



International Conference on DIAGNOSTICS FOR FUSION REACTORS: THE BURNING PLASMA ERA

Villa Monastero, Varenna, Italy
September 1 - 5, 2025

Organized by:

- * "Piero Caldirola" International Centre for the Promotion of Science and ISPP, Italy
- * Istituto per la Scienza e Tecnologia dei Plasmi (ISTP), Italy
- * Università degli Studi di Milano-Bicocca, Milano, Italy
- * ENEA Centro Ricerche Frascati, Italy

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Purpose

The conference will focus on diagnostics systems, related technologies, and control systems of ITER and magnetically confined DT reactors aimed at the production of fusion power (BEST, SPARC, DEMO, ARC...). The status of private fusion company projects aiming at achieving burning plasma in the next years will be addressed. New diagnostics developed as part of the worldwide effort towards fusion energy production are included.

Specific topics covered:

- Diagnostics and controls for reactors: machine protection, plasma scenarios, and burning plasma control (including JET experience and present machines)
- Diagnostic system solutions and technologies adopted in DT reactors (ITER, DEMO, BEST, SPARC)

- Diagnostics development within the worldwide magnetic fusion programme and applicable to burning plasmas
- New concepts of diagnostics for fusion reactors
- State of progress of private funded fusion companies aiming at achieving burning plasmas.

The programme will include invited oral presentations and contributed short oral presentations. Contributors of short orals are also invited to present their work in a poster for the poster sessions.

The conference is organized on-site.

The Conference strongly encourages the participation of young scientists.

Contributed Papers

Contributed papers for the workshop will be selected by the Scientific Advisory Committee in line with the points listed in the section 'Purpose' on the basis of a one page abstract. These abstracts should be sent through the website at the link <https://agenda.infn.it/event/44061/abstracts> by **May 20, 2025**. Notification of abstract acceptance will be sent via e-mail by **June 10, 2025**.

Proceedings of the Conference

Following a tradition started in 1975 invited and contributed papers will be published in a book of Proceedings in the journal JINST. Manuscripts must be delivered at the Conference. Detailed instructions for authors will be published on the Conference web site by **June 30, 2025**.

Registration and Hotel Reservation

Registration and hotel reservation to be made online on the conference website at the link <https://agenda.infn.it/event/44061/>. Deadline for registration is **June 20, 2025**. Applicants will receive confirmation of hotel reservation by **June 30, 2025**.

Registration Fee

Registration fee: € 600.
A reduced onsite registration fee for students is not foreseen but students can apply for a discount which will be decided upon on a case by case basis.
The fee should be paid by bank transfer **before 25 July 2025** to:
Banca Popolare di Sondrio, Account opened in favour of
"International Center Piero Caldirola"
IBAN: IT40B0569651490000041377X47 BIC/SWIFT: POSOIT22XXX
Please, state as motivation of payment: **YOUR FULL NAME - Participation "Diagnostics 2025"**
Onsite participation fee covers admission to the Conference, coffee breaks and all social events.
All bank expenses are at participants' charge.

Important Dates

Abstract submission	May 20, 2025
Abstract acceptance	June 10, 2025
Application, hotel reservation	June 20, 2025
Notification of hotel reservation	June 30, 2025
Payment of registration fee by bank transfer	July 25, 2025
Manuscript delivery	September 1 to November 15, 2025

For any inquiry, please contact

For questions related to the scientific programme:
F. P. Orsitto, G. Gorini, G. Croci, M. Tardocchi, M. Nocente conf-varenna@istp.cnr.it

For questions related to the conference proceedings:
E. Perelli Cippo, G. Croci, A. Dal Molin, M. Nocente proc-varenna@istp.cnr.it

For any other question:
D. Pifferetti secretariat@icpc.it