

PERSONAL INFORMATION



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🌐 <http://www.lnf.infn.it/dtecnica/SPCM/spcm.htm>

Sex Male | Date of birth 23 September 1964 | Nationality Italian

WORK EXPERIENCE

15 Feb 95 - Present

"Dirigente Tecnologo" (Technical Manager - INFN Top level since 1 Jan 09)

Istituto Nazionale di Fisica Nucleare - Laboratori Nazionali di Frascati , Frascati (Italy)

Head of Mechanics Design and Construction Department, since 1 Aug 1998.

This department (up to 20 people) provides technical (mechanics) support for design, construction and installation of particle physics experiments.

Planning, coordinating and managing the activity of 5 Units composing the Department: Mechanical Design, Metrology, Metal Carpentry, Metal Warehouse, Machine Shop.

Major contribution to INFN particle physics experiments:

CUORE (Gran Sasso Lab)

Engineering Coordinator in charge to integrate all the sub-systems in an ultra cold (1 ton detector @ 0,01 K) and ultra pure (radiation) experiment for Neutrinoless Double Beta Decay study. In charge of mechanical installations in underground Lab.

OPERA (Gran Sasso Lab)

Project Leader of mechanical structure for target support (mass 1700 t, extra target material 0,4%); LNF responsible for target production (Brick Assembly Machine: 200.000 "bricks" in 1.5 years).

LHCb (CERN)

Designing the mechanical support structure of 5 Muon Stations (450 m², 6400 kg, radiation length <0,04 X₀ for first station, 1 mm precision).

ATLAS (CERN)

Overseeing design, construction and commissioning of an automatic machine for wiring the tubes for Muon Chambers (30.00 units production, 100 units/day, precision 20micron); designing a transportation system for road transfer from LNF to CERN for assembled chambers.

KLOE (Frascati Lab)

Responsible engineer for design, construction and installation of all the mechanical parts of the experiment: Iron Yoke (mass 800 t), EMC Endwall (4 modules, mass 10 t each), EMC Barrel (24 modules, mass 4 t each). Coordinating roll-in (15 m), uplift (1.4 m) and aligning (precision 1 mm) of the whole experiment (mass 1000 t, size 8 m x 13 m x 10 m).

1 Jun 93 - 19 Dec 94

Guest Engineer

Fermi National Accelerator Laboratory , Chicago (USA)

Working in Research Division/Collider Detector Department for **CDF** experiment:

SVX II Silicon Detector

Mechanical design of whole detector, thermal and structural FEM analysis; mechanical and fluid dynamic design of Be bulkhead, thermal and fluid dynamics tests.

SVX' Silicon Detector

Cooling system construction, test and installation; detector installation inside CDF experiment (supervised by Joe Incandela).

- 5 Feb 93 - 31 May 93 **Independent Consultant**
Istituto Nazionale di Fisica Nucleare - Sezione di Pisa , Pisa (Italy)
 Engineering and designing (CAE/CAD) for particle physics experiments: **CDF , VIRGO**.
- 4 Jan 93 - 4 Feb 93 **Independent Consultant**
Università "La Sapienza" - Mechanics and Aeronautics Department , Roma (Italy)
 Fluid dynamics measures: Laser Doppler Anemometry, Particle Image Velocimetry.
- 3 Oct 91 - 3 Jan 93 **"Sottotenente - Genio Aeronautico" (Lieutenant - Aeronautical Engineering)**
Aeronautica Militare (Italian Air Force) , Amendola (Foggia) (Italy)
 Managing Maintenance Dept. Personnel (40 people) in absence of Dept. Commander;
 teaching aerodynamics to trainees flying officers;
 testing technical equipment to be furnished to Italian Air Force.

EDUCATION AND TRAINING

- 17 Jun 92 **"Abilitazione professionale" (Qualification to practice as Engineer)**
 Ministero dell'Università e della Ricerca Scientifica e Tecnologica, Roma (Italy)
- 9 Jul 91 **"Laurea: Ingegneria Aeronautica" (Degree: Aerospace Engineering)** 110/110
 Università "La Sapienza", Roma (Italy)
- Jul 83 **"Diploma di Maturità Scientifica" (Scientific High School)** 57/60
 Liceo Scientifico "Amedeo Avogadro", Roma (Italy)

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
[Common European Framework of Reference for Languages](http://www.cedefop.europa.eu/en/quality/1187)

Organisational / managerial skills

Excellent leadership, decision making and team managing skills (responsible for teams up to 20 people and coordinator of mechanical engineering in experiments up to 150 people).

Excellent organizational skills with long-term experience in activity planning, personnel training, as well as in maintenance, upgrading and acquisition of technical equipment.

Job-related skills

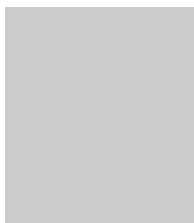
Solid experience in project managing: preliminary study, design, engineering, analysis, construction and installation.




Direct experience (direction) in installation of big structures and apparatuses in limited and uneasy spaces, dealing also with transport, logistic and safety issues.

Long-term experience in design, analysis, construction, of low mass, high precision mechanical parts.

PERSONAL INFORMATION

Vincenzo Patera



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Sex Male | Date of birth 10/06/1962 | Nationality Italy

WORK EXPERIENCE

- 2002-2014 Permanent Associate Professor at Engineering faculty of University "La Sapienza" of Roma
- 1999-2002 Associate Professor at Engineering faculty of University "La Sapienza" of Rome
- 1992-1999 Researcher of Engineering faculty of University of Rome "La Sapienza" at Department of Energetics.
- 1992 Visiting Researcher at California Institute of Technology.
- 1990-1992 Researcher Istituto Nazionale di Fisica Nucleare at Laboratori Nazionali di Frascati
- 1988-1990 Research grant of Istituto Nazionale di Fisica Nucleare (INFN) at Laboratori Nazionali di Frascati

Business or sector Research/University

EDUCATION AND TRAINING

- 1982-1987 Degree in Physics (Elementary Particle Physics): 110/110 cum laude at Universita' di Roma "La Sapienza" Replace with EQF (or other) level if relevant

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	B2I	B2	C1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills Good communication skills gained through my experience as university professor and conference speaker

Organisational / managerial skills Good managerial/leadership skills: has been the leader of international research groups

Computer skills Deep knowledge of the Linux and MacOSX OS. Good knowledge of WINDOWS OS. Good knowledge of C, C++, Fortran programming languages
Good command of Microsoft Office™ , ROOT, FLUKA package

Driving licence ▪ B

ADDITIONAL INFORMATION

Projects

- 2006-2009 Local coordinator at Energetic department of the PRIN project (Research Project of National Relevance) focused on "Read-out optimization and DAQ electronics development of a scintillating fiber tracking calorimeter"
- 2009-today Local coordinator fo the INFN project TPS (Treatment Planning System for hadrontherapy) at LNF
- 2010-today Co-Spokeperson of the FIRST (Fragmentation of Ions Relevants for Space and Therapy) experiment at GSI laboratory (Darmstadt)
- 2010-today Coordinator of the project of the Centro FERMI "Innovative non invasive imaging of dose release in hadrontherapy"
- 2012-today Local coordinator at S.B.A.I department of Sapienza University of the PRIN project (Research Project of National Relevance) INSIDE: "Innovative Solution of Imaging and Dosimetry in Hadrontherapy"
- 2012-today Coordinator of the Flagship Project (Progetto Premiale) of the M.I.U.R. for the Museo storico della Fisica e Centro Studi Enrico Fermi : "Multiple source, real-time Imaging for Hadrontherapy "
- 2012-today Principal Investigator of the Italian Institute of Technology (IIT) in the project "Novel strategies for the treatment and the imaging of brain tumors through targeting cancer stem cell-specific signaling pathways"

Memberships

- 2002-2005 Member of the Executive Committee of the Energetic Department of Rome University "La Sapienza".
- 2003-2009 Member of the Panel for the TARI (Transnational Access to Research Infrastructure) funds assignment of Laboratori Nazionali del Gran Sasso of INFN
- 2004-2007 Member of evaluation boards for permanent positions of researcher in experimental physics (FIS01) at Perugia University and Lecce.
- 2004-2008 Member of the evaluation board for the final PhD examination at Rome University' "Sapienza", Milano University and Torino University .
- 2001-2007 Member of the scientific committee coordinating the activity of the Laboratori Nazionali del Gran Sasso dell'IN
- 2006- 2009 Member of the Panel for the TARI funds assignment of the European Network of Laboratories for the underground physics:Boulby(EN)-Canfranc(ES)-Modane(FR)-LNGS(IT)
- 2010-2014 Member of the FLUKA Scientific Committee

Publications

Author or co-author of more than 100 scientific papers on refereed international journals and more than 300 talk or communications to international workshops and conferenes

Referee/reviewer 2005-2006 Technical reviewer of CIVR (Comitato di Indirizzo per la Valutazione della Ricerca) of Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR)
 2007- today Referee of Padova University for the assignment of research grants in physics.
 2008- today Referee for the approval of the PRIN-FIRB research project of MIUR
 2008-today Policy Board Member of the KLOE-2 experiment at LNF
 2011-today M.I.U.R. (Italian Ministry of Education, University and Research) referee for the research evaluation: VQR-2004-2010
 2012-today Reviewer of International Scientific Journals (Nuclear Instruments and Methods, Journal of Radiation Research)

Conferences & Seminars

- First presentation of the joint results of MACRO and EAS-TOP experiment, Int. Conf. on High Energy Physics of European Physics Society, Madrid (1989)
- Talk on the joint data dating in the period 1988-1991 of the MACRO and EAS-TOP experiments: Int. Conf. on Theoretical Aspects in Underground Physics (TAUP), Toledo (1992)
- June 1992: Seminar: "The KLOE experiment at DaΦne" al High Energy Physics Department del California Institute of Technology.
- Talk on "New phenomenologic description of the e.m. component of E.A.S." : Int. Conf. on Frontier Object in Astrophysics and Particle Physics ,Vulcano (1994).
- Talk on "Accuracy of the KLOE experiment in the Re(e/e) measurement" Workshop on Physics and Detectors for DAFNE, Frascati (1991)
- Invited talk on "Status of the KLOE experiment", Int. Workshop on K-Physics ad Orsay (1996).
- Invited talk on "Status of the KLOE experiment", XXXVII Recontres de Moriond , Les Arc (Marzo 2002).
- Invited review talk on "Rare K decays and CP,CPT violation" all' International Conference of High Energy Physics (ICHEP) 2004, Pechino
- March 2006: Seminar at CERN "Recent Results of KLOE at Dafne"
- November 2008 Invited talk on "Future experiments at DAFNE", International Conference on Particles And Nuclei (PANIC08) , Eilat, Israel
- December 2009 : Seminar "The FIRST experiment on fragmentation of high-energy heavy ions of biomedical interest at GSI" al GSI
- February 2012 Talk on "Fragmentation measurements of 12C ion on C and Au target with the FIRST experiment at GSI ", ICTR-PHE conference, 2012, Geneva
- June 2012 : Seminar at Centro Nazionale di Adroterapia Oncologica (CNAO) in Pavia : Measurement of flux of prompt photons, charged particles and gamma PET from 12C therapeutical beam on PMMA target
- June 2013 invited talk on "Nuclear fragmentation measurements for hadrontherapy "at International Nuclear Physics Conference (INPC2013) Firenze
- October 2013 invited talk on " The FIRST experiment:: Fragmentation of Ions Relevants for Space and Therapy" at International Conference on Nuclear Fragmentation 2013 (NUFRA2013) Kemer, Turkey
- January 2014 : Ludwig-Maximilians-Universität Colloquium on "Nuclear aspects in hadrontherapy", Munich, Germany
- February 2014: talk on " The INSIDE project: an integrated monitoring system for the on-line assessment of particle therapy treatment accuracy", ICTR-PHE 2014, Geneva

Breve Curriculum Vitae di Chiara Brofferio

Chiara Brofferio è professore associato presso il Dipartimento di Fisica dell'Università di Milano Bicocca dal 1 marzo 2006. E' titolare del corso di "Rivelatori di radiazioni" e del "Laboratorio di Misure Nucleari e Subnucleari" per la Laurea Specialistica in Fisica. In passato è stata titolare del corso di "Introduzione alla Fisica Nucleare" e del corso di "Complementi di Fisica ed Astrofisica Nucleare" per la Laurea Triennale in Fisica ed Astronomia, ed è stata responsabile del Laboratorio di Fisica Generale per la Laurea Triennale in Scienze Ambientali. E' ed è stata relatore di tesi di Laurea Triennale e Specialistica in Fisica, è stata membro della Commissione Didattica del corso di laurea (triennale e specialistica) in Fisica nel triennio 2004-2006 ed è membro del Collegio dei Docenti di Dottorato di Milano-Bicocca dal 1998. Ha ottenuto l'Abilitazione Scientifica Nazionale per il ruolo di Professore Ordinario nella tornata del 2012.

Svolge esperimenti di fisica delle particelle senza acceleratori, basati sull'uso di bolometri, presso la sezione di Milano-Bicocca dell'INFN e presso i Laboratori Nazionali del Gran Sasso, con particolare riguardo alla ricerca del Doppio Decadimento Beta. Ha contribuito a portare i bolometri ad un elevatissimo livello di precisione, realizzando rivelatori per raggi X e per particelle alfa con risoluzioni energetiche molto più elevate di quelle ottenibili con rivelatori convenzionali, e a realizzare i più massivi rivelatori bolometrici di raggi gamma. Le sue competenze professionali spaziano pertanto dalla tecnologia del vuoto e delle temperature ultra basse alla progettazione, realizzazione, messa in opera ed ottimizzazione di rivelatori criogenici. Ha inoltre ampie competenze nel campo della radioattività naturale e della fisica del neutrino.

Dal 2004 al 2011 è stata coordinatore della parte di progetto, costruzione ed assemblaggio del rivelatore per CUORE, un esperimento di nuova generazione per eventi rari, nonché chair dello Speakers Board dal luglio 2009 a novembre 2011. Da novembre 2011 è stata Deputy Chair prima ed ora Chair del Collaboration Council di CUORE. In questi ruoli ha dimostrato competenze organizzative e gestionali non solo all'interno della collaborazione, ma anche nei contatti con le Istituzioni finanziatrici e con ditte esterne. E' stata anche Responsabile Locale di 3 PRIN cofinanziati dal MIUR.

E' referee di riviste scientifiche internazionali e di progetti scientifici finanziati dall'INFN e dal MIUR. E' stata membro del Conseil Scientifique du LPC, Caen (Francia) per il biennio 2006 - 2007. Ricopre dal 2009 il ruolo di Coordinatore della linea Scientifica 2 dell'INFN per la Sezione di Milano-Bicocca.

Ha tenuto relazioni su invito a conferenze internazionali sul Decadimento Doppio Beta e sui rivelatori a basse temperature e sulle loro applicazioni, e numerose presentazioni su invito della propria attività di ricerca. E' autrice o co-autrice di circa 200 articoli su rivista scientifica o proceedings di conferenza, con un h-index di 29 ed un i10-index di 64 (Google Scholar).