

**Massimo Ferrario** è attualmente Dirigente di Ricerca presso i Laboratori Nazionali di Frascati dell'INFN e Project Leader della struttura di ricerca EuPRAXIA@SPARC\_LAB, sede italiana del progetto Europeo EuPRAXIA. Ha lavorato nel campo degli acceleratori lineari di particelle, dei laser ad elettroni liberi e delle nuove tecniche di accelerazione. Insegna "Fisica dei Fasci ad Alta Brillanza" presso l'Università degli Studi di Roma "La Sapienza" per il Dottorato di Ricerca in Fisica degli Acceleratori. È anche membro della CERN Accelerator School.

## ESPERIENZA PROFESSIONALE

DA AGOSTO 2022 A OGGI	VICE DIRETTORE GENERALE
Datore di lavoro	INFN – Amministrazione Centrale – Frascati (RM)
DA AGOSTO 2020 A OGGI	DIRETTORE DELLA DIREZIONE SERVIZI ALLA RICERCA
Datore di lavoro	INFN – Amministrazione Centrale – Frascati (RM)
DA SETTEMBRE 2020 A LUGLIO 2021	RESPONSABILE DELLA DIVISIONE RECLUTAMENTO E TRATTAMENTO ECONOMICO
Datore di lavoro	INFN – Amministrazione Centrale – Frascati (RM)
SETTEMBRE 2019	DOCENTE
Datore di lavoro	Faticoni S.p.A. - Cagliari
DA SETTEMBRE 2016 AD AGOSTO 2019	DIRIGENTE DELL'AREA RICERCA, INTERNAZIONALIZZAZIONE, TRASFERIMENTO TECNOLOGICO E TERZA MISSIONE
Datore di lavoro	Università degli Studi di Sassari
OTTOBRE 2017	DOCENTE "MASTER IN CONTRATTUALISTICA PUBBLICA"
Datore di lavoro	ANCITEL SARDEGNA
DA MARZO 2017 A LUGLIO 2017	DIRIGENTE DELL'AREA INFORMATICA E INNOVAZIONE TECNOLOGICA
Datore di lavoro	Università degli Studi di Sassari
AGO 2015 – SETT 2015	CONSULENTE
Datore di lavoro	Azienda Ospedaliero Universitaria di Sassari
MAG 2015 – LUG 2015	DOCENTE DI PROJECT MANAGEMENT
Datore di lavoro	Università degli Studi di Sassari
SETT 2014 – GEN 2015	PROJECT MANAGER
Datore di lavoro	Università degli Studi di Sassari
2013 - 2014	DOCENTE
Datore di lavoro	Esep Nord Sardegna – Ente di formazione
FEB 2002 – NOV 2013	RESPONSABILE AMMINISTRAZIONE, FINANZA E SVILUPPO
Datore di lavoro	Gruppo Novafin: Novadata S.r.l. con unico socio e Novaco S.r.l. con unico socio – Sassari
Tipo di azienda o settore	Opere pubbliche - Costruzioni - Immobiliare
2003 – 2004	MEMBRO DEL CONSIGLIO DI AMMINISTRAZIONE
Datore di lavoro	Sartecna S.c.ar.l. e Maresar S.c.a.r.l.
2001 - 2002	DOCENTE PROJECT MANAGEMENT E MICROSOFT PROJECT
Datore di lavoro	Enaip Sardegna – Ente di formazione
1996 - 2001	CONSULENTE
Datore di lavoro	Studio Sardara e Copafin S.r.l. – Sassari
1994	CONSULENTE
Datore di lavoro	Axios S.n.c. - Sassari

## ISTRUZIONE E FORMAZIONE

**MOOC CON ATTESTATO FINALE POSITIVO**

FEBRUARY 2020	Certificate – LEARN MOODLE 3.8 BASIC – MoodleHQ
GENNAIO 2020	Certificato – BRIDGING THE GAP BETWEEN STRATEGY DESIGN AND DELIVERY, Coursera – Brightline Project Management Institute
GENNAIO 2020	Certificato – DESIGN THINKING FOR INNOVATION, Coursera – University of Virginia
LUGLIO 2019	Certificato - CLD277x: MICROSOFT SERVICE ADOPTION SPECIALIST, Microsoft through edX
FEBBRAIO 2016	Certificato - INSPIRING AND MOTIVATING INDIVIDUALS, Coursera – University of Michigan
GENNAIO 2016	Certificato - AGILE PLANNING FOR SOFTWARE PRODUCTS, Coursera – University of Alberta
NOVEMBRE - DICEMBRE 2015	Certificato - NGIX; THE NEXT GENERATION OF INFRASTRUCTURE DelftX, an online learning initiative of Delft University of Technology through edX
NOVEMBRE 2015	Certificato - MANAGING TALENT, Coursera – University of Michigan
NOVEMBRE 2015	Certificato - SCALING OPERATIONS: LINKING STRATEGY AND EXECUTION, Coursera – Northwestern University

DICEMBRE 2014	Certificato - <a href="#">AN INTRODUCTION TO FINANCIAL ACCOUNTING, THE WHARTON SCHOOL UNIVERSITY OF PENNSYLVANIA</a> – Coursera.org
LUGLIO 2014	Attestato di partecipazione - <a href="#">ELEMENTI DI DIRITTO AMMINISTRATIVO, REGIONE TOSCANA</a> - Progetto TRIO
GIUGNO – LUGLIO 2014	Certificato - <a href="#">FINANCING AND INVESTING IN INFRASTRUCTURE</a> , Università Bocconi – Coursera.org
SETTEMBRE – NOVEMBRE 2013	Certificato - <a href="#">AN INTRODUCTION TO OPERATIONS MANAGEMENT</a> The Wharton School University of Pennsylvania – Coursera.org
SETTEMBRE 2015	Certificato - DAT206x: <a href="#">EXCEL FOR DATA ANALYSIS AND VISUALIZATION</a> - Microsoft through edX
GIUGNO 2015	Certificato - EX101: <a href="#">DATA ANALYSIS - TAKE IT TO THE MAX</a> DelftX, an online learning initiative of Delft University of Technology through edX
AGOSTO 2014	Certificato - <a href="#">MICROSOFT SHAREPOINT 2013 FOUNDATION</a> - Udemy
GIUGNO 2014	Certificato - <a href="#">MICROSOFT PROJECT 2013 ADVANCED</a> - Udemy
GENNAIO 2013	Certificato - <a href="#">LEARN MICROSOFT EXCEL 2013 - Advanced</a> – Udemy

### CORSI, CERTIFICAZIONI E TITOLI

GIUGNO 2020	<a href="#">IBM DATA SCIENCE PROFESSIONAL CERTIFICATE</a> – IBM through Coursera
NOVEMBRE 2019	<a href="#">PM² Advanced</a> Certificazione N. CERPM20191003235820191119 rilasciata da PM² Alliance – Bruxelles
FEBBRAIO – NOVEMBRE 2018	“ <a href="#">PER FAR VOLARE L’AEREO</a> ” <i>La gestione della complessità organizzativa</i> – organizzato da CODAU con il patrocinio della Fondazione CRUI ( <a href="http://www.codau.it/sites/default/files/docs/codau_-_sviluppo_ruolo_dg.pdf">http://www.codau.it/sites/default/files/docs/codau_-_sviluppo_ruolo_dg.pdf</a> ). Corso di potenziamento manageriale per un gruppo selezionato di direttori generali e dirigenti delle università italiane.
APRILE 2016	<a href="#">MICROSOFT CERTIFIED PROFESSIONAL</a> - Certificazione N. F643-4295 <a href="#">MICROSOFT SPECIALIST: MANAGING PROJECTS WITH MICROSOFT PROJECT 2013</a> - Certificazione N. F643-4294
FEBBRAIO 2013	<a href="#">GLOBAL CREDENTIAL PMP® PROJECT MANAGEMENT PROFESSIONAL PMP®</a> N. 1580911, “in good standing” fino al 26/02/2025 - PMI® PROJECT MANAGEMENT INSTITUTE, Inc.
NOVEMBRE 2011	Attestato di partecipazione - <a href="#">PROJECT MANAGER DELL’OPERA PUBBLICA</a> - SDA Bocconi, Milano (8 giornate)
1995 – 1996	Attestato di partecipazione - <a href="#">CORSO DI SPECIALIZZAZIONE IN OPERAZIONI DI PROJECT FINANCING</a> – LUISS Scuola di Management, Roma (13 giornate)
1987 - 1994	<a href="#">LAUREA IN ECONOMIA AZIENDALE CON SPECIALIZZAZIONE IN EC. DEGLI INTERMEDIARI FINANZIARI</a> - Università Commerciale L. Bocconi, Milano
1982 - 1987	<a href="#">MATURITÀ CLASSICA</a> - Liceo Ginnasio D. A. Azuni, Sassari

### COMPETENZE PERSONALI

LINGUE	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	ASCOLTO	LETTURA	INTERAZIONE	PRODUZIONE ORALE	
Inglese	C1	C1	C1	B2	B2
Francese	A2	A2	A2	A2	A2

### ULTERIORI INFORMAZIONI

#### APPARTENENZA A GRUPPI / ASSOCIAZIONI

Membro del PMI® Project Management Institute e del PMI® Rome Italy Chapter dal novembre 2012.  
Direttore del Branch Sardegna del PMI® Central Italy Chapter dal 2014 al 2017.  
All'interno del Gruppo di lavoro CODAU Ricerca, coordinatore del sottogruppo “Metodologie di project management” dal 2017 al 2019.

Autorizzo il trattamento dei miei dati personali ai sensi della vigente normativa in materia di privacy e tutela dei dati personali.

Sassari, 13 Maggio 2023

Attilio Gaetano Sequi

## Curriculum Vitae

### Enrica Chiadroni

I am currently, since September 2021, **Associate Professor** at the Department of Basic and Applied Sciences for Engineering at **Sapienza, University of Rome**.

I have been **Senior Scientist at Laboratori Nazionali di Frascati (LNF) – INFN** until August 2021. Since January 2011 I have been working as staff scientist at the SPARC\_LAB Test Facility of the LNF, where I have coordinated the Machine Operation of the SPARC photo injector from January 2015 to June 2018. At SPARC\_LAB I have been the reference person for the THz radiation source [1], which was included in the CalipsoPlus program until October 2021.

I work in the SPARC group at LNF since March 2001, when I started the **Master Thesis in Physics** with a study on **Free-Electron Lasers**. I got the Master Thesis in June 2002 at the University of Rome La Sapienza. I defended the **PhD in Physics** at the University of Rome Tor Vergata in April 2006 with a thesis on the **Bunch Length Characterization at the TTF VUV-FEL** [2] (DESY, Hamburg).

In this framework I have gained an expertise on radiation-based techniques to measure both transverse and longitudinal beam properties. I have been collaborating with DESY [3] on an experiment, partially funded by the INFN, to measure the beam emittance by means of Optical Diffraction Radiation in a non-intercepting way at FLASH, DESY – Hamburg [4].

From 2013 to 2015 I have been Local Coordinator of SL\_Femtoter, an experiment funded by INFN, for the development and application of a high peak power THz source at SPARC\_LAB [1,5], carrying to the first experiment with users at SPARC\_LAB. I participated to the 38th International Conference on Infrared, Millimeter and Terahertz Waves IRMMW-THz 2013 as invited speaker on *The SPARC\_LAB High Peak Power THz Source: Different Methods Of Generation And Characterization*.

In 2013 I have been awarded of the “**FIRB 2012**” grant, a 3-years fund from the Italian Minister of Research, concerning the development of experiments on the acceleration of high brightness electron beam in a plasma-based accelerator, to be performed at SPARC\_LAB. In this context, I have been the **Principal Investigator** of the research activities concerning the plasma-based acceleration experiments foreseen at SPARC\_LAB.

Since 2015 I am the **National Coordinator** of SL\_COMB first and **SL\_COMB2FEL** then, two experiments, funded by the INFN, for the characterization manipulation, transport and application of a plasma-based accelerator driven by high brightness multi-bunch trains at SPARC\_LAB to pilot a SASE FEL [6,7]. In this regard, I have participated to several **International Conferences as Invited Speaker**, among which:

- 13<sup>th</sup> International Particle Accelerator Conference (IPAC2022): *Progress Towards Demonstration of a Plasma Based FEL* (Plenary talk)
- 9<sup>th</sup> International Particle Accelerator Conference (IPAC2018): *Status of Plasma-based Experiments at the SPARC LAB Test Facility* (Parallel session)
- 3<sup>rd</sup> European Advanced Accelerator Concepts (EAAC): *Overview of Plasma Lens Experiments and Recent Results* (Plenary talk)

In 2015 a two-years project proposal within the cooperation agreement between ASRT (Egypt) and INFN has been accepted for funding with title “THz Radiation for medical and other applications in Egypt, Italy and beyond” and I have been the corresponding person for the INFN site.

In November 2015 EU has funded a 4-years Design Study for the realization of a plasma-based user facility, named as **EuPRAXIA**; **from Nov. 2015 till Dec. 2018** I have been **leader** of the **Work Package 5**, concerning the “**Electron beam design and optimization**” [8].

**Since November 1st, 2022**, I am **Co-Leader of the Work Package 11 – Applications**, for the **EuPRAXIA - PP** (Preparatory Phase) project, funded by EU.

In the framework of the Italian pillar **EuPRAXIA@SPARC\_LAB**, I am **Leader of the working area studying the injector and ancillary components**.

I have been **Member of the Steering Committee and Collaboration Board of EuPRAXIA** (01-11-2015/31-12-2018), representing INFN.

I am now **Member**, representing Sapienza University, **of the Steering Committee for EuPRAXIA - PP** (Preparatory Phase), being included in the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap for the 2021.

I have been **Member of the Scientific Advisory Board** of the International Particle Accelerator Conference (**IPAC**) in the past editions IPAC2023, IPAC2022, IPAC2021, ..., and since IPAC2018.

**Since June 2017** I am **Member** of both the Scientific Program Committee (**SPC**) and the International Organizing Committee (**IOC**) of **LINAC** conference.

Since May 2023 I am **Member** of the Board of the Accelerator Group in the European Physical Society (**EPS-AG**).

In 2009 I led, as Chairman, the Working Group on Manipulation and diagnosis of high brightness beams, at the international workshop on “The Physics and Applications of High Brightness Electron Beams” in Maui, as Co-chairperson in the SPIE Optics+Optoelectronics Conference in Prague (2015) the session dedicated to Novel Source Developments, as Co-chairperson in the 2nd European Advanced Accelerator Concepts in 2015 the Working Group on High-gradient plasma structures Advanced beam diagnostics. I have been lecturer at the Cern Accelerator School (CAS) in Geneva (Nov. 2015) and in Hamburg (June 2016) on High Brightness Photo-injectors.

I am co-author of more than 240 papers on international, peer reviewed journals, among them several are on a Nature Journal (W. Ackermann et al., *Operation of a free-electron laser from the extreme ultraviolet to the water window*, Nature Photonics 1, 336–342 (2007); F. Giorgianni, E. Chiadroni et al., *Strong nonlinear terahertz response induced by Dirac surface states in Bi<sub>2</sub>Se<sub>3</sub> topological insulator*, Nature Communications 7, 11421 (2016); R. Pompili et al., *Femtosecond dynamics of energetic electrons in high intensity laser-matter interactions*, Scientific Reports 6, 35000 (2016); R. Pompili et al., *Energy spread minimization in a beam-driven plasma wakefield accelerator* (2021) Nature Physics, 17 (4), pp. 499-503); R. Pompili, et al., *Free-electron lasing with compact beam-driven plasma wakefield accelerator* (2022), Nature, doi: 10.1038/s41586-022-04589-1), ranging from high brightness beam dynamics, free electron laser physics, linac-based THz radiation sources, transverse and longitudinal electron beam diagnostics, advance acceleration techniques.

My h-index is 33 (as counted in SCOPUS).

I served as Member of the Local Organizing Committee in several conferences among which:

- Channeling 2012, 2014, 2016, 2018
- CERN School on Excellence in Detectors and Instrumentation Technologies 2015 (EDIT2015)

- 1st European Advanced Accelerator Concepts (EAAC 2013)
- 3rd International Conference Frontiers in Diagnostic Technologies (ICFDT3) – 2013
- 5th International Conference Frontiers in Diagnostic Technologies (ICFDT5) – 2018
- Member of the Programme Committee of SPIE Optics + Optoelectronic Conferences, in the section dedicated to Advances in X-ray Free-Electron Laser Instrumentation, April 13-16, 2015 Prague
- 2nd European Advanced Accelerator Concepts (EAAC 2015), September 2015 – La Biodola “Physics and Applications of High Brightness Beams” Conference, Creta, April 8- 12, 2019

I am also reviewer on Nuclear Instruments and Methods in Physics Research, Journal of Applied Physics, Physical Review Letters, Phys. Rev. Accel. and Beams and Journal of Modern Optics.

I have been Reviewer of Project Research and Development proposals for the Science and Technology Facilities Council (STFC) and the Helmholtz Association for selecting the best application for Helmholtz Young Investigators Groups.

I have been supervisor of several Master and PhD thesis’.

Rome, May 14th, 2023

PERSONAL WEBPAGE

<https://orcid.org/0000-0003-0350-8590>

## References

- [1] Giorgianni, F., Chiadroni, E., et al., Strong nonlinear terahertz response induced by Dirac surface states in Bi<sub>2</sub>Se<sub>3</sub> topological insulator, Nature Communications, 7, art. no. 11421 (2016).
- [2] Chiadroni, E., Bunch Length Characterization at the TTF VUV-FEL, TESLA-FEL 2006-09 (2006).
- [3] Ackermann, W., Chiadroni, E., et al., Operation of a free-electron laser from the extreme ultraviolet to the water window, Nature Photonics, 1 (6), pp. 336-342 (2007).
- [4] Cianchi A, Castellano M, Catani L, Chiadroni E, Honkavaara K, Kube G, Non-intercepting electron beam size monitor using optical diffraction radiation interference. Physical Review Special Topics Accelerators and Beams, vol. 14, ISSN: 1098-4402, doi: 10.1103/PhysRevSTAB.14.102803 (2011).
- [5] Chiadroni E., Cianchi A., Ferrario M., Mostacci A., Pompili R., Shpakov V., A versatile THz source from high-brightness electron beams: Generation and characterization. Condensed Matter, vol. 5, p. 1-10, ISSN: 2410- 3896, doi: 10.3390/condmat5020040 (2020).
- [6] R. Pompili, et al.,(2022), Free-electron lasing with compact beam- driven plasma wakefield accelerator. Nature, ISSN: 0028-0836, doi: 10.1038/s41586-022-04589-1.
- [7] Shpakov V., et al., (2021). First emittance measurement of the beam-driven plasma wakefield accelerated electron beam. Physical Review Accelerators and Beams, vol. 24, ISSN: 2469- 9888, doi: 10.1103/PhysRevAccelBeams.24.051301.
- [8] Nghiem P. A. P., et al., (2020). Toward a plasma-based accelerator at high beam energy with high beam charge and high beam quality, Physical Review Accelerators and Beams, ISSN: 2469-9888