



**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

# **16th Technical Meeting on Energetic Particles in Magnetic Confinement Systems — Theory of Plasma Instabilities**

**Hosted by the  
Government of Japan**

**through the  
National Institute for Fusion Science**

**Shizuoka City, Japan**

**3–6 September 2019**

**Ref. No.: EVT1701743**

## **Information Sheet**

### **Introduction**

The International Atomic Energy Agency (IAEA) fosters the exchange of scientific and technical results in nuclear fusion research and development through its series of Technical Meetings and workshops. The 16th Technical Meeting on Energetic Particles in Magnetic Confinement Systems — Theory of Plasma Instabilities (EPPI 2019) aims to provide a forum to discuss the status of experimental and theoretical work on suprathermal electrons and ions in a wide variety of magnetic confinement geometries, and to discuss theoretical and computational physics issues relevant to burning plasmas.

The event will focus on the formation and transportation of energetic particles, including their confinement properties. It will provide a detailed account of the location of lost energetic particle incidence on first wall components, the collective instabilities driven by energetic particles and their impact on plasma properties in different operational scenarios, and energetic particle diagnostics. It will aim, in particular, at identifying current physics issues and gaps associated with energetic particles in ITER and future fusion power plants.

Additionally, the event will cover linear and non-linear theory and simulation of plasma instabilities, including core/edge turbulence, magneto-hydrodynamic processes, and energetic particle driven dynamics and their effects on plasma confinement. Attention will be paid to multi-scale interaction dynamics to better understand burning plasmas, as well as to the modelling of such complex physical processes.

The EPPI 2019 is being organized by the IAEA, in cooperation with the Government of Japan through the National Institute for Fusion Science, in Shizuoka City, Japan. Previous Technical Meetings on Energetic Particles in Magnetic Confinement Systems were held in Kiev, Ukraine (1989), Aspenas, Sweden (1991), Trieste, Italy (1993), Princeton, United States of America (1995), Abingdon, United Kingdom (1997), Naka, Japan (1999), Gothenburg, Sweden (2001), San Diego, United States of America (2003), Takayama, Japan (2005), Seeon-Seebruck, Germany (2007), Kiev, Ukraine (2009), Austin, United States of America (2011), Beijing, China (2013), Vienna, Austria (2015), and Princeton, United States of America (2017). In addition, previous Technical Meetings on Theory of Plasma Instabilities were held in Seeon-Seebruck, Germany (2002), Trieste, Italy (2005), York, United Kingdom (2007), Kyoto, Japan (2009), Austin, United States of America (2011), Vienna, Austria (2013), Frascati, Italy (2015), and Vienna, Austria (2017).

## Structure, Themes and Topics

The Technical Meeting will include invited and contributed papers (oral and poster presentations) presented in sessions devoted to the following topics:

- **APP:** Alpha Particles Physics;
- **TEP:** Transport of Energetic Particles;
- **EEP:** Effects of Energetic Particles in Magnetic Confinement Fusion Devices;
- **CP:** Collective Phenomena (Alfvén eigenmodes, energetic particle modes and others);
- **RE&D:** Runaway Electrons and Disruptions;
- **DEP:** Diagnostics for Energetic Particles;
- **CEP:** Control of Energetic Particle Confinement; and
- **MP&I:** Multiscale Physics and Instabilities in Burning Plasmas.

An International Programme Advisory Committee consisting of a representative international membership will be responsible for the selection of papers, arrangements of technical sessions (including a summary session) and the overall scientific content of the event.

## Abstracts, Papers and Proceedings

Concise papers on issues falling within the topics outlined in Section above may be submitted as contributions to the event. All papers must present original work and should not have been published elsewhere.

Anyone wishing to present a paper at the event is requested to submit an abstract of not more than 500 words through IAEA-INDICO by **2 June 2019**. Abstracts may contain figures and graphics. Instructions on how to upload the abstracts to IAEA-INDICO will be available on the 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 International Programme Advisory Committee will evaluate all submissions and decide on the final presentation format.

Authors will be notified by email by **28 June 2019** as to whether their papers 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-INDICO website.

A summary paper and a selection of papers from the event will be published in *Nuclear Fusion*.

## Working Language(s)

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

## 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 **14 June 2019**. 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 paper at the meeting are requested to send the **Participation Form (Form A)** and **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](mailto:InTouchPlus.Contact-Point@iaea.org).

## 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 **14 June 2019**.

Grant awards will be announced by **28 June 2019**.

## Visas

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

## Event Venue and Accommodation

The event will take place at the Shizuoka Convention & Arts Center (GRANSHIP, <http://www.granship.or.jp>). Detailed information on accommodation, transportation and other relevant matters will be provided to all designated participants by the host organization.

## Key Deadlines and Dates

<b>2 June 2019</b>	Deadline for submission of abstracts through IAEA-INDICO
<b>14 June 2019</b>	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
<b>28 June 2019</b>	Notification of acceptance of abstracts and of assigned awards
<b>3 September 2019</b>	Event begins
<b>6 September 2019</b>	Event ends

## Event Web Page

Please visit the following web page regularly for new information regarding this event:  
<https://conferences.iaea.org/indico/event/185/>

## International Programme Advisory Committee

The International Programme Advisory Committee is composed of the following members:

Todo, Yasushi (Chair)	Japan
Yagi, Masatoshi (Co-Chair)	Japan
Breizman, Boris	United States of America
Cai, Huishan	China
Chen, Wei	China
Fasoli, Ambrogio	Switzerland
Fredrickson, Eric	United States of America
Fulop, Tunde	Sweden
Hahm, Taik Soo	Republic of Korea
Heidbrink, William	United States of America
Kolesnichenko, Yaroslav	Ukraine
Lauber, Philipp	Germany
Pinches, Simon	ITER Organization
Sharapov, Sergei	United Kingdom
Shinohara, Kouji	Japan
Vlad, Gregorio	Italy

## IAEA Contacts

### Scientific Secretary:

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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

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