

# Journal of Nuclear Engineering and Radiation Science

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Currently, Nuclear Power Plants (NPPs) generate about 14% of electricity around the world, and demand for this powerful and reliable energy source, free from "green-house" gases, is growing. Interest in the use of nuclear energy for electricity generation is leading to new nuclear reactors being built in many countries. Safe and efficient operation of the current fleet of NPPs is essential, as is their life extension. These current generation reactors / NPPs, largely water-cooled, present challenges in terms of thermal efficiency, fuel-cycle issues and waste management. The future, therefore, lies in the development of the next generation, Generation-IV reactors, which offer potential solutions to many of these problems. Radiation science is integral to NPP design and operation, and critical to ensuring public safety. New designs will incorporate the latest developments and understanding in this important scientific discipline.

## Coverage

- Advanced Reactors
- Alternative Nuclear Energy Applications
- Beyond Design Basis Events
- Codes, Standards, Licensing and Regulatory Issues
- Computational Fluid Dynamics (CFD) and Coupled Codes
- Current Reactors
- Fuel Cycle, Radioactive Waste Management and Decommissioning
- Fusion Engineering
- Instrumentation, Control and Electrical Systems (IC&E)
- Next Generation Reactors
- Nuclear Education, Public Acceptance and Nuclear Knowledge Management
- Nuclear Engineering
- Nuclear Fuels and Materials
- Nuclear Safety and Security
- Plant Operations, Maintenance, Engineering, Modifications, and Life Cycle
- Plant Systems, Construction, Structures and Components
- Radiation Science & Radiation Protection
- Reactor Physics and Transport Theory
- Research Reactors
- Risk Informed Applications for Nuclear Engineering
- Small Modular Reactors (SMRs)
- Systems Reliability and Performance
- Thermal Hydraulics

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