



## **24th IAEA Fusion Energy Conference (FEC 2012)**

**San Diego, USA**

**8–13 October 2012**

*Organized by the*  
International Atomic Energy Agency

*Hosted by the*  
Government of the United States of America

*through the*  
U.S. Department of Energy and  
General Atomics, San Diego

## **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 24th IAEA Fusion Energy Conference (FEC 2012) aims to provide a forum for the discussion of key physics and technology issues as well as innovative concepts of direct relevance to fusion as a source of nuclear 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, USA — 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 resolution of these challenges will dictate research orientations in the present and coming decades.

The scientific scope of FEC 2012 is, therefore, intended to reflect the priorities of this new era in fusion energy research. The conference aims to be 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 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 International Organization and 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 a continuous effective international collaboration.

The 24th Fusion Energy Conference is being organized by the IAEA in cooperation with the U.S. Department of Energy and General Atomics, USA. 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), and Daejeon (2010).

## 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)
- **ITR**        ITER Activities
- **IFE**        Inertial Fusion Experiments and Theory
- **ICC**        Innovative Confinement Concepts
- **FTP**        Fusion Technology and Power Plant Design
- **SEE**        Safety, Environmental and Economic Aspects of Fusion

Papers on these topics will be considered for presentation at FEC 2012 if 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 2012 at IAEA Headquarters in Vienna, Austria.

## C. Participation

All persons wishing to participate in the conference are requested to register online in advance via the IAEA conference website (see Section O). 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 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 to the conference's web browser-based file submission system (IAEA-INDICO) will be available on the conference website (see Section O) as of February 2012. The synopses and abstracts **must** be submitted through this system **between 1 March and 1 April 2012**. No other form of submission will be accepted.

Authors must further submit the following two forms to their appropriate governmental authority (see section H) for transmission to the IAEA. These forms must be received by the IAEA no later than **1 April 2012**.

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

**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 representative official channels (see Section H).

## E. Papers and Conference Proceedings

### (a) Acceptance of papers

Authors will be notified by email by May 2012 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.

### (b) Submission of full manuscripts

Full manuscripts shall be submitted through the IAEA-INDICO file submission system. Specifications for the layout and electronic format of the full manuscripts and for the preparation of posters will be available on the IAEA FEC web site. The full manuscripts **must** be submitted through IAEA-INDICO in the same way as the two-page synopses. IAEA-INDICO will be reopened for submission of accepted papers on **20 August 2012**. The deadline for electronic submission of the full papers as PDF files is **23 September 2012**. The IAEA will not accept regular papers submitted after the deadline, and any subsequent submission by email will not be accepted either.

The specifications and instructions for preparing the full manuscripts will be posted on the IAEA's web page for the conference by **May 2012**:

<http://www-pub.iaea.org/MTC/Meetings/Announcements.asp?ConfID=41985>

**IMPORTANT:** The system for electronic submission of papers, IAEA-INDICO, is the sole mechanism for submission of regular papers for FEC 2012. Historically, up to 70% of all papers for previous conferences were submitted during the last week before the submission deadline. Authors are therefore encouraged to submit papers as early as possible.

**(c) 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-2013.

**(d) Page limits**

Summaries: 20 pages

Overviews: 12 pages

Oral presentations: 8 pages

Posters: 8 pages

**(e) Publication of proceedings**

The papers will be published by the IAEA as unedited proceedings in electronic format on CD-ROM and on the IAEA Physics Section website (<http://www-naweb.iaea.org/naweb/physics/index.html>) by March 2013. Authors should note that material which was not presented at the conference orally or by poster will not be included in the proceedings.

**(f) Submissions 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 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);
- A two-page synopsis has been sent as a file attachment by email to the IAEA's Scientific Secretariat for the conference before **16 September 2012** (to this email address: [physics@iaea.org](mailto:physics@iaea.org) and as **PDF files only**). The Programme Committee will meet on **8 October 2012** to consider post-deadline submissions. Authors will be notified promptly about the acceptance or rejection of their papers through announcements posted at the 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 designated participants in the conference. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of selected specialists from Member States eligible to receive technical assistance under the IAEA's technical cooperation programme. Such assistance may be offered, upon specific request, to one participant per country provided that in the IAEA's view the participant will make an important contribution to the conference. Grant applications will only be considered for authors of accepted papers. In general, not more than one grant will be awarded to any one country.

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 2012**;
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 conference website (see Section O). In addition, they must send a completed Participation Form (Form A), the Form for Submission of a Paper (Form B) (if applicable), and the Grant Application Form (Form C) (if applicable) as soon as possible to the competent official authority (Ministry of Foreign Affairs; National Atomic Energy Authority; or, in the case of ITER participants, the ITER 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 conference website.

## **I. Distribution of Documents**

A preliminary programme and Book of Abstracts will be posted on the IAEA's web page for the conference 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 available on the conference websites well in advance of the conference.

## **L. Visas**

Participants are responsible for taking the steps required to obtain a visa or entry permission for the USA. As the processing of visa applications can take up to three months, participants are strongly advised to start this process as soon as possible. Participants are strongly encouraged to refer to the Local Host web site for details on how to apply, <http://www.fec2012.com>. The Non-U.S. Citizen Form should be submitted no later than March 1st, 2012.

## **M. Satellite Meetings**

Deadline for booking requests: **8 September 2012**

Contact details for reservations will soon be made available on the conference website.

## **N. Conference Secretariat**

### **IAEA Scientific Secretaries:**

Mr Ralf Kaiser  
Division of Physical and Chemical Sciences  
International Atomic Energy Agency  
Vienna International Centre, PO Box 100  
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Mr Richard Kamendje  
Division of Physical and Chemical Sciences  
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**Contact email address (and also for  
post-deadline submission of papers):**

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

### **IAEA Administration and Organization:**

Ms Karen Morrison  
Conference Services Section  
Division of Conference and Document Services  
IAEA-CN-197  
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Vienna International Centre, PO Box 100  
1400 Vienna, Austria  
Tel.: +43 1 2600 21317  
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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 Official:**

Mr Edmund Synakowski  
Associate Director of the Office of Science for Fusion Energy Sciences  
US Department of Energy, USA  
Email: [ed.synakowski@science.doe.gov](mailto:ed.synakowski@science.doe.gov)  
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### **Conference Site Issues:**

Ms Michelle Bartolone, CMP  
24<sup>th</sup> IAEA FEC Event Coordinator  
Meeting Sites Pro, Inc.  
Email: [michelle@meetingsitespro.com](mailto:michelle@meetingsitespro.com)  
Tel.: +1 858 560 4677

Ms Anastasia Nycum  
24<sup>th</sup> IAEA FEC Secretariat  
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## **O. Conference Websites**

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

IAEA web site: <http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=41985>

Local Host web site: <http://www.fec2012.com/>