March 21-22, 2013, Hanasaari, Espoo, Finland


Seminar chairman: Jorma Aurela, MEE – Ministry of Employment and the Economy

Seminar Program:

Day 1  21.3.2013

9:00 – 9:40  Opening session:
Opening remarks, Herkko Plit, MEE
Safety for all, Tero Varjoranta, STUK – Radiation and Nuclear Safety Authority
Overview of SAFIR2014 (years 2011-2012) – Kaisa Simola, VTT – Technical Research Centre of Finland

9:40 – 10:20  Research area 1: Man, Organisation and Society
9:40 – 10:00  Managing safety culture throughout the lifecycle of nuclear plants (MANSCU), Pia Oedewald
10:00 – 10:20  Sustainable and future oriented expertise (SAFEX2014), Krista Pahkin

10:20 – 10:40  Coffee break

10:40 – 11:40  Research area 2: Automation and Control Room
10:40 – 11:00  Coverage and rationality of the software I&C safety assurance (CORSICA), Timo Varkoi
11:00 – 11:20  Human-automation collaboration in incident and accident situations (HACAS), Jari Laarni
11:20 – 11:40  Safety evaluation and reliability analysis of nuclear automation (SARANA), Keijo Heljanko

11:40 – 12:20  Research area 3: Fuel Research and Reactor Analysis
11:40 – 12:00  Criticality safety and transport methods in reactor analysis (CRISTAL), Karin Rantamäki
12:00 – 12:20  Three-dimensional reactor analyses (KOURA), Elina Syrjälahti

12:20 – 13:20  Lunch

13:20 – 14:00  Research area 3: Fuel Research and Reactor Analysis (cont.)
13:20 – 13:40  Neutronics, nuclear fuel and burnup (NEPAL), Jarmo Ala-Heikkilä
13:40 – 14:00  Extensive fuel modelling (PALAMA), Ville Tulkki

14:00 – 15:10  Research area 4: Thermal Hydraulics
14:00 – 14:20  Enhancement of safety evaluation tools (ESA), Ismo. Karpinnen
14:20 – 14:50  Experimental studies on containment phenomena (EXCOP) & Numerical modelling of condensation pool (NUMPOOL), Markku Puustinen & Timo. Pättikangas
14:50 – 15:10  Improvement of PACTEL facility simulation environment (PACSIM), Juhani. Vihavainen

15:10 – 15:30  Coffee break

15:30 – 16:10  Research area 4: Thermal Hydraulics (cont.)
15:30 – 15:50  PWR PACTEL experiments (PAX), Vesa Riikonen
15:50 – 16:10  Modelling of pressure transients in steam generators (SGEN), Timo. Pättikangas
16:10 – 16:40 Poster session break

16:40 – 18:20 Panel: international co-operation in nuclear power plant safety
H. Plit (MEE, chairman), M-L. Järvinen (STUK), L. Heikinheimo (TVO), H. Tuomisto (FPH), J. Hyvärinen (Fennovoima), E.K. Puska (VTT), R. Kyrki-Rajamäki (LUT), R. Salomaa (Aalto), L. Skånberg (SSM), M. Martín-Ramos (EC)

18:30 – Buffet dinner
Day 2 22.3.2013

8:30  Opening

8:30 – 9:50  Research area 5: Severe Accidents
8:30 – 8:50  Core debris coolability and environmental consequence analysis (COOLOCE-E), Elina. Takasuo
8:50 – 9:10  Thermal hydraulics of severe accidents (TERMOSAN), Tuomo. Sevón
9:10 – 9:30  Transport and chemistry of fission products (TRAFl), Teemu. Kärkelä
9:30 – 9:50  Reactor vessel failures, vapour explosions and spent fuel pool accidents (VESPA), Niina. Könönen

9:50 – 10:20  Coffee break

10:20 – 12:00  Research area 6: Structural Safety of Reactor Circuits
10:20 – 10:40  Environmental influence on cracking susceptibility and ageing of nuclear materials (ENVIS), Ulla. Ehrnstén
10:40 – 11:00  Fracture assessment of reactor circuit (FAR), Pekka Nevasmaa
11:00 – 11:20  Monitoring of the structural integrity of materials and components in reactor circuit (MAKOMON), Tarja Jäppinen
11:20 – 11:40  Advanced surveillance technique and embrittlement modelling (SURVIVE), Matti. Valo
11:40 – 12:00  Water chemistry and plant operating reliability (WAPA), Timo. Saario

12:00 – 13:00  Lunch

13:00 – 13:50  Research area 7: Construction Safety
13:00 – 13:30  Impact 2014 (IMPACT2014) & Structural mechanics analyses of soft and hard impacts (SMASH), Ari Vepsä
13:30 – 13:50  Seismic safety of nuclear power plants. Targets for research and education (SESA), Ludovic Fülöp

13:50 – 14:50  Research area 8: Probabilistic Risk Analysis (PRA)
13:50 – 14:10  Extreme weather and nuclear power plants (EXWE), Hilppa Gregow
14:10 – 14:30  Risk assessment of large fire loads (LARGO), Simo Hostikka
14:30 – 14:50  PRA development and application (PRADA), Ilkka Karanta & Antti Toppila

14:50 – 15:10  Coffee break

15:10 – 15:50  Research area 9: Development of Research Infrastructure
15:10 – 15:30  Enhancement of Lappeenranta instrumentation of nuclear safety experiments (ELAINE), Heikki. Purhonen
15:30 – 15:50  Renewal of hot cell infrastructure (REHOT), Wade. Karlsen

15:50 – 16:30  Final discussion

16:30  Closing

Further information: kaisa.simola@vtt.fi

Poster presentations:
Safety requirements specification and management in nuclear power
Fatigue affected by residual stresses, environment and thermal fluctuations (FRESH), M. Chauhan
plants (SAREMAN), T. Tommila
Development of Finnish Monte Carlo reactor physics code (KÄÄRME), J. Leppänen
Radionuclide source term analysis (RASTA), V. Tulkki
OpenFOAM CFD-solver for nuclear safety related flow simulations (NUFOAM), T. Pättikangas
Uncertainty Evaluation for Best Estimate Analyses (UBEA), J. Kurki
Chemistry of fission products (FISKE), T. Kekki
RI- ISI analyses and inspection reliability of piping systems (RAIPSYS)

Aging management of concrete structures in nuclear power plants (MANAGE), M. Ferreira
FinPSA knowledge transfer (FINPSA-TRAN), T. Mätäsniemi
Enhancement of Lappeenranta instrumentation of nuclear safety experiments (ELAINE), H. Purhonen
Renewal of hot cell infrastructure (REHOT), W. Karlsen