

Elena Gaio

Senior researcher with Consorzio RFX since 1984
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Research Field

Electrical technologies, power circuits and systems for fusion experiments: power supplies for ohmic and additional heating, for MHD plasma instabilities control, dc current interrupters. The applications of the research activities are in the frame of the main Consorzio RFX programs: the RFX-mod experiment, the development and realization of ITER Neutral Beam Test Facility (NBTF), the Italian Divertor Tokamak test Facility, the contribution to the Broader Approach, the studies for the european DEMO reactor under the Eurofusion program.

Main roles covered

- 2015 – today - Coordinator of the design and R&D work on the “EU DEMO Plant Electrical System” (EUROfusion) – selected for the position of Project Leader from 2021
- Jan 2009 – today - Leader of the Power Systems Research Group at Consorzio RFX
- 2007 – 2020 - Responsible of the Consorzio RFX activities and projects for the JT-60SA tokamak in the frame of the Broader Approach Agreement; Responsible of the development and procurement of the Quench Protection Circuits for superconducting coils and of the Power Supply system for Resistive Wall Mode control
- 2016 – 2017 -Project leader of the electrical area of the ITER Neutral Beam Test Facility
- 2000-2003 - Project Leader and contract Responsible for the restoration and upgrade of the RFX 400 MVA ac/dc converter system and of the system for the protection signals handling for RFX experiment
- 2000-2003 - Project Leader and contract Responsible for the development and procurement of the Power Supply System for MagnetoHydroDynamic modes control for RFX experiment:
- 2000-2003 - Project Leader for the restoration and upgrade of the Pulse Discharge Cleaning system for RFX
- 2004-2005, 1997-1999 - Conduction of the RFX experimental session
- 1993-2009 - Responsible Officer for several electrical systems of RFX machine
- 2017 – today - Member of the Technical Advisory Panel of Fusion for Energy and now Vice-chair
- 2019 – today - Member of the International Organizing Committee of the Symposium on Fusion Technology
- 2007 – 2020 - Member of the Technical Coordination Group of JT-60SA
- 2007, 2020, 2012 - Member of Review Panels, as external expert, for Design Reviews of different topics of the the ITER Coil Power Supply System
- 2010- 2012- Coordinator of the EFDA Task Agreement WP08-GOT-PSE - the European Goal Oriented Training programme in the field of Power Systems Engineering
- a. y. 2003/04 - 2008/2009 Contract Professor at the Electronic Engineering Department of the Padova University - Industrial Electronic course (54 hours) - III year of the Bachelor Degree in Electronic Engineering
- Supervisor of several PhD, master and bachelor degree thesis

Summary of publications

Author or coauthor of more than 150 papers, H-index=25, source: publons - web of science