

EHPG Lillehammer 2017

Technical Program Man-Technology-Organisation

		Monday September 25
0830-1200		Joint Opening Session Session Chair: Jürgen Hartung (GRS)
	Paper No.: 01 02 03 04 05 06 07	Joint Opening Session Margaret McGrath, Halden Project: <i>"Welcome and Introduction"</i> Nils Morten Huseby, IFE: <i>"Status and Future Plans for the Halden Reactor"</i> Ho Nieh, OECD NEA, France: <i>Nuclear Safety Research Focus and Priorities</i> Victor McCree, US NRC, USA: <i>The View over the Horizon: Looking Ahead at Nuclear Power</i> Naoto Sekimura, University of Tokyo, Japan: <i>Materials and their Systems for Continuous Improvement of Nuclear Safety</i> Glyn Rossiter, NNL: <i>New Build and New R&D in the UK: An Update</i> Meera al Mheiri, FANR, UAE: <i>Progress of the UAE Nuclear Power Programme – Regulators Perspective</i>
1200-1330		Lunch

1330-1600	Paper No.:		Authors:	Session MTO-1: Control Rooms and HSIs - Design and Evaluation Session chairs: Wolfgang Krause, AREVA / NN Session secretary: Maren H. R. Eitrheim / Stine Strand
1330-1355	MTO-1.1		B. P. Hallbert, K. D. Thomas, R.L. Boring, J. Oxstrand, V. Agarwal, S. St. Germain, A. A. Rashdan, INL, USA	<i>An Overview of the Progress in Research and Development in Advanced Instrumentation, Information, and Control System Technologies to Support Light Water Reactor Sustainability</i>
1355-1420	MTO-1.2		D. Andrijević, Areva NP, Germany	<i>Experiences from the Human-Centered Design of the Control Room of an Evolutionary Power Reactor™</i>
1420-1445	MTO-1.3	HWR-1210	P. Ø. Braarud, H. Svengren, Halden Reactor Project	<i>Assessment of Situation Awareness in Control Room. The Development and Initial Assessment of the Process Awareness and Situation Understanding (PASU) Measure</i>
1445-1510				Coffee Break
1510-1535	MTO-1.4		J. Holgersson, A. Thunberg, Ringhals, Sweden	<i>Lessons Learnt from Application of an Overall Holistic Control Room Assessment at Ringhals</i>
1535-1600	MTO-1.5		S. Collier, M. Rosenqvist, P. Le Darz, IFE	<i>Human Factors in the Design of Control-Rooms for the European Spallation Source</i>
1600-1830				Demo Session
	D1		Thomas Winger/Michael Louka	<i>The Virtual HAMMLAB</i>
	D2		Tom Robert Bryntesen/István Szöke	<i>Mixed Reality Demo: Historic Fuel Inspection Case Study</i>
	D3		Espen Nystad	<i>Desktop Software for Gamification of Decommissioning Staff</i>
	D4		Espen Nystad/Aleksander Toppe	<i>4D Navigation System for Decommissioning Status Information</i>
	D5		Joachim Bratteli	<i>CREATE</i>
	D6		Svein Tore Edvardsen	<i>VRdose</i>
	D7		S. Sarshar	<i>Conceptual Framework for Risk and Barrier Management</i>
	D8		Harald P-J. Thunem	<i>Updates to the MFM Suite</i>
	D9		Alexandra Fernandes/Rossella Bisio	<i>Data Explorer</i>
	D10		Svein Nilsen	<i>Second Prototype Developed for URUT Testing of Portable Procedures</i>
				Tuesday September 26
0830-1200				Session MTO-1: continues Session chairs: Bruce Hallbert, INL / Spencer Brown, FANR Session secretary: Per Øivind Braarud / Salvatore Massaiu
0830-0855	MTO-1.6	HWR-1211	M. H. R. Eitrheim, H. Svengren, A. Fernandes, Halden Reactor Project	<i>Evaluation of the Integrated Human System Interface Concept for Near-Term Applications</i>
0855-0920	MTO-1.7	HWR-1212	M. H. R. Eitrheim, A. Fernandes, H. Svengren, Halden Reactor Project	<i>Evaluation of Design Features in the HAMBO Operator Displays</i>

0920-0945	MTO-1.8	HWR-1222	S. Nilsen, J.E. Hulsund, Halden Reactor Project	<i>Status Updates on Portable Procedure Activities and Findings from Recent Tests</i>
0945-1015				Coffee Break
1015-1055	MTO-1.9	HPR-387	G. Skraaning jr., Halden Reactor Project, G.A. Jamieson, Univ. of Toronto, Canada	<i>Twenty years of HRP Research on Human-Automation Interaction: Insights on Automation Transparency and Levels of Automation</i>
1055-1110	MTO-1.10	HPR-384	M. Kaarstad, Halden Reactor Project	<i>Human-System Interfaces to Facilitate Work Practices in Digital Control Rooms – Summary and Lessons Learned</i>
1110-1135	MTO-1.11		W. Sang, F. Song, Y. Zhang, J. Shen, SNERDI, China	<i>Implementation of a Highly Integrated, Dynamic and Interactive Virtual Reality Platform to support HFE Verification and Validation</i>
1135-1200	MTO-1.12	HWR-1213	M. Louka, T. Winger, A.O. Braseth, Halden Reactor Project	<i>Using Virtual Reality and Simulation to Support Preliminary Validation Tasks in a Human-Centred Control Room Design Process</i>
Tabled	MTO-1.13	HWR-1194	G. Skraaning jr. , Halden Reactor Project	<i>A Reanalysis of the Work Practice Experiments in HAMMLAB (2009-2014)</i>
1200-1330				Lunch
1330-1600				Session MTO-2: Operation and Maintenance Session chairs: Stefan Figedy, VUJE / Daying Gu, SNERDI Session secretary: S. Renganayagalu, S. Nilsen, J.E. Hulsund
1330-1350	MTO-2.1		P. Fantoni, Wirescan, Norway	<i>Advancements in Condition Monitoring of Electrical Cables in NPP's using Line Resonance Analysis (LIRA)</i>
1350-1410	MTO-2.2	HWR-1221	J. E. Hulsund, S. K. Renganayagalu, S. Nilsen, E. Wingstedt, A. Hornæs, Halden Reactor Project	<i>Predictive Analysis and Visualisation of Condenser Fouling using Big Data and Machine Learning</i>
1410-1430	MTO-2.3	HWR-1192	M. Lind, X. Zhang, Denmark Tech. Univ.	<i>Multilevel Flow Modelling: A Tutorial</i>
1430-1450	MTO-2.4	HWR-1223	H. P-J. Thunem, Halden Reactor Project	<i>Diagnostic Decision Support – Recent Development and Updates on the MFM Suite</i>
1450-1520				Coffee Break
1520-1540	MTO-2.5	HWR-1224	E. Wingstedt, Halden Reactor Project, O. Saarela, VTT, Finland	<i>Prediction of the Influence Changes in Process Parameters on the Uncertainty in Calculated Thermal Power for Steam Turbine Cycles</i>
1540-1600	MTO-2.6		J. Molnar, UJV, Czech Republic, T. Bodal, K.T. Hansen, Halden Project	<i>20 Years of History and Experience with the SCORPIO-VVER Reactor Core Monitoring and Surveillance System</i>
Tabled	MTO-2.7		Jindrich Machek, UJV Rez	<i>SPND Signals Validation and Signal Faults Identification</i>
1600-1900				Demo Session
	D1		Thomas Winger/Michael Louka	<i>The Virtual HAMMLAB</i>
	D2		Tom Robert Bryntesen/István Szöke	<i>Mixed reality demo: Historic Fuel Inspection case Study</i>
	D3		Espen Nystad	<i>Desktop Software for Gamification of Decommissioning Staff</i>
	D4		Espen Nystad/Aleksander Toppe	<i>4D Navigation System for Decommissioning Status Information</i>

	D5		Joachim Bratteli	<i>CREATE</i>
	D6		Svein Tore Edvardsen	<i>VRdose</i>
	D7		Sizarta Sarshar	<i>Conceptual Framework for Risk and Barrier Management</i>
	D8		Harald P-J. Thunem	<i>Updates to the MFM Suite</i>
	D9		Alexandra Fernandes/Rossella Bisio	<i>Data Explorer</i>
	D10		Svein Nilsen	<i>Second Prototype Developed for URUT Testing of Portable Procedures</i>
Wednesday September 27				
0830-1155				Session MTO-3: Outage and Decommissioning Session chairs: Vladimir Fiser, UJV / Francois Jeffroy, IRSN Session secretary: Niels-Kristian Mark, Joachim Bratteli
0830-0855	MTO-3.1		Y. Iguchi, K. Kitamura, M. Tezuka, Y. Taruta, Y. Koda, Fugen Decommissioning Engineering Center, JAEA, RINE, Japan	<i>Application of VR to the Knowledge Management for the Decommissioning of Nuclear Facilities</i>
0855-0920	MTO-3.2		Á. Farkas, P. Fűri, I. Balásházy, Hungarian Academy of Sciences, István Szőke, HRP	<i>Advanced Models for Internal Dosimetry – Opportunities for Application in Nuclear Decommissioning</i>
0920-0945	MTO-3.3		J. Svatek, J. Svanda, H. Hustakova, UJV Rez, Czech Republic	<i>Halden Planner for Optimisation of Dukovany NPP Intervention/Rescue Operations in Case of Severe Accident</i>
0945-1015				Coffee Break
1015-1040	MTO-3.4	HWR-1190	I. Szőke, E. Nystad, G. Rindahl, S. Holcombe, P. Kárpáti, Halden Reactor Project	<i>Current Challenges for Nuclear Decommissioning and Opportunities for Application of Innovative Concepts</i>
1040-1105	MTO-3.5	HWR-1214	E. Nystad, G. Rindahl, S-T. Edvardsen. T-R. Bryntesen, Halden Reactor Project	<i>A Game Approach to Non-Technical Decommissioning Training</i>
1105-1130	MTO-3.6		I. Szőke, B. Oberländer, P. Bennett, Halden Reactor Project	<i>Management of Legacy Fuel at IFE: Advanced Information Technology Support</i>
1130-1155	MTO-3.7		N-K. F. Mark, IFE	<i>Experiences from Using VRdose in Projects in Russia and Ukraine</i>
1200-1330				Lunch
1330-1555				Session MTO-4: Digital I&C Session chairs: Janne Valkonen, VTT / Terje Sivertsen, Bane NOR Session secretary: Sizarta Sarshar, John E. Simensen
1330-1355	MTO-4.1		T. Sivertsen, Bane NOR, Norway	<i>Requirements to Models for Use in the Safety Management Process</i>
1355-1420	MTO-4.2	HWR-1199	J. E. Simensen, Halden Reactor Project	<i>Digital I&C Assurance: Interview and Survey</i>
1420-1450				Coffee Break
1450-1530	MTO-4.3	HWR-1200	P. Kárpáti, Halden Reactor Project, K. C. Attwood, Univ. of York, J. Valkonen, VTT, V. Katta, Halden Reactor Project, C.	<i>Improving Understanding of and Supporting Argumentation in Safety Demonstration – Status of Activities</i>

		HWR-1220	Raspotnig, Avinor, G. Meyer, Halden Reactor Project P. Kárpáti, Halden Reactor Project, C. Raspotnig, Avinor, V. Katta, Halden Reactor Project	<i>Expert Workshop on DI&C Safety Assurance with Special Focus on Experiences with Assurance Cases</i>
1530-1555	MTO-4.4	HWR-1219	S. Nair, Halden Reactor Project, T. Stålhane, NTNU	<i>Boilerplate for Safety and Security Requirements</i>
Thursday September 28				
0830-1155				Session MTO-5: Human Performance, Human Reliability and Accident Management Session chairs: Vinh Dang, PSI / Andreas Kjellin, SSM Session secretary: Ann Britt M. Skjerve / Espen Nystad
0830-0855	MTO-5.1		S. Peters, US NRC, USA	<i>The USNRC's Human Factors and Human Reliability Analysis Research Programs</i>
0855-0920	MTO-5.2		M. Liinasuo, H. Koskinen, M. Porthin, VTT, Finland	<i>Communication in an Emergency Exercise</i>
0920-0945	MTO-5.3		A. Davies, M. Reid, EDF Energy, United Kingdom	<i>Qualitative Task Assessment in Support of Human Reliability Assessment and Task Optimisation (pre-NARA assessment)</i>
0945-1015				Coffee Break
1015-1040	MTO-5.4		J-Y. Han, D-J. Kim, Y-H. Chung, KINS, Korea	<i>The Application of Human Factors Engineering Program Review Model to Beyond Design Basis Accident and Severe Accident</i>
1040-1105	MTO-5.5		N. Hughes, A. D'Agostino, L. Reinerman, US NRC, USA	<i>The NRC's Human Performance Test Facility: Methodological Considerations for Developing a Research Program for Systematic Data Collection Using an NPP Simulator</i>
1105-1130	MTO-5.6	HWR-1198	C. Taylor, M. Hildebrandt, R. McDonald, Halden Reactor Project, N. Hughes, US NRC, USA	<i>Operator Response Failures of a Computerised Procedure System: Results from a Training Simulator Study</i>
1130-1155	MTO-5.7	HWR-1216	S. Massaiu, L. Holmgren, Halden Reactor Project	<i>The 2013 Resilient Procedure Use Study with Swedish Operators: Final Results</i>
1200-1330				Lunch
1330-1610				Session MTO-5: continues Session chairs: Sean Peters, US NRC / NN Session secretary: Magnhild Kaarstad / Rossella Bisio
1330-1410	MTO-5.8	HWR-1217	A-B. Skjerve, L. Holmgren, Halden Reactor Project	<i>Towards an Approach for Training NPP Operators in Handling for Unforeseen Events</i>

1410-1430	MTO-5.9	HWR-1218	A. Fernandes, S. Massaiu, Halden Reactor Project	<i>Comparing Operator Reliability in Analog vs. Digital Human System Interfaces: An Experimental Study on Identification Tasks</i>
1430-1500				<i>Coffee Break</i>
1500-1520	MTO-5.10		S. Sarshar, A-B. Skjerve, IFE	<i>Managing Major Accident Risk through the Planning Process for Maintenance Work – a Case Study from the Petroleum Industry</i>
1520-1550	MTO-5.11	HWhP-065	A. Fernandes, S. Massaiu, R. Bisio, M.H.R. Eitheim, Halden Reactor Project	<i>The Human Performance Data Explorer: Scope, Status and Plans</i>
1550-1610	MTO-5.12		C. Taylor, Halden Reactor Project	<i>Improving HRA Practices: Task Analysis Library Test</i>