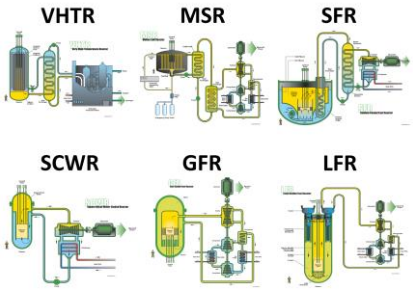
CALL

FOR

PAPERS



16-18 OCT 2018 **IN PARIS**

ATOMS FOR THE FUTURE

GEN IV International Forum℠

GIF SYMPOSIUM

www.atomsforthefuture.org & http://gifsymposium2018.gen-4.org

Atoms for the Future & GIF Symposium
Technical Sessions Application Form
16-18th Oct 2018

GENERAL INFORMATION

This conference is organised by the Gen IV International Forum (GIF) and the French Nuclear Energy Society Young Generation Network (SFEN JG). The GIF Symposium and Atoms for the Future 2018 will form a joint conference with two days of plenary sessions, panel sessions, networking events, contest, technical sessions, and workshops in Paris.

About Atoms for the Future & SFEN JG

Atoms for the Future is the international conference organised annually in Paris by the French Nuclear Society Young Generation Network. This group gathers about 400 students and young professionals around the same passion for nuclear energy.
Several actions to improve the YG general knowledge on nuclear and develop our network are carried such as top management interviews, presentation of the nuclear industry in schools, casual meetings, exchanges with international networks… Among our actions, the organisation of the international conference Atoms for the Future is key. Since 2010, it gathers students and young professionals from the nuclear industry coming from all over the world.

About the GIF & its symposium

The Generation IV International Forum (GIF) is a co-operative international endeavour that performs the research and development needed to establish the feasibility and performance capabilities of the next generation nuclear energy systems.
The goals adopted by GIF provided the basis for identifying and selecting six nuclear energy systems for further development. The selected systems are based on a variety of reactor, energy conversion and fuel cycle technologies and include thermal and fast neutron spectra cores and both closed and open fuel cycles. The reactors range in size from very small to very large. Depending on their respective degree of technical maturity, sustainability, safety, reliability, economic competitiveness, proliferation resistance and physical protection, the first Generation IV systems are expected to be deployed commercially around 2030-2040.

The symposium has two major objectives:

- to review the progress achieved for each system against the R&D goals of the 2014 Technology Roadmap Update,
- to identify the remaining challenges and associated R&D goals for the next decade necessary for the demonstration and/or deployment of the Gen IV systems, and the goal of establishing nuclear energy as a necessary element in the world's long-term sustainable carbon-free energy mix.

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TECHNICAL SESSIONS – SUBMISSION PROCESS

It is possible to either prepare a 400 word abstract or send a video that shall explain the technical or scientific aspect of your presentation. The submission is done by returning this application form with your name at the beginning (**NAME_GIF_AFF_2018_Abstract.docx)** at:

conferences@sfenjg.org and gifsymposium2018@gen-4.org

If you choose the video submission, the video cannot last more than 3 minutes and must be sent by email with the enclosed application form. If needed, it is possible to use a transfer website such as "WeTransfer" and send in parallel the application form. In this case, indicate "Video submission" instead of writing a summary in the section "TECHNICAL SESSIONS – ABSTRACT".

Deadlines for full papers dedicated to Gen IV systems (GIF):

February, 28th	2018	SUBMISSION OF ABSTRACTS
March	2018	AUTHOR NOTIFICATION OF ACCEPTANCE
June	2018	DRAFT PAPERS
July	2018	REVIEW NOTIFICATION
September	2018	FINAL PAPERS/COPYRIGHT

Deadlines for simplified process dedicated to other systems (AFF):

April, 30th	2018	SUBMISSION OF ABSTRACTS*
June	2018	ABSTRACT REVIEW
September	2018	AUTHOR NOTIFICATION OF ACCEPTANCE

** Abstracts submitted to the Atoms for the Future conference are not subject to the writing of a full paper (Atoms for the Future acceptance will be based on the abstracts only). For that reason, the submission process for Atoms for the Future abstracts has been simplified.*

Elevator Pitch Challenge (EPiC)

Students, PHDs or young professionals submitting an abstract, video or paper to the conference are highly encouraged to take part in the Elevator Pitch Challenge (EPiC) **. The EPiC is an additional contest that will take place right before the Technical Sessions. The participants will have 3 min to present their subject and convince the audience (this 3' talk may be supported by a short Powerpoint). The best EPiC presentation will be elected by the full audience and will be rewarded.

*** Practical information on the EPiC competition will be available on the websites.*

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ATOMS FOR THE FUTURE 2018 & GIF SYMPOSIUM TECHNICAL TRACKS

- **Track 1 & 2: Progress on Gen IV systems**

Progress on the development of Gen IV reactors including design, engineering, studies on structures, systems and components, including core design, instrumentation, in-service inspection and repair. Any scientific or engineering design study related to one of the six systems, from concept to demonstration.

- **Track 3: Human capital development**

Gen IV related national and international Education and Training programs, networks, courses, webinars, massive open online courses (MOOCs), schools: overview and novel approaches. Role of GIF in human capital development, including student's career paths: success stories and potential.

- **Track 4: Research infrastructures**

Progress in existing or planned experimental facilities, in support of design, technology development and qualification of components and systems for Gen IV, as well as papers on the key role of experimental testing on the validation of modelling and simulation. Their potential crossed use between GIF members could be highlighted.

- **Track 5: Safety and security**

This track is not only focused on Gen IV and can also deal with the current nuclear fleet, SMRs and Gen III.

Any safety methodology or analysis, including deterministic and probabilistic studies. Safety design Criteria or Guidelines. Design and Design Extension Conditions including severe accidents. Security methodology or analysis, proliferation resistance and physical protection issues.

- **Track 6: Fuels and materials**

This track is not only focused on Gen IV and will deal also with the current nuclear fleet, SMRs and Gen III.

The higher temperatures, prolonged strong irradiation, and potentially chemically aggressive environments compared with light water reactors, together with the expectation of enhanced safety and lower severe accident probabilities provide challenges and opportunities for both fuel and structural materials in Gen IV systems. This track will cover the design, fabrication, irradiation and PIE, qualification, as well as the modelling and simulation of materials systems that address these challenges. Papers are particularly encouraged that delineate present impediments to full deployment of Gen IV technologies and how they be overcome.

- **Track 7: Advanced components and systems for Gen IV reactors**

Design, fabrication, irradiation and PIE, qualification, modelling and simulation of advanced components and systems (power conversion, decay heat removal …).

Papers are particularly encouraged that consider how Advanced Manufacturing may be used to enable material, qualification and certification and supply chain improvements to potentially reduce the time to deploy innovative solutions with nuclear energy systems.

- **Track 8: Integration of nuclear reactors in low carbon energy systems**

This track is not only focused on Gen IV and will deal also with the current nuclear fleet, SMRs and Gen III.

Economic and technical aspects of integration of renewable energy resources and nuclear power plants in electricity grids, economic and optimisation modelling studies, flexibility requirements for new-build nuclear capacity for load-following, hybrid energy systems including energy storage and co-generation, system effects including grid reliability, market and economic analysis and policies required to make nuclear-renewable integration viable.

Scenarios studies, technical-economic analysis of power and co-generation for specific Gen IV systems, studies on closing/partially closing fuel cycles using. Gen IV reactors in symbiosis with other systems.

- **Track 9: Decommissioning & Waste Management**

This track is not only focused on Gen IV reactors and will deal with the decommissioning (and waste issues) of all nuclear power plants or facilities using nuclear materials (including research reactors, fuel cycle facilities, facilities producing medical isotopes, …)

- **Track 10: Operation, Maintenance, Simulation & Training**

This track is not only focused on Gen IV and will deal also with the current nuclear fleet, SMRs and Gen III.

Operating experience case and strategies. Any NPP operation-related experience feedback. Long term operation (LTO) modifications. Operators and workers' training including the use of the simulation for maintenance preparation, operation management, Severe Accident Management Guidelines (SAMG).

- **Track 11: Construction of nuclear reactors**

This track is not only focused on Gen IV and will deal also with the current nuclear fleet, SMRs and Gen III.

Any experience related to design optimisation. Construction process. Supply chain, Commissioning

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TECHNICAL SESSIONS – PRESENTATION AND POSTER APPLICATION FORM

Further information about the event and the technical sessions is available on our websites:

About you…

Full Name: *(Ex: DUPONT Pierre)*	
Address:	
E-mail: *(Ex: pierre.dupont@company.com)*	
Telephone: *(Ex: +33 6 78 91 23 45)*	
Institution/Company:	

About your abstract…

You would like a:	☐ Presentation	☐ Poster	
You want to participate to the EPiC: *(Elevator Pitch Challenge: 3 min to present your subject and convince the audience!)*	Choose here...		
Select your track:	Choose a track here...		
	☐ GIF Symposium	☐ Atoms for the Future	☐ Both
Your presentation/poster title:			
You allow AFF and the GIF to publish your presentation/poster on their websites after the event:	Choose your answer here...		

TECHNICAL SESSIONS – ABSTRACT

1. Please describe your current role (max 200 words)
2. Please provide a summary of what your presentation/poster is about (max 400 words)
3. Please describe the relevance of your poster or presentation to the relevant technical track you have chosen above (max 200 words)

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JOINT CONFERENCE PROGRAM