



13th Technical Meeting on Plasma Control Systems, Data Management and Remote Experiments in Fusion Research

Hosted by the
Government of United Kingdom

through the
United Kingdom Atomic Energy Authority

Culham Science Centre
Culham, United Kingdom

5–8 July 2021

Ref. No.: EVT1904260

Information Sheet

Introduction

The International Atomic Energy Agency (IAEA) fosters international collaboration and coordination to help close the existing gaps in physics, technology and safety, and move forward in developing the peaceful use of fusion energy. IAEA's activities in this field cover, among others, plasma physics and fusion energy research, technologies and materials, both for magnetic and inertial confinement fusion. The main objective of fusion technology development is to deliver a safe, economical and essentially unlimited energy source. While considerable progress has been made during the last few years, there is still a great deal of research and development needed; moving from pulsed experimental devices to long-pulse operation with high neutron yields creates increasing computer science and engineering challenges to be solved.

Objectives

The event aims to provide a forum to discuss new developments in the areas of plasma control systems, data management including data acquisition and analysis, and remote experiments in fusion research.

Target Audience

The event aims to bring together junior and senior scientific fusion project leaders, plasma physicists, including theoreticians and experimentalists, and experts in the field of plasma control systems, data management including data acquisition and analysis, and remote experiments in fusion research.

Working Language(s)

The working language of the event will be English. All communication and papers must be sent to the IAEA in English. No simultaneous interpretation will be provided.

Structure and Topics

The programme will mainly consist of sessions dedicated to invited and contributed (orals and posters) talks and discussion. A Programme Committee made up of a representative international membership will be responsible for selecting the talks and arranging the technical and discussion sessions, as well as for the overall scientific content of the event.

The sessions will cover the following topics:

- **Plasma Control**
Keywords: CODAC Control Systems and its Components, Plasma Control Systems, Advanced Software Approaches
- **Machine Control, Monitoring, Safety and Remote Manipulation**
Keywords: Equilibrium Condition, Transport Simulation, Fast Simulation, Event System
- **Data Acquisition and Signal Processing**
Keywords: Diagnostics, Data Processing, Image Processing
- **Database Techniques for Information Storage and Retrieval**
Keywords: Metadata, Post Data Analysis, Multi-site Repositories, Database System
- **Advanced Computing and Massive Data Analysis**

Keywords: Artificial Intelligence, Deep Learning, Machine Learning, Real-time Diagnostics, Parallel Computing, High Performance Computing, Real-time MHD Analysis

- **Remote Experiments and Virtual Laboratory**

Keywords: Remote Participation, Control Tools, Remote Data Analysis and Visualization

- **Fast Network Technology and its Application**

Keywords: Data Archival and Retrieval, Animation Performance

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State, participants are requested to send the **Participation Form (Form A)** to their competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) for onward transmission to the IAEA by **28 May 2021**. Participants who are members of an organization invited to attend are requested to send the **Participation Form (Form A)** through their organization to the IAEA by the above deadline.

All persons wishing to present a contribution at the event are requested to send the **Participation Form (Form A)** together with **Form for Submission of a Paper (Form B)** through the established official channels to the IAEA by the above deadline.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Please note that the IAEA is in a transition phase to manage the entire registration process for all regular programme events electronically through the new InTouch+ (<https://intouchplus.iaea.org>) facility, which is the improved and expanded successor to the InTouch platform that has been used in recent years for the IAEA's technical cooperation events. Through InTouch+, prospective participants will be able to apply for events and submit all required documents online. National authorities will be able to use InTouch+ to review and approve these applications. Interested parties that would like to use this new facility should write to: InTouchPlus.Contact-Point@iaea.org.

Abstracts and Proceedings

Concise regular contributions (oral and poster presentations) that fall within the topics outlined above may be submitted to the event. Anyone wishing to present a regular contribution at the event is requested to submit an abstract of not more than 500 words through IAEA-INDICO by **7 May 2021**. Abstracts may contain figures and graphics. Instructions on how to upload the abstracts will be available on the IAEA-INDICO website.

Submissions must contain the author's name, email address, country, organization and topic. Authors are encouraged to flag their proposals as an oral or poster presentation. However, the Programme Committee will evaluate all submissions and decide on the final presentation format.

Authors will be notified by email by **7 June 2021** as to whether their abstracts have been accepted.

An electronic copy of the proceedings, consisting of abstracts, presentation slides and posters will be made available to all participants on the IAEA Fusion Portal.

Under the coordination of the Chair of the Programme Committee, a summary paper will be published in the IAEA journal *Nuclear Fusion*.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made using the **Grant Application Form (Form C)** which has to be stamped, signed and submitted by the competent national authority to the IAEA together with the **Participation Form (Form A)** by **28 May 2021**.

Grant awards will be announced by **7 June 2021**.

Event Venue and Accommodation

The event will be held at Culham Science Centre, Culham, United Kingdom.

For information about accommodation and transportation please visit the meeting web page.

Visas

Participants who require a visa to enter the United Kingdom should submit the necessary application as soon as possible to the nearest diplomatic or consular representative of the United Kingdom.

Key Deadlines and Dates

7 May 2021	Deadline for submission of abstracts through IAEA-INDICO for contributed talks
28 May 2021	Deadline for submission of Participation Form (Form A), Form for Submission of a Paper (Form B) and Grant Application Form (Form C) (if applicable) through the official channels
7 June 2021	Notification of acceptance of abstracts and of assigned awards
5 July 2021	Event begins
8 July 2021	Event ends

Programme Committee

The Programme Committee is composed of the following members:

Mr John Waterhouse (Chair)	United Kingdom
Ms Sang-hee Hahn	Republic of Korea
Mr Adriano Luchetta	Italy
Mr Didier Mazon	France
Ms Mikyung Park	ITER Organization
Mr Hideya Nakanishi	Japan
Mr Wanderley Pires De Sa	Brazil
Mr Daniel Raju	India
Mr David Schissel	United States
Mr Joe Snipes	ITER Organization
Mr Mikhail Sokolov	Russia
Mr Joshua Stillerman	United States
Mr Axel Winter	Germany
Mr Bingjia Xiao	China

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretary.

Host Organization Contact Point

Chairperson:

Mr John Waterhouse

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Culham Science Centre
ABINGDON
UNITED KINGDOM

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Meeting Web Page

Participants are encouraged to visit this web page regularly to check for new or updated information regarding the meeting:

<https://conferences.iaea.org/event/244/>