

## Webinar Invite

Education and Training Working Group

Join us on January 27, 2022, 8:30 am EST (UTC-5)

## ESFR SMART a European Sodium Fast Reactor Concept Including the European Feedback Experience and the New Safety Commitments Following Fukushima Accident

The ESFR-SMART project is what in the Anglo-Saxon world is called a "working horse" or a "concept car". Its role is to introduce, outside any constructive planning, new ideas for the future, which can be valuable guides for R&D. Unlike in an "industrial" project, which initially had a construction schedule, one can introduce innovative ideas, even if their lower technological-readiness level would require development and time. For these new ideas, research and first calculations were also performed during the project, to check their general feasibility and the absence of major impossibilities.

The presentation will show the design proposition for this SFR reactor including the experience feedback from European experience on Phénix, Superphénix, EFR and ASTRID. This design includes all improvements in response to the last safety rules issued after the Fukushima incident. Finally, the first calculations performed for the design validation are also explained with the necessary R&D.



**Mr. Joël Guidez**, a 1973 graduate from the Ecole Centrale de Paris, focused his career on the field of nuclear reactors in France and in Europe. After working for Superphénix, then for Phénix as head of tests, he led the thermohydraulic laboratory in the CEA center of Cadarache. In 1992 he became head of the Osiris reactor at Saclay ,near Paris. In 1997 he was seconded to the European Commission in Petten, the Netherlands where he took responsibility for the European Commission reactor: the High Flux Reactor. From

2002 to the end of 2007, he was director of the Phénix nuclear power plant in the CEA center of Marcoule. He continued in 2008 and 2009 as director of industrial nuclear support, at Saclay. His first European experience was followed by a second one in 2010, where he became nuclear representant at the French Embassy in Berlin. In 2011, he returned to Saclay in the director of the CEA nuclear energy division, as an international expert. At the end of 2012, he published a book on the experience feedback from the 35 years of operation of the reactor Phénix, translated into English in 2013 and republished in 2013, at edp / sciences. In 2015 he wrote a book on the technical and scientific achievements of Superphénix, which were published in 2016, republished in 2017 and were translated and published in English by Springer editions in 2017. In 2019, he was a member of the operational committee of the office of the High Commissioner. / Honorary President of the ST7 SFEN section / Representative of France at the RSWG of GIF / President of the GCFS -French safety advisory group - tripartite CEA / EDF / AREVA / Scientific manager of the GEN IV segment at CEA. Mr. Guidez retired in March 2020 while remaining a scientific advisor to the CEA, working on the ESFR SMART European project and writing a new book entitled Fast Reactors: A solution to Avoid Global Warming?

Free webcast!



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Who should attend: policymakers, managers, regulators, students, general public

## **Upcoming Webinars**

24 February 2022 Artificial Intelligence in Support of NE Sector, Prof. Prinja, Nawal, JACOBS, UK

23 March 2022 Scale Effects and Thermal Hydraulics: Application to French SFR, Benjamin Jourdy, CEA, France

TBD April 2022 Role of Nuclear Energy in Reducing CO2 Emissions

For more information, please contact Patricia Paviet at patricia.paviet@pnnl.gov or visit the GIF website at www.gen-4.org

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