



Contributing to training **the future players**

of the Low Carbon Energy sector,
including Nuclear and Renewables



Our founding members,
associated with the INSTN



FONDATION
instn
Sous l'égide de la Fondation de France

A foundation to involve, train and recruit tomorrow's talent in a promising sector

— The fight against global warming, the improvement of population health, the design of sustainable energy systems involving all low-carbon energy sources, including nuclear and renewables in a responsible sense, represent major challenges for the energy sector in France and in the world.

To meet these challenges, in a field that is not well known and requires a high level of technical expertise and social

awareness, the nuclear sector needs new talent more than ever, in both its industrial and medical aspects for its national and international projects. The INSTN Foundation has set itself the goal of attracting and training new talent in France and worldwide in support of the highly specialised education and training programmes provided by the French National Institute for Nuclear Science and Technology (INSTN) and its partners, in the fields of energy and health.

In December 2016, three companies – **Apave, Assystem and Nuvia** – motivated by this context and committed to take action, came together to support the INSTN and its projects by creating the INSTN Foundation (sheltered by Fondation de France). Our aim is to promote and develop Innovation, Education and Training to support the development of low-carbon energy sources, including nuclear and renewables, in France and internationally.



A MISSION

TO SUPPORT EDUCATION AND TRAINING FOR LOW CARBON ENERGY SOURCES, INCLUDING NUCLEAR AND RENEWABLES

PROMOTE the attractiveness of the low carbon energy sector, including nuclear and renewables, especially to future students.

TRANSFER knowledge and know-how of the sector, through the INSTN and its partners' education and training programmes.

ENCOURAGE equal opportunities and diversity for students in training and improve the conditions of student life.

Since its creation, the INSTN Foundation focuses its funding and projects on **four main areas.**



INNOVATIVE ACTIONS

Knowledge transfer on energy issues, low carbon energy solutions, including nuclear and renewables, to the public, students and professionals.

The design of innovative educational tools: MOOCs, augmented virtual reality, FabLabs, simulation tools for attractive and effective training solutions.

Contributing to improving students' life conditions: awarding scholarships, providing support for international mobility, organising or supporting cultural and sporting events, creating and awarding student prizes, etc.

The creation of Teaching Chairs around key scientific and technological themes for the success of nuclear, renewables, and energy systems projects.

Strengthening Knowledge Transfer

— PROMOTING A BETTER UNDERSTANDING OF ENERGY ISSUES AND BETTER KNOWLEDGE OF NUCLEAR ENERGY

Developing the attractiveness of the nuclear sector, particularly among young people, in order to attract, train and recruit the talent of tomorrow is a key challenge for the INSTN Foundation.

With this in mind, it is a priority to encourage the dissemination of a better knowledge of nuclear energy, to the greatest number of people, and its contribution to low-carbon energy solutions. The INSTN Foundation is financing the creation of public media, such as MOOCs (Massive Open Online Courses), an effective knowledge transfer and communication tool, accessible to a wide audience. It opens up access to education and training, as well as being a modern and flexible training method.

The MOOC "Nuclear energy in France" has brought together 7,000 participants for a 6-week training course offering 12 modules on two levels of training.



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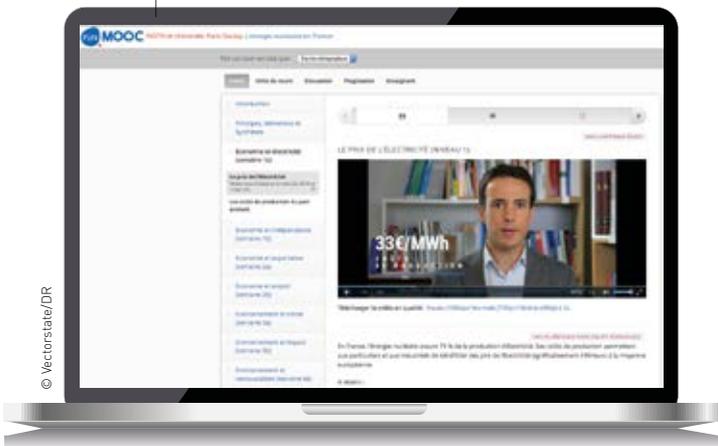
— A MOOC ON NUCLEAR ENERGY IN FRANCE

In 2017, the French National Institute for Nuclear Science and Technology (INSTN), in cooperation with the French Society for Nuclear Energy (SFEN), launched the production of the MOOC "Nuclear energy in France".

This course deals with the economic, environmental, industrial and societal dimensions of nuclear energy in France and should enable a broad target group to acquire a general knowledge of the place of nuclear energy in the country's low carbon energy mix, while debating the associated societal issues and technological challenges.

It also aims to demonstrate the professional business prospects within the nuclear value chain and to develop the attractiveness of nuclear professions among young talent and qualified players. Funded in large part by the INSTN Foundation, this tool has been available since February 2018 on the France Université Numérique (FUN) platform.

The Student/Business Forum is an opportunity to put the INSTN's teaching themes into perspective with the skills needs of employers in the sector.



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SUPPORT THE FOUNDATION

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Promoting innovation in learning tools and methods

— DEVELOPING INNOVATIVE LEARNING TOOLS

Developing the attractiveness of the nuclear sector, particularly among young people, in order to attract, train and recruit the talent of tomorrow is a key challenge for the INSTN Foundation.

In this perspective, the enlightened digitalisation of the training courses offered by the INSTN is both a vector of modernity and attractiveness for a new generation strongly oriented towards digital and connected objects. These solutions

The use of an immersive 3D visualization system in order to reproduce the real-life working environment conditions during training sessions.

— EVOC, AN AUGMENTED VIRTUAL REALITY TRAINING REACTOR



© P. Dumas/CEA

also make it possible to target increased teaching and training performance. In order to support a modern sector and maintain teaching excellence, the INSTN Foundation supports the development of new information technologies, connected objects and the creation of innovative learning tools such as: simulation tools, augmented virtual reality, FabLabs, 3D printing, etc.

Students and trainees use 3D visualization devices coupled with digital models of facilities for an increased understanding of systems, equipment and how they operate.

Initiated in 2017 by the French National Institute for Nuclear Science and Technology (INSTN) and the result of a collaboration with CEA experts in the fields of nuclear energy (DEN), digital and information technologies (DRT/LIST), the Enhanced Virtual Open Core (EVOC) augmented virtual reality platform is aimed at multimodal training on nuclear reactors for teaching.

This project, which is a world first, demonstrates France's desire to move concretely towards a nuclear 2.0. The EVOC project aims to offer a flexible and innovative training solution with features and teaching methods never before offered to strengthen the skills of the trainees.

The Augmented Virtual Reality system will provide trainees with an interactive 4D training experience combining a balanced mix of real and virtual worlds, using both digital and physical resources. Operational in September 2018, EVOC will contribute to the recognition of France in the field of training on research reactors. It is today supported by the CEA and the INSTN Foundation.



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Improving students' life conditions



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Closing ceremony after graduation.

— DEFENDING ACCESS FOR ALL

The nuclear sector recognises the importance of supporting young talent in achieving their academic potential and enabling them to benefit from first rate degree courses in line with competency needs.

Supporting students in their career planning, enabling them to study in the right conditions, facilitating mobility for internships and study visits are essential contributions to the training of tomorrow's talent.

They are part of the INSTN Foundation's commitment to encourage deserving and motivated students in France and around the world. The Foundation's support reflects the social and gender commitments implemented by the founding members and the INSTN in their national and international activities.



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Use of the VERT simulation platform for radiological and medical physics teaching.

— AWARDING SCHOLARSHIPS TO INTERNATIONAL STUDENTS

Regardless of their background, we know that many students view scholarships as an encouragement, an opportunity to succeed.

The confidence shown in their ability to excel is a huge boost and a powerful source of motivation. To enable students to follow the INSTN cycles and those of its academic partners, a scholarship system has been set up with the support of the INSTN Foundation. The first campaign turned towards India, due to the recent signing of partnerships between the two countries in the fields of nuclear energy and renewable energies.

Typically, the French Embassy sets up scholarships for talented Indian students. The INSTN Foundation is helping to supplement these scholarships to ensure that the students are able to live comfortably whilst studying in France. The allocation of scholarships takes place following prior assessment by the Embassy and a final decision by an Ad Hoc Committee, set up by the INSTN Foundation's Executive Committee.

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Contributing to the creation of teaching chairs

— COMBINING RESEARCH AND SKILLS DEVELOPMENT FOR THE TECHNOLOGIES OF THE FUTURE

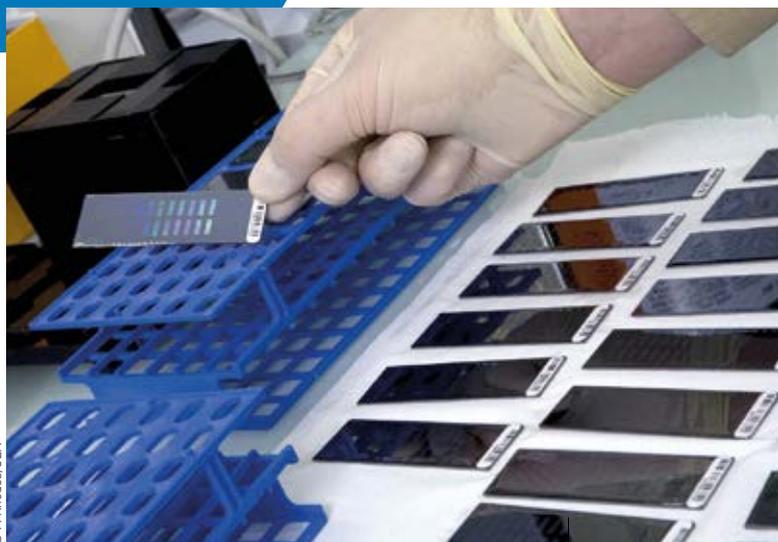
At the crossroads of its societal commitments and the development of skills for the future, the INSTN Foundation is involved in the creation of teaching chairs.

Within this framework, it participates in the financing of projects associating cutting-edge research and training of excellence proposed by the founding members and actors of the sector. The results obtained will contribute to the dissemination of knowledge and to the progress of research at national and international levels. According to the principle of patronage, they will be able to benefit as many people as possible and will underline the societal commitment of the founding companies and that of the INSTN.



Teaching and research on solar energy technologies, materials and processes.

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— A TEACHING-RESEARCH CHAIR ON EMERGING PROCESSES FOR ADVANCED MATERIALS

Teaching and research on the microchips of the future and their health applications.

The INSTN Foundation is involved in the preparation of a chair project led by the INSTN and CEA through its transversal Materials and Processes skills programme.

The theme «innovative materials development processes» cuts across all low-carbon energy applications, including nuclear and renewables, as well as health applications. It echoes strategic directions identified by the founding members and corroborated by the INSTN's partners and clients in France and internationally. The Chair is scheduled for launch in 2019, aiming to develop new generations of innovative industrial processes for the synthesis, implementation and integration of advanced materials for industry.

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Let's support together the INSTN Foundation



Supporting the INSTN Foundation today means fighting against climate change while developing future promising sectors.

Together, we can all help to train and recruit the talent of the future.

In order to achieve this objective, the Foundation is counting on your commitment and support which will enable us to develop innovative projects:

- Knowledge transfer regarding low-carbon energy sources, including nuclear and renewables.
- Disruptive educational and digital solutions for modern and effective training.
- Creation of national and international research and teaching chairs.
- Improving students' quality of life.

DONATE



By making a donation to the INSTN Foundation, you are contributing to a major future-oriented project, while reaping tax benefits. Join the founding members today as a donor.

ONLINE

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