

PERSONAL INFORMATION

Elena Gaio



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Sex F | Date of birth 18/08/1958 | Nationality Italian

POSITION

Senior Researcher with National Research Council, seconded to Consorzio RFX

TYPE OF BUSINESS

Fusion machines systems and operation  
electrical technologies, circuits and systems

WORK EXPERIENCE

2009 - today

*Power Systems Group Leader*

- To program and coordinate the activities of the research group (7-10)
- To promote the competency growth and the scientific production of the researchers
- **Sector** R&D, engineering analysis, design and experimental activities on power supply systems for RFX, JT-60SA, ITER, ITER Neutral Beam Test Facility, DEMO

2007 - today

*Responsible of the Consorzio RFX activities for the JT-60SA tokamak in the frame of the BA Agreement*

- Coordination of the Consorzio RFX activities within the JT-60SA international project team. The activities have been mainly addressed to general machine system studies, engineering analysis for identifications of requirements, for the selection of suitable design solutions, experimental activities for prototypes development and then all the accompanying activities for the procurement of the two systems to be provided by Consorzio RFX.
- Responsibility for the procurement of the Quench Protection system and Power Supply system for RWM control
- **Sector** General machine systems, engineering analysis, management of R&D tasks, scientific projects and industrial contracts

Feb 2016 – July 2017

*Project leader of the electrical area of the ITER Neutral Beam Test Facility*

- Coordination of the activities related to the electrical components and systems of the NBTF plant and the SPIDER and MITICA projects.
- Coordination of the R&D task to investigate issues related to the design and operation of RF drivers for NB negative ion sources and to increase the knowledge and competences in the field
- **Sector** engineering analysis, management of scientific and technical tasks and of contracts follow-up

2015 – today

*Coordination of the tasks on “DEMO Plant Electrical System” design in the frame the EUROfusion organization*

- Coordination of the studies to outline the DEMO Plant Electrical System also with the aim to achieve a more complete and realistic Balance of Plant description.
- **Sector** General machine systems, engineering analysis

Nov 2000 –Dec 2003

*Project Leader for the development and procurement of RFX components:*

- upgraded 400 MVA ac/dc converter system
- new system of fast power amplifier for MHD control
- upgraded system for Pulse Discharge Cleaning
- **Sector** engineering analysis, management of scientific projects and industrial contracts

1997-1999 *Conduction of the RFX experimental session*  
 2004-2005

- technical management of the sessions
- coordination of the session team in charge for the plant system operation (about 20 persons)
- **Sector** General machine operation

1998-2008 *Leader of the technical electrical area for RFX machine*

- Coordination of the group of technicians in charge for the electrical systems of the RFX
- **Sector** General machine operation

*Responsible Officer for RFX machine systems:*

1993 – 2009  
 2004 -2007  
 2004 - 2009

- ac/dc converter system, rated for a power of more than 400 MVA
- power supply system for MHD control
- pulse discharge cleaning system
- **Activities** management of the system operation, maintenance, documentation and upgrades
- **Sector** General machine operation

*Main educational activities*

2008 – today  
 2009 - 2012  
 2003 - 2009

- Supervision of five PhD, one Erasmus Mundus PhD, one EFDA fellowship
- Coordination of the EFDA Task Agreement WP08-GOT-PSE - the European Goal Oriented Training programme in the field of Power Systems Engineering
- Contract Professor Teacher of the Industrial Electronic course (54 hours) - III year of the Bachelor Degree in Electronic Engineering - Padova University

EDUCATION AND TRAINING

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1984 One year master in engineering of plasma and controlled thermonuclear fusion  
 1977-1982 Master degree in Electronic Engineering at the University of Padova

ADDITIONAL INFORMATION

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**Publications** around 140 papers, half of them in peer-reviewed journals, 2280 citations in total, H-index=25  
 Source: google scholar

**Membership** Member of three review panels (2008, 2010, 2012) on the design of the ITER pulsed power system

Member of the Technical Coordination Group of JT-60SA since 2007 (composed of one representative for each Voluntary Contributor)  
 Participation since 2010 in the JT-60SA Project Committee as external experts

**English use** Upper intermediate in understanding, speaking and writing