

Thermal hydraulics of Supercritical pressure water-cooled Reactor (SCWR)

Supercritical pressure water-cooled reactors (SCWRs) have garnered

significant interest from the international nuclear community due to their

potential for high thermal efficiency and substantial plant simplification. SCWRs are the sole water-cooled reactor among the six GEN-IV concepts. Over the past decade, extensive research activities on SCWRs have been conducted in the nuclear industry. This presentation summarizes and reviews various R&D activities, including experimental studies, analytical methods, and numerical simulations, related to SCWR development. It also identifies future R&D challenges. These efforts contribute to a better understanding of the fundamental thermal-hydraulic phenomena and the

Dr. Patricia Paviet from PNNL, USA, member of GIF ETWG will facilitate this

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Who should attend:

policymakers, industry professionals, regulators, researchers, students, general public

Speaker

webinar.



Prof. Xiaojing Liu

webinars and ETWG activities on the GIF website.

improvement of prediction methods.

Professor Xiaojing Liu from Shanghai Jiao Tong University in China obtained his Ph.D. degree from SJTU in 2010. He was a postdoctoral fellow at the Karlsruhe Institute of Technology (KIT) in Germany from 2012 to 2013. He is currently the director of the Shanghai integrating innovation center for digital reactors, leader of the Innovative Nuclear System Laboratory (INSL) in SJTU and has long been engaged in research on advanced and digital nuclear energy systems. He has published over 200 papers in renowned journals such as Applied Energy, Energy Conversion and Management, and Annals of Nuclear Energy.

He serves as a board member of the Nuclear Reactor Thermal-Hydraulics Division of the Chinese Nuclear Society, Associate editor of ASME Journal of Nuclear Engineering and Radiation Science (JNERS), Editorial Advisory Board member of Nuclear Engineering and Design, Youth editorial board member of Nuclear Science and Techniques and Frontiers in Energy.

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