

NURETH-21 Plenary Session (I)

- **Time: Sept. 1 (Mon.) Morning (Duration: 80")**
- **Format: Three talks (20" each) followed by a panel discussion (20")**
- **Topic: Technology Innovation for Nuclear Sustainability**
 - Keywords: Emerging technologies; nuclear sustainability; disruptive technologies; advanced nuclear systems; innovative concepts and features; from design concept to demonstration and deployment; innovation for existing fleets, ...
- **Topical Areas for Inviting Speakers: with Suggested Keywords**
 - Disruptive technologies for advanced nuclear systems (Keywords: AI, Robotics, Smart devices; Advanced Modeling and Simulation, Advanced Manufacturing, Advanced Materials, ...)
 - Safety demonstration of advanced nuclear systems (Keywords: Holistic approach; safety assessment; regulation and licensing, ...)
 - Accelerating deployment of advanced nuclear systems (Keywords: Performance, safety, and economic competitiveness; accelerated deployment, ...)
 - Challenges/Opportunities for Operating Fleets or Existing Designs (Keywords: Innovation for economics and safety enhancement, Reliability, Availability, Operational flexibility, Continuous operation, ...)

Description

This Plenary Session aims at gathering high-profile speakers from global organizations who will share their vision for innovative technologies to drive nuclear sustainability. With the climate crisis looming large and urgent, the emphasis will be placed on enhancing the safety of advanced nuclear technologies as they are integrated into the clean energy landscape.

The focus will be on the current state of the art in emerging technologies and disruptive concepts, the ongoing global efforts to further develop and implement the innovative and transformative technologies in nuclear power systems design, manufacturing, deployment, and operation.

The speakers are expected to share their perspectives on the path forward for developing and deploying such transformative and disruptive new technologies that are essential to innovating nuclear energy systems, where the role of thermal hydraulics is critical to their performance and safety, contributing to securing the sustainability of the nuclear role.

Topics of discussion will include advanced technologies for nuclear sustainability, disruptive technologies for advanced nuclear systems, such as AI, advanced modeling and simulation, advanced manufacturing, advanced materials, robotics, and smart devices, and strategies for demonstration and accelerated deployment of advanced nuclear systems.

The insights shared in this plenary session will help shape the roadmap for implementing these cutting-edge technologies, ensuring a sustainable and secure future for nuclear energy on a global scale.

- **Current Status: Candidates to be invited to establish a list of speakers** (As of Sept. 2024)