

CURRICULUM VITAE

Gerardo Giruzzi

- *nationality* : **Italian**
- *job* : **physicist (retired)**
- *title* : **Formerly: Research Director at CEA**
- *research fields* :
 - physics of RF waves in **plasmas** (H&CD, MHD control, diagnostics)
 - plasma **kinetic theory, transport and confinement** physics
 - integrated tokamak plasma **modelling**
 - conception, realization and analysis of **tokamak** experiments

Education

Graduation : 1981 **Degree in Physics**, *Università degli Studi di Milano* (Italy). Final mark: 110/110 cum laude.

Ph. D. : 1985 **Ph.D. in Physics**, *Université de Nancy I*, Nancy (France). Distinction: “très honorable”. Thesis subject: “Theory of electron cyclotron emission and absorption by a relativistic electron tail in tokamak plasmas”

Professional experience

1982-85 : **Ph.D. Euratom fellowship** at Association Euratom-CEA sur la Fusion, Centre d'Etudes Nucléaires de Fontenay-aux-Roses (France).

1986-88 : **Post-doc** at Association Euratom-FOM, Institute of Plasma Physics, Nieuwegein (The Netherlands).

1988-2023 : **Physicist** at Association Euratom-CEA, Département de Recherches sur la Fusion Contrôlée (DRFC, then IRFM), CEA/Cadarache (France)

Scientific Management

1991-1996 : **Electron Cyclotron Interaction Group Leader** (6 physicists, 2 technicians)
(microwave diagnostics on the Tore Supra tokamak)

1996-1998 : **Theory and Modelling 1 Group Leader** (10 physicists, 2 programmers)
(theory and modelling of MHD, transport, wave-plasma interaction)

1998-2004 : **Transport and Confinement Group Leader** (13 physicists, 1 programmer)
*(transport modelling in tokamaks and associated experiments;
data coherence and validation on Tore Supra; CRONOS code development)*

2004-2008 : **Support to Experiments and Modelling Group Leader** (17 physicists)
(integrated tokamak modelling, leading participation in the EU Integrated Tokamak Modelling Task Force, scientific coordination and support to experiments on Tore Supra and JET, RF antenna-plasma edge interaction)

2012-2015 : **Scientific Programme Leader** (in charge of IRFM scientific programmes, including Tore Supra, JET participation, collaborations, numerical simulation, participation in ITPA and JT-60SA physics activities)

Project Leadership

- **Task Force leader** on Tore Supra (2003 and 2004 campaigns)
- Tore Supra Experimental **Programme Coordinator** (2007 and 2008 campaigns)
- **CRONOS Project Leader** (2004-2008)

(one of the worldwide leading codes for integrated modelling of tokamak discharges)

- **Project leader** of the “ECRH for JET Project” (2009 and 2010)
(feasibility study of a 12 MW ECRH system for JET, including physics and technology, carried out by an international team (~40 people) under EU-Russian bilateral agreement)
- **Coordinator of the JT-60SA EU Research Unit** (2011 - 2022)
(build-up of a JT-60SA EU Research Unit under EFDA: 11 Responsible Officers coordinating the work of ~ 70 physicists; revision of the JT-60SA Research Plan)
- **Project Leader of the EUROfusion WP-SA Project** (2014 - 2020)
(preparation of JT-60SA exploitation)

Publications

Articles on refereed journals:	184	Science popularisation articles:	10
Invited lectures:	22	Citations:	> 7000
Conference proceedings:	227	H-index:	41

Miscellaneous

- **DTT Research Plan:** coordinator
- **Chair of the STP-PC:** Satellite Tokamak Programme (JT-60SA) – Project Committee, in the framework of the EU-Japan Broader Approach agreement
- Founder and co-director of the **JT-60SA International Fusion School**
- **Member of the CFETR IAC** (International Advisory Committee) 2017-2019
- Member of the **Programme Committee** of various International Conferences: Joint Workshop on ECE-ECRH (2002, 2004, 2006, chairman in 2002 and 2006), IAEA Technical Meeting on ECRH Physics and Technology for ITER (2003, 2005, 2007), 34th EPS Conference on Plasma Physics (2007), 43rd EPS Conference on Plasma Physics (2016, MCF sub-chair), 47th EPS Conference on Plasma Physics (2020, **PC chair**).
- **Editor** of the Proceedings of the Joint Workshop on ECE-ECRH 2002 (World Scientific)
- **Organiser** of 2 international workshops (ECE-ECRH 2002; Pedestal Physics 2006)
- **Referee of US SCIDAC projects** (Scientific Discovery through Advanced Computing), appointed by the US Government (Department of Energy)
- Member of an international panel on Integrated Fusion Plasma Modelling projects, **appointed by the US Government** (Department of Energy, Washington DC, 2005)
- **Research Direction Qualification** (French “Habilitation à Diriger des Recherches”)
- Direction of **6 PhD theses** (Universities of Paris VI, Paris XI, Nancy I, Aix-Marseille I)
- Member of several **thesis boards of examiners** (in France and abroad)
- Regular **referee** of scientific journals (Physics of Plasmas, Nuclear Fusion, Plasma Physics and Controlled Fusion, Fusion Science and Technology, Physics Letters, Physical Review Letters).