



# NUCLEAR ENGINEERING RESOURCES

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# Presentation Aim

To introduce scientific data and technical resources available for our research projects consult.



- Technical Information

- Technical Information
- Training Data

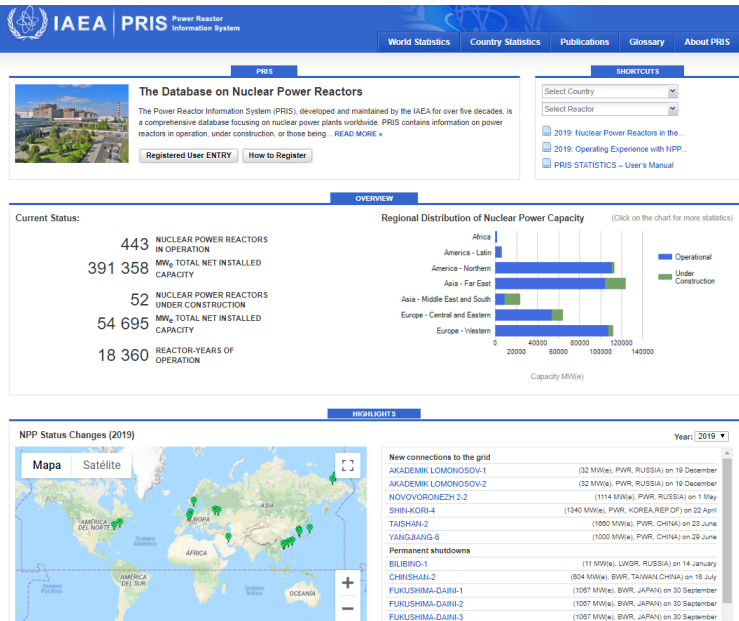
- Technical Information
- Training Data
- Technical Meetings

- Technical Information
- Training Data
- Technical Meetings
- Opportunities

- ¿How many NPP are around the world?
- ¿How many PWR, BWR and PHWR are?
  - ¿How much energy is produced by nuclear energy?
- IAEA's Information Resources



# PRIS-Power Reactor Information System

Presentation — FEB 11<sup>th</sup>, 2020

PhD RESEARCH SEMINAR

5/13

# INIS-International Nuclear Information Systems



## International Nuclear Information System (INIS)

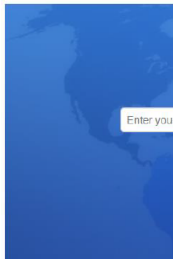


IAEA

INIS

International Nuclear  
Information System

INIS Home Thesaurus Browse



International Nuclear Information System – INIS

### 2018 in Review



International  
Nuclear  
Information  
System  
INIS

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



INIS repository

4.2 million bibliographic records  
568,060 full-texts



2018

108,196 new bibliographic records  
19,529 new full-texts  
3.2 million web page views  
1.9 million unique searches  
1.1 million unique visitors



INIS thesaurus

A knowledge organization system  
8 languages  
Arabic, Chinese, English, French,  
German, Japanese, Russian, Spanish  
31,309 descriptors



2018

151 new descriptors

## Nuclear Reactor Simulators for Education and Training

NS

CNR

### PC-Based Basic Principle Simulators

In support of human resource development in Member States the IAEA has established education and training programmes on active learning about nuclear technologies using the PC-based basic principle simulators.

As part of this programme, the IAEA arranges for the development and distribution of its suite of PC-based basic principle simulators including the manuals and related documentation, sponsors education and training courses and workshops on physics and technology of advanced reactors, methodology on technology assessment and technology relevant databases:

- [THERPRO](#) (Thermo-Physical Materials Properties Database of LWRs and HWRs)
- [ARIS](#) (Advanced Reactor Information System)
- [NGKB](#) (Nuclear Graphite Knowledge Base)

These simulators provide efficient hands-on learning of the physics and engineering designs of various reactor types. The simulators operate on personal computers and are provided for a broad audience of technical and non-technical professionals, students and instructors as an introductory educational tool. Worldwide the faculty members interested in developing nuclear engineering courses may find the IAEA simulators effective hands-on educational tools.

Currently the IAEA has nuclear power plant simulation software available for distribution that simulate the behaviour of the following reactor types:

#### Pressurized Water Reactor (PWR) Simulators

- [PCTTRAN: Conventional Two-Loop Pressurized Water Reactor](#)
- [Advanced PWR: Two-Loop Large PWR \(Korean-OPR 1000\)](#)
- [Russian-type PWR \(VVER-1000\)](#)
- [Advanced Passive PWR \(AP-600\)](#)
- [Integral Pressurized Water Reactor \(SMR\)](#)

#### Boiling Water Reactor (BWRs) Simulators

- [Conventional Boiling Water Reactor with Active Safety Systems \(BWR\)](#)
- [Advanced BWR with Passive Safety Systems \(ESBWR\)](#)

#### Pressurized Heavy Water Reactor (PHWR)

### Related Stories



[Using Simulators to Train Nuclear Professionals](#)



[Using Simulators to Train Nuclear Professionals](#)



[Upgraded Nuclear Reactor Simulator Enhances Training Opportunities for Member States](#)

### Related Publications

- [Simulators for Training Nuclear Power Plant Personnel](#)
- [Selection, Specification, Design and Use of Various Nuclear Power Plant Training Simulators](#)
- [Use of Control Room Simulators for Training of Nuclear Power Plant Personnel](#)
- [Guidelines for Upgrade and Modernization of Nuclear Power Plant Training Simulators](#)
- [Reactor Simulator Development \(Training Course Series No. 12\)](#)
- [Developing a Systematic Education and Training Approach Using Personal Computer Based Simulators for Nuclear Power Programmes](#)
- [PCTTRAN Generic Pressurized Water Reactor Simulator Exercise Handbook \(Training Course Series 68, 2019\)](#)
- [Passive Safety Systems in Water Cooled Reactors: An Overview and Demonstration with Basic](#)

The screenshot displays the IAEA NUCLEUS website. At the top, the IAEA logo and the text "IAEA NUCLEUS" are visible. Below this, a blue navigation bar contains the IAEA logo, the word "IAEA", and "NUCLEUS For Nuclear Knowledge and Information". To the right of the navigation bar is a search box labeled "Search NUCLEUS" and a "Register" button circled in red. The main content area features a large image of people working at a table, with a red dashed box highlighting the text: "NUCLEUS is your common access point to the IAEA's Scientific, Technical and Regulatory Information Resources". Below this, a grid of nine smaller images represents various resources: InTouch+, IAEA CONNECT platform, GovAtom, IAEA Library Catalogue of Resources, Accelerator Knowledge Portal, SAGSI on NUCLEUS - The Standing Advisory Group on Safeguards Implementation (SAGSI), Nuclear Security Information Portal, Application of Safeguards TO Geological Repositories, and Directory of Radiotherapy Centres. On the right side, a "Related Links" section lists "Euratom", "OECD Nuclear Energy Agency (OECD/NEA)", and "Nuclear Regulation Authority (NRA)".

IAEA.org NUCLEUS

IAEA NUCLEUS For Nuclear Knowledge and Information

Search NUCLEUS

Register Sign In

Catalogue

NUCLEUS is your common access point to the IAEA's Scientific, Technical and Regulatory Information Resources

NUCLEUS provides access to over 130 IAEA scientific, technical and regulatory resources. This includes databases, websites, applications, publications, safety standards, training material and more

Related Links

- Euratom
- OECD Nuclear Energy Agency (OECD/NEA)
- Nuclear Regulation Authority (NRA)

InTouch+

IAEA CONNECT platform

GovAtom

IAEA Library Catalogue of Resources

Accelerator Knowledge Portal


SAGSI on NUCLEUS - The Standing Advisory Group on Safeguards Implementation (SAGSI)


Nuclear Security Information Portal


Application of Safeguards TO Geological Repositories







Directory of Radiotherapy Centres


IAEA-PLMS English (en) ▾


**IAEA** | **Instructor-led** Learning Management System  
powered by CLP4NET


 You are logged in as Francisco chaparro (Log out)

**MAIN MENU** 

-  Site news
-  LMS Manual (EN)
-  LMS Manual (ES)
-  Student feedback form
-  Contact us
-  Disclaimer

**NAVIGATION** 

Dashboard


- ▀ **Site home**
- Site pages
- My courses


## Courses

▸ Expand all

- **GFF University Collaboration**
- **Knowledge Management**
- **Legal**
- **Network RLMS**
- **Nuclear Energy**
- **Offices Reporting to the Director General**
- **Partner Organizations**
- **Safeguards**
- **Safety and Security**
- **Sciences and Applications**
- **Technical Cooperation**

This is the IAEA Instructor-led Learning Management System. It contains instructor-led courses as a part of the Cyber Learning Platform for Network Education and Training (CLP4NET)

**CALENDAR** 


February 2020 

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29

[Home](#) > [More Courses](#)

Select your category

FILTER

<a href="#">DOWNLOAD COURSE DESCRIPTION</a>	<b>Inspection during the Construction Phase – Site Evaluation (Mod 2) 11/19</b>	Start Date: 2019-11-25 End Date: 2019-11-29 Location: Singapore	
NUCLEAR SECURITY  <a href="#">DOWNLOAD COURSE DESCRIPTION</a>	<b>Implementing Nuclear Safeguards in practice_12/19</b>	Date: 09 - 13 December 2019 Location: Paris, France Zone: Course in English Duration: 1 week	
NUCLEAR SAFETY  <a href="#">DOWNLOAD COURSE DESCRIPTION</a>	<b>Oversight of Safety Culture and Management System_01/20</b>	Date: 13-17 January 2020 Location: Brussels, Belgium Zone: Course in English Duration: 1 week	
<a href="#">DOWNLOAD COURSE DESCRIPTION</a>	<b>Application of International Regulations in Qualifications and Approval of Packages for the Transport of radioactive materials_02/20</b>	Date: 24-28 February 2020 Location: Paris - FRANCE Zone: course in English Duration: 1 week	
RADIATION PROTECTION  <a href="#">DOWNLOAD COURSE DESCRIPTION</a>	<b>The Legal and Regulatory Basis for Nuclear and Radiation Safety_03/20</b>	Date: 16-20 March 2020 Location: Paris, France Zone: Course in English Duration: 1 week	

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## Upcoming events

Upcoming events

Past events

Year

2020 ▾

Type

Scientific and Technical Events ▾

Topics

- Any - ▾

Search

Search

10 – 14 Feb 2020  
Vienna, Austria

Event Code: EVT1900138

[International Conference on Nuclear Security: Sustaining and Strengthening Efforts](#)

10 – 13 Feb 2020  
Vienna, Austria

Event Code: EVT1703137

[Fourth Research Coordination Meeting on Radioactive Release from the Prototype Fast Breeder Reactor under Severe Accident Conditions](#)

17 – 20 Feb 2020  
Vienna, Austria

Event Code: EVT1904962

[Technical Meeting on Current Practices in Performing Comprehensive Evaluations of Safety and Periodic Safety Reviews of Nuclear Power Plants](#)

17 – 28 Feb 2020  
Fukushima, Japan |  
Hiratsuka, Japan | Tokyo,  
Japan

Event Code: EVT2000327

[International School of Nuclear and Radiological Leadership for Safety](#)

17 – 21 Feb 2020  
Vienna, Austria

Event Code: EVT1904965


[Technical Meeting on Safety Aspects of Using Smart Digital Devices in Nuclear Systems](#)

17 – 28 Feb 2020  
Fukushima, Japan |  
Hiratsuka, Japan | Tokyo,  
Japan

Event Code: EVT1904871

[International School of Nuclear and Radiological Leadership for Safety](#)

## More Meetings


 [IAEA Meeting Schedule](#)

 [Other Vienna Based Organizations' Meeting Schedule](#)

## Practical Information

 [Guide to the Vienna International Centre \(VIC\)](#)


 [Greening the VIC](#)

 [VIC Guidebook for People with Disabilities](#)


 [VIC Sustainable Transportation](#)

 [Hotels in Vienna](#)

 [More about Vienna](#)

 [Vienna public transportation map](#)

 [Austria Visa Information](#)

 [Code of Conduct - To Prevent Harassment, Including Sexual Harassment, at UN System Events](#)



**IAEA**

International Atomic Energy Agency

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▼ Location

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☐ Austria (48)

State/Region

☐ Vienna (45)

☐ Lower Austria (2)

City

☐ Vienna (45)

Duty Station

☐ IAEA Headquarters (45)

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▼ Job Field

Job Family

☐ Management and Administrative Support (35)

☐ Engineering (6)

Job Function

☐ Information Technology (7)

Requisition Title	Location	Closing Date	Actions
Consultancy - Results Based Management	Austria-Vienna-Vienna-IAEA Headquarters	2020-02-21, 4:59:00 PM	<a href="#">Apply</a>
Nuclear Security Information Officer(P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-21, 4:59:00 PM	<a href="#">Apply</a>
Unit Head (Programme, Budget and Reporting)(P4)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-21, 4:59:00 PM	<a href="#">Apply</a>
Emergency Preparedness Officer(P4)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-21, 4:59:00 PM	<a href="#">Apply</a>
Team Leader (DSRS)(P5)	Austria-Vienna-Vienna-IAEA Headquarters	2020-02-29, 4:59:00 PM	<a href="#">Apply</a>
Communication Advisor (NS)(P5)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-19, 4:59:00 PM	<a href="#">Apply</a>
Training Specialist (Nuclear Power)(P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-19, 4:59:00 PM	<a href="#">Apply</a>
Remote Monitoring Equipment Engineer (P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-17, 4:59:00 PM	<a href="#">Apply</a>
Consultant - 3D Model Gamification & VR Development	Austria-Vienna-Vienna-IAEA Headquarters	2020-02-14, 4:59:00 PM	<a href="#">Apply</a>
Safeguards Information Analyst (Open Source)(P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-02, 4:59:00 PM	<a href="#">Apply</a>
Safeguards Information Analyst (Nuclear Trade) (P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-02, 4:59:00 PM	<a href="#">Apply</a>
IT Systems Engineer(P3)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-13, 4:59:00 PM	<a href="#">Apply</a>
Director (Conference and Document Services - MTCDD)(D1)	Austria-Vienna-Vienna-IAEA Headquarters	2020-03-16, 4:59:00 PM	<a href="#">Apply</a>
Section Head, Coordination and Support Services, Safeguards Analytical Services (P5)	Austria-Lower Austria-Seibersdorf-IAEA Laboratories in Seibersdorf	2020-03-12, 4:59:00 PM	<a href="#">Apply</a>



# References



<https://pris.iaea.org/PRIS/home.aspx>



<https://www.iaea.org/resources/databases/inis>



<https://www.nrc.gov/about-nrc/regulatory/research/obtainingcodes.html>



<https://www.nrc.gov/about-nrc/regulatory/research/obtainingcodes.html>



<https://www.iaea.org/resources/nucleus-information-resources>



<https://iaea.taleo.net/careersection/ex/jobsearch.ftl>



<https://www.iaea.org/events>



<https://www.iaea.org/topics/nuclear-power-reactors/nuclear-reactor-simulators-for-education-and-training>



<https://enstti.eu/wp/training-programs/>