

# Generation-IV International Forum Education and Training Task Force initiatives

K. Mikityuk and P. Paviet on behalf of GIF-ETTF























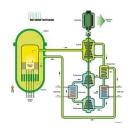


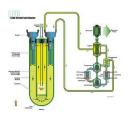
The Generation IV International Forum (GIF) is a co-operative international endeavour which was set up to carry out the R&D needed to establish the feasibility and performance capabilities of the next generation nuclear energy systems.

GIF has 14 Members which are signatories of its founding document, the GIF Charter.

The goals adopted by GIF provided the basis for identifying and selecting six nuclear energy systems for further development.

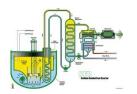
Depending on their respective degree of technical maturity, the first Generation IV systems are expected to be deployed commercially around 2030-2040.

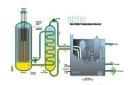












## **GIF Education and Training Task Force**



Established in 2015 as a platform to promote and enhance open E&T as well as communication & networking in support of GIF. What was done during 3 years:

 a social medium platform to exchange information on Gen-IV R&D topics and related GIF E&T activities



 collaboration with other international E&T networks



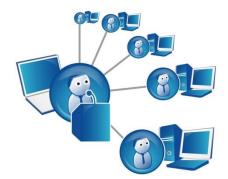


support of training courses and schools





 18-webinar series dedicated to Gen IV systems and related cross-cutting topics during last 18 months.



## **Members**

- The GIF-ETTF members
  - Nominated by Policy Group members
  - 14 Members from 9 countries + EU







Mikityuk, Konstantin (Co-chair)











Alekseev, Pavel Fazio, Concetta Fratoni, Massimiliano Hwang, Il Soon

Liu, Xiaojing Mihara, Takatsugu



Mpoza, Nolitha



Nam, Youngmi



Harisson, Grace Renault, Claude





Sun, Jun

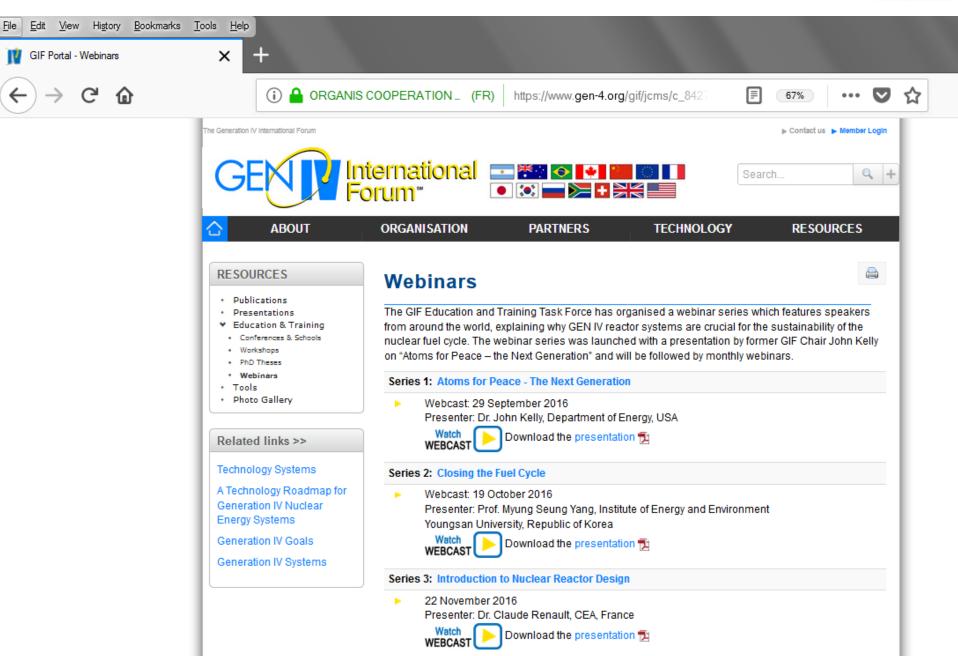






## Webinars. Archive on GIF portal





## Webinars. Introduction



#### Atoms for Peace - The Next Generation

Dr. John Kelly DOE

USA





## Introduction to Nuclear Reactor Design

Dr. Claude Renault

CEA

France





# Webinars. Gen-IV systems (1)



Sodium Cooled Fast Reactors		
Dr. Bob Hill ANL USA		Argonne
Lead Fast Reactor  Prof. Craig Smith US Naval Postgraduate School USA		NPS PEASTANTIA PER SCIENTIAL
Gas Cooled Fast Reactor  Dr. Alfredo Vasile CEA France	H. Marie Control of the Control of t	MEDITION DE PROPERTIE DE LA COMPONITION DE LA CO

## Webinars. Gen-IV systems (2)



#### Very High Temperature Reactors

Dr. Carl Sink DOE USA





#### Supercritical Water Reactors

Dr. Laurence Leung CNL Canada





## Fluoride-Cooled High-Temperature Reactors

Prof. Per Peterson UC Berkeley USA





#### Molten Salt Reactors

Dr. Elsa Merle CNRS France





# Webinars. Operational experience



Design, Safety Features and Progress of HTR-PM		The state of the s
Prof. Dr. Yujie Dong INET Tsinghua University China		151NG INTERPRETATION OF THE PARTY OF THE PAR
Feedback Phenix and Superphenix	301	
Dr. Joel Guidez CEA France		cea

# Webinars. Gen-IV cross-cutting topics



Energy Conversion  Dr. Richard Stainsby  NNL  UK	NATIONAL NUCLEAR LABORATORY
Dr. Geoffrey Rothwell OECD/NEA France	NEA Nuclear Energy Agency
Materials Challenges for Gen IV Reactors  Dr. Stu Maloy LANL USA	Los Alamos NATIONAL LABORATORY EST. 1943

# Webinars. Fuel types



General Considerations on	Thorium as a Nuclear
Fuel	

Dr. Franco Michel-Sendis OECD/NEA

France





#### Metallic Fuel for SFRs

Dr. Steven Hayes INL

USA





## Webinars. Sustainability and fuel cycle



#### Closing the Fuel Cycle

Prof. Myung Seung Yang Youngsan University ROK

Sustainability, A Relevant Approach for Defining Future Nuclear Fuel Cycles

Dr. Christophe Poinssot CEA France









## What next?



#### **General:**

Enhance communication on Gen IV systems by education and training initiatives
 e.g. webinars, MOOC, specific events and activities for students/young researchers

## **Short-term:**

- Finish webinars scheduled until December 2018
- Continue cooperation with ENEN, AFRANEST, IAEA and other E&T groups
- Compile all webinars presented
- Database professors in nuclear engineering to promote students exchange

## Long-term:

 Elevation of the task force to a GIF working group to explore bigger projects such as MOOC, book, coordination of students and postdocs working on GIF-related topics



"Because of the passion and grass root efforts from Professionals and Educators, the GIF-ETTF's goal of creating an archive of online Gen IV systems webinar series becomes a reality"

# Thank you for your attention

**Questions?**