

Alessandra Canton

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Expertise

Dr. Alessandra Canton is a plasma physicist who has been working as researcher on the field of magnetically confined plasmas of interest for nuclear fusion science and technology. She has been involved since the beginning of her career in plasma diagnostics for fusion experiments, with particular interest on interferometric/polarimetric measurements, designing, realizing, installing and running instruments for RFX-mod (Italy), TPE-RX (Japan) and FTU (Italy) devices. Since 2006 she devoted herself mostly to the subject of plasma wall interaction, wall treatments and materials for thermonuclear fusion devices. She worked on the optimization of particle fueling techniques on RFX-mod and on the study of Glow Discharge Cleaning and Boronization techniques in view of the design of RFX-mod2. She also worked on the shape and material design of the first wall of RFX-mod2. In 2017 she focused her activity on management task, at first as collaborator of the Director of Consorzio RFX, later, since 01/03/2020, as Deputy Director of Consorzio RFX. She is author or co-author of 89 papers published in refereed international journals recorded on SCOPUS (h-index 29, 2270 citations) and of several contributions to international conferences. She acts as referee for journals among which *Review of Scientific Instruments*, *Plasma Physics and Controlled Fusion*, *Scientific Reports* and *Nuclear Materials and Energy*.

Education

1997	Degree in Physics, University of Padova, Italy
1998	Diploma of post-graduate course in Plasma Engineering for Controlled Thermonuclear Fusion, University of Padova, Italy
1999	Diploma of post-graduate 'Fourth Carolus Magnus Summer School on Plasma Physics', Maastricht, Holland
2001	PhD in Energetics, University of Padova, Italy

Professional Experience

January 2001 - present	Employed as Research Physicist at Consorzio RFX
Formal Assignments	
October 2009 – June 2018	Leader of the SX-D group (technical department for diagnostics) of Consorzio RFX
October 2017- February 2020	Collaborator of the Director of Consorzio RFX
July 2019 - present	RFX Responsible Officer of the Agreement on the Neutral Beam Test Facility (NBTF) between Consorzio RFX and the ITER International Fusion Energy Organization
March 2020 - present	Deputy Director of Consorzio RFX
2022-present	Corruption Prevention and Transparency Officer (Responsabile della Prevenzione della Corruzione e della Trasparenza - RPCT) of Consorzio RFX
November 2025 - present	Director of Consorzio RFX
Other activities	
1999-2000	One year collaboration, under the Agency of Industrial Science and Technology (branch of the Japanese Ministry of International Trade and Industry), with the TPE-RX experiment in Tsukuba (Japan) for the design and realization of a new interferometric diagnostic. The instrument has been installed on the Japanese experiment during a mission in the period 17/06 - 29/07/2000.
2000 - 2004	Collaboration with the FTU experiment at ENEA-Frascati (Italy) for the design and realization of an innovative scanning beam interferometric diagnostic.
2011 - 2012	Deputy leader of the Task Force 'TF1: Physics Integration for high performance RFP' of the RFX-mod experiment
2013	Contact person for the WP13-IPH-A03-P1-01/ENEA_RFX/BS EFDA activity of title: 'Exposure to high-flux Hydrogen plasmas of co-deposited materials (W/N and W with a low-Z material) for

	retention studies'
2013	Contact person for the WP13-IPH-A11-P1-02/ENEA_RFX/BS EFDA activity of title: 'Optimization of W-coated samples as plasma-facing material'
2016 – October 2017	Task Leader of 'Task 4: Vacuum, Gas injection and First wall conditioning systems' for the Consorzio RFX Project: Design of RFX-mod2
Tutoring	
	She has been tutor of 3 Bachelor's degree and 1 Ph.D. students