

CURRICULUM VITAE – I. PREDEBON

Name	Italo Predebon
Position	Researcher, Consiglio Nazionale delle Ricerche
Institute	Istituto per la Scienza e Tecnologia dei Plasmi and Consorzio RFX, Padova, Italy
Academic discipline	FIS/03
Main expertise	Plasma physics

Research areas

Plasma physics for nuclear fusion applications: particle and energy transport, chaos and fractional diffusion, ideal and resistive instabilities, drift-wave instabilities, gyrokinetics, electromagnetic turbulence.

Topological properties of magnetic fields and connections with cross-field transport.

Ideal MHD instabilities in general-relativistic plasmas, magnetic reconnection in solar physics.

High performance computing, development and use of Hamiltonian guiding-center codes and gyrokinetic codes for turbulence and transport simulations in magnetized plasmas.

Summary

Principal Investigator of 8 high performance computing projects (IFERC-CSC Japan, CINECA Italy).

Participant in EUROfusion work packages WP-JET, WP-S2, WP-MST, Enabling Research and related experimental campaigns.

Abilitazione a professore di I fascia, settore 02/B2 e di II fascia, settore 02/B1 (ASN 2016).

Reviewer for journals: Physical Review Letters, Physics of Plasmas, Plasma Physics and Controlled Fusion, IEEE Access.

Reviewer for Italian research projects (bandi MIUR).

Author of 74 papers, H-index 22 (Scopus).

Publications

A few sample papers:

“The phenomenology of reconnection events in the reversed field pinch”, Momo B et al, Nuclear Fusion 60, 056023 (2020).

“Reconstruction of flux coordinates from discretized magnetic field maps”, Predebon I et al, Plasma Phys. Control. Fusion 60, 045003 (2018).

“Overview of gyrokinetic studies of finite-beta microturbulence”, Terry PW et al, Nuclear Fusion 55, 104011 (2015).

“On the linear stability of collisionless microtearing modes”, Predebon I et al, Physics of Plasmas 20, 040701 (2013).