

PERSONAL INFORMATION



Simone Peruzzo

+39 049 829 5004 (direct)
+39 049 829 5000 (secretary)

simone.peruzzo@cnr.it
simone.peruzzo@pec.cnr.it

WORK EXPERIENCE

Role within present employer's organization:

Name and address of employers:

2023 – present **Consiglio Nazionale delle Ricerche** – Istituto per la Scienza e Tecnologia dei Plasmi -
Corso Stati Uniti 4, 35127 Padova, Italy

1997 – 2023 **Consorzio RFX** (CNR, ENEA, INFN, Università di Padova, Acciaierie Venete Spa) ,
Corso Stati Uniti 4, 35127 Padova, Italy

Type of business or sector Scientific and technological research in the field of controlled thermonuclear fusion

Main activities and responsibilities:

- | | |
|----------------|---|
| 2023 - present | Infrastructure Manager appointed for the NEFERTARI project in the framework of the Italian National Recovery and Resilience Plan (NRRP) funded by the European Union - NextGenerationEU [1] |
| 2019 - 2023 | Program Manager of the "Technology and Engineering Development Program". Member of 'Programs Coordination Team' in charge of the coordination of resources allocated to the Consorzio RFX scientific and technological activity program.
Specific responsibility: coordination of resources dedicated to engineering projects focussed on RFX, DTT, ITER, DEMO and Non-fusion applications. Overall annual allocated resources: 30 Full Time Equivalent (personnel); 1,5 M€ (budgetary expenditure). |
| 2018 – 2023 | Project Manager of the project "Machine upgrades for the RFX-mod experiment". Contract Execution Director for the procurement of components for RFX-mod2. [2] [a] |
| 2017 – 2019 | Contributor to the "Divertor Tokamak Test facility Interim Design Report". |
| 2016 – 2022 | Contract Program Manager for the ITER Framework Contract "Diagnostic Systems Engineering Services". [3] |
| 2013 – 2018 | Group Head of Consorzio RFX Plasma Engineering research group (staff of 15 researchers with main competence in thermo-mechanical engineering and vacuum technology). |
| 2011 – 2015 | Project Manager of the project "R&D/Design of sensors for the ITER magnetic diagnostic: in-vessel discrete sensors assemblies". [4] |
| 2010 - 2013 | Technical Responsible Officer for RFX contribution in the project "Optimisation of the ITER magnetic diagnostic system" (Grant promoted by Fusion For Energy in collaboration with CREATE, ENEA-UTFUS, CCFE, Ref. <F4E-GRT-047>). |
| 2010 - 2011 | Work Package Manager of the sub-project "Progress in the design of Residual Magnetic Field Coils for MITICA" (Grant promoted by Fusion for Energy Ref. <F4E-GRT-032>). |

2010	Technical Officer for the Conceptual Design Review of the ITER Diagnostic 'Outer vessel discrete inductive sensors' (2 months secondment to ITER Diagnostic Division in the framework of Service Contract ITER/4300000204).	
2009 - 2011	Deputy Project Leader of the ITERMAG Consortium (international collaboration among CEA, CIEMAT, CRPP, RFX on the magnetics diagnostic for the ITER project). Work Package Manager for Grant "R&D on ex-vessel magnetics and construction of a magnetics test facility" in collaboration with CEA and CRPP.	[5]
2009	Senior engineer for the development and integration of ITER In-Vessel magnetic diagnostics (3 months secondment to ITER Diagnostic Division in the framework of Service Contract – ITER/CT/09/4100000486).	
2005 - 2009	Technical Responsible Officer for specific EFDA Tasks on ITER Magnetic Diagnostics design and R&D.	[6] [7]
2005 - 2008	Member of RFX project team involved in the EFDA Technology Work-programme for ITER involved in the design of the first ITER NBI arc driven ion source and in the integration of diagnostics in the design of the first ITER NBI.	
2003 - 2008	Project Leader of the "JET Magnetic Diagnostic Enhancement" Project. Contract Manager for the procurement of diagnostic systems for JET-EP.	[8]
2001 - 2008	Member of the RFX project team involved in the EFDA-JET Work-programme in charge of the design, manufacture, installation and commissioning of electro-magnetic Diagnostics for JET-EP ('JET-EP-HCS' and 'JET-EP-MAG').	[c] [d]
2000	6-months secondment to EFDA-JET (Engineering Analysis group) for electromagnetic and thermal analyses for design and assessment of in-vessel and ex-vessel components for JET.	
1998 - 2015	Responsible Officer of RFX experimental devices (electrical measurements, magnets protection system). Engineer in Charge for RFX experimental sessions.	[b]
1997 - 2004	Member of the RFX 'Magnetic Systems' group in charge for the design, manufacture, installation and commissioning of several magnet systems for MHD instability control in the RFX experiment.	[e]

EDUCATION

1994 - 1997	PhD in Electrical Engineering	
Thesis title	'Detection and analysis of electrical currents flowing between plasma and vessel in the RFX experiment' (in Italian)	
Occupational skills covered	Main experimental research activity developed within the RFX experiment. In addition, a 6-months contract of assignment to the JET experiment (UK) was performed for a research activity on 'Analysis of currents in Saddle Coils circuits during disruptions in the JET experiment'	
Organisation providing education	University of Padova (Italy)	
1994	Post graduate Master's degree in Controlled Thermonuclear Fusion and Plasma Engineering	
Thesis title	'Analysis of global results of the RFX experiment during 1994' (in Italian)	
Organisation providing education	University of Padova (Italy)	
1987 - 1994	Master's degree in Electrical Engineering (5-years course)	
Thesis title	'Design and development of a target emission probe for suprathermal electron detection in RFX' (in Italian)	
Organisation providing education	University of Padova (Italy)	
Level in national classification	110 out of 110	

POST-GRADUATION TRAINING

2017	French language - level A2
Organisation providing training	StudiInglese s.a.s. school of languages (Italy)
Course duration	30 hours
2015	Leadership and teambuilding - Strengthening of relational skills for the effective management of work teams
Organisation providing training	Solarislab – Laboratorio della conoscenza (Italy)
Course duration	16 hours
2015	EMI-EMC compatibility and radiation sources
Organisation providing training	"Centro Ricerche Fusione" Università degli Studi di Padova (Italy)
Course duration	16 hours
2014	Vacuum Technologies - advanced level course
Organisation providing training	AIV – Associazione italiana di scienza e tecnologia (Italy)
Course duration	16 hours
2012-2013	Jobleader Executive Course on "Innovation and R&D"
Organisation providing training	CUOA Business School (Italy)
Course duration	124 hours
2009	French language - Level B1 intermediate
Organisation providing training	CIELS – International Company (Italy)
2005	Quality systems standards and their application to RFX context
Organisation providing training	Fòrema – Formazione per lo sviluppo dell'impresa (Italy)
Course duration	24 hours
2003	Project Management
Organisation providing training	Hemsley Fraser Learning and Development (UK)
Course duration	24 hours
2000	English Language - Trinity Grade 10 (Advanced Stage) – Spoken English for Speakers of Other Languages
Organisation providing training	Oxford College of Further Education (UK)

PERSONAL SKILLS

Experience in Project Management :

- [1] "NEFERTARI – New Equipment for Fusion Experimental Research and Technological Advancements with Rfx Infrastructure". Project in the framework of Italian National Recovery and Resilience Plan (NRRP), funded by the European Union - NextGenerationEU (Mission 4, Component 2, Investment 3.1 - Area ESFRI Energy - Call for tender No. 3264 of 28-12-2021 of Italian University and Research Ministry (MUR), Project ID IR0000007, MUR Concession Decree No. 243 del 04/08/2022, CUP B53C22003070006)
- Project duration: 2.5 years (2022 – 2025)
- Allocated resources: 18 M€ (70% dedicated to hardware investment)
- Involved institutions: Consiglio Nazionale delle Ricerche, Università di Napoli, Università di Padova;
- Role: Infrastructure Manager

- [2] "Machine upgrades for the RFX-mod experiment". Internal project of Consorzio RFX (Ref. <RFXmod2 Project Charter>) partially co-funded by Regione Veneto in the framework of the European Regional Development Fund (Ref. POR-FESR 2014-20 - industrial innovation project 'MIAIVO')
Project duration: 5 years (2018 – 2023)
Allocated resources: 50 FTE (manpower) + 10 M€ (procurement)
Involved institutions: Consorzio RFX in partnership with 3 industries (Alca Technology srl, SISMA spa, Zanon Pressure Equipment srl); Fondazione Centro Produttività Veneto; Regione Veneto;
Role: Project Manager
- [3] "Diagnostic Systems Engineering Services". Framework Contract awarded by ITER Organization to multi-beneficiary contractor (Ref. IO/16/CT/SAP 6000000181)
Project duration: 6 years (2016 – 2022)
Allocated resources: 7,5 M€ (manpower)
Involved institutions: ITER-O; Vitrociset spa (main contractor) in consortium with Consorzio RFX, Istituto di Fisica del Plasma "P. Caldirola" - CNR, LT Calcoli srl.;
Role: Contract Program Manager (for Consorzio RFX contribution)
- [4] "R&D/Design of sensors for the ITER magnetic diagnostic: in-vessel discrete sensors assemblies". Grant promoted by Fusion for Energy to Consorzio RFX (Ref. <F4E-GRT-155 (PMS-DG)>)
Project duration: 4 years (2011 – 2015)
Allocated resources: 7 FTE (manpower)
Involved institutions: Consorzio RFX; F4E; ITER-O
Role: Project Manager
- [5] "R&D on ex-vessel magnetics and construction of a magnetics test facility". Grant promoted by Fusion for Energy for multiple beneficiaries (Ref. <F4E-GRT-012 (PMS-DG)>)
Project duration: 2 years (2009 – 2011)
Allocated resources: 0,3 M€ (manpower + R&D components)
Involved institutions: F4E; ITER-O; CRPP in consortium with CEA and Consorzio RFX
Role: Work Package Manager (for Consorzio RFX contribution)
- [6] "Detailed design of the in-vessel magnetic sensor common mechanical and electrical platform". Task Agreement between European Fusion Development Agreement and Consorzio RFX (Ref. EFDA Contract 07-1702/1562 - Del.2)
Project duration: 1.5 years (2007 - 2009)
Allocated resources: 0.5 FTE (manpower)
Involved institutions: Consorzio RFX; EFDA; ITER-O
Role: Technical Responsible Officer
- [7] "Development and testing of magnetic sensors". Task Agreement between European Fusion Development Agreement and Consorzio RFX (Ref. EFDA Task TW5-TPDS-DIADEV - Del. 2a)
Project duration: 1 year (2006 - 2007)
Allocated resources: 1 FTE (manpower)
Involved institutions: Consorzio RFX; EFDA; ITER-O
Role: Technical Responsible Officer

- [8] “Upgrade JET magnetic diagnostics”. Task Agreement between ‘EFDA Associate Leader for JET’ and multiple institutions (Ref. EFDA Task Agreement Code: JW2-TA-EP-MAG-07; <JET-EP-MAG Project>)
Project duration: 7 years (2002-2008)
Allocated resources: 16 FTE (manpower) + 1 M€ (procurement)
Involved institutions: ENEA (CREATE+RFX); CRPP; EFDA-JET; UKAEA (JET Operator)
Role: deputy Project Leader (2002/06), Project Leader (2007/08)

Experience in procurement contracts :

- [a] “Supply and installation of new components for the completion of the modifications of the RFX-mod2 machine”
Contract duration: 4 years (2020 – 2023)
Indicative amount: 2,4 M€
Supplier: Zanon Pressure Equipment srl (Italy)
Role: Contract Execution Director (Direttore per la Esecuzione del Contratto - DEC)
- [b] “Manufacture of the flexible joints of the Toroidal Field Coils for the RFX experiment”
Contract duration: 13 months (2010-2011)
Indicative amount: 0,1 M€
Supplier: PFISTERER srl (Italy)
Role: Technical Responsible Officer
- [c] “Manufacture and assembly of electromagnetic transducers and mechanical support structure for JET-EP Magnetic Diagnostic system”
Contract duration: 17 months (2003-2005)
Indicative amount: 0,1 M€
Supplier: ALCA Technology Srl (Italy); Thermo-Est (France)
Role: Technical Responsible Officer
- [d] “Manufacture and assembly of electromagnetic transducers, CFC tiles and mechanical support structures for JET-EP Halo Current Sensors System”
Contract duration: 18 months (2003-2005)
Indicative amount: 0,2 M€
Supplier: CINEL Scientific Instruments Srl (Italy); Thermo-Est (France)
Role: Technical Responsible Officer
- [e] “Manufacture of 192 saddleback coils for the RFX experiment:”
Contract duration: 18 months (2002-2003)
Indicative amount: 0,4 M€
Supplier: Tesla engineering ltd (UK)
Role: Deputy Technical Responsible Officer

Scientific and Technological publications:

Author or co-author of **more than 150 papers** in peer reviewed international journals or proceedings of international conferences concerning Fusion Science and Technology (**h-index 32**, source Scopus).

Presentations at international conferences:

2003 – present

Oral presentations at international conferences:

- "Status of the RFX-mod2 project and prospects with the NRRP/NEFERTARI project" AIV XXVI Conference, Rome, 7-10 November 2023
- "The New Vessel Complex for the RFX-mod2 Experiment - an effective synergy between Fusion Research and Technological Development", 32nd Symposium on Fusion Technology, Dubrovnik, Croatia, 18-23 September 2022 (invited)
- "From RFX to RFX-mod2", FuseNet PhD event 2022, Padova, 4-6 July 2022
- "Design of machine upgrades for the RFX-mod experiment", 29th Symposium on Fusion Technology, Prague, Czech Republic, 5-9 September 2016
- "Progress in development of in-Vessel magnetic equilibrium Sensors with low thermal gradient", 14th Meeting of the ITPA Topical Group on Diagnostics, Lausanne, Switzerland, 14-18 April 2008
- "Improved design proposal for in-Vessel pick-up coils and Halo sensors", 10th Meeting of the ITPA Topical Group on Diagnostics, Moscow, Russia, 10-14 April 2006
- "Overview of the JET-EP Diagnostics Project "Halo Current Sensors", 4th Meeting of the ITPA Topical Group on Diagnostics, Padova, Italy, 17-21 February 2003

1996 - present

Presenting author of more than 20 poster contributions at national/international conferences concerning Fusion Science and Technology

Commissions of trust:

2007 – present

Peer reviewer for the journal "Fusion Engineering and Design" (Elsevier): 25 papers reviewed since 2007

2013 – 2017

Review Panel Member of design review for various ITER diagnostic projects:

- 2017: ITER diagnostics inner-vessel magnetic sensors (PBS 55.AA, AB, AC, AG, AJ) - Final Design Review
- 2017: ITER diagnostics Magnetic Flux Loops (PBS 55.AD, AE, AF, AH, AI, A7) - Final Design Review
- 2017: ITER In-Vessel Electrical Services (PBS 55.NE.V0) - Final Design Review
- 2016: ITER Outer Vessel Coils (PBS 55.A3, A4, A9) - Final Design Review
- 2016: ITER In-Vessel Electrical Services (PBS 55.NE.V0) – Preliminary Design Review
- 2013: ITER bolometer system (PBS 55.D1) - Conceptual Design Review

Teaching activities:

2010 - 2017

Visiting lecturer on topic "Introduction to plasma diagnostics" for Thermonuclear Fusion course at University of Padova, Italy (4 hours per year)

1997 – 2004

Lecturer on contract for numerical laboratories on "Electric circuits and electromagnetic field analysis" for Electrical Engineering courses at University of Padova, Italy (30 hours per year, on average)

Outreach activities:

As Project Manager of the Machine upgrades for the RFX-mod experiment, I have been involved in many events to reinforce the relationships between research laboratories, schools and citizens. Some examples are listed here below.

Contributions to divulgation through popular journal media

- Interview for RAI TG1 h20:00, 20/12/2022 <https://www.raiplay.it/video/2022/12/Tg1-ore-2000-del-20122022-e46c9ae4-2fd2-490c-b469-83044dfbcd51.html>
- RAI Futuro24: Padova eccellenza nella fusione nucleare, 03/01/2020 <https://www.rainews.it/video/2022/02/futuro24-padova-eccellenza-nella-fusione-nucleare-9fa5998c-1ddc-420c-9412-5c5fbc1b87fd.html>
- "Le sfide dell'innovazione - Viaggio nell'Italia che investe sul futuro", event organized by daily paper La Stampa, 14/03/2019, <https://www.cnr.it/it/nota-stampa/e-16163/le-sfide-dell-innovazione-viaggio-nell-italia-che-investe-sul-futuro>

Guide for visits of institutional representatives

- Visit of the Comitato Elettrotecnico Italiano to Consorzio RFX, 20/12/2022, <https://www.ceinorme.it/2022/12/20/incontro-cei-con-il-consorzio-rfx-padova/>
- Visit of the President of the CNR, Maria Chiara Carrozza, to Consorzio RFX, 21/11/2022, <https://www.cnr.it/it/intervento-presidente/11521/la-presidente-del-cnr-maria-chiara-carrozza-in-visita-al-consorzio-rfx-di-padova>
- Visit of the President of the province of Padova, Fabio Bui, to Consorzio RFX, 07/05/2021, <https://www.provincia.padova.it/presidente-bui-visita-al-consorzio-rfx>
- Visit of the President of the Senate of the Italian Republic, Maria Elisabetta Alberti Casellati, to Consorzio RFX, 08/02/2019 https://www.senato.it/leg18/4534?current_page_48507=3&album_presidente=133

Knowledge of languages:

Mother tongue
Other languages

Italian

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C2	C2
French	B1	B1	B1	B1	B1

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

Social skills and competences :

- Intercultural skills: I am experienced at working in an international environment, since during my entire work experience I have been having continuative collaborations with international research organizations (CCFE, CEA, CIEMAT, CRPP, EFDA, F4E, IPP, ITER-O, UKAEA) in the framework of international projects such as RFX, JET, ITER and DTT.
- Team Work: during my work experience within Consorzio RFX I had the opportunity to work in various 'Research Groups' ('Electromagnetic Engineering Group', 'Magnetic Systems Group', 'Plasma Engineering Group', 'Plasma Boundary Physics Group') and in several 'Project Teams' (for ITER, JET, DTT and RFX specific projects). Since 2018 I am member of the 'fire-prevention and safety crew' of Consorzio RFX. In my private life I have developed my aptitude to team spirit in the practice of competitive sports for more than twenty years (futsal, football, track and field, swimming).
- Mediating skills: I have been active in elected representative roles in several areas of competence both in personal and professional activities, such as 'students representative' at the University Faculty Board for 3 years, 'parents representative' at the primary and secondary School Council in my city of residence for 5 years, 'staff representative' at the Consorzio RFX Staff Committee for 3 years.

I authorize the processing of my personal data contained in my curriculum vitae pursuant to Legislative Decree 101/2018 and art. 13 GDPR (EU Regulation 2016/679) for the purposes of personnel research and selection.