

## Objectives

A set of common goals has been set forward for Generation IV nuclear reactors. They will have to be sustainable, economically viable, safe, reliable and proliferation resistant. Next to producing electricity, other uses have been identified: hydrogen production, seawater desalination and heat generation for industrial processes.

In 2001, the Generation IV International Forum (GIF) was established to harmonize research and development efforts in different countries. It groups ten member countries plus EURATOM. By consensus, six nuclear systems were selected and a technology roadmap was set up.

This course aims to give an overview of technological features and challenges encountered in the design of this generation of nuclear systems.



## Seminar on Generation IV reactors

### Programme

#### Wednesday March 31

- 09:00 Why Generation IV reactors
- 10:00 International networks for Generation IV: GIF, SNE-TP
- 11:00 Thermal spectrum versus fast spectrum reactors: nuclear cross sections and their consequences
- 11:45 *Lunch*
- 13:00 The reactor core of a Gen IV reactor
- 14:00 Fuel and fuel cycle options
- 16:00 Nuclear thermal hydraulics aspect
- 17:30 *End of the day*

#### Thursday April 1

- 09:00 Safety aspects
- 10:00 Material challenges in structural materials and fuel cladding
- 12:00 *Lunch*
- 13:00 Waste aspects related to partitioning & transmutation
- 14:00 Research infrastructures
- 15:00 *End of the day*

### Lecturers

All lecturers are professors of the BNEN consortium or renown researchers in the nuclear domain.

### Venue

This two-day seminar will be organised at SCK•CEN's Club-House (Auditorium).

## Practical information

**Registration deadline:**  
**March 20, 2010**

**Course Language:** English

**Course fee:**

The course is free of charge for BNEN/ENEN students.

Participants from industry: € 300,00

**Scientific coordinator:**

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**Location:**

SCK•CEN Club-House

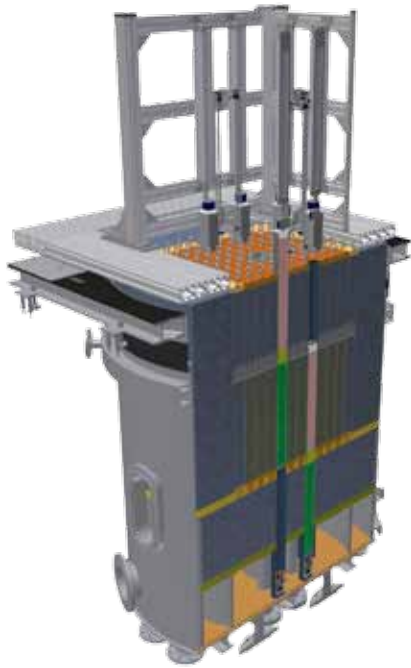
Boeretang 201

BE-2400 Mol

Belgium

# MASTER OF SCIENCE IN NUCLEAR ENGINEERING

## BNEN seminar on Generation IV reactors



# BNEN

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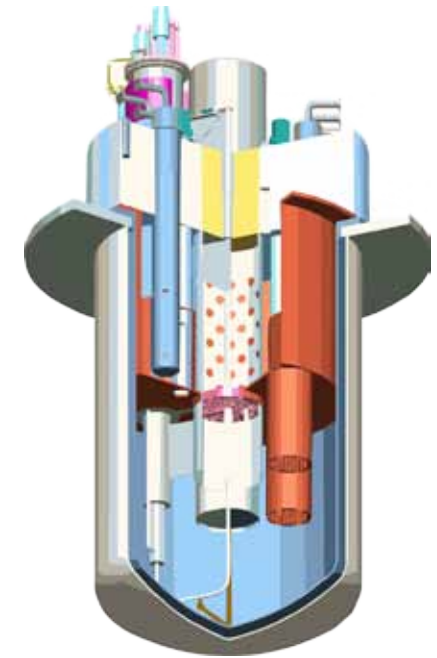
  
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March 31 - April 1, 2010  
SCK•CEN, Mol

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CENTRE D'ETUDE DE L'ENERGIE NUCLEAIRE

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# BNEN

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