

Mauro Dalla Palma

Senior engineer in plasma engineering
Head of Plasma Engineering Group in Consorzio RFX



Affiliation

CNR - Institute for Plasma Science and Technology
Consorzio RFX, 4 corso Stati Uniti, 35127 Padova, Italy
Tel: +39 049 8295041
e-mail: mauro.dallapalma@igi.cnr.it

Research fields

- Components exposed to high heat fluxes and to plasmas: design, testing, and thermal control
- Thermal-hydraulic modelling of two-phase heat transfer
- Plasma-wall interaction and surface conditioning
- Vacuum vessels, feedthroughs, and thermo-mechanical systems for nuclear fusion machines
- Neutral beam injection systems: in-vessel components and embedded sensors
- Thermo-mechanical measurement systems: in-vessel instrumentation and signal conditioning
- Primary heat transfer systems and power conversion systems

Biographical sketch

Mauro Dalla Palma received the M.Eng. degree in mechanical engineering in 2000 and the Ph.D. degree in energetics in 2006 from the University of Padova, Italy.

He has worked from 2001 to 2004 on the development and construction of ALMA observatory in collaboration with EIE and ESO. Since 2004, he has been working on nuclear fusion for studying, prototyping, and testing high heat flux components and in-vessel diagnostics for ITER (France), DEMO (Europe), LHD (Japan), RFX and DTT (Italy). He has been leading since 2018 the Plasma Engineering Group in Consorzio RFX with Institute for Plasma Science and Technology of the National Research Council of Italy. Since 2021, Mauro Dalla Palma has been coordinating the design completion for the procurement of vacuum vessel and ex-vessel mechanical systems of DTT. He is the author of more than 140 articles and one invention.

Dr. Dalla Palma in 2007 was a recipient of the EFDA Fusion Researcher Fellowship for the career development of exceptional candidates working on nuclear fusion.

International collaborations

- ITER Organization (IO), St. Paul Lez Durance, France
- Fusion For Energy (F4E), Barcelona, Spain
- Culham Centre for Fusion Energy (CCFE), Abingdon, United Kingdom
- Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (ENEA), Roma, Italy
- Commissariat à l'énergie atomique et aux énergies alternatives (CEA), St. Paul Lez Durance, France
- EUROfusion's Programme Management Unit (EUROfusion), Garching, Germany
- Institute for Plasma Research (IPR), Bhat Village, Gandhinagar, Gujarat, India
- Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
- Kurchatov Institute of Atomic Energy (KIAE), Moscow, Russian Federation
- Max-Planck Institut für Plasmaphysik (IPP), Garching, Germany
- National Institute for Fusion Science (NIFS), Oroshi Toki, Gifu, Japan

Summary of publications

Up to January 2021, Mauro Dalla Palma is author or co-author of 3 patents, 101 papers in peer reviewed international journals, and 48 international conference proceedings (20 h-index in Web of Science).