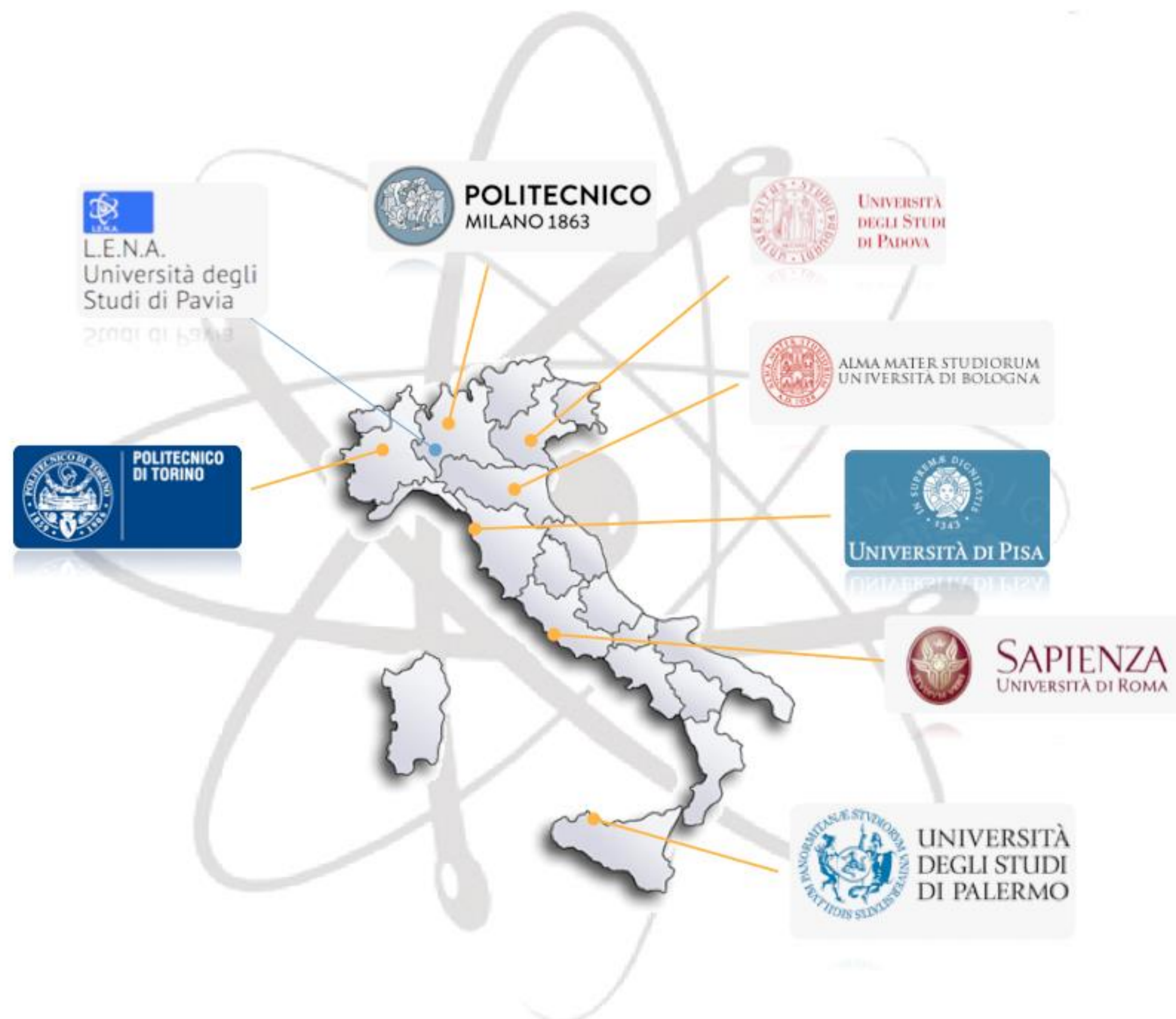




# Education, Training and Research for Innovative Reactors and SMRs



## CIRTEN – the italian nuclear universities



**65** permanent staff professors  
more than **70** young researchers (PhD, research assistants)

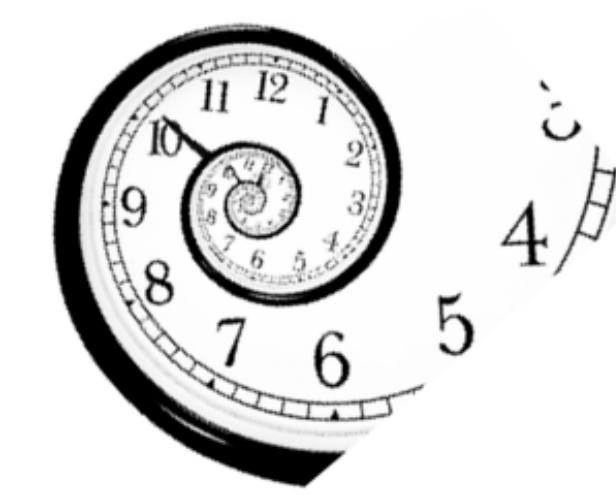


more than **150** new students/year (MSc + PhD programmes)

- **CIRTEN is the Consortium of the Italian Universities involved in nuclear science and technology research activities, and where educational programmes (MSc, PhD) on nuclear engineering are offered to the young generations**
- CIRTEN has been founded in **1994**, joining the competences and the history of Universities active in the nuclear engineering area **since the early '50s**
- In the land of Enrico Fermi, **researchers, professors and young students** are working together to renovate and to transfer knowledge on nuclear technology and its applications



CIRTEN is a proud Founding Member of ENEN Association, the European Nuclear Education Network, and of the **World Nuclear University**





**ENEA**

The Permanent Mission of Italy to the International Organizations in Vienna Italian national agency for new technologies, energy and sustainable economic development

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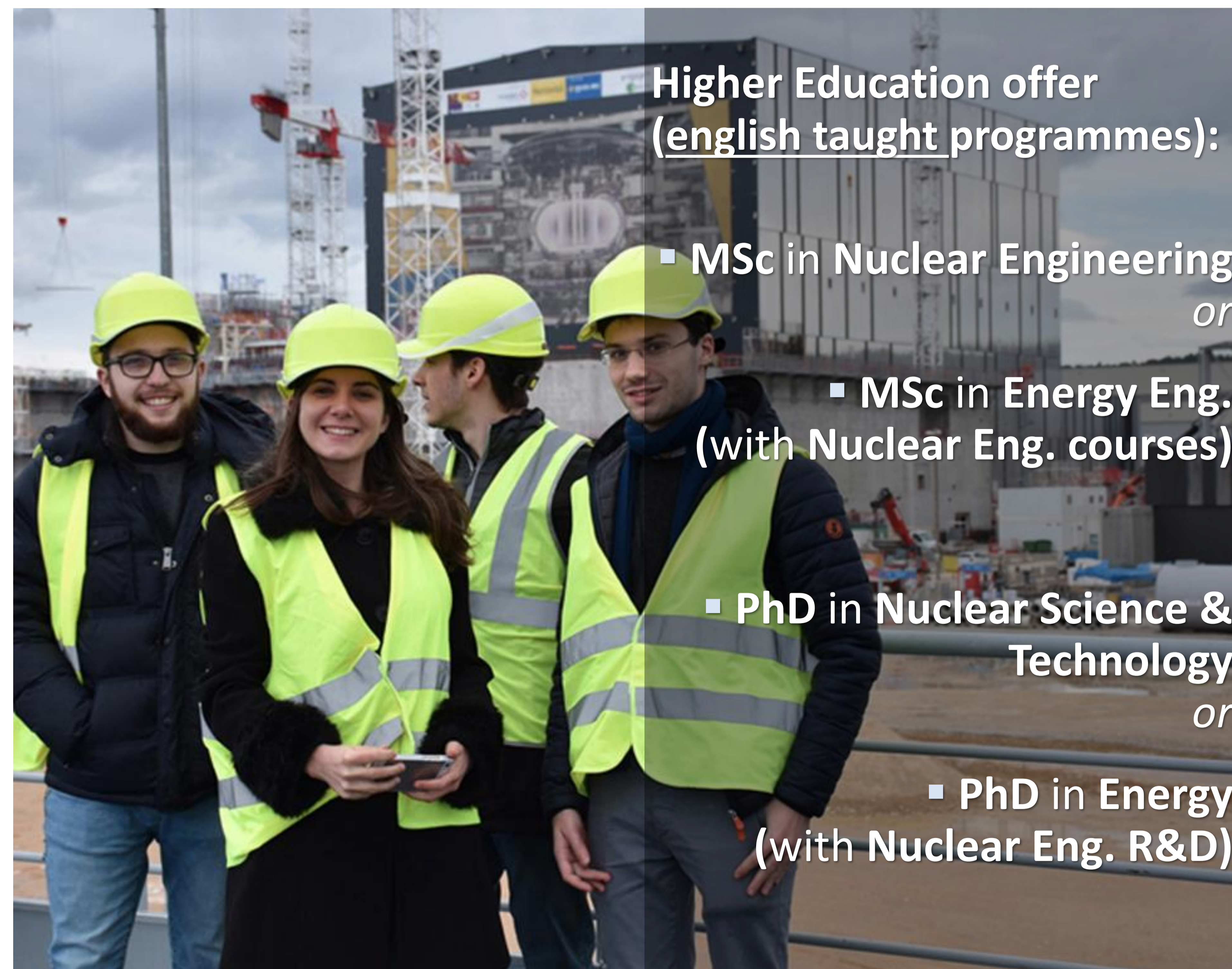
**C I R T E N**  
Consorzio Interuniversitario per la Ricerca Tecnologica Nucleare  
INTER-UNIVERSITY CONSORTIUM FOR NUCLEAR TECHNOLOGICAL RESEARCH

[www.cirten.it](http://www.cirten.it)

## CIRTEN is active in international R&D projects, through its competence areas

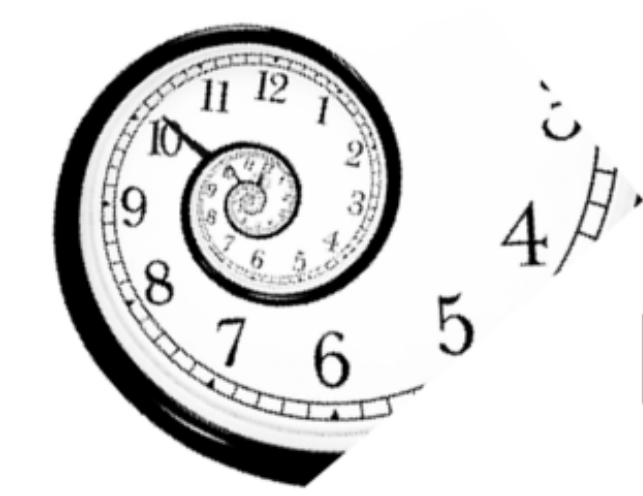
- *Nuclear safety*
- *Decommissioning, nuclear waste management and environmental remediation*
- *Innovation and technology development of nuclear fission (GenIII, GenIV, SMRs) and fusion reactors*
- *Nuclear fuel and fuel cycle*
- *Radiation protection*
- *Radiation measurement and instrumentation*
- *Medical and industrial applications of ionising radiations*

## Nuclear Engineering educational activities are carried out in all CIRTEN Universities



Higher Education offer (english taught programmes):

- MSc in Nuclear Engineering *or*
- MSc in Energy Eng. (with Nuclear Eng. courses)
- PhD in Nuclear Science & Technology *or*
- PhD in Energy (with Nuclear Eng. R&D)





# Education, Training and Research for Innovative Reactors and SMRs



## CIRTEN and new generation reactors

### R&D activities for **Lead-cooled Fast Reactors**

- Partner of **FALCON** consortium for the development of **ALFRED** reactor
- Participation to Euratom projects and **GIF-GenIV** activities, experience on Accelerator Driven Systems

### R&D activities for **Small Modular Reactors**

- Key partner of the **IRIS** project
- Developer of SMR (integral PWR) concepts
- Research activities performed for **EU SMR concepts** (FlexBlue, F-SMR, ELSMOR project)
- Collaborating with **IAEA** in SMR initiatives

## CIRTEN education, training and research

- **MSc and PhD students and young Post-Doc** researchers, from Italy, **Europe** and other **Continents**, involved in modelling and experimental R&D activities

- **International Summer Schools** organised and hosted in CIRTEN Universities

- **Innovative** educational tools (e.g. Massive On-Line Open Courses-MOOC) and on-site **visits**

