

F02 New Developments in HRA

Friday 9:00 AM Discovery

Chair: Hyun Gook Kang

- 133 **Overview of the 2017 Revision to IEEE Standard 1082: Guide for Incorporating Human Reliability Analysis into Probabilistic Risk Assessments for Nuclear Power Generating Stations and Other Facilities**
Ronald Laurids Boring
Idaho National Laboratory, Idaho Falls, Idaho, USA
- 142 **Errors of Commission in HRA – NPSAG Phase 1 Project**
Xuhong He (a), Cilla Andersson (b), Anders Olsson (a), Julia Ljungbjörk, Anders Karlsson (c), Lovisa Nordlof, Karl Gustafsson (d), Lasse Tunturivuori (e), Per Hellström (f)
a) Lloyd's Register Consulting AB, Stockholm, Sweden, b) Ringhals AB, Väröbacka, Sweden, c) Forsmarks Kraftgrupp AB, Östhammar, Sweden, d) OKG AB, Oskarshamn, Sweden, e) Teollisuuden Voima Oyj, Olkiluoto, Finland, f) Strål Sakerhets Myndigheten, Stockholm, Sweden
- 53 **An Introduction of Simulator Exercises and Operator Interviews in support of C-2 Human Reliability Analysis**
Yongping Qiu, Yucheng Zhuo, Wenjing Lei, Juntao Hu
Shanghai Nuclear Engineering Research & Design Institute Co. Ltd, Shanghai, China

F03 Site Level (Multi-Unit, Multi-Source) PSA/PRA III

Friday 9:00 AM Illumination

Chair: Xue Yang

- 335 **Analysis of Different Quantitative Safety Goals for Nuclear Power Plants**
Ji Suk Kim, Man Cheol Kim
Chung-Ang University, Seoul, Korea
- 394 **Application of Bayes' Theorem for Risk-Informed Decision-Making at the Decommissioning of Fukushima Daiichi Nuclear Power Plant**
Tu Guang Tan, Sunghyon Jang, And Akira Yamaguchi
The University of Tokyo, Tokyo, Japan
- 395 **Development of Multi-Unit Dependency Evaluation Model Using Markov Process and Monte Carlo Method**
Sunghyon Jang, and Akira Yamaguchi
Department of Nuclear Engineering and Management, The University of Tokyo, Tokyo, Japan

F04 Risk and Hazard Analysis VI

Friday 9:00 AM Legacy A

Chair: Nathan Siu

- 371 **Tools and Methods for Assessing the Risk Associated with Consequential Steam Generator Tube Rupture**
Mohamad Ali Azarm (a) and S. Sancaktar (b)
a) Innovative Engineering and Safety Solutions, Germantown, MD, USA, b) Nuclear Regulatory Commission, Rockville, MD, USA
- 372 **Probabilistic Risk Assessment of the Spent Fuel Pools of Olkiluoto 1 and 2 NPP Units**
Simo Sihvola (a), Lasse Tunturivuori (b)
a) Platom Oy, Mikkeli, Finland, b) Teollisuuden Voima Oyj, Eurajoki, Finland
- 402 **Analysis of Precursor Accidents in Nuclear Power**
Spencer Wheatley, Wolfgang Kröger (a), Olivier Nusbaumer (b), & Didier Sornette (a)
a) ETH Zurich, Zurich, Switzerland, b) Leibstadt Nuclear Power Plant, Leibstadt, Switzerland

F05 Risk Assessment Methods VI

Friday 9:00 AM Legacy B

Chair: Marina Röwekamp

- 111 **Perceived Low Risk Processes Can Be Important - Lessons to a Regulator Based on a Nuclear Fuel Facility Process Event**
Donnie Harrison, April Smith
U.S. Nuclear Regulatory Commission
- 426 **Challenges, Solution Proposals and Research Directions in Safety and Risk Assessment of Autonomous Shipping**
J. Montewka (a,c), K. Wróbel (a), E. Heikkilä (b), O. Valdez-Banda (c), F. Goerlandt (d,c), S. Haugen (e)
a) Gdynia Maritime University, Poland, b) VTT Technical Research Centre of Finland Ltd, Tampere, Finland, c) Aalto University, Espoo, Finland, d) Dalhousie University, Halifax, Canada, e) NTNU Trondheim, Norway
- 405 **Fire Source Ignition Frequencies Determined from the International OECD FIRE Database**
Marina Roewekamp (a), Nicholas Melly (b), Andreas Werner (c)
a) Gesellschaft fuer Anlagen- und Reaktorsicherheit (GRS) gGmbH, Koeln, German, b) United States Nuclear Regulatory Commission (NRC), Office of Research, Washington, DC, USA, c) Safety Assessment Consulting (SAC), Breitbrunn, Germany

Conference Summary followed by the Ice Cream Special