framatome

Digital Nuclear Reactor

Digital twins are more and more commonly expected for all industrial products, including nuclear power plants.

But what is a digital twin? What can be expected from a digital nuclear reactor in the coming years, and what are the current challenges?

This topic will be illustrated through the « Réacteur Numérique » project managed in France by several partners.

Duration: 3h

Language: English

Participants: 10 to 30

Location: classroom

Basics

Prerequisites: None

Your profile

Master 1-2 level student in a partnering university, wishing to learn about “Digital Reactor Project”

During the training, you will:

- Increase your skills in Nuclear Safety field
- Discover current works in the nuclear R&D, subjects to be explored in the coming years and decades
- Provide you some hints for your challenges

After the training, you will be able to:

- Present some industrials needs for a digital nuclear reactor
- Know main challenges to be solved in the future years regarding numerical simulation of nuclear reactors
- Share on « Digital Reactor Project » work packages and benefits

Advantages

- Face-to-face training

Content

Theoretical module:

- Introduction
- What is Digital Twin?
- The “Réacteur Numérique” Project
- A platform for engineering studies
- A simulator for operators training
- Advanced visualization
- Web portal
- Propagation of uncertainties

Evaluation

- None

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