



# **25th IAEA Fusion Energy Conference (FEC 2014)**

**Saint Petersburg, Russian Federation  
13–18 October 2014**

**Organized by the  
International Atomic Energy Agency**

**Hosted by the  
Government of the Russian Federation**

**through the  
State Atomic Energy Corporation “Rosatom”**

## **Announcement and Call for Papers**

### **A. Introduction**

The International Atomic Energy Agency (IAEA) fosters the exchange of scientific and technical results in nuclear fusion research through its series of Fusion Energy Conferences. The 25th IAEA Fusion Energy Conference (FEC 2014) aims to provide a forum for the discussion of key physics and technology issues as well as innovative concepts of direct relevance to the use of nuclear fusion as a source of energy.

With a number of next-step fusion devices currently being implemented — such as the International Thermonuclear Experimental Reactor (ITER) in Cadarache, France, and the National Ignition Facility (NIF) in Livermore, United States of America — and in view of the concomitant need to demonstrate the technological feasibility of fusion power plants as well as the economical viability of this method

of energy production, the fusion community is now facing new challenges. The way these challenges are addressed will dictate research orientations in the present and coming decades.

The scientific scope of FEC 2014 is, therefore, intended to reflect the priorities of this new era in fusion energy research. The conference aims to serve as a platform for sharing the results of research and development efforts in both national and international fusion experiments that have been shaped by these new priorities, and to thereby help in pinpointing worldwide advances in fusion theory, experiments, technology, engineering, safety and socio-economics. Furthermore, the conference will also set these results against the backdrop of the requirements for a net energy producing fusion device and a fusion power plant in general, and will thus help in defining the way forward.

With the participation of international organizations such as the ITER Organization and the European Atomic Energy Community (Euratom), as well as the collaboration of more than forty countries and several research institutes, including those working on smaller plasma devices, it is expected that this conference will, as in the past, serve to identify possibilities and means for continuous and effective international collaboration in this area.

The 25th IAEA Fusion Energy Conference is being organized by the IAEA in cooperation with the State Atomic Energy Corporation “Rosatom”, Russian Federation. Previous conferences in this series were held in Salzburg (1961), Culham (1965), Novosibirsk (1968), Madison (1971), Tokyo (1974), Berchtesgaden (1976), Innsbruck (1978), Brussels (1980), Baltimore (1982), London (1984), Kyoto (1986), Nice (1988), Washington DC (1990), Würzburg (1992), Seville (1994), Montreal (1996), Yokohama (1998), Sorrento (2000), Lyon (2002), Vilamoura (2004), Chengdu (2006), Geneva (2008), Daejeon (2010) and San Diego (2012).

## B. Topics

- **OV**        Overviews
- **EX**        Magnetic Confinement Experiments (for the subtopics, see Annex A)
- **TH**        Magnetic Confinement Theory and Modelling (for the subtopics, see Annex A)
- **PPC**       Plasma Overall Performance and Control
- **IFE**        Inertial Fusion Experiments and Theory
- **ICC**        Innovative Confinement Concepts
- **FIP**        Fusion Engineering, Integration and Power Plant Design
- **FNS**        Fusion Nuclear Physics and Technology
- **MPT**       Materials Physics and Technology
- **SEE**        Safety, Environmental and Economic Aspects of Fusion

Papers on these topics will be considered for presentation at FEC 2014 if they are clearly relevant to the development of fusion energy (see the attached Annex A, *Scientific Guidelines for Authors*). A Programme Committee consisting of a representative international membership will be responsible for the selection of papers, the arrangements of conference sessions and the overall scientific content of the conference. The Programme Committee will meet in April 2014 at the IAEA’s Headquarters in Vienna, Austria, to finalize the technical programme of the conference. Please be aware that because of the large interest within some countries in submitting papers, official authorities in those countries

may pre-screen the papers to be submitted. Authors are advised to acquaint themselves with possible deadlines for this process at their earliest convenience.

## C. Participation

All persons wishing to participate in the conference are requested to register online in advance via the IAEA conference website (see Section P). In addition, they must send a completed Participation Form (Form A) to their appropriate governmental authority for subsequent transmission to the IAEA. **A participant will be accepted only if the Participation Form is transmitted to the IAEA through one of the established official channels** (see Section H).

## D. Submission of Synopses and Abstracts

Anyone wishing to present a paper or poster during this conference must submit **a two-page synopsis and an abstract, both in electronic format** (no paper copies), directly to the IAEA. Instructions on how to upload the synopses and abstracts to the conference's web browser-based file submission system (IAEA-INDICO) are available on the IAEA conference website (see Section P). The synopses and abstracts **must** be submitted through this system **between 21 February and 21 March 2014**. No other form of submission will be accepted.

Authors must further submit the following two forms to their appropriate governmental or other competent authority (see section H) for transmission to the IAEA:

- Participation Form (Form A)
- Form for Submission of a Paper (Form B)

These forms must be received by the IAEA no later than **1 April 2014**.

**IMPORTANT:** The electronically received two-page synopsis will be considered by the Programme Committee only if these two forms have been received by the IAEA through the established official channels (see Section H). **Authors should be aware that only one paper per same first author may be submitted for consideration.**

## E. Papers and Conference Proceedings

### E.1. Acceptance of papers

Authors will be notified by email by May 2014 whether their papers have been accepted for oral presentation or for poster presentation and will be informed of the assigned paper number and presentation session.

## **E.2. Submission of full manuscripts**

Specifications and instructions for the layout and electronic format of the full manuscripts as well as for the preparation of posters will be posted on the IAEA conference website (see Section P) by May 2014. The full manuscripts **must** be submitted through the IAEA-INDICO file submission system in the same way as the two-page synopses. IAEA-INDICO will be reopened for submission of accepted papers on **18 August 2014**. The deadline for electronic submission of the full papers as PDF files is **21 September 2014**. The IAEA will not accept regular papers submitted after the deadline, and any subsequent submission by email will not be accepted either.

**IMPORTANT:** The system for electronic submission of papers, IAEA-INDICO, is the sole mechanism for submission of regular papers for FEC 2014. Historically, up to 70% of all papers for previous conferences were submitted during the last week before the submission deadline, which has led to some technical difficulties experienced by submitters due to high traffic on the web server. Authors are therefore encouraged to submit papers as early as possible.

## **E.3. Overview papers and summaries**

Authors of manuscripts for overview papers and conference summary papers are kindly requested to submit their papers for publication in a special issue of the journal *Nuclear Fusion* to appear in mid-2014.

## **E.4. Page limits for proceedings papers**

Summaries:	20 pages
Overviews:	12 pages
Oral presentations:	8 pages
Posters:	8 pages

## **E.5. Publication of proceedings**

The papers will be published by the IAEA as unedited proceedings in electronic format on a CD-ROM and on the IAEA Physics Section website (<http://www-naweb.iaea.org/napc/physics/index.html>) by March 2015. Authors should note that material which was not presented at the conference orally or in the form of a poster will not be included in the proceedings.

## **E.6. Submission of contributed papers to *Nuclear Fusion***

Authors of papers accepted for presentation at the conference are encouraged to submit their papers to the journal *Nuclear Fusion*, in addition to submitting them for inclusion in the conference proceedings. The manuscripts must contain original work and should omit, or only briefly mention in the introduction, material that has already been published. Papers should be appropriate, in terms of style and content, for a high quality scientific journal and will be subject to the standard double-referee peer-review procedure observed by the editors of *Nuclear Fusion*. All communications with the authors regarding details for publication and charges will be handled by the *Nuclear Fusion* editorial office.

## F. Post-Deadline Papers

A limited number of papers will be considered for post-deadline acceptance. To be considered, a paper must meet all of the following criteria:

- It deals with subject matter appropriate for this conference;
- It presents new experimental or theoretical data, or technological developments, of sufficient importance to attract wide-ranging interest among the conference participants;
- It is submitted together with a completed Form for Submission of a Paper (Form B; see Section D) and an officially endorsed Participation Form (Form A; see Section H); and
- A two-page synopsis has been sent as a file attachment by email to the IAEA's Scientific Secretariat for the conference by **21 September 2014** (to this email address: [physics@iaea.org](mailto:physics@iaea.org) and as **PDF files only**). The Programme Committee will meet on **13 October 2014** to consider post-deadline submissions. Authors will be notified promptly about the acceptance or rejection of their papers through announcements posted on the IAEA conference website. Authors of post-deadline papers should be prepared to provide either an oral presentation or a poster. Time will be made available for three post-deadline oral presentations. The manuscripts of post-deadline contributions are to be included in the proceedings and must follow the same guidelines as those that apply to regular papers (see Section E).

## G. Expenditures

The cost for the organization of the conference is borne by the Host Government and the IAEA.

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 conference. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Such assistance may be offered upon specific request to normally one participant per country provided that, in the IAEA's view, the participant on whose behalf assistance is requested will make an important contribution to the conference. Grant applications will only be considered for authors of accepted papers.

If governments wish to apply for a grant on behalf of one of their specialists, they should address specific requests to the IAEA to this effect. Governments should ensure that applications for grants are:

1. Submitted by **1 April 2014**;
2. Accompanied by a duly completed and signed Grant Application Form (Form C);
3. Accompanied by a completed Participation Form (Form A).

Applications that do not comply with the above conditions cannot be considered.

Approved grants will be issued in the form of a lump sum payment that usually covers **only part of the cost of attendance**.

## **H. Channels of Communication**

All persons wishing to participate in the conference are requested to register online in advance via the IAEA conference website (see Section P). In addition, they must send a completed Participation Form (Form A), Form for Submission of a Paper (Form B) (if applicable), and Grant Application Form (Form C) (if applicable) as soon as possible to one of the competent official authorities (in most cases these are: Ministry of Foreign Affairs, National Atomic Energy Authority or invited organization) for subsequent transmission to the IAEA.

Participants whose official designations have been received by the IAEA will receive further information on the conference at least three months before the event. This information will also be made available on the IAEA conference website.

## **I. Distribution of Documents**

A preliminary programme and Book of Abstracts will be posted on the IAEA conference website (see Section P) as soon as possible.

The final programme and the Book of Abstracts (**in electronic form only**) will be available free of charge upon registration at the conference. It is also planned to make available a smartphone application to provide participants with the possibility to access programme and conference details through their smartphones.

## **J. Working Language**

The working language of the conference will be English. No simultaneous interpretation will be provided.

## **K. Accommodation**

Detailed information on accommodation and other administrative details will be made available on both conference websites (see Section P) well in advance of the conference.

## **L. Visas**

Designated participants who require a visa to enter the Russian Federation should submit the necessary application(s) to the nearest diplomatic or consular representative of the Russian Federation as early as possible, but at least one month before the start of the conference. An invitation letter from the local

organizers will be required to accompany the visa application. Please see the “Visa Guidance” to be made available soon at the IAEA conference website (see Section P) on how to obtain such an invitation letter.

## **M. Satellite Meetings**

Deadline for booking requests: **13 September 2014**.

Details regarding how to arrange for room reservations will soon be made available on the Host Organization Host Organization conference website.

## **N. Exhibitions**

Space will be available for commercial vendors’ displays/exhibits during the conference (further information will be made available in due course on the conference websites).

## **O. Conference Secretariat**

### **IAEA Scientific Secretaries:**

#### **Mr Ralf Kaiser**

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[physics@iaea.org](mailto:physics@iaea.org)

## **IAEA Administration and Organization:**

### **Ms Karen Morrison**

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries ([physics@iaea.org](mailto:physics@iaea.org)) and correspondence on administrative matters to the IAEA's Conference Services Section.

## **Host Government Officials:**

### **Mr Alexey Kalashnikov**

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## **P. Conference Websites**

Participants are encouraged to visit the two conference websites regularly to check for new or updated information. The conference website addresses are:

IAEA website:

<http://www-pub.iaea.org/iaeameetings/46091/25th-Fusion-Energy-Conference-FEC-2014>

Host Organization website:

This will soon be available through the IAEA conference website.