

Rafael Omar FERRAGUT

Place of birth: Buenos Aires (Argentina)

Nationality: Argentinian and Italian

Address: Politecnico di Milano, Polo Territoriale di Como

Via Anzani 42, Como, 22100, Italy

E-mail: rafael.ferragut@polimi.it

<http://www.como.polimi.it/positron>

<https://www.fisi.polimi.it/en/people/ferragut>



POSITION

- 2014- : Associate Professor (tenured position), Department of Physics, Politecnico di Milano. Position obtained by concourse.
- 2011- : Responsible of the Positron Laboratory at the research centre L-NESS in Como, Politecnico di Milano.

EDUCATION

- 1999: Ph.D. in Physics, Thesis: Age-hardening study in Aluminium based alloys, Universidad Nacional del Centro de la Provincia de Buenos Aires (UNICEN), Argentina.
- 1995: Licenciatura en Ciencias Físicas (equivalent to Master in Physics), Thesis: Microstructural analysis of age-hardening alloys based in Al-Zn-Mg, UNICEN.

PROFESSIONAL EXPERIENCE

- 2005-2014: Assistant Professor (tenured position, ricercatore a tempo indeterminato), Department of Physics, Politecnico di Milano. Position obtained by concourse.
- 2002-2004: Member as researcher of Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina (permanent position; leave-of-absence in this period).
- 2000-2004: Assistant Professor. Universidad Nacional del Centro de la Provincia de Buenos Aires (UNICEN). Argentina (tenured position; leave-of-absence in this period).
- 1996-2000: Assistant Professor. UNICEN. Argentina.
- 1990-1995: Undergraduate Teaching Assistant. UNICEN. Argentina.

POSTDOCTORAL FELLOW

- 2001-2004: Visiting scientist. Post doctorate position with Alfredo Dupasquier at the Department of Physics, Politecnico di Milano, Italy. Fellowships: 2001-2002 International Centre for Theoretical Physics (ICTP, Trieste), 2003 Institute for the Physics of Matter (INFM, Genoa) and 2004 Politecnico di Milano.

PHD FELLOW

- 1998-1999: Beca de perfeccionamiento - Comisión de Investigaciones Científicas de la Prov. de Bs. As. (CICPBA).
- 1996-1997: Beca de iniciación - CICPBA (Argentina).

STUDENT FELLOW

- 1994-1995: Beca de entrenamiento - CICPBA (Argentina).

AWARDS

2004: Nano TAP award. Nano Travel and Access Program to Atom Probe measurements. Project: Nanostructural study of light alloys. Australia.

LANGUAGES

Spanish (mother tongue); Italian; English.

REVIEWER OR REFEREE OF RELEVANT MAGAZINES

Nature Materials, Physical Review B, Acta Materialia, Philosophical Magazine, Journal of Applied Physics, and others.

PROJECT REVIEWER

Agencia Nacional de Promociones Científica y Tecnológica (Argentina), Research Fondation - Flanders -FWO (Belgium), MIUR, etc.

SUPERVISOR OF POST-DOCS

2006-2007: M. M. Iglesias, Funding Agency: Program IDEAS, Lombardy Region and European Commission, at Positron Laboratory.

2011-2012: F. Moia, Funding Agency: Lombardy Region 50% + 50% Politecnico di Milano, at Positron Laboratory (Como Campus).

2015-2018: S. Aghion, Funding Agency: Politecnico di Milano, at Positron Laboratory (Como Campus).

DIRECTION OF THESIS

Physics Doctorate -PhD- (6)

- 2018-2021: Valerio Toso. "Study of the interferometric and gravitational behavior of antimatter". Department of Physics. Politecnico di Milano. Direction: Rafael Ferragut (in progress).
- 2014-2017: Craig W. Evans. "Mesoporous materials for positronium production in transmission geometry". Department of Physics. Politecnico di Milano. Direction: Rafael Ferragut.
- 2012-2014: Stefano Aghion. "Study of thin films and porous materials by means of Positron Annihilation Spectroscopy". Department of Physics. Politecnico di Milano. Direction: Rafael Ferragut.
- 2007-2009: Alberto Calloni. "Positron beam spectroscopy in thin layers and porous materials". Department of Physics. Politecnico di Milano. Direction: Alfredo Dupasquier and Rafael Ferragut.
- 2006-2008: Fabio Moia. "Vacancy-solute interaction in Mg-rare earth alloys". Department of Physics, Politecnico di Milano. Direction: Alfredo Dupasquier and Rafael Ferragut.
- 2004-2006: Marina Marta Iglesias. "The CDB method applied to the study of aluminium nanostructures and its alloys". Department of Physics. Politecnico di Milano. Direction: Alfredo Dupasquier and Rafael Ferragut.

Physics Grade -Master- (4)

- 2015: Erasmo Dei Cas. "Studio di materiali mesoporosi per la produzione di positronio freddo". Department of Physics. Politecnico di Milano. Direction: Rafael Ferragut and Stefano Aghion.
- 2014: Luca Lucera. "Light emission from zinc oxide nanoforest plasma". Politecnico di Milano. Direction: Rafael Ferragut and Helena Silva.
- 2011: Stefano Aghion. "Studio di materiali mesoporosi per applicazioni avanzate mediante spettroscopia di annichilazione di positroni". Department of Physics. Politecnico di Milano. Direction: Rafael Ferragut.
- 2011: Gaia Tosi. "Produzione di positronio in materiali porosi per l'esperimento AEGIS sull'antimateria al Cern. Department of Physics". Università degli Studi di Milano. Direction: Rafael Ferragut and Fabrizio Castelli.

Computing Engineering Grade -Master- (1)

- 2006: Angeles Macuso. "Sistema de Procesamiento de Datos para Espectroscopía Temporal de Aniquilación de Positrones". Facultad de Ciencias Exactas, UNCentro. Direction: Rafael Ferragut and Hernán Cobo.

Physics Engineering Grade -Bachelor- (23 students)

Daniele Ronchetti (Sep/2018), Iorgo Giacomo Argyropoulos (Jul/2018), Alessio Magni (Sep/2015), Cecilia Landini (Sep/2015), Enrico Talamas (Sep/2015), Francesca Luoni (Sep/2015), Giovanni Casula (Sep/2013), Andrea Sattin (Sep/2013), Valerio Bitetta (Sep/2011), Lorenzo Baldrati (Sep/2011), William Capra (Sep/2011), Lara Sormani (Sep/2011), Eric Vezzoli (Sep/2010), Luca Lucera (Sep/2010), Tommaso Zandrini (Sep/2010), Valeria Rossi (Sep/2010), Marta Galbiati (Sep/2008), Andrea Bertelè (Sep/2008), Graciela Ferreira (Dec/2007), Filippo Cavalca (Jul/2007), Nur Fadel (Sep/2005), Sara Bortot (Sep/2005), Ana Huarte (Mar/2001).

TEACHING EXPERIENCE

- 2018-19 Physics: in average 200 students, credits: 7, lesson: 42 h + 28 h. Politecnico di Milano, Milano-Bovisa.
- 2009-18 Physics: in average 130 students, credits: 12, lesson: 72 h + exercises: 48 h. Politecnico di Milano. Como Campus.
- 2018-19 Semiconductor Physics (Master): students: 10, credits: 5, lesson: 28 h and exercises: 22 h. Politecnico di Milano. Leonardo-Milan.
- 2015-17 Semiconductor Physics (Master): students: 9, credits: 5, lesson: 28 h and exercises + laboratory: 22 h. Politecnico di Milano. Como Campus.
- 2009-17 Responsible of courses of Physics, School of Industrial and Information Engineering, Politecnico di Milano. Como Campus.
- 2007-08 Mechanics and Thermodynamics: in average 110 students, credits: 7.5, lesson: 45 h. Politecnico di Milano. Como Campus.
- 2005-08 Electrostatics and Magnetostatics: in average 120 students, credits: 5, lesson: 30 h + exercises: 18 h. Politecnico di Milano. Como Campus.
- 2003-05 Mechanics and Thermodynamics: in average 114 students, credits: 7.5, lesson: 45 h (contract professor). Politecnico di Milano. Como Campus.
- 2002-2003: Teacher Assistant undergraduate courses. Exercises and Laboratories of the course Physics A+B. (Mechanics, Thermodynamics, Electrostatics and Magnetostatics). Politecnico di Milano. Leonardo-Milan.
- 2001-2002: Teacher Assistant of undergraduate courses. Laboratories of the course Physics A+B. Politecnico di Milano. Como Campus.
- 1996-2000: Teacher Assistant of undergraduate courses. Physics and Electronics (Electricity and Magnetisms/Mechanics and Thermodynamics/Digital Electronics) UNICEN. Tandil (Argentina).
- 1993-1995: Assistant of undergraduate courses (as Student). Exercises and Laboratories of the course Electricity and Magnetisms, UNICEN. Tandil (Argentina).

OTHERS ACADEMIC RESPONSIBILITIES

- 2016: Member of the Doctoral Thesis Examination Committee: Eneko Axpe. Spain, October 23rd 2015.

- 2017: Member of the Doctoral Thesis Examination Committee: Zeudi Mazzotta, Giacomo Guarnieri and Jacopo Trapani. January 19th 2017. Università degli Studi di Milano. Milan.
- 2018: Member of the Doctoral Thesis Examination Committee: Craig W. Evans, Luca Anzi and Andrea Ballabio Como. February 23rd 2018. Politecnico di Milano, Como Campus.
- 1999-2000: Departmental Counsellor, Department of Physics (researcher in formation). Facultad de Ciencias Exactas, UNICEN, Argentina.
- 1991-1995: Departmental Counsellor, Department of Physics (student). Facultad de Ciencias Exactas, UNICEN, Argentina.

ACTIVE SCIENTIFIC COLLABORATIONS

- AEgIS (Antihydrogen Experiment: gravity, Interferometry, Spectrometry) collaboration at CERN.
- Northwestern University (USA), Department of Chemistry and the Materials Research Center Prof. Antonio Facchetti and Prof. Tobin Marks.
- Jet Propulsion Laboratory - NASA (USA), Dr. M. P. Petkov and Dr. S. M. Jones.
- Istituto Nazionale di Fisica Nucleare - INFN (Italy). Dr. Marco Gianmarchi.
- Laboratory for High Energy Physics (LHEP) - University of Bern (Suisse). Dr. Ciro Pistillo.

FINANCED PROJECTS (some)

- AEgIS project (INFN, Milano Unit, Responsible: Dr. Marco G. Gianmarchi). 2008-continue. Local Responsible (Politecnico di Milano).
- Polo Territoriale di Como. Politecnico di Milano. 2010-continue. Positron Group, L-NESS. Responsible.
- Electric Control of Magnetization in Spintronic Devices (ECoMag). *Criple Foundation*. 2011-2013. Positron Group. Task-leader.
- PRIN 2004, Coordinator: Alfredo Dupasquier. Period: 2004-2007. Participant.
- NANO TAP GRANT - TAP # 4023: Nanostructural study of light alloys. Sydney (Australia), 07/2004. Responsible.
- PICT 3-12739: Agencia Nacional de Investigaciones Cientificas y Tecnologicas (Argentina). Project: MICROESTRUCTURA Y DEFECTOS EN SEMICONDUCTORES: US\$ 25,400. Period: 2002-2003. Responsible.
- CONICET (Argentina). Fondo para la Investigación Científica y Tecnológica. Period: 1998-2001. Coordinator: Alberto Somoza. Participant.
- PICT 4318/97: Agencia Nacional de Investigaciones Cientificas y Tecnologicas (Argentina). Coordinator: Alberto Somoza. Participant.

PARTICIPATION IN RESEARCH INSTITUTIONS (Local and International)

- Member of the Executive Committee: AEgIS experiment at CERN. 09/2013-continue.
- Secretary of the Research Lines 4 and 5: Department of Physics. Politecnico di Milano. 09/2013-continue.
- Team Leader (Politecnico di Milano) AEgIS experiment at CERN 06/2013- continue.
- Member of the Executive Board: Interuniversity Centre L-NESS 01/2010- continue.
- Departmental Counsellor, Department of Physics (as researcher in formation). Facultad de Ciencias Exactas, Universidad Nacional del Centro de la Provincia de Buenos Aires. 01/1999-12/2000.
- Departmental Counsellor, Department of Physics (as student). Facultad de Ciencias Exactas, Universidad Nacional del Centro de la Provincia de Buenos Aires. 01/1991-12/1995.

TECHNOLOGY TRANSFER

- Development of a system for telephone calls from tetraplegic people (Sep/2012). First prototype used by Prof. Alfredo Dupasquier. Feasibility study of a patent.
- SATA S.p.A (Argentina). Advisor for error calculation and propagation (Jan/2000). Department of Metrology and Quality Control: SATA Argentina S.A.

CONFERENCES AND SCHOOLS

He participated in many schools and conferences (more than 50) with contributed and invited talks.

List of the recent conferences in which RF has presented invited talks:

- “18th International Conference on Positron Annihilation (ICPA-18)” Orlando, USA (August 19th-24th, 2018).
- The International Workshop on Positron Studies and Defects 2017 (PSD-17) Dresden (September 3rd-8th, 2017).
- International Forum on Advances in Radiation Physics, Buenos Aires (May 3rd-6th 2017).
- “11th International Workshop on Positron and Positronium Chemistry (PPC-11)” Cidade de Goa, Goa, India, (November 9th-14th, 2015).
- “Energy, Materials and Nanotechnology (EMN) Meeting 2014: Defects in Electronic and Photonic Materials”, Cancun, Mexico, (Programmed: 9-12 June, 2014).
- “13th International Workshop on Slow Positron Beam Techniques and Applications”, Munich (Sep 15th-20th 2013).
- “7th International conference on Positron Studies of Defects”, Delft, The Netherlands (Aug 28th-Sep 2nd, 2011).
- “Conference of Precision Physics of Simple Atomic Systems 2010 (PSAS 2010)”, Les Houches, France (Maggio/Giugno, 2010).

PUBLICATIONS

The contributions of RF are documented by about 140 publications (international journals and proceedings).
Current Hirsch index (h): 23.

->[Click here to see the publications list](#)<-

Other sources

->[Click Google Scholar](#)<-

->[Click Scopus](#)<-

->[Click ORCID](#)<-