

Special Issue on Containment Phenomenology and Safety Analysis

CALL FOR PAPERS

The containment building is one of main engineered safety systems of nuclear power plants. After Three Mile Island accident in 1979, there was a growing interest in topics related to the potential impact of a severe accident in the containment, such as hydrogen combustion, corium concrete interaction, or aerosol transport. Later, after the Fukushima accident in 2011, the development of studies regarding the containment has been increased exponentially, covering topics such as hydrogen risk management, severe accident management strategies, accident dosimetry, or equipment and instrumentation survivability. This new interest comes together with the new computational capabilities allowing expansion of the simulation frontiers with 3D detailed modelling, even for full-scale containments.

The role of the containment in the nuclear safety has become more relevant than ever before and this special issue tries to cover all aspects of research and development that the academia, research centers, and nuclear industry are doing to make the nuclear energy safer in the nearly future, for reactors in operation and under construction. Submissions related to instrumentation or equipment survivability and severe accident management strategies are especially welcomed.

Potential topics include but are not limited to the following:

- ▶ Containment reliability and level 2 probabilistic safety assessment
- ▶ Hydrogen distribution and combustion analysis
- ▶ Condensation studies and experiments
- ▶ Environmental qualification of instrumentation and equipment
- ▶ Survivability of equipment or instrumentation during severe accident sequences
- ▶ Simulation of design basis accidents with 3D containment models
- ▶ New methodologies for containment safety analysis
- ▶ Severe accident management strategies related to containment (e.g., containment venting, manual spray actuation)
- ▶ Analysis related to new containments designs
- ▶ Dosimetry inside containment during accidental sequences
- ▶ Aircraft Crash Impact Analyses

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/stni/cpsa/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

Lead Guest Editor

Cesar Queral, Universidad Politécnica de Madrid, Madrid, Spain
cesar.queral@upm.es

Guest Editors

Thomas L. George, Zachry Nuclear Engineering, Inc., Washington, USA
georget@zachrynuclear.com

Thomas Jordan, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany
thomas.jordan@kit.edu

Gonzalo Jimenez, Universidad Politécnica de Madrid, Madrid, Spain
gonzalo.jimenez@upm.es

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