Karlsruher Institut für Technologie

Institut für Kern- und Energietechnik
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Einladung zum IKET-Kolloquium

Zeit: Dienstag, 15. Januar 2013, 15.00 Uhr

Ort: Kolloquiumsraum des IKET, Campus Nord, Bau 419, Raum 104

Referent: Prof. Sevostian Bechta, Royal Institute of Technology (KTH), Stockholm, Schweden

Titel: Nuclear power safety research at KTH

Zusammenfassung:

Royal Institute of Technology (KTH) is active in nuclear safety research from 1980. It has expertise in basic research and engineering applications concentrated in the Nuclear Power Safety Division (NPS) of the Department of Physics, which belongs to the KTH School of Engineering Sciences.

The basic research activities at NPS are focused on integrated probabilistic/deterministic safety and risk analysis methods, severe accident phenomena, multiphase flows and boiling heat transfer, as well as on multi-physics and multi-scale coupled simulations of NPP system behavior, like nuclear kinetics coupled with thermal hydraulics and system simulation coupled with CFD of local elements.

We provide technical support for engineering applications in analysis of complex reactor transients and containment thermal-hydraulics, risk management and safety improvements of Swedish BWRs, development of safety concepts and designs of Generation IV systems including lead, LBE and sodium cooled reactors.

NPS research laboratories are equipped by various installations for study of different severe accident phenomena by using corium simulant materials, LBE thermal hydraulics loop and facility for study of boiling at micro scale.

Several NPS ongoing research projects give examples of NPS national and international collaborations including the EU coordinated SARNET network. KIT-NPS collaboration in safety research has been recently intensified by bilateral cooperation agreement signed in 2011.

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