dec. 2016) External reviewer for the PhD thesis "Growth, local structural and electronic properties, and band alignment at SrTiO₃-based all-oxide heterojunctions" by Alessio Giampietro, University of Milan and Catholic University of the Sacred Heart of Brescia

Publications

I am author of more than 100 papers in peer reviewed scientific journals, plus 2 chapters in two books. On 24/09/2018 the Scopus h-index = 25 and the Web of Knowledge ISI h-index = 25. See below for a complete list of publications.

Oral Presentations

Oral Presentations in International Conferences:

"Studio delle proprietà elastiche di superreticoli a semiconduttore mediante spettroscopia Brillouin", LXXXI Congresso Nazionale della Società Italiana di Fisica, Perugia (1995)

"Determination of TiO₂(110) Surface Relaxation by Variable Polarization Photoelectron Diffraction", ICSOS-6, Vancouver, Canada, July 1999

"Amorphous to Crystalline Phase Transition during Two-Dimensional Pb/Ge(001) Growth. A Photoelectron Diffraction Study", IVC-16, Lido di Venezia, Italy, 28 Jun-2 July 2004

"Structure and morphology of Co-Tetraphenylporphyrin (Co-TPP) molecules on Ag(111)", ECOSS-26, Parma 30 Aug.- 4 Sept. 2009

"Resonant photoelectron diffraction: a novel tool for novel surface structure studies", Second joint workshop SILS-SISN, XIX National Congress SILS and XXII National Congress SISN, Trieste, 1-3 settembre 2011

"Intrinsic Nature of the Excess Electrons Distribution at the TiO₂(110) surface", FISMAT2013 and XX National Congress SILS, Politecnico di Milano, 9-13 Settembre 2013

"Metalation of porphyrins and the role of the interaction with surfaces", invited - FISMAT2015, Università degli Studi di Palermo, 27 Sept.-2 Ott. 2015

"The influence of Mg on the surface properties in rutile TiO₂(011)", - European Conference on Surface Crystallography and Dynamics (ECSCD), Trieste 18-21 Oct. 2015

"Excess electrons distribution in TiO₂(110) and Mg:TiO₂(011) surfaces", invited - Trendoxides, New TRENDS in Correlated OXIDES and Interfaces, Brescia 16-18 Nov. 2015

"Metalation of porphyrins and the role of the interaction with surfaces", 16th Joint Vacuum Conference and 14th European Vacuum Conference, Portoroz . Slovenia, 6-10 Giu. 2016

"Metalation of porphyrins and the role of the interaction with surfaces", 3rd Workshop on Surfaces, Interfaces and Functionalization Processes in Organic Compounds and Applications - SINFO III, Napoli, 27-29 Giu. 2016

"Excess electrons distribution in TiO₂(110) and Mg:TiO₂(011) surfaces", Materials 2016, Aci Castello (Catania) Dec 12-16 2016

"Metalation of porphyrins and the role of the surface oxidation in metal surfaces", invited . AIV XXIII Conference Florence, April 5-7 2017 . Materials, Interfaces, Processes in Industrial and Basic Research Applications.

"Study of stability of Ruthenocene on Ag(111) and Cu(111) by means of X-ray Photoemission and Absorption Spectroscopies", FISMAT2017, ICTP and SISSA Miramare Campus, Trieste 1-5 Oct 2017

"Surface properties of TiO₂(011) and Mg:TiO₂(011)", EVC-15, Geneva . Switzerland, June 17th - 22nd, 2018.

"Role of surface oxidation in the interaction and self-metalation of 5,10,15-triphenylcorrole with Cu(111)", accepted as oral presentation at Materials 2018, Area della Ricerca CNR, Bologna Oct. 22-26 2018

Scientific Projects

Involved in the following Italian National Projects:

- Research Program %Interazione molecole superfici: dall'elio ai film di molecole organiche+
Molecule-surface interaction: from helium to organic molecules (Cofin2001, total funding 155.000 euro);
- Research Program %Proprietà elettroniche e strutturali e crescita di film debolmente legati: verso la comprensione dell'interfaccia organico-inorganico+
Growth, Electronic and structural properties of weakly bonded thin films: towards a comprehension of the organic-inorganic interface (Cofin2003, Total funding 470.000). See 39 and 46 as main publications in the publication list
- Research Program %Studio di sistemi ad alta correlazione e bassa dimensionalità' con spettroscopie elettroniche di coincidenza: una nuova generazione di metodi sperimentali e teorici+
Study of high correlated and low dimensional systems by means of coincidence electronic spectroscopies: a new generation of experimental and theoretical methods (PRIN 2005 Total funding 172.000). The main publication of this project is a chapter in a book (See publication 32 in the publication list) regarding the Auger-photoelectron correlation in solids
- Research Program %Misure con radiazione di sincrotrone degli effetti di correlazione elettronica e di dicroismo nella forma di riga Auger per lo studio di sistemi magnetici a bassa dimensionalità+
- Measurement by means of synchrotron radiation of the electronic correlation effects and dicroism in the Auger lineshape for the study of low dimensional magnetic systems (PRIN 2008, Total Funding 128.000 Euro).
- Research Program %Electron structure and charge transfer dynamics at hybrid molecular interfaces+(CNR-STM 2014), as Principal Investigator Partner. See publication 98 in the publication list

and in the following International Projects:

- Project %Correlazione tra le proprietà elettroniche e strutturali di film ultrasottili+(Correlation between electronic and structural properties in ultrathin films), in collaboration with the Institute Jožef Stefan, Ljubljana (ref. prof. D. Cvetko), within the framework of the Technological and Scientific Cooperation between Italy and Slovenia (2002-2005).
- Project %Creazione di rete di ricerca Italo-Slovena per lo studio dei materiali nanostrutturati e l'utilizzo della radiazione di sincrotrone+(Creation of an Italian-Slovenian research network for the study of nanostructured materials and for the use of synchrotron radiation) within the Communitarian Program InterReg III (2004-2009) (Total funding 451.000 euro). This project plus the one above have brought to the creation of a long-lasting collaboration with the Institute Jožef Stefan, Ljubljana and the University of Ljubljana. Dr. G. Bavdek has carried out most of his activities for the graduating thesis and the PhD research at the HASPES and ALOISA. Dr. G. Kladnik has carried out most of his activity for the PhD thesis at ALOISA and he obtained a fellowship of the Italian Foreign Affair Ministry (see below). From this collaboration several papers have been published in high impact international scientific journals (see publication list).
- Italian contact and responsible for the Italian Foreign Affair Ministry fellowship for the project %Studio delle Proprietà di Trasferimento di Carica nelle Interfacce Ibride per Applicazioni di Dispositivi Innovativi+awarded to dr. G. Kladnik for the research activities at the ALOISA beamline (2013). See publication 84 in the publication list
- Project %Nanoscience for energy: a joint Italy-US laboratory + ref. Prof. A. Morgante (2014-2016) funded by the Italian Foreign Ministry (Total funding 30.000). This project helped to strengthen the collaboration between our research team and those led by prof. L. Venkatamaran e J. Kymissis (Columbia University - New York . USA)
- Project %Advanced Nanotechnologies For Multivariate Sensor Fabrication+ I am the responsible of the CNR unit, funded by the NATO SPS (Science for Peace and Security) program from September 2016 (Total funding 375.000 Euro)

Research project as Principal investigator . positive evaluated but not funded

- SUNNN:MED SUPramolecular assemblies and Nanoarchitectures as Novel solar cells: Morphology, Electronic and Dynamics properties, ERANETMED 2nd call 2016 (Total Funding 752.804)- The National budgets of the Funding Parties were not sufficient to fund all projects with a positive evaluation (Score 3.5/5)

Proposals

- Nov. 2017: Principal Investigator of the 1st Joint-Project CNR-IOM and Elettra Sincrotrone Trieste
- Title: Study of the metalation of metal-free porphyrin and tetrapyrroles-based molecules on oxidized metal surfaces together with dr. G. Di Santo (Elettra Sincrotrone Trieste) for a total of 4 beamtimes (one per semester) in two years. Considering that the financial equivalent for a 6 days beamtime is about 50 keuro as ability to attract and manage external funds, this project has a total funding of about 200 keuro in two years.
- In the last 20 years, I am a proposer or co-proposer of 50 beamtimes and local contact of another 37, for a total of 87 approved beamtimes. The financial equivalent for a 6 days beamtime has

been evaluated about 50 keuro and, therefore, the resulting total funding is about 4.3 Meuro. Moreover, I have been involved in more than 100 beamtimes (also in the synchrotron facilities Soleil . Paris France and Diamond . Daresbury UK) for a total equivalent funding of 5 Meuro. This makes an average of about 465 keuro/year as capability to attract and manage external funds

- Honours and Awards**
- The publication: J. Wider, F. Baumberger, M. Sambì, R. Gotter, A. Verdini, F. Bruno, D. Cvetko, A. Morgante, T. Greber, and J. Osterwalder, "Atomically resolved images from near node photoelectron holography experiments on Al(111)", Phys. Rev. Lett. 86, p. 2337 (2001) has been put to the attention of the readers of Nature by J. Spence in the section News & Views: "Holograms of atoms", Nature 410, p. 1037 (2001)
 - The publication Willi Auwärter, Knud Seufert, Florian Klappenberger, Joachim Reichert, Alexander Weber-Bargioni, Alberto Verdini, Dean Cvetko, Martina Dell'Angela, Luca Floreano, Albano Cossaro, Gregor Bavdek, Alberto Morgante, Ari P. Seitsonen, and Johannes V. Barth, "Site-specific electronic and geometric interface structure of Co-tetraphenyl-porphyrin layers on Ag(111)", Phys. Rev. B 81, 245403 (2010), has been selected as Editors' Suggestion
 - The publication A. Basagni, L. Colazzo, F. Sedona, M. Di Marino, T. Carofiglio, E. Lubian, D. Forrer, A. Vittadini, M. Casarin, A. Verdini, A. Cossaro, L. Floreano, M. Sambì, "Stereoselective Photopolymerization of Tetraphenylporphyrin Derivatives on Ag(110) at the Sub-Monolayer Level." Chem Eur. J. 20 (2014) 14296-14304 has been selected for the back cover of the journal
 - The publication Z. Feng, S. Velari, A. Cossaro, C. Castellarin-Cudia, A. Verdini, E. Vesselli, C. Dri, M. Peressi, A. De Vita, G. Comelli, "Trapping of charged gold adatoms by dimethyl sulfoxide on a gold surface", ACS Nano 9 (2015) 8697. 8709, DOI: 10.1021/acsnano.5b02284. This work has been put to the attention of the readers in a Perspective paper by Saw-Wai Hla in ACS Nano, 2015, 9 (9), pp 8644. 8646 DOI: 10.1021/acsnano.5b04985

March 2007, Commendable Service (Lodevole Servizio) from the TASC-INFM Laboratory Director, prof. G. Rossi

August 2015, Commendable Service (Encomio al merito) from the IOM Director,, prof. A. Morgante, for the work done in the creation of the IOM web site

February 2016, Commendable Service (Lodevole Servizio) from the IOM Director, prof. A. Morgante

- Other info**
- I am Referee for the Elsevier (Surface Science, Applied Surface Science,) and ACS - American Chemical Society (Journal of Chemical Physics C, Journal of Chemical Physics Letters,)
 - From 2012, Referee for the Italian Research Evaluation Quality Panel (VQR 2004-2010 and VQR 2011-2014) in the Expert Group (GEV Gruppo di esperti della Valutazione) 02 - Physics
 - From Feb 2013, Registered Expert of the 'European Research Council as project evaluator
 - Summer 2013, referee for the Czech Science Foundation to evaluate the national scientific projects-
 - Dec 2013, I got the National Scientific Abilitation for the position of Associate Professor in the Physics Sector.
 - Dec. 2010, Eligible (Idoneità) as senior scientist in the internal call of Italian National Research Council (CNR)
 - Jan. 2015 - Invited as SILS representative by the Assistant Director for Natural Sciences of UNESCO to the Opening Ceremony of the International Year of Light 2015 held at UNESCO site in Paris 19-20 Jan. 2015
 - Sept. 2015, selected as Seconded National Expert for the ERCEA (European Research Council Executive Agency - Bruxelles) and in the reserve list
 - May 2016, Eligible (Idoneità) as senior scientist in the Macro Area Dipartimentale di Scienze Fisiche e Tecnologie della Materia (Physical Sciences and Matter Technologies Dipartimental Area)
 - Jul. 2016, Eligible (Idoneità) as senior scientist in th Macro Area Dipartimentale di Scienze Chimiche e Tecnologie dei Materiali (Chemical Sciences and Materials Technologies Dipartimental Area)
 - 2016 Competition for Associate Professor (Professore Universitario di II Fascia SC 02/B1) . University degli Studi di Pisa, the panel (ref. Code PA2016/18) valuta Alberto VERDINI un candidato buono e qualificato a ricoprire il posto di Professore di II fascia del SC 02/B1 (valuates Alberto Verdini good and qualified candidate to cover the position of Associate Professor of SC 02/B1). Moreover la Commissione, all'unanimità, dichiara che il dott. Alberto VERDINI è ritenuto idoneo a coprire il posto di professore di seconda fascia (The panel, unanimously, declares that dr. Alberto Verdini is eligible to cover the position of Associate Professor+) -minutes of 04/11/2016 . Albo Pretorio of the University of Pisa

- 2016 Competition for Associate Professor (Professore Universitario di II Fascia SC 02/B1) . University degli Studi di Pisa, the panel (ref. Code PA2016/42) % valuta Alberto VERDINI un candidato buono e qualificato a ricoprire il posto di Professore di II fascia del SC 02/B1 (% evaluates Alberto Verdini a good and qualified candidate to cover the position of Associate Professor of SC 02/B1). Moreover % la Commissione, all'unanimità, dichiara che il dott. Alberto VERDINI è ritenuto idoneo a coprire il posto di professore di seconda fascia% (The panel, unanimously, declares that dr. Alberto Verdini is eligible to cover the position of Associate Professor) -minutes of 16/11/2016 . Albo Pretorio of the University of Pisa

Other skills //

Driving licence B

ADDITIONAL INFORMATION

ANNEXES

Complete List of Publications

1. G. Carlotti, L. Palmieri, C. Rigo, G. Socino, A. Verdini and L. Verdini, "Brillouin Light Spectroscopy of Surface Phonons in Semiconductor Heterostructures", Highlights of Light Spectroscopy on Semiconductors HOLSOS '95 , ed. World Scientific. (1996)
2. G. Carlotti, D. Fioretto, L. Palmieri, G. Socino, A. Verdini and C. Rigo, "Brillouin light scattering study of the elastic properties of chemical beam epitaxy grown In_{0.5}Ga_{0.5}As/InP superlattices", J. Phys. : Condensed Matter 8, p. 2265 (1996)
3. D. Cvetko, L. Floreano, R. Gotter, M. Malvezzi, L. Marassi, A. Morgante, G. Naletto, A. Santaniello, G. Stefani, F. Tommasini, G. Tondello, A. Verdini, "First results from the new optical configuration for a synchrotron radiation monochromator applied to the ALOISA beamline", in Proceedings of SPIE, Vol. 3150, p. 86 (1997)
4. L. Floreano, G. Naletto, D. Cvetko, R. Gotter, M. Malvezzi, L. Marassi, A. Morgante, A. Santaniello, A. Verdini, F. Tommasini and G. Tondello, "Performance of the Grating-Crystal Monochromator of the ALOISA beamline at the Elettra Synchrotron", Rev. Sci. Instrum. 70, p. 3855 (1999)
5. M. Sauvage-Simkin, Y. Garreau, A. Barski, R. Langer, L. Floreano, R. Gotter, A. Santaniello, D. Cvetko, A. Verdini, "X-ray photoelectron spectroscopic investigation of the GaAs nitridation mechanism with an ECR plasma source", Phys. Stat. Sol. A 176, p. 671 (1999)
6. A. Verdini, M. Sambì, F. Bruno, D. Cvetko, M. Della Negra, R. Gotter, L. Floreano, A. Morgante, G.A. Rizzi, and G. Granozzi, "Determination of TiO₂(110) Surface Relaxation by Variable Polarization Photoelectron Diffraction", Surf. Rev. Lett. 6, p. 1201 (1999)
7. L. Floreano, L. Petaccia, M. Benes, D. Cvetko, A. Goldoni, R. Gotter, L. Grill, A. Morgante, A. Verdini and S. Modesti, "Photoelectron diffraction study of the (3x3)-Sn/Ge(111) structure", Surf. Rev. Lett. 6, p. 1091 (1999)
8. F. Bruno, D. Cvetko, L. Floreano, R. Gotter, C. Mannori, L. Mattera, R. Moroni, S. Prandi, S. Terreni, A. Verdini and M. Canepa, "Combined photoelectron and X-ray diffraction from ultrathin Fe films on Cu₃Au(001)", Appl. Surf. Sci. 162-163, p. 340 (2000)
9. J. Wider, F. Baumberger, M. Sambì, R. Gotter, A. Verdini, F. Bruno, D. Cvetko, A. Morgante, T. Greber, and J. Osterwalder, "Atomically resolved images from near node photoelectron holography experiments on Al(111)", Phys. Rev. Lett. 86, p. 2337 (2001). This paper has been put to the attention of the readers of Nature by J. Spence nella sezione News & Views: "Holograms of atoms", Nature 410, p. 1037 (2001)
10. P. Luches, S. Altieri, C. Giovanardi, T.S. Moia, S. Valeri, F. Bruno, L. Floreano, A. Morgante, A. Santaniello, A. Verdini, R. Gotter, T. Hibma, "Growth, structure and epitaxy of ultrathin NiO films on Ag(001)", Thin Solid Films 400, p. 139 (2001)
11. J. Danger, H. Magnan, D. Chandresis, P. Le Fevre, S. Bourgeois, J. Jupille, A. Verdini, R. Gotter, A. Morgante, "Intra-atomic versus interatomic process in resonant Auger spectra at the Ti L₂₃ edges in rutile", Phys. Rev. B 64, p. 045110 (2001)
12. F. Bruno, S. Terreni, L. Floreano, A. Cossaro, D. Cvetko, P. Luches, L. Mattera, A. Morgante, R. Moroni, M. Repetto, A. Verdini, and M. Canepa, "Pseudomorphic to orthomorphic growth of Fe films on Cu₃Au(001)", Phys. Rev. B 66, p. 045402 (2002)
13. L. Petaccia, L. Floreano, A. Goldoni, D. Cvetko, A. Morgante, L. Grill, A. Verdini, G. Comelli, G. Paolucci and S. Modesti, "Order-disorder character of the (3 x 3) to (sqrt(3) x sqrt(3))R30° phase transition

- of Sn on Ge(111)†, Phys. Rev. B 64, p. 193410 (2001)
14. L. Petaccia, L. Floreano, M. Benes, D. Cvetko, A. Goldoni, L. Grill, A. Morgante, A. Verdini and S. Modesti, "Determination of the (3x3)-Sn/Ge(111) structure by photoelectron diffraction†, Phys. Rev. B 63, p. 115406 (2001)
 15. F. Bruno, D. Cvetko, L. Floreano, R. Gotter, A. Morgante, A. Verdini, G. Panaccione, M. Sacchi, P. Torelli, and G. Rossi, "Structure modulated LMDAD effects in bcc-Fe vs rcp-Fe†, J. Magn. Magn. Mater. 233, p. 123 (2001)
 16. T. Greber, J. Wider, A. Verdini, A. Morgante, and J. Osterwalder, "Imaging atom sites with near node photoelectron holography", Europhysics News 32, p. 172 (2001)
 17. P. Luches, C. Giovanardi, T. Moia, S. Valeri, F. Bruno, L. Floreano, R. Gotter, A. Verdini, A. Morgante, A. Santaniello, "Epitaxy of ultrathin CoO films studied by XPD and GIXRD", Surf. Rev. Lett. 9, p. 937 (2001)
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107. B. Quiroga Argañaraz, L. J. Cristina, L.M. Rodríguez, A. Cossaro, A. Verdini, L. Floreano, J.D. Fuhr, J. E. Gayone, H. Ascolani, "Ubiquitous deprotonation of terephthalic acid in the self-assembled phases on Cu(100)", *Phys. Chem. Chem. Phys.* 20 (2018) 4329-4339.
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110. R. Costantini, M. Stredansky, D. Cvetko, G. Kladnik, A. Verdini, P. Sigalotti, F. Cilento, F. Salvador, A. De Luisa, D. Benedetti, L. Floreano, A. Morgante, A. Cossaro, M. DellaAngela, "ANCHOR-SUNDYN: A novel endstation for time resolved spectroscopy at the ALOISA beamline", *J. El. Spect. Rel. Phen.* 229 (2018) 7-12
111. G. Zamborlini, M. Jugovac, L. Floreano, A. Verdini, A. Cossaro, P. Puschnig, D. Lüftner, V. Feyer and C. M. Schneider, "On-surface nickel porphyrin mimics reactive center of enzyme cofactor", *Chem. Comm.* 54 (2018) 13423-13426.

CURRICULUM PROFESSIONALE

Vinai Giovanni Maria

Esperienza professionale

Ricercatore III livello a tempo determinato

Titolo: *Caratterizzazione di nanostrutture di interesse per la spintronica mediante tecniche di magnetometria ottica (MOKE) e tecniche di spettroscopia elettronica con luce di sincrotrone quali dicroismo magnetico in assorbimento (XMCD)*

Periodo di attività: dal 01/06/2018 al 31/05/2019

Ente/Istituzione finanziatrice: CNR-IOM

N. Protocollo: bando n. IOM 001/2018 TS – prot. CNR-IOM n. 67 del 11/1/2018, pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana n. 10 del 2/2/2018

Finalità del progetto: SPRINT – Spin Polarization Research Instrumentation in the Nanoscale and Time domain

Ruolo svolto: - **Organizzazione delle attività scientifiche** dell'apparato sperimentale MBE-CLUSTER e del personale che opera su di esso (un tecnico, uno studente di dottorato, una studentessa di laurea), comprendente sia l'attività giornaliera sull'apparato sperimentale di ricerca scientifica su eterostrutture multiferroiche, che l'attività di manutenzione e sviluppo strumentale a breve e lungo termine (i.e. sviluppo di sistema di focalizzazione per MOKE su microstrutture).

- **Sviluppo di attività di ricerca** tramite l'utilizzo degli apparati sperimentali presenti nella sede di Trieste della facility NFFA (<http://www.trieste.nffa.eu/>), spaziando dalla deposizione per MBE di campioni metallici alla caratterizzazione di luce di sincrotrone. Instaurazione di collaborazioni internazionali. Scrittura di proposal e organizzazione e direzione scientifica di beamtime presso linee di luce.

- **Sviluppo strumentale** del gruppo di camere MBE-CLUSTER e del sistema di misure per effetto Kerr magneto-ottico longitudinale a bassa temperatura.

- **Partecipazione** all'organizzazione del lavoro sulla linea APE-HE del sincrotrone Elettra, che comprende tutti gli aspetti della vita operativa e scientifica della linea (raccolta e stesura dei progetti, organizzazione del calendario, gestione utenti).

- **Pubblicazione di 2 articoli** in riviste scientifiche internazionali.

- **Partecipazione a conferenze internazionali** con 2 presentazioni orali.

Post-Doc presso CNR-IOM

Titolo: *Crescita e caratterizzazione delle proprietà elettroniche e magnetiche di etero-interfacce con spettroscopia 'in-operando' con radiazione di sincrotrone*

Periodo di attività: dal 02/06/2014 al 31/05/2018

Ente/Istituzione finanziatrice: CNR-IOM

Nominativo coordinatore del progetto: Piero Torelli

N. Protocollo: bando n. IOM AR 002/2014 TS del 16/4/2014

Finalità del progetto: Progetto strategico di ricerca di interesse internazionale NFFA Roadmap ESFRI

Ruolo svolto: - **Sviluppo di attività di ricerca** nell'ambito delle eterostrutture multiferroiche, con deposizione e caratterizzazione tramite la strumentazione sviluppata con il sistema di camere da vuoto MBE-CLUSTER e caratterizzazione tramite luce di sincrotrone sulla linea APE-HE.

- **Attività di beamline scientist** presso la linea APE-HE del sincrotrone Elettra, con attività di supporto e collaborazione scientifica con numerosi gruppi di ricerca. In particolare, definizione e messa a punto di proposal, assistenza durante esperimenti di assorbimento di raggi X, di dicroismo circolare in assorbimento, di fotoemissione, di deposizione e

preparazione campioni, di caratterizzazione delle proprietà magnetiche tramite misure di effetto Kerr magneto-ottico.

- **Sviluppo di un sistema di camere da vuoto** (UHV) MBE-CLUSTER per la deposizione di film sottili tramite *molecular beam epitaxy* per caratterizzazione in condizioni di ultra alto vuoto delle proprietà magnetiche, chimiche ed elettroniche, attualmente in uso nell'ambito del progetto NFFA. In particolare, sviluppo, messa in funzione e implementazione di apparecchiature per misure di effetto Kerr magneto-ottico, misure di magneto-resistenza e misure magnetiche sotto tensione elettrica, sia dal punto di vista strumentale che informatico.

- **Pubblicazione di 14 articoli** in riviste scientifiche internazionali.

- **Accettazione di 5 proposal** per l'assegnazione di beamtime sincrotroni.

- **Partecipazione a conferenze internazionali** con 6 presentazioni orali e 1 poster.

Formazione scientifica

Dottorato in Fisica dei Materiali

Titolo del dottorato: *Scalability and improvement of exchange bias properties for Thermally Assisted MRAM*

Sede di svolgimento: Spintec – CEA-Grenoble, Université de Grenoble

Durata: dal 16/12/2010 al 16/12/2013,

Data esame finale: **16/12/2013**

Reperibile presso: <https://tel.archives-ouvertes.fr/tel-01558898>

Ruolo svolto: - Studio della variazione statistica delle proprietà di *exchange bias* su sistemi nanostrutturati in funzione delle proprietà strutturali/morfologiche, per l'implementazione su memorie magnetiche ad attivazione termica (TA-MRAM). In particolare, **deposizione per sputtering e nanostrutturazione** dei campioni tramite litografia in camera bianca, e caratterizzazione tramite misure di microscopia a forza atomica e magnetica (AFM, MFM) e misure di effetto Kerr magneto-ottico focalizzato.

- Studio dell'**ottimizzazione delle proprietà di exchange bias per applicazione tecnologica** (minimizzazione del campo coercitivo e aumento della temperatura di bloccaggio) tramite lo sviluppo di campioni *trilayer*, combinando magnetizzazione nel piano e fuori dal piano. In particolare, deposizione per *sputtering* e caratterizzazione in temperatura tramite misure magnetometriche SQUID.

- **Modellizzazione di sistemi exchange bias** nanostrutturati tramite lo sviluppo in codice Python del modello di Heisenberg di interazione di spin.

- **Pubblicazione di 6 articoli** in riviste scientifiche internazionali.

- **Partecipazione a conferenze internazionali** con 3 presentazioni orali.

Ingegnere Ricerca e Sviluppo

Sede Organismo/Struttura: Crocus Technology

Durata: dal 10/2010 al 12/2010

Ruolo svolto: - Studio della transizione da singolo dominio a vortice in nanostrutture, tramite simulazioni OOMMF e misure di microscopia magnetica (MFM).

Stage di formazione

Sede di svolgimento: Spintec – CEA-Grenoble

Durata: dal 02/2010 a 06/2010

Ruolo svolto: - Studio delle proprietà magnetiche di sistemi *exchange bias* nanostrutturati. In particolare, deposizione per sputtering e nanostrutturazione dei campioni tramite litografia in camera bianca, e caratterizzazione tramite misure di microscopia a forza atomica e magnetica (AFM, MFM).

Sede di svolgimento: Spintec – CEA-Grenoble

Durata: dal 05/2009 a 08/2009

Ruolo svolto: - Caratterizzazione delle proprietà magnetiche di sistemi multilivello pre-patternati per sistemi di memoria magnetici tramite misure di microscopia a forza atomica e magnetica (AFM, MFM).

- **Pubblicazione di 2 articoli** in riviste scientifiche internazionali.

Formazione accademica

Laurea specialistica in Nanotecnologie per le ICT (Classe N. 32/S – D.M. 509/1999)

Sede di svolgimento: Politecnico di Torino

Durata del corso: Anni accademici 2008/2009, 2009/2010

Data esame finale: 24/09/2010

Votazione conseguita: **110/110**

Altre informazioni: Laurea specialistica nell'ambito del Master Nanotech, con tre semestri suddivisi tra gli istituti del Politecnico di Torino, Grenoble INP e EPFL (<http://nanotech.grenoble-inp.fr/funzionamento/>), con valore di doppia laurea italiana e francese.

Laurea specialistica in Master Micro e Nano Elettronica

Sede di svolgimento: Institut Polytechnique de Grenoble

Durata del corso: Anni accademici 2008/2009, 2009/2010

Data esame finale: 04/10/2010

Laurea Triennale in Ingegneria Fisica

Sede di svolgimento: Politecnico di Torino

Durata del corso: Anni accademici 2005/2006, 2006/2007, 2007/2008

Data esame finale: 25/07/2008

Votazione conseguita: **110/110 cum Laude**

Produzione scientifica

23 articoli in riviste scientifiche internazionali con peer review

6 articoli e 2 proceeding di conferenze internazionali come primo autore

Articoli su riviste ad alto high impact: 2 Nano Letters, 1 Nature communication, 1 Nanoscale

ResearcherID : X-1852-2018
Orcid ID : https://orcid.org/0000-0003-4882-663X

Articoli in riviste scientifiche internazionali

1. Titolo: *Magnetic properties of the CoO/Fe(001) system with a bottom-up engineered interface*
Rivista: Journal of Magnetism and Magnetic Materials **475**, 54 (2019)

Elenco autori: A. Brambilla, A. Picone, D. Giannotti, A. Calloni, G. Berti, H. Hedayat, E. Carpena, C. Dallera, M. Zani, **G. Vinai**, P. Torelli, M. Foerster, L. Aballe, M. Finazzi, L. Duò, F. Ciccacci

Ruolo svolto: Sviluppo del setup sperimentale, collaborazione alle misure, revisione dell'articolo.

Codice identificativo (ISSN): 0304-8853

Impact Factor rivista: 3.046 (2017)

Numero citazioni: 0

Altre informazioni: DOI: [10.1016/j.jmmm.2018.11.095](https://doi.org/10.1016/j.jmmm.2018.11.095)

2. Titolo: *Room temperature biaxial magnetic anisotropy in La_{0.67}Sr_{0.33}MnO₃ thin films on SrTiO₃ buffered MgO (001) substrates for spintronic applications*

Rivista: Applied Physics Letters **113**, 052403 (2018)

Elenco autori: S. K. Chaluvadi, F. Ajejas, P. Orgiani, O. Rousseau, **G. Vinai**, A. Yu Petrov, P. Torelli, A. Pautrat, J. Camarero, P. Perna, and L. Mechin
Ruolo svolto: Revisione del proposal, studio di fattibilità, sviluppo del setup sperimentale per l'esperimento, collaborazione alle misure presso MBE-CLUSTER, revisione dell'articolo.
Codice identificativo (ISSN): 0003-6951
Impact Factor rivista: 3.495 (2017)
Numero citazioni: 0
Altre informazioni: DOI: [10.1063/1.5020072](https://doi.org/10.1063/1.5020072)

3. Titolo: *Bonding character and magnetism at the interface between Fe and MoS₂ nanosheets*
Rivista: Physica Status Solidi A **215**, 1800015 (2018)

Elenco autori: R. Mantovan, Y. Matveyev, **G. Vinai**, C. Martella, P. Torelli, A. Molle, S. Zarubin, Y. Lebedinskii and A. Zenkevich
Ruolo svolto: preparazione del setup sperimentale, collaborazione alle misure presso APE-HE, discussione e analisi dati, ricerca bibliografica, revisione dell'articolo.
Codice identificativo (ISSN): 1862-6300
Impact Factor rivista: 1.795 (2017)
Numero citazioni: 0
Altre informazioni: DOI: [10.1002/pssa.201800015](https://doi.org/10.1002/pssa.201800015)

4. Titolo: *Ferroelectric control of the spin texture in GeTe*

Rivista: Nano Letters **18**, 2751 (2018)

Elenco autori: C. Rinaldi, S. Varotto, M. Asa, J. Sławińska, J. Fujii, **G. Vinai**, S. Cecchi, D. Di Sante, R. Calarco, I. Vobornik, G. Panaccione, S. Picozzi, and R. Bertacco
Ruolo svolto: preparazione del setup sperimentale, collaborazione alle misure presso APE, revisione dell'articolo.
Codice identificativo (ISSN): 1530-6984
Impact Factor rivista: 12.08 (2017)
Numero citazioni: 5
Altre informazioni: DOI: [10.1021/acs.nanolett.7b04829](https://doi.org/10.1021/acs.nanolett.7b04829)

5. Titolo: *Strain-induced magnetization control in an oxide multiferroic heterostructure*

Rivista: Physical Review B **97**, 094423 (2018)

Elenco autori: F. Motti, **G. Vinai**, A. Petrov, B. A. Davidson, B. Gobaut, A. Filippetti, G. Rossi, G. Panaccione, and P. Torelli
Ruolo svolto: Sviluppo della tematica scientifica, scrittura del proposal, preparazione dei campioni, misure di effetto Kerr magneto-ottico, XAS, XMCD, caratterizzazione elettrica, analisi dati, contribuzione alla scrittura dell'articolo.
Codice identificativo (ISSN): 2469-9950
Impact Factor rivista: 3.813 (2017)
Numero citazioni: 1
Altre informazioni: DOI: [10.1103/PhysRevB.97.094423](https://doi.org/10.1103/PhysRevB.97.094423)

6. Titolo: *Interdiffusion-driven synthesis of tetragonal chromium (III) oxide on BaTiO₃*

Rivista: Physics Review Materials **2**, 033401 (2018)

Elenco autori: M. Asa, **G. Vinai**, J. L. Hart, C. Autieri, C. Rinaldi, P. Torelli, G. Panaccione, M. L. Taheri, S. Picozzi, and M. Cantoni
Ruolo svolto: Revisione del proposal, studio di fattibilità, caratterizzazione XAS e XPS, analisi dati, contribuzione alla scrittura dell'articolo.
Codice identificativo (ISSN): 2475-9953
Impact Factor rivista: Rank in Category: 284 of 285 Quartile in Category: Q4
Numero citazioni: 1
Altre informazioni: DOI: [10.1103/PhysRevMaterials.2.033401](https://doi.org/10.1103/PhysRevMaterials.2.033401)

7. Titolo: *Study of equilibrium carrier transfer in LaAlO₃/SrTiO₃ from an epitaxial La_{1-x}Sr_xMnO₃ ferromagnetic layer*

Rivista: Journal of Physics Communications **2**, UNSP 025010 (2018)

Elenco autori: F. Telesio, R. Moroni, I. Pallecchi, D. Marré, **G. Vinai**, G. Panaccione, P. Torelli, S. Rusponi, C. Piamonteze, E. di Gennaro, A. Khare, F. Miletto Granozio, and A. Filippetti

Ruolo svolto: Partecipazione al beamtime, revisione dell'articolo.

Codice identificativo (ISSN): 2399-6528

Numero citazioni: 0

Altre informazioni: DOI: [10.1088/2399-6528/aaa943](https://doi.org/10.1088/2399-6528/aaa943)

8. Titolo: *Giant magneto-electric coupling in 100 nm thick Co capped by ZnO nanorods*

Rivista: Nanoscale **10**, 1326 (2018)

Elenco autori: **G. Vinai**, B. Ressel, P. Torelli, F. Loi, B. Gobaut, R. Ciancio, B. Casarin, A. Caretta, L. Capasso, F. Parmigiani, F. Cugini, M. Solzi, M. Malvestuto, and R. Ciprian

Ruolo svolto: Revisione del proposal, studio di fattibilità, sviluppo del setup sperimentale per l'esperimento, misure di effetto Kerr magneto-ottico, XAS, XMCD, caratterizzazione elettrica, analisi dati, scrittura dell'articolo.

Codice identificativo (ISSN): 2040-3364

Impact Factor rivista: 7.233 (2017)

Numero citazioni: 2

Altre informazioni: DOI: [10.1039/c7nr09233d](https://doi.org/10.1039/c7nr09233d)

9. Titolo: *Enhanced magnetic hybridization of a spinterface through insertion of a two-dimensional magnetic oxide layer*

Rivista: Nano Letters **17**, 7440 (2017)

Elenco autori: A. Brambilla, A. Picone, D. Giannotti, A. Calloni, G. Berti, G. Bussetti, S. Achilli, G. Fratesi, M. I. Trioni, **G. Vinai**, P. Torelli, G. Panaccione, L. Duò, M. Finazzi, and F. Ciccacci

Ruolo svolto: Revisione del proposal, studio di fattibilità, collaborazione alle misure presso APE-HE, collaborazione all'analisi dei dati, revisione dell'articolo.

Codice identificativo (ISSN): 1530-6984

Impact Factor rivista: 12.08 (2017)

Numero citazioni: 1

Altre informazioni: DOI: [10.1021/acs.nanolett.7b03314](https://doi.org/10.1021/acs.nanolett.7b03314)

10. Titolo: *Spectroscopic identification of the chemical interplay between defects and dopants in Al-doped ZnO*

Rivista: Physical Chemistry Chemical Physics **19**, 29364 (2017)

Elenco autori: S. Benedetti, I. Valenti, A. di Bona, **G. Vinai**, C. Castan-Guerrero, S. Valeri, A. Catellani, A. Ruini, P. Torelli, and A. Calzolari

Ruolo svolto: Collaborazione alle misure presso APE-HE, collaborazione all'analisi dei dati, revisione dell'articolo.

Codice identificativo (ISSN): 1463-9076

Impact Factor rivista: 3.906 (2017)

Numero citazioni: 1

Altre informazioni: DOI: [10.1039/C7CP05864K](https://doi.org/10.1039/C7CP05864K)

11. Titolo: *Quantifying the critical thickness of electron hybridization in spintronics materials*

Rivista: Nature Communications **8**, 16051 (2017)

Elenco autori: T. Pincelli, V. Lollobrigida, F. Borgatti, A. Regoutz, B. Gobaut, C. Schlueter, T.-L. Lee, D.J. Payne, M. Oura, K. Tamasaku, A.Y. Petrov, P. Graziosi, F. Miletto Granozio, M. Cavallini, **G. Vinai**, R. Ciprian, C.H. Back, G. Rossi, M. Taguchi, H. Daimon, G. van der Laan, and G. Panaccione

Ruolo svolto: Partecipazione al beamtime, collaborazione alle misure ed all'analisi dei dati, revisione dell'articolo.

Codice identificativo (ISSN): 2041-1723

Impact Factor rivista: 12.353 (2017)
Numero citazioni: 2
Altre informazioni: DOI: [10.1038/ncomms16051](https://doi.org/10.1038/ncomms16051)

12. Titolo: *Magnetic anisotropy at the buried CoO/Fe interface*

Rivista: Applied Physics Letters **109**, 232401 (2016)

Elenco autori: D. Giannotti, H. Hedayat, **G. Vinai**, A. Picone, A. Calloni, G. Berti, M. Riva, G. Bussetti, F. Boschini, P. Torelli, G. Panaccione, E. Carpene, C. Dallera, M. Finazzi, and A. Brambilla

Ruolo svolto: Revisione del proposal, studio di fattibilità, collaborazione alle misure presso APE-HE, analisi dati, contribuzione alla scrittura dell'articolo.

Codice identificativo (ISSN): 0003-6951

Impact Factor rivista: 3.495 (2017)

Numero citazioni: 2

Altre informazioni: DOI: [10.1063/1.4971291](https://doi.org/10.1063/1.4971291)

13. Titolo: *New strategy for magnetic gas sensing*

Rivista: RSC Advances **6**, 83399 (2016)

Elenco autori: R. Ciprian, P. Torelli, A. Giglia, B. Gobaut, B. Ressel, **G. Vinai**, M. Stupar, A. Caretta, G. De Ninno, T. Pincelli, B. Casarin, G. Adhikary, G. Sberveglieri, C. Baratto, and M. Malvestuto

Ruolo svolto: Misure di effetto Kerr magneto-ottico, analisi dati, contribuzione alla scrittura dell'articolo.

Codice identificativo (ISSN): 2046-2069

Impact Factor rivista: 2.936 (2017)

Numero citazioni: 5

Altre informazioni: DOI: [10.1039/c6ra18213e](https://doi.org/10.1039/c6ra18213e)

14. Titolo: *Magnetic gas sensing exploiting the magneto-optical Kerr effect on ZnO nanorods/Co layer system*

Rivista: RSC Advances **6**, 42517 (2016)

Elenco autori: R. Ciprian, C. Baratto, A. Giglia, K. Koshmak, **G. Vinai**, M. Donarelli, M. Ferroni, M. Campanini, E. Comini, A. Ponzoni, and G. Sberveglieri

Ruolo svolto: Misure di effetto Kerr magneto-ottico, analisi dati, contribuzione alla scrittura dell'articolo.

Codice identificativo (ISSN): 2046-2069

Impact Factor rivista: 2.936 (2017)

Numero citazioni: 9

Altre informazioni: DOI: [10.1039/c6ra00522e](https://doi.org/10.1039/c6ra00522e)

15. Titolo: *Magnetoresistance of galfenol-based magnetic tunnel junction*

Rivista: AIP Advances **5**, 127128 (2015)

Elenco autori: B. Gobaut, **G. Vinai**, C. Castán-Guerrero, D. Krizmancic, H. Rafaqat, S. Roddaro, G. Rossi, G. Panaccione, M. Eddrief, M. Marangolo, and P. Torelli

Ruolo svolto: Misure di effetto Kerr magneto-ottico ed elettriche, discussione e trattamento dei risultati, contribuzione alla scrittura dell'articolo.

Codice identificativo (ISSN): 2158-3226

Impact Factor rivista: 1.653 (2017)

Numero citazioni: 0

Altre informazioni: DOI: [10.1063/1.4939019](https://doi.org/10.1063/1.4939019)

16. Titolo: *Unraveling the magnetic properties of BiFe_{0.5}Cr_{0.5}O₃ thin films*

Rivista: APL Materials **3**, 116107 (2015)

Elenco autori: **G. Vinai**, A. Khare, D. S. Rana, E. Di Gennaro, B. Gobaut, R. Moroni, A. Yu. Petrov, U. Scotti di Uccio, G. Rossi, F. Miletto Granozio, G. Panaccione, P. Torelli

Ruolo svolto: Sviluppo della tematica scientifica, partecipazione al beamtime, misure XAS, XMCD, XRD, analisi dati, scrittura e revisione dell'articolo.

Codice identificativo (ISSN): 2166-532X

Impact Factor rivista: 4.127 (2017)
Numero citazioni: 4
Altre informazioni: DOI: [10.1063/1.4935618](https://doi.org/10.1063/1.4935618)

17. Titolo: *IrMn microstructural effects on exchange bias variability in patterned arrays of IrMn/Co square dots*

Rivista: Journal of Physics D – Applied Physics **47**, 195302 (2014)

Elenco autori: G. Vinai, J. Moritz, G. Gaudin, J. Vogel, I. L. Prejbeanu, and B. Dieny

Ruolo svolto: Sviluppo della tematica scientifica, preparazione campioni, misure di effetto Kerr magneto-ottico focalizzato, analisi dati, scrittura dell'articolo.

Codice identificativo (ISSN): 0022-3727

Impact Factor rivista: 2.373 (2017)

Numero citazioni: 1

Altre informazioni: DOI: [10.1088/0022-3727/47/19/195302](https://doi.org/10.1088/0022-3727/47/19/195302)

18. Titolo: *Large exchange bias enhancement in (Pt(or Pd)/Co)/IrMn/Co trilayers with ultrathin IrMn thanks to interfacial Cu dusting*

Rivista: Applied Physics Letters **104**, 62401 (2014)

Elenco autori: G. Vinai, J. Moritz, S. Bandiera, I. L. Prejbeanu, B. Dieny

Ruolo svolto: Sviluppo della tematica scientifica, deposizione e caratterizzazione magnetica dei campioni; analisi dati; stesura e revisione articolo.

Codice identificativo (ISSN): 0003-6951

Impact Factor rivista: 3.495 (2017)

Numero citazioni: 5

Altre informazioni: DOI: [10.1088/0022-3727/47/19/195302](https://doi.org/10.1088/0022-3727/47/19/195302)

19. Titolo: *Magnetic properties of patterned arrays of exchange-biased IrMn/Co square dots*

Rivista: Journal of Physics D – Applied Physics **46**, 345308 (2013)

Elenco autori: G. Vinai, J. Moritz, G. Gaudin, J. Vogel, M. Bonfim, F. Lançon, I. L. Prejbeanu, K. Mackay, B. Dieny

Ruolo svolto: Sviluppo della tematica scientifica, deposizione e nanostrutturazione dei campioni; caratterizzazione strutturale e magnetica; analisi dati, stesura e revisione dell'articolo.

Codice identificativo (ISSN): 0022-3727

Impact Factor rivista: 2.373 (2017)

Numero citazioni: 4

Altre informazioni: DOI: [10.1088/0022-3727/46/34/345308](https://doi.org/10.1088/0022-3727/46/34/345308)

20. Titolo: *Enhanced blocking temperature in (Pt/Co)₃/IrMn/Co and (Pd/Co)₃/IrMn/Co trilayers with ultrathin IrMn layer*

Rivista: Journal of Physics D – Applied Physics **46**, 322001 (2013)

Elenco autori: G. Vinai, J. Moritz, S. Bandiera, I. L. Prejbeanu, B. Dieny

Ruolo svolto: Sviluppo della tematica scientifica, deposizione e caratterizzazione magnetica dei campioni; analisi dati; stesura e revisione articolo.

Codice identificativo (ISSN): 0022-3727

Impact Factor rivista: 2.373 (2017)

Numero citazioni: 7

Altre informazioni: DOI: [10.1088/0022-3727/46/32/322001](https://doi.org/10.1088/0022-3727/46/32/322001)

21. Titolo: *Large exchange bias field in (Pt/Co)₃/IrMn/Co trilayers with ultrathin IrMn layers*

Rivista: IEEE Magnetic Letters **3**, 4000204 (2012)

Elenco autori: J. Moritz, G. Vinai, and B. Dieny

Ruolo svolto: Deposizione dei campioni, misure di effetto Kerr magneto-ottico, analisi dati, contribuzione alla scrittura dell'articolo.

Codice identificativo (ISSN): 1949-307X

Impact Factor rivista: 1.568 (2017)

Numero citazioni: 6

Altre informazioni: DOI: [10.1109/LMAG.2012.2184794](https://doi.org/10.1109/LMAG.2012.2184794)

22. Titolo: *Two-bit-per-dot patterned media combining in-plane and perpendicular-to-plane magnetized thin films*

Rivista: Journal of Applied Physics **109**, 083902 (2011)

Elenco autori: J. Moritz, **G. Vinai**, S. Auffret and B. Dieny

Ruolo svolto: Caratterizzazione AFM e MFM, analisi dati, contribuzione alla scrittura dell'articolo

Codice identificativo (ISSN): 0021-8979

Impact Factor rivista: 2.176 (2017)

Numero citazioni: 15

Altre informazioni: DOI: [10.1063/1.3572259](https://doi.org/10.1063/1.3572259)

23. Titolo: *Two-bit-per-dot patterned media for magnetic storage*

Rivista: IEEE Magnetic Letters **2**, 2500104 (2011)

Elenco autori: J. Moritz, C. Arm, **G. Vinai**, E. Gautier, S. Auffret, A. Marty, P. Bayle-Guillemaud, and B. Dieny

Ruolo svolto: Caratterizzazione AFM e MFM, analisi dati

Codice identificativo (ISSN): 1949-307X

Impact Factor rivista: 1.568 (2017)

Numero citazioni: 4

Altre informazioni: [10.1109/LMAG.2010.2098852](https://doi.org/10.1109/LMAG.2010.2098852)

Proceedings in conferenze internazionali

Titolo: *Influence of Mn diffusion on IrMn thickness threshold for the onset of exchange bias in IrMn/Co bilayers*

Rivista: Journal of Physics Conference Series **903**, UNSP 012061 (2017)

Elenco autori: **G. Vinai**, L. Frangou, C. Castan-Guerrero, V. Bonanni, B. Gobaut, S. Auffret, I. L. Prejbeanu, B. Dieny, V. Baltz, and P. Torelli

Ruolo svolto: Sviluppo della tematica scientifica, scrittura del proposal, misure di effetto Kerr magneto-ottico, caratterizzazione XAS, XMCD e XPS, analisi dati, scrittura dell'articolo

Codice identificativo (ISSN): 1742-6588

Numero citazioni: 0

Altre informazioni: DOI: [10.1088/1742-6596/903/1/012061](https://doi.org/10.1088/1742-6596/903/1/012061)

Titolo: *Focused Kerr measurements on patterned arrays of exchange biased square dots*

Rivista: EPJ Web of Conferences **75**, UNSP 05003 (2014)

Elenco autori: **G. Vinai**, J. Moritz, G. Gaudin, J. Vogel, I. L. Prejbeanu, and B. Dieny

Ruolo svolto: Preparazione campioni, misure di effetto Kerr magneto-ottico focalizzato, analisi dati, scrittura dell'articolo

Codice identificativo (ISSN): 2100-014X

Impact Factor rivista: 1.802 (2017)

Numero citazioni: 0

Altre informazioni: DOI: [10.1051/epjconf/20147505003](https://doi.org/10.1051/epjconf/20147505003)

Incarichi in strutture di natura tecnico-scientifica nazionali ed internazionali

Partecipazione a progetti

- Partecipazione attiva a due progetti strategici a valenza di internazionalizzazione:
 - Progetto *NFFA-DEMONSTRATOR ERIA –H2020 NFFA-EUROPE*: Caratterizzazione avanzata mediante microscopia e spettroscopie con luce di sincrotrone di eterostrutture basate su sistemi a forte correlazione elettronica;
 - Progetto *EUROFEL*: Elettrodinamica di bassa energia in sistemi elettronici esotici studiata con spettroscopia infrarossa e terahertz.
- Partecipazione a un *Marie Curie individual Fellowship*: progetto Platone, Horizon 2020.
- Partecipazione al progetto internazionale *NFFA-EU: Nanoscience Foundries and Fine Analysis* – Europe, H2020-EU.1.4.1.2. – Integrating and opening existing national and regional research infrastructures of European interest.
- Collaborazione scientifica all'interno dei seguenti progetti:
 - *PRIN OXIDE* “Interfacce di ossidi: nuove proprietà emergenti, multifunzionalità e dispositivi per l'elettronica e l'energia”
 - *PRIN NEWLI* (NEW Light on transient states in condensed matter by advanced photon - electron spectroscopies, 2016-1019 grant 2015CL3APH);
 - *MINECO* Project Nos. *FIS2015-67287-P LANTHACOR* (Lanthanide coordination chemistry on surfaces) and *FIS2016-78591-C3-1-R SKYTRON* (Towards tailored magnetic skyrmions for spintronic applications in energy saving technologies);
 - Progetto *PON04a2_00490* Ricerca Applicata a Reti di comunicazione M2M e modem integrati innovativi dedicati a servizi avanzati per le Smart Cities – M2M Netergit;
 - *Project ECOS* (grant no. 2017-1622) Electric Control Of Spin in ferroelectric Rashba semiconductors;
 - *Project MAGISTER* No. 2013-0726 Magnetic Information Storage in Antiferromagnet Spintronic Devices.

Supervisore e revisore di Tesi di Laurea Triennale

Tesi di Laurea Triennale in Fisica di Martina Ferlin, Anno Accademico 2015-2016, Università degli Studi di Milano, Facoltà di Scienze e Tecnologie, Corso di Laurea Triennale in Fisica

Durata incarico: dal 11/2016 al 01/2017

Denominazione Organismo/Struttura: Università degli Studi di Milano

Ruolo svolto: - Attività di supervisione e formazione durante lo stage presso la linea APE-HE.

- Revisione della Tesi di Laurea Triennale *FeMn Ultrathin Films on Ferroelectric Surfaces: Epitaxial Growth and Synchrotron Radiation Spectroscopies*.

Collaborazioni scientifiche in corso

- A. Brambilla, Dipartimento di Fisica, Politecnico di Milano;
- M. Cantoni, C. Rinaldi, Dipartimento di Fisica, Politecnico di Milano;
- V. Baltz, B. Dieny, SPINTEC, Univ. Grenoble Alpes / INAC-CEA / CNRS;
- R. Mantovan, CNR-IMM;
- P. King, University of St. Andrews;
- F. Borgatti, CNR-ISMN.

Proposal sottomessi ed accettati presso linee di sincrotrone

- F. Motti, **G. Vinai** et al., *Study of interface-engineered ultrathin $\text{La}_{0.65}\text{Sr}_{0.35}\text{MnO}_3/\text{BaTiO}_3$ heterostructures*, **Elettra Sincrotrone proposal 20180271**
- G. Panaccione, **G. Vinai** et al., *Manipulating the interplay of included ferromagnetism in few-layers VSe_2* , **Diamond Light Source proposal SI21429-1**
- P. Torelli, **G. Vinai** et al., *PEEM investigation of $\text{Fe}_x\text{Mn}_{1-x}$ thin films under polarized ferroelectric substrate*, **Diamond Light Source proposal SI18810**
- **G. Vinai** et al., *Thickness dependent study of $\text{Fe}_x\text{Mn}_{1-x}$ thin films magnetic state under polarized ferroelectric substrates*, **Elettra Sincrotrone proposal 20175448**
- **G. Vinai** et al., *Effects of BaTiO_3 layer on $\text{Fe}_x\text{Mn}_{1-x}$ thin films at ferro/antiferromagnetic transition*, **Elettra Sincrotrone proposal 20170351**
- R. Ciprian, **G. Vinai** et al., *Compositional and structural properties of Co-doped NiMnGa Heusler alloy*, **Elettra Sincrotrone proposal 20145259**
- **G. Vinai** et al., *Role of Mn spin canting in exchange bias properties enhancement of $(\text{Pt/Co})_3/\text{IrMn/Co}$ trilayer structures*, **Elettra Sincrotrone proposal 20145249**

Partecipazione ad esperimenti presso Elettra Sincrotrone

- F. Borgatti et al., *Spin-ARPES investigation of the strain induced effects on the $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ surface layer*, **Elettra Sincrotrone proposal 20180307**
- C. Bigi et al., *Unveiling magnetic impurities impact on the spin-polarised states in transition-metal dichalcogenides: a XAS/SARPES investigation*, **Elettra Sincrotrone proposal 20180395**
- C. Rinaldi et al., *Investigation of the Rashba spin texture in n-type GeTe*, **Elettra Sincrotrone proposal 20180354**
- A. Brambilla et al., *Magnetic properties of metal porphyrins with Co and Ni ion cores in Fe-based spinterfaces*, **NFFA-Trieste proposal 2018_004**
- A. Gerbi et al., *Temperature and strain dependent electronic properties in PLD thin films of the iron-chalcogenide Fe_{1+y}Te* , **NFFA-Trieste proposal 2018_001**
- G. M. De Luca et al., *Investigation of spin-orbit coupling on both strained SrMnO_3 films and bilayers of SrMnO_3/Fe* , **NFFA-Trieste proposal 2017_005**
- S. Benedetti et al., *Plasmon-mediated hot electron injection from Au NP in Al:ZnO films*, **Elettra Sincrotrone proposal 20170371**
- W. Zhang et al., *Oxygenation of two-dimensional (2D) vanadium diselenide*, **Elettra Sincrotrone proposal 20170083**
- C. S. Kumar et al., *Investigation of magnetic anisotropy in sequentially grown $\text{La}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$ films on LSAT (001) substrate*, **NFFA-Europe proposal ID 334**
- R. Ciprian et al., *Magnetoelectric coupling in Co/ZnO/ZnO nanorods hybrid system*, **NFFA-Trieste proposal 2016_007**
- I. Carlomagno et al., *Magnetic characterization of Cobalt-Iridium interface upon Co intercalation under Graphene on Iridium(111)*, **NFFA-Trieste proposal 2016_005**
- R. Mantovan et al., *Electronic properties of ultra-thin MoS_2 films grown by Pulsed Laser Deposition*, **NFFA-Trieste proposal 2016_004**
- I. Aliaj et al., *A study of 2D electron gases at graphene-gated oxide heterostructures*, **NFFA-Trieste proposal 2016_008**

- W. Zhang et al., *Electronic hybridization effects in 2D transition-metal dichalcogenides with ferromagnetic contacts: an in-situ XMCD/XPS study*, **Elettra Sincrotrone proposal 20165019**
- M. Cantoni et al., *XAS and XMLD study of Cr oxides on BaTiO₃ films for applications in antiferromagnetic spintronics*, **NFFA-Trieste proposal 2016_001**
- P.A. Bhoje, *Exploration of possible Half-Metallicity in Cr-based Spinel Chalcogenides*, **NFFA-Trieste proposal 2016_003**
- A. Brambilla et al., *Influence of different surface preparations on the magnetic coupling of C60 fullerene with Fe(001)*, **Elettra Sincrotrone proposal 20150282**
- A. Brambilla et al., *Magnetic properties of ordered CoO nanostructures on Co/Fe(001)*, **Elettra Sincrotrone proposal 20140509**

Partecipazione ad esperimenti presso altri sincrotroni

- G. Panaccione et al., *Lattice-Spin coupling dynamics of the ferroelectric/ferromagnetic La_{0.7}Sr_{0.3}MnO/BaTiO₃ interfaces*, **Spring-8 proposal 2017A1323**
- D. Payne et al., *HAXPES study of M₂Ir₂O₇ (M = Tl, Pb, Bi) pyrochlores*, **Diamond Light Source proposal SI12673**
- R. Moroni et al., *Study of equilibrium carrier transfer in LaAlO₃/SrTiO₃ from an epitaxial La_{1-x}Sr_xMnO₃ ferromagnetic layer*, **Swiss Light Source proposal 20140226**

Presentazioni orali presso conferenze internazionali

Titolo: *Controlling magnetism in Fe_xMn_{1-x}/PMN-PT heterostructures by electrically driven morphological transition*

Conferenza: **MAGNET 2019**, Messina

Altre informazioni:

http://magnet2019.unime.it/files/2018/11/magnet2019_program_2018_11_13.pdf

Titolo: *Fe_xMn_{1-x}/PMN-PT magnetic configuration around ferromagnetic/antiferromagnetic transition*

Conferenza: **JEMS 2018**, Mainz (Germania)

Altre informazioni: <https://jems2018.org/program/>

Titolo: *Fe_xMn_{1-x} thin films at ferro/antiferromagnetic transition on PMN-PT ferroelectric substrates*

Conferenza: **FisMat 2017**, Trieste

Altre informazioni: <http://eventi.cnism.it/fismat2017/submission/calendar>

Titolo: *Fe_xMn_{1-x} thin films at ferro/antiferromagnetic transition on ferroelectric substrates*

Conferenza: **MAGNET 2017**, Assisi (PG)

Titolo: *Magnetic properties of multiferroic thin films and multiferroic heterostructures*

Conferenza: **JEMS 2016**, Glasgow (UK)

Altre informazioni: <http://jems2016.iopconfs.org/programme>

Titolo: *Magnetic properties of Bi₂FeCrO₆ thin film multiferroics by means of x-ray magnetic dichroism*

Conferenza: **DINEMN 2015**, San Sebastian (Spagna)

Altre informazioni: http://www.dicnma.com/archivos_web/DINEMN-2015-PROGRAM.pdf

Titolo: *Exchange bias enhancement in [Pt(Pd)/Co]/IrMn/Co trilayers with ultrathin IrMn through Cu interlayer*

Conferenza: **MMM 2013**, Denver (USA)

Altre informazioni: http://www.magnetism.org/images/docs/mmm_conference_58.pdf

Titolo: *Focused Kerr measurements on patterned arrays of exchange biased square dots*
Conferenza: **JEMS 2013**, Rhodes (Grecia)

Titolo: *Magnetic properties of exchange biased IrMn/Co patterned arrays*
Conferenza: **Intermag 2012**, Vancouver (Canada)

Altre informazioni:

http://www.2012.intermagconference.com/content/Intermag_2012_program.pdf

Poster presso conferenze internazionali

Titolo: *Element specific investigation of the magnetic properties of Bi₂FeCrO₆ thin film multiferroics*

Conferenza: **ICMFS 2015**, Cracovia (Polonia),

Altre informazioni: <http://icmfs2015.agh.edu.pl/program.html>

Competenze personali

Competenze linguistiche

Lingua madre: Italiano

Altre lingue: - Inglese: piena competenza professionale
- Francese: piena competenza professionale

Competenze informatiche

Competenza professionale di trattamento testi, internet ed analisi dati (OriginLab e Igor).
Programmazione di base in linguaggio Visual Basic e Python.

Competenze tecniche/scientifiche

Preparazione e caratterizzazione di campioni:

- Deposizione di campioni tramite tecniche sputtering o Molecular Beam Epitaxy (MBE);
- Nanostrutturazione tramite litografia in camera pulita;
- Caratterizzazione magnetica tramite misura dell'effetto Kerr magneto-ottico (MOKE), misure magnetoresistive, magnetometria VSM o SQUID, microscopia magnetica (MFM);
- Caratterizzazione topografica tramite misure di microscopia atomica (AFM);
- Caratterizzazione strutturale di superfici tramite diffrazione di elettroni a bassa energia (LEED) e spettroscopia Auger (AES).

Competenze acquisite nella gestione di una linea di luce di sincrotrone:

- Caratterizzazione delle proprietà chimiche tramite fotoemissione (XPS) e assorbimento di raggi X (XAS);
- Caratterizzazione delle proprietà magnetiche tramite dicroismo circolare di assorbimento (XMCD);
- Caratterizzazione delle proprietà di accoppiamento magnetoelettrico tramite misure in-operando di dicroismo sotto tensione applicata;
- Caratterizzazione chimica tramite *hard x-ray photoemission* (HAXPES);
- Caratterizzazione delle proprietà chimiche, magnetiche e magnetoelettriche in funzione della temperatura, tramite raffreddamento criogenico con azoto o elio liquido;
- Redazione e revisione di proposal;
- Attività di beamline scientist con gruppi di ricerca internazionali, comprendente l'aiuto in fase di redazione proposal, sostegno tecnico durante le fasi di preparazione all'esperimento, formazione all'utilizzo della linea di luce e dei software di acquisizione e trattamento dati, collaborazione nell'analisi dati e stesura dei risultati scientifici ottenuti.

Competenze acquisite nello sviluppo di camere da vuoto e strumentazione scientifica:

- Test di tenuta da ultra alto vuoto di camere da vuoto, preparazione di *bakeout*, ricerca di perdite di tenuta;
- Test di funzionamento, *degas* e calibrazione di strumentazione da ultra alto vuoto, quali LEED, evaporatori MBE, microbilance al quarzo, *sputtering gun*, filamenti per *annealing*;
- Organizzazione e messa in funzione di *rack* per strumentazione scientifica;
- Collaborazione nello sviluppo del disegno e montaggio di componenti da ultra alto vuoto quali manipolatori, flange speciali e connettori;
- Sviluppo e implementazione di apparecchiature per la misura dell'effetto Kerr magneto-ottico a pressione ambiente ed in condizioni di ultra alto vuoto;
- Sviluppo e implementazione di software per l'acquisizione di misure dell'effetto Kerr magneto-ottico, di magnetoresistenza e di misure elettriche di corrente;
- Acquisto e sostituzione di strumentazione scientifica.