

Upcoming Seminars

NKS-R DIGREL

Reliability analysis of digital systems in PSA context

26 November, 2013, VTT Digitalo, Vuorimiehentie 3, Espoo, Finland

In 2007, the OECD/NEA CSNI directed the Working Group on Risk Assessment (WGRisk) to set up a task group (TG) to coordinate an activity on digital instrumentation and control (DIC) system risk. One of the recommendations was to develop a taxonomy of hardware and software failure modes of digital components for the purpose of probabilistic safety assessment (PSA). A new WGRisk TG was set up in 2010 to develop best practice guidelines on failure modes taxonomy for reliability assessment of digital I&C systems for PSA. This activity is supported by a parallel Nordic research project financed by NKS, Nordic PSA Group and the Finnish nuclear safety research programme SAFIR. The project will develop a technically sound and feasible failure mode taxonomy and best practice guidelines on the use of the taxonomy in modelling, data collection and quantification of digital I&C system reliability. In 2013, one of the focus areas has been the software reliability quantification.

In the NKS-R DIGREL seminar, results of the DIGREL task will be presented to the Nordic end users (experts from other countries are welcomed as well). Previous years' work has been published in the NKS report series [NKS-230](#), [NKS-261](#) and [NKS-277](#).

Please, register to the meetings by e-mail to tero.tyrvainen@vtt.fi (phone +358 40 7760841) or jan-erik.holmberg@riskpilot.se (phone +358 40 827 665) by November 8, 2013.

The seminar is open to any person who is interested in the topic.

Helsinki-Vantaa airport is the closest airport to VTT located in Espoo. Each participant is responsible for his/her own hotel bookings. More detailed travelling information can be asked from Tero Tyrväinen.

Draft Agenda

08:30 Coffee, registration

09:00 Opening of the seminar

09:15 Status of NKS/NPSAG DIGREL project, overview of the activities

WGRISK TG DIGREL, failure modes taxonomy report

Break

Experiments with the Nordic example PSA model

12:00 Lunch

13:00 Software reliability quantification

Break

Software reliability quantification, continued

15:00 Discussion, conclusions of the seminar

16:30 Adjourn

New Publications

The following NKS-R reports are available free of charge: Download by clicking the appropriate link.

NKS-285	July 2013	S. Tietze, C. Ekberg, T. Kärkelä, A. Auvinen, U. Tapper, J. Jokiniemi: Adsorption and revaporisation studies of thin iodine oxide and Csl aerosol deposits from containment surface materials in LWRs	AIAS	View document
NKS-286	July 2013	Eveliina Takasuo, Tuomo Kinnunen, Stefan Holmström, Taru Lehtikuusi: COOLOCE debris bed experiments and simulations investigating the coolability of cylindrical beds with different materials and flow modes	DECOSE	View document
NKS-287	August 2013	Pavel Kudinov, Alexander Konovalenko, Dmitry Grishchenko, Sergey Yakush, Simone Basso, Nazar Lubchenko, Aram Karbojian: Investigation of debris bed formation, spreading and coolability	DECOSE	View document
NKS-288	August 2013	Sachin Thakre, Weimin Ma, Pavel Kudinov, Sevostian Bechta: Study on Effective Particle Diameters and Coolability of Particulate Beds Packed with Irregular Multi-size Particles	DECOSE	View document
NKS-289	August 2013	Sachin Thakre, Weimin Ma: Simulations of Ex-vessel Fuel Coolant Interactions in a Nordic BWR using MC3D Code	DECOSE	View document

The following NKS-B reports are available free of charge: Download by clicking the appropriate link.

NKS-290	Sept. 2013	Xiaolin Hou (ed.): Abstract Book of the NKS Workshop on Radioanalytical Chemistry, Risø, Roskilde, Denmark, 2-6th September 2013	RADIOANALYSIS	View document
NKS-291	Sept. 2013	Jens Havskov Sørensen, Bjarne Amstrup, Henrik Feddersen, Ulrik Smith Korsholm, Jerzy Bartnicki, Inger-Lise Frogner, Heiko Klein, Alvaro Valdebenito, Peter Wind, Viel Ødegaard, Bent Lauritzen, Steen Cordt Hoe, Jonas Lindgren: Meteorological Uncertainty of atmospheric Dispersion model results (MUD)	MUD	View document

NKS Young Scientist Travel Assistance

A reminder that NKS offers travel assistance for young scientists wishing to attend NKS-R and NKS-B events as well as related non-NKS events that are held within the Nordic countries. More information on how to apply for travel assistance can be seen on the NKS web site [here](#) (http://www.nks.org/en/nksr/travel_assistance/travel_assistance.htm) for NKS-R related events, and [here](#) (http://www.nks.org/en/nksb/travel_assistance/travel_assistance.htm) for NKS-B related events.