



REACTOR DESIGN

Why is a 4th generation of nuclear reactors needed? And what are the most promising reactor technologies? The GIF initiative has led to reconsider some of the options adopted in the past and stimulated the investigation of new tracks for long term sustainable nuclear energy. To grasp the rationale for selecting Generation IV reactor systems, and their main characteristics, requires some basic knowledge in the fundamentals of nuclear reactor design. What is behind the terms "criticality," "breeding," and "fast or thermal neutrons"? How to select the coolant, moderator, neutron spectrum, fuel materials and composition and to choose the *ad hoc* combinations to design nuclear reactors in line with Generation IV criteria, in particular sustainability? This is the objective of this rather technical webinar targeting civil society stakeholders.

Free webcast Tuesday November 22, 2016 at 8:30 am EDT (UTC-4)



Register NOW at www.gen-4.org

Who should attend: policy makers, managers, regulators, students, general public

Meet the Presenter...

Claude Renault has been working at CEA (The French Alternative Energies and Atomic Energy Commission) for more than 30 years in R&D and E&T. He is a senior expert at CEA and professor. In 2010, he joined the INSTN (The National Institute for Nuclear Science and Technology) where he is currently the International Project Leader. His expertise and teaching experience mainly cover thermal-hydraulics, design and operation of nuclear reactors, including the different families of reactors in particular the concepts of 4th generation. Claude Renault came to CEA in 1984 in the development team of CATHARE, the reference CEA-EDF-AREVA-IRSN computer code for the simulation of accidental transients in Pressurized Water Reactors (PWR). He was subsequently responsible, at national and international level, for several R&D projects in the areas of severe accidents (ASTEC) and nuclear fuel behavior (PLEIADES). Between 2001 and 2009, he was heavily involved in R&D programs devoted to future nuclear reactors. He intervened at the Directorate of Nuclear Energy (CEA/DEN) in the definition and monitoring of research programs on the different concepts of 4th generation reactors. He chaired the Steering Committee of the Molten Salt Reactor in Generation IV.



The Generation IV International Forum invites you to attend web-based lectures on the next generation of nuclear energy systems and other cross-cutting subjects. Join internationally recognized subject matter experts and leading scientists in the nuclear energy arena for these short presentations.

Upcoming Webinars

December 15, 2016 January 25, 2017 February 22, 2017 Sodium Cooled Fast Reactors, Dr. Bob Hill Very High Temperature Reactors, Mr. Carl Sink Gas Cooled Fast Reactor (GFR), Dr. Alfredo Vasile



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