



**International Conference on  
Research Reactor Utilization, Safety,  
Decommissioning, Fuel and Waste Management**

**10-14 November 2003  
Santiago, Chile**

*Organized by the*  
International Atomic Energy Agency

*Hosted by the*  
*Government of Chile through the*  
Nuclear Energy Commission of Chile

**ANNOUNCEMENT AND CALL FOR PAPERS**

**1. BACKGROUND**

For more than 50 years research reactors have played an important role in the development of nuclear science and technology. They have made significant contributions to a large number of disciplines as well as to the educational and research programmes of about 70 countries world wide.

About 675 research reactors have been built to date, of which some 278 are now operating in 59 countries (86 of them in 38 developing Member States). Altogether over 13,000 reactor-years of cumulative operational experience has been gained during this remarkable period.

As required by its Statute, the IAEA has been promoting the exchange of scientific and technical information related to the utilization and safety of research reactors for many years. A major avenue for this exchange has been the periodical seminars and symposia and conferences which the Agency has convened on this topic.

Recent meetings along these lines have been the International Symposium on the Utilization of Multipurpose Research Reactors held in Grenoble, France, in October 1987, the International Symposium on Research Reactor Safety, Operations and Modifications held in Chalk-River, Ontario, Canada, in March 1989, the International Topical Seminar on Management of Ageing in Research Reactors held in Geesthacht near Hamburg, Germany, in May 1995 and the International Seminar on Enhanced Utilization of Research and Test Reactors held in Mumbai (Bombay), India, in March 1996 and the International Symposium on Research Reactor Utilization, Safety and Management held in Lisbon, Portugal, in September 1999.

There are a number of significant issues being faced by the research reactor community, in particular those related to utilization, safety (operational and regulatory), decommissioning, fuel cycle and waste management. The continuing interest in these topics and in a wide range of additional issues indicates the need to convene an International Conference with a broad range of research reactor topics for exchanging experience and views, for discussing priorities for future work and promoting co-operation.

## **2. OBJECTIVE**

The objective of this conference is to foster the exchange of information on current research reactor concerns related to safety, operation, utilization, decommissioning and to provide a forum for reactor operators, designers, managers, users and regulators to share experience, exchange opinions and to discuss options and priorities.

## **3. THEMATIC SCOPE**

The Conference will have a number of technical sessions dealing with specific topical areas. All sessions are expected to include papers from invited speakers as well as contributions by participants.

The topical areas are grouped below under five major headings :

### **1. Utilization**

- New trends and directions for utilization of research reactors;
- Effective management of research reactors and associated facilities;
- Engineering considerations and experience related to refurbishment and modifications;
- Strategic planning and marketing;
- Classical applications (nuclear activation analysis, isotope production, neutron beam applications, industrial irradiations, medical applications);
- Training for operators;
- Educational programmes using a reactor;
- Current developments in design and fabrication of experimental facilities;
- Irradiation facilities;

- Projects for regional uses of facilities;
- Core management and calculation tools;
- Future trends for reactors;
- Use of simulators for training and educational programmes.

## **2. Safety**

- Experience with the preparation and Review of Safety Analysis Reports;
- Human factors in safety analysis;
- Management of extended shutdown periods;
- Modifications: safety analysis, regulatory aspects, commissioning programmes;
- Engineering safety features;
- Safety culture;
- Safety peer reviews and self assessments;
- Current developments in research reactor design criteria;
- Calculation methods and codes;
- Regulatory aspects and experience with current research reactor issues;
- Quality assurance programmes during the various stages of a reactor life;
- Training and qualification of reactor operating personnel and regulators;
- Modifications in operating procedures and training and qualification;
- In-service and special inspections with respect to ageing.

## **3. Fuel Cycle**

- New high-density fuel development;
- Fuel fabrication and performance;
- Fuel qualification programmes;
- Core conversion;
- Fuel management (including spent fuel storage);
- Spent fuel transportation;
- Final disposition.

## **4. Decommissioning**

- Preliminary decommissioning planning (long term);
- Creation of data base for decommissioning (e.g. during refurbishment);
- Final decommissioning planning;
- Extensive R&D activities associated to decommissioning of research reactors;
- On-going/recently completed research reactor decommissioning projects.

## **5. Waste Management**

- Operational waste management;
- Decommissioning waste management.

#### 4. PROGRAMME STRUCTURE

The conference programme will be structured as follows:

- An opening session
- Five technical sessions (these may be divided, if necessary, into sub-sessions) in which invited and contributed papers will be presented
- Parallel poster sessions
- A concluding panel discussion session.

#### 5. CONTRIBUTED PAPERS AND POSTERS

Concise papers on issues falling within the topics (Section 3) may be submitted as contributions to the Conference. All papers, apart from invited review papers, must present original work; they should not have been published elsewhere.

In order to provide ample time for discussion, the number of papers that can be accepted for oral presentation is limited. If the number of relevant and high quality papers submitted for selection exceeds the acceptable number, poster sessions may be arranged. The authors may indicate if they would wish to present their contribution as an oral presentation or a poster. The IAEA reserves the right to refuse the presentation or publication of any paper that does not meet the expectations based on the information given in the extended synopsis.

##### (a) Submission of Extended Synopses

Persons who wish to present a paper or a poster at the Conference must submit an **extended synopsis** (in English) together with a completed Form for Submission of a Paper (**Form B**), and the Participation Form (**Form A**) to the competent national authority for official transmission to the IAEA. In addition, an electronic version of the synopsis must be submitted directly to the IAEA Scientific Secretariat, e-mail: [I.Ritchie@iaea.org](mailto:I.Ritchie@iaea.org). Authors are urged to make use of the Synopsis Template in Word 2000 on the Conference web page. The specifications and instructions for preparing the synopsis and how to use the synopsis template are given in the attached "Instructions on how to prepare the synopsis and how to submit it electronically". Also attached is a "Sample Synopsis". The deadline for receipt of the of the Extended Synopses, Forms A and B is **1 May 2003**.

The synopsis will be considered by the Programme Committee only if the Participation Form A and Paper Submission Form B have been received by the IAEA through official government channels.

### **(b) Acceptance of papers/posters**

Authors will be notified **in June** whether their paper(s) have been accepted by the Programme Committee on the basis of the extended synopsis submitted. At the same time, authors of accepted papers will be advised if the synopsis has been accepted for oral presentation or for presentation as a poster, and they will also be informed of the assigned paper number and session of presentation. The accepted synopses will be reproduced in unedited form in the Book of Extended Synopses.

## **6. PARTICIPATION**

All persons wishing to participate in the Symposium are requested to complete a Participation Form (see attached Form A) and send it as soon as possible to the competent official authority (Ministry of Foreign Affairs or national atomic energy authority) for subsequent transmission to the IAEA. A participant will be accepted only if the Participation Form is transmitted through the government 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 further information on the Symposium approximately two to three months before the meeting. This information will also be posted on the web page:  
<http://www.iaea.org/worldatom/Meetings/2003>.

## **7. EXPENDITURES**

No registration fee is charged to participants.

As a general rule, the IAEA does not pay the cost of attendance, i.e. travel and living expenses, of participants. However, limited funds are available to help meet the cost of attendance of selected specialists mainly from developing countries with low economic resources. Generally, 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 Secretariat to this effect. Governments should ensure that applications for grants:

- (a) are submitted by **1 May 2003**;
- (b) are accompanied by a duly completed and signed Grant Application Form (see attached Form C).

Applications that do not comply with conditions (a) and (b) cannot be considered.

The grants awarded will be in the form of lump sums that usually cover only part of the cost of attendance.

## **8. CONFERENCE PROCEEDINGS**

The proceedings of the meeting will be published by the IAEA in camera-ready, unedited form as a CD ROM as soon as possible after the meeting. All participants will receive a free copy of the proceedings.

## **9. WORKING LANGUAGE**

The working language of the Conference will be English. All communications, synopses, abstracts and papers must be sent to the Agency in English.

## **10. DISTRIBUTION OF DOCUMENTS**

A preliminary programme of the Conference will be sent to the participants before the meeting. The final programme, and the book of extended synopses will be distributed on registration.

## **11. ACCOMMODATION**

Detailed information on accommodation and other information of interest will be sent to all designated participants well in advance of the meeting and will also be available on the conference webpage : <http://www.iaea.org/worldatom/Meetings/2003>.

## **12. VISAS**

Designated participants who require a visa to enter Chile should submit the necessary application(s) to the nearest diplomatic or consular representative of Chile as early as possible. This procedure may take up to three weeks.

## **13. SECRETARIAT**

The address of the Secretariat is:

International Atomic Energy Agency  
IAEA-CN-100  
Vienna International Centre  
P.O. Box 100  
Wagramer Strasse 5  
A-1400 Vienna, Austria  
Telephone No.: +43 1 2600 (0) plus extension  
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The Scientific Secretaries of the Conference are Mr. T. Hargitai, Division of Nuclear Installation Safety (telephone extension 26176, e-mail address: [T.Hargitai@iaea.org](mailto:T.Hargitai@iaea.org)), Mr. S. Paranjpe, Division of Physical and Chemical Sciences (telephone extension 21751, e-mail address: [S.Paranjpe@iaea.org](mailto:S.Paranjpe@iaea.org)), and Mr. I. Ritchie, Division of Nuclear Fuel Cycle and Waste Technology (telephone extension 22759, e-mail address: [I.Ritchie@iaea.org](mailto:I.Ritchie@iaea.org)). Conference organization is provided by Ms. H. Schmid, Conference Service Section, Division of Conference and Documents Services (telephone extension 21316, e-mail address: [H.Schmid@iaea.org](mailto:H.Schmid@iaea.org)).

#### **14. CHANNELS OF COMMUNICATION**

The Participation Form (Form A) and the Form for the Submission of a Paper (Form B), together with two copies of each synopsis, and, if applicable, the Grant Application Form (Form C), should be sent to the competent national authority (Ministry of Foreign Affairs or national atomic energy authority) for official transmission to the IAEA.

Subsequent correspondence on scientific matters should be sent to the Scientific Secretaries and correspondence on administrative matters to the IAEA Conference Service Section.

#### **15. CONFERENCE WEB PAGE**

Please visit the IAEA conference webpage regularly for information regarding this Conference under:

<http://www-pub.iaea.org/MTCD/Meetings/Announcements.asp?ConfID=100>