



International Conference on Research Reactors: Safe Management and Effective Utilization

**IAEA Headquarters
Vienna, Austria**

16–20 November 2015

Ref. No.: IAEA-CN-231

Announcement and Call for Papers

A. Background

The International Atomic Energy Agency (IAEA) has promoted and fostered the exchange of scientific and technical information on research reactors for many years. An important mechanism for this exchange is the organization of periodic meetings, seminars, symposia and conferences. Since 2003 the IAEA has been organizing major international conferences on topics of interest to the research reactor community every four years. The last such event was the International Conference on Research Reactors: Safe Management and Effective Utilization held in Rabat, Morocco, in November 2011.

A number of significant issues still being faced by the research reactor community are primarily related to operation, maintenance, utilization, safety, security, ageing management, decommissioning, spent fuel and waste management. More recent challenges have to do with initiatives to support new research reactor projects (including national infrastructure development), safety reassessment of facilities following the accident at the Fukushima Daiichi nuclear power plant in March 2011, and fresh fuel supply. Additional challenges, such as securing isotope production, competence management and succession planning, strategic planning and the sustainability of research reactor programmes, are also

receiving greater attention. In view of the above, a new international conference is being convened in 2015 to discuss these issues, report on relevant progress and plans, exchange information, and foster cooperation among the research reactor community.

B. Objectives

The purpose of this conference is to foster the exchange of information on operating and planned research reactors and to provide a forum at which reactor operators, managers, users, regulators, designers and suppliers can share experience and lessons learned, as well as address common issues, challenges, and strategies.

C. List of Topics

The conference will have a number of technical sessions dealing with specific topical areas. Sessions are expected to include papers by invited speakers as well as contributions by participants. While most papers will focus on one of the principal areas below, authors are encouraged to consider integration with the other areas as appropriate.

The topical areas are grouped below under seven major headings:

1. Utilization and Applications of Research Reactors

- Advances and challenges in:
 - Production of radioisotopes
 - Research with neutron beams
 - Neutron imaging
 - Irradiation services and products
 - Neutron activation analysis
 - Material and fuel testing
 - Other applications
- Utilization programmes for critical and subcritical facilities
- Education and training programmes, including e-learning
- Strategies for enhanced utilization and sustainability, including networking, coalitions, and regional and international cooperation

- Role of research reactors in the development of nuclear science and technology programmes, including nuclear power programmes

2. Research Reactor Operation and Maintenance

- Operating experience and lessons learned
- Ageing management, maintenance and recent major repair/refurbishment and upgrade projects
- Fuel management experience, related issues and lessons learned:
 - Fuel performance and corrosion issues
 - Qualification of new fuels for research reactors
 - Fuel storage and transportation
- Member States' experience from Operation and Maintenance Assessment for Research Reactors (OMARR) missions
- Recent core conversion programmes
- Operational waste management and disposal

3. New Research Reactor Projects

- Strategy and rationale for new research reactor acquisitions in support of nuclear science and technology, including nuclear power programmes
- Experience in the application of the IAEA-developed 'research reactor milestones' approach for new research reactor projects¹, with relevant topics including:
 - Assessment of needs, development of users' community, stakeholder involvement and strategic planning
 - Development and assessment of the national infrastructure to support the first/a new research reactor in each of the project implementation phases
 - Safety considerations in different phases of a research reactor project
 - Preparation of the feasibility study for a new research reactor, including consideration of alternative neutron sources
 - Development of the technical requirements for the bidding process
- Status reports on new research reactor projects in progress, including on relevant experience and lessons learned

¹ This approach is outlined in: *Specific Considerations and Milestones for a Research Reactor Project* (IAEA Nuclear Energy Series No. NP-T-5.1, Vienna, 2012).

4. Safety of Research Reactors

- Experience with the application of the Code of Conduct on the Safety of Research Reactors and the relevant IAEA safety standards
- Lessons learned from safety assessments performed following the accident at the Fukushima Daiichi nuclear power plant
- Operational safety issues and safety documents, including:
 - Safety analysis methods and approaches
 - Safety of utilization, modifications and upgrades
 - Periodic safety reviews
- Member States' experience from Integrated Safety Assessment for Research Reactors (INSARR) missions
- Regulatory oversight, including developing and maintaining regulatory capability
- Reactor core safety calculations and measurements, including verification and validation of computer codes

5. Security of Research Reactors

- Experience with International Physical Protection Advisory Service (IPPAS) missions
- Experience with implementation of IAEA Nuclear Security Series publications²
 - National regulatory oversight by the competent authorities
 - Processes for licensing, inspections, compliance checking and enforcement of the nuclear security regime
 - Risk based approach, including threat assessment, design basis threat, risk management, graded approach and defence in depth
 - Transport security
- Implementing and sustaining facility security systems:
 - Threat assessment
 - Protection systems and security plans, including computer security
 - Response and mitigation strategies

² In particular: *Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5)* (IAEA Nuclear Security Series No. 13, Vienna, 2011), *Nuclear Security Recommendations on Radioactive Materials and Associated Facilities* (IAEA Nuclear Security Series No. 14, Vienna, 2011), and *Objective and Essential Elements of a State's Nuclear Security Regime* (IAEA Nuclear Security Series No. 20, Vienna, 2013).

6. Research Reactor Spent Fuel Management and Decommissioning

- Strategies for spent fuel disposal, including fuel return programmes
- Strategies for decommissioning, including waste management and disposal
- Management of the transition between definitive shutdown and decommissioning
- Experience with ongoing and recently completed decommissioning projects

7. Common Management Considerations for Research Reactors

- Establishment and implementation of an integrated management system, including quality assurance programmes
- Graded approach in application of management, technical and safety requirements
- Management and verification of safety and security, including:
 - Safety and security culture
 - Safety and security interfaces
- Human resource development, competence management, training, and succession planning
- Operating and/or experimental data management and preservation
- Configuration and documentation management
- Management of facilities in extended shutdown (safety, security, surveillance and maintenance)

D. Programme Structure

The conference programme will consist of an opening session, technical sessions with invited and contributed papers, poster sessions and a closing panel session. Side events on IAEA activities and services for research reactors as well as on issues and challenges in new research reactor projects are scheduled (other topics could be added based on the expressions of interest received).

Invited papers will cover major issues of relevance in the conference topical areas. A closing panel session will summarize the principal observations made during the conference and address important issues raised by the audience. At the end, summary conclusions and recommendations will be presented and discussed.

E. Synopses, Papers and Proceedings

All papers submitted — other than invited keynote papers — must present original work and should not have been published elsewhere.

E.1 Submission of Synopses

Persons who wish to present a paper at the conference on one of the topics listed under Section C — either orally or in the form of a poster — must submit a synopsis of **800 words maximum** (not exceeding two pages, including figures and tables) **in electronic format** (no paper copies) directly to the IAEA.

The synopsis should give enough information on the contents of the proposed paper to enable the Technical Programme Committee to evaluate it. Including too many introductory and general matters should be avoided. The accepted synopses will be reproduced in unedited form in the electronic *Compilation of Synopses* which will be distributed to all participants at the conference.

Instructions on how to upload the synopsis to the conference's web browser-based file submission system (IAEA-INDICO) will be available on the conference web page (see Section O) as of **1 February 2015**.

The synopses **must** be submitted through this system by **1 May 2015**. No other submission route will be accepted.

It is the responsibility of the authors to ensure that the submitted synopses have received any necessary clearance by their relevant governmental authorities.

In addition, authors must submit the following two forms to their appropriate governmental authority (see Section F) for transmission to the IAEA. These forms must be received by the IAEA not later than **1 May 2015**.

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

IMPORTANT: The electronically received synopses will be considered by the Technical Programme Committee only if these two forms have been received by the IAEA through the established official channels (see Section F).

E.2 Acceptance of Synopses

Given the number of synopses anticipated and the need to provide ample time for discussion, the number of papers that can be accepted for oral presentation is limited. Authors who prefer to present their papers as posters are requested to indicate this preference on Form A.

Authors will be notified by **30 June 2015** as to whether their papers have been accepted for oral or poster presentation.

E.3 Submission of Full Papers

Authors of accepted papers will be requested to submit a full length paper (**maximum of 8 pages**) taking into account reviewers' comments and recommendations.

The IAEA reserves the right to exclude papers that do not comply with its quality standards and/or that do not apply to one of the topics outlined in Section C above and/or that do not meet the expectations based on the information given in the extended synopsis.

Full papers must also be submitted through the IAEA-INDICO file submission system. Specifications for the layout and electronic format of the full papers will be available on the conference web page. The deadline for electronic submission of the full papers as PDF files is **30 September 2015**.

It is the responsibility of the authors to ensure that the submitted papers have received any necessary clearance by their relevant governmental authorities.

IMPORTANT: The system for electronic submission of papers, IAEA-INDICO, is the sole mechanism for submission of regular papers. Authors are encouraged to submit papers as early as possible.

E.4 Conference Proceedings

The proceedings of the conference will be published by the IAEA and made available on its website as soon as possible after the conference.

F. Participation and Registration

The target audience of the conference is the global research reactor community, including research reactor operating organizations, regulatory bodies, governmental institutions, research reactors users and other stakeholders.

All persons wishing to participate in the conference are requested to **register online in advance** through the conference web page (see Section O). **In addition**, they are required to send a completed Participation Form (Form A) and, if applicable, the Form for Submission of a Paper (Form B) and the Grant Application Form (Form C) to their competent national authority (e.g. Ministry of Foreign Affairs or National Atomic Energy Authority), or to one of the organizations invited to participate, for subsequent electronic transmission to the IAEA (Official.Mail@iaea.org).

A participant will be accepted only if the Participation Form is transmitted through the competent national authority of a Member State of the IAEA or by an organization invited to participate.

Participants whose official designations have been received by the IAEA will receive from the IAEA further information approximately three months before the opening of the conference. This information will also be posted on the conference web page.

G. 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 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.

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 May 2015**;
2. Accompanied by a completed and signed Grant Application Form (Form C); and
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. Distribution of Documents

A preliminary programme will be posted on the IAEA conference web page (see Section O) in advance of the event. The final programme and the electronic *Compilation of Synopses* will be available free of charge upon registration at the conference.

I. Working Language

The working language of the conference will be English. All communications and papers must be sent to the IAEA in English.

J. Conference Venue and Accommodation

The conference will be held at the IAEA's Headquarters in Vienna, Austria. Participants must make their own travel and accommodation arrangements. Hotels which are offering a reduced rate for conference

participants will be listed on the conference web page (see Section O). Please note that the IAEA is not in a position to assist participants with hotel bookings, nor can the IAEA assume responsibility for paying cancellation fees or for re-booking and no shows.

K. Exhibitions

A limited amount of space will be available for commercial vendors' displays/exhibits during the conference. Interested parties should contact the Scientific Secretariat by email (RRConference2015@iaea.org) before **15 April 2015**.

L. Visas

Designated participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

M. Key Deadlines

Electronic submission of the synopsis (including submission of Form A and Form B):	1 May 2015
Submission of grant application (including submission of Form A and Form C):	1 May 2015
Notification of acceptance of papers:	30 June 2015
Electronic submission of accepted full papers:	30 September 2015

N. Conference Secretariat

General contact details of the Conference Secretariat:

International Atomic Energy Agency

Vienna International Centre

PO Box 100

1400 VIENNA

AUSTRIA

Tel.: +43 1 2600

Fax: +43 1 2600 2007

Email: Official.Mail@iaea.org

Scientific Secretariat of the conference:

Email: RRConference2015@iaea.org

Mr Andrea Borio di Tigliole (Lead Scientific Secretary)

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Division of Nuclear Fuel Cycle and Waste Technology

Department of Nuclear Energy

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Mr Amgad Shokr

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Administration and organization:

Ms Martina Neuhold

Conference Services Section

Division of Conference and Document Services

Department of Management

IAEA-CN-231

Tel.: +43 1 2600 21314

Email: M.Neuhold@iaea.org

Subsequent correspondence on scientific matters should be sent to the Scientific Secretariat of the conference and correspondence on administrative matters to the IAEA Conference Services Section.

O. Conference Web Page

Please visit the IAEA conference web page regularly for new information regarding this conference:

<http://www-pub.iaea.org/iaemeetings/46533/International-Conference-on-Research-Reactors-Safe-Management-and-Effective-Utilization>

Participation Form

International Conference on Research Reactors: Safe Management and Effective Utilization

IAEA Headquarters, Vienna, Austria

16–20 November 2015

To be completed by the participant and sent to the competent official authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA), Vienna International Centre, PO Box 100, 1400 Vienna, Austria, either electronically by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed).

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Family name:		Given name(s):		Mr/Ms
Institution:				
Full address:				
For urgent communications please indicate:		Tel.:		
		Fax:		
		Email:		
Nationality:		Designating Government or organization:		
Mailing address (if different from address indicated above):				
Do you intend to submit a paper?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Would you prefer to present your paper as a poster?		Yes <input type="checkbox"/>	No <input type="checkbox"/>	
Title:				

Form for Submission of a Paper

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Deadline for receipt by IAEA through official channels: 1 May 2015

Title of the paper:		
Family name(s) and initial(s) of author(s)	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name of author who will present the paper		Mailing address:
Initial(s):		
Mr/Ms		
For urgent communications please indicate		Tel.:
Email:		Fax:
<p>I hereby agree to assign to the International Atomic Energy Agency (IAEA):</p> <p><input type="checkbox"/> the copyright or</p> <p><input type="checkbox"/> the non-exclusive, royalty-free licence (this option is only for those authors whose parent institution does not allow them to transfer the copyright for work carried out in that institution) to publish the above-mentioned paper, and certify that no other rights have been granted which could conflict with the right hereby given to the IAEA.</p> <p><input type="checkbox"/> the release of electronic presentations to be included in PDF format in the proceedings and on the IAEA website (if applicable)</p>		
Date:		Signature of main author:

Grant Application Form

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Deadline for receipt by IAEA through official channels: 1 May 2015

Family name:	Given name(s):	Mr/Ms:
Mailing address:	Tel.:	
	Fax:	
	Email:	
Date of birth (yy/mm/dd):	Nationality:	

1. Education (post-secondary):

Name and place of institution	Field of study	Diploma or Degree	Years attended	
			from	to

2. Recent employment record (Starting with your present post):

Name and place of employer/ organization	Title of your position	Type of work	Years worked	
			from	to

3. Description of work performed over the last three years:

4. Institute's/Member State's programme in field of conference:

Date: _____ **Signature of applicant:** _____

Date: _____ **Name, signature and stamp of responsible Government official:**
