

## CONFERENCE VENUE

Palais des Congrès, Paris, France

## LANGUAGE

The conference will be held in English.

## EXHIBITION

A limited amount of space will be offered by the hosts for companies' displays/exhibits of equipment and services during the conference. Interested exhibitors should contact the local organizer:

### Sylvie Delaplace

French Nuclear Energy Society (SFEN)  
5, rue des Morillons  
F-75015 Paris, France  
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## IAEA CONTACTS

### Scientific matters and paper submission

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### Administrative matters, registration and grants

#### Ms Martina Khaelss

Conference Services Section  
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## CONFERENCE OFFICIALS AND COMMITTEES

### Conference General Chair:

Christophe Behar (France)

### Conference Honorary General Chair:

Yutaka Sagayama (Japan)

### Conference General Co-Chair:

Alexander Bychkov (IAEA)

### Chair of the International Advisory Committee:

Moon-Hee Chang (Republic of Korea)

### Chair of the International Scientific Programme Committee:

Frank Carré (France)

### Chair of the Local Organizing Committee:

Bernard Jolly (France)

### Members of the International Advisory Committee:

François Billot (France), Alexander Bychkov (IAEA), Moon-Hee Chang (Republic of Korea), Subash Chander Chetal (India), Thierry Dujardin (OECD Nuclear Energy Agency), Didier Haas (European Commission), John E. Kelly (United States of America), Yongde Liu (China), Alain Porrachia (France), Valery I. Rachkov (Russian Federation), Yutaka Sagayama (Japan), Stefano Monti (IAEA), Uddharan Basak (IAEA).

## CONFERENCE WEB PAGE

Detailed information on administrative procedures including participation, submission of papers, registration and grants is provided on the conference web page:

[www.iaea.org/meetings](http://www.iaea.org/meetings)

## LOCAL ORGANIZER'S WEB PAGE

Detailed information on logistics including accommodation, transportation, social events and venue is provided on the local organizer's web page:

[www.sfen.fr/FR13](http://www.sfen.fr/FR13)

# International Conference on FAST REACTORS AND RELATED FUEL CYCLES: Safe Technologies and Sustainable Scenarios FR13

4-7 March 2013  
Paris, France

Organized by the



**IAEA**  
International Atomic Energy Agency

Hosted by the

Government of France

Through the



French Alternative Energies and  
Atomic Energy Commission (CEA)



French Nuclear Energy  
Society (SFEN)

CN-199

## BACKGROUND

The last large international conference on fast reactors, FR09, was held in Japan in 2009. Four years later, the fast reactor and associated fuel cycle community will again come together.

The important role of fast reactors and related fuel cycles for the long term sustainability of nuclear power has long been recognized. Fast reactors operated in a closed fuel cycle help to improve the utilization of resources, both fissile and fertile materials used in nuclear fuels. This improvement is possible because fast reactors can breed fissile materials and, using modern fuel cycle technologies, recycle materials bred in these reactors. In this way, fast reactors and fuel cycle technologies can make an enormous contribution to the sustainability of nuclear energy production. They have the potential to produce a hundred times more energy from natural uranium resources. At the same time, fast neutrons favour fission of heavy atoms, instead of capture, so they can also be used to transmute minor actinides in order to reduce the requirements for final geological repositories of the nuclear waste.

Many countries are actively developing and advancing reactor, coolant, fuel and fuel cycle technologies. Reactor technologies under development include sodium cooled systems, lead cooled systems, gas cooled systems, molten salt systems, and even supercritical water cooled technologies and accelerator driven systems. In parallel, several demonstration projects ranging from small to large scale are under study or construction.

For nuclear energy systems to be industrially deployed in the coming decades, designers will have to advance the level of safety to gain public acceptance. Harmonization of safety standards at the international level could play a leading role in achieving these goals.

## OBJECTIVES

The conference will provide a forum to exchange information on national and international programmes, and new developments and experience in the field of fast reactor technology and fuel cycle. A first goal is to identify and discuss options, strategic and technical, proposed by countries or companies. Another goal is to promote fast reactors and related fuel cycle technologies in a safe, proliferation resistant and economic way. A

third goal is to identify gaps and main issues concerning the industrial deployment of fast reactors with a closed fuel cycle. A fourth goal is to engage young people in the field, particularly in the development of innovative fast reactor concepts.

## TOPICS

### National or multinational strategy and programmes

#### Fast reactor safety:

- Safety by design approaches, safety of equipment
- Harmonization of safety requirements and approaches
- Probabilistic and deterministic approach and studies
- Severe accidents

#### Fuel cycle options and processes:

- Safety of processes and facilities
- Waste minimization
- Partitioning and transmutation

#### Reactor concept designs:

- System design
- Cores, coolant technology
- Component design and qualification
- In-service inspection and repair, instrumentation

#### Economics, performance and scenarios of industrial deployment:

- Transition to fast reactors
- Management of materials
- Reliability, availability, public acceptance
- Business case for investment

#### Proliferation resistance and physical protection

#### Fast reactor fuels:

- Driver fuels, MA bearing fuels and targets
- Design, manufacturing, thermophysical properties, irradiation experiments and post-irradiation examinations

#### Structural materials:

- Material qualification for early deployment
- Innovative materials for improved performance

#### Experiments, tests and simulations:

- Modelling, verification, validation
- Recent experimental results or projects
- Fundamental issues

#### Operating and decommissioning experience:

- Safety feedback
- Radiological impact

#### Skills, capabilities, professional development, knowledge management, international networks

## AUDIENCE

The conference is mainly designed for researchers, scientists and engineers from public or private sectors including research institutes, academia, regulatory bodies and other stakeholders. Attendance by young professionals is strongly encouraged.

## KEY DEADLINES

<b>27 July 2012</b>	Submission of abstracts (including Forms A and B)
<b>27 July 2012</b>	Submission of grant applications (Forms A and C)
<b>14 Sep 2012</b>	Notification of acceptance of abstracts
<b>30 Nov 2012</b>	Submission of full paper

Any participant not submitting an abstract should submit Participation Form A through the appropriate authority as soon as possible (see conference web page for further details).

## REGISTRATION

No registration fee is charged.

## REFERENCE TO BE USED IN ALL CORRESPONDENCE:

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