

Th01 Flex, Seismic, and Fire HRA

Thursday 9/20/2018 10:30 AM Exploration

Chair: James Chang

90 **Human Reliability Assessment for 'Flex' Equipment**

Martin Reid
EDF Energy, Gloucester, UK

305 **Application of SPAR-H Method in Fire Human Reliability Analysis**

Kunxiu Liu, Xiufeng Tian (a), Xuhong He (b), Xinwei Liu (a)
a) CNNC China Nuclear Power Engineering Co., Ltd, Beijing, China, b) Lloyd's Register Consulting – Energy AB, Sundbyberg, Sweden

425 **Use of Expert Judgment to Support Human Reliability Analysis of Implementing FLEX Equipment**

Michelle Kichline, Jing Xing, John Hughey, and Mathew Hamberstone
U.S. Nuclear Regulatory Commission, Washington DC, USA

Th02 Reliability Analysis IV

Thursday 9/20/2018 10:30 AM Discovery

Chair: Elaheh Rabiei

338 **Quantitative Reliability Demonstration from Production to Operation on the Example of the New Radiation Tolerant Power Converter Controller for the Large Hadron Collider**

Tamer Tevetoğlu (a), Slawosz Uznanski, Benjamin Todd (b), Bernd Bertsche (a)
a) University of Stuttgart, Stuttgart, Germany, b) CERN (TE-EPC), Geneva, Switzerland

140 **Optimization of Test Cases for Experimental Reliability Evaluation of Digital Reactor Protection System**

Jeongil Seo and Seung Jun Lee
Ulsan National Institute of Science and Technology (UNIST), Ulsan, Republic of Korea

357 **Time-Dependent Reliability Analysis of Nuclear Hybrid Energy Systems**

Askin Guler Yigitoglu, Michael S. Greenwood, Thomas J. Harrison
Oak Ridge National Laboratory, Oak Ridge, TN

Th03 Dynamic PSA/PRA IV

Thursday 9/20/2018 10:30 AM Illumination

Chair: Matthew Denman

217 **A Dynamic Coupled-Code Assessment of Mitigation Actions in an Interfacing System Loss of Coolant Accident**

Zachary Jankovsky (a,b), Matthew Denman (b), and Tunc Aldemir (a)
a) The Ohio State University, Columbus, Ohio, USA, b) Sandia National Laboratories, Albuquerque, New Mexico, USA

221 **Performing an Accident Sequence Precursor Analysis with the ADS-IDAC Dynamic PSA Software Platform**

Mihai A. Diaconeasa and Ali Mosleh
The B. John Garrick Institute for the Risk Sciences, Department of Mechanical Engineering, University of California, Los Angeles, USA

223 **Discrete Dynamic Event Tree Uncertainty Quantification in the ADS-IDAC Dynamic PSA Software Platform**

Mihai A. Diaconeasa and Ali Mosleh
The B. John Garrick Institute for the Risk Sciences, Department of Mechanical Engineering, University of California, Los Angeles, USA

189 **The Backtracking Process Algorithm: A Dynamic Probabilistic Risk Assessment Method for Autonomous Vehicle Control Systems**

Mohammad Hejase, Arda Kurt, Tunc Aldemir, and Umit Ozguner
The Ohio State University, Columbus, Ohio, U.S.A.

Th04 Oil and Gas Industry II

Thursday 9/20/2018 10:30 AM Legacy A

Chair: Marilia Ramos

- 345 **A Practical Approach to Risk-Based Gas Monitoring System Design for Oil and Gas Offshore Platforms**
Claudia Vivalda, Raffaella Gerboni, and Andrea Carpignano
Politecnico di Torino, Turin, Italy

- 416 **Development of a Software Platform for Pipeline Health Monitoring and Management**
Mihai A. Diaconeasa and Ali Mosleh
The B. John Garrick Institute for the Risk Sciences, Department of Materials Science and Engineering, University of California, Los Angeles, USA

- 418 **The Impact of Time-Varying Operating Parameters on the Corrosion Rate and Depth of Gas Pipelines**
Keo Yuan Wu, Mihai A. Diaconeasa, Ali Mosleh
The B. John Garrick Institute for the Risk Sciences, Department of Materials Science and Engineering, University of California, Los Angeles, USA

Th05 Risk Assessment Methods IV

Thursday 9/20/2018 10:30 AM Legacy B

Chair: Brandon Chisholm

- 283 **Recent PSA developments and use of PSA applications in Belgium**
Véronique Jacques, Julie Delvax, Luc Kelders, Dries Gryffroy and Pieter De Gelder
Bel V, Brussels, Belgium

- 309 **Development of Probabilistic Safety Assessment Methodology for Autonomous Micro Modular Reactor**
Eun Seo So, Jaesun Ha, and Man Cheol Kim
Chung-Ang university, Seoul, Korea

- 315 **SSM funding of R&D activities related to Probabilistic Safety Assessment**
Per Hellström
Swedish Radiation Safety Authority, Stockholm, Sweden

- 328 **Reconsideration of PRA Framework – Addressing Level 3 PRA Coverage and Multi-unit Issues**
Kampanart Silva (a), Shin-etsu Sugawara (b)
a) Thailand Institute of Nuclear Technology (Public Organization), Nakhon Nayok, Thailand, b) Central Research Institute of Electric Power Industry, Tokyo, Japan

Th07 Risk Informed Applications IV

Thursday 9/20/2018 10:30 AM Laureatte

Chair: Jonathan DeJesús

- 378 **Use of PRA to Select Licensing Basis Events**
Karl Fleming (a), Edward Wallace (b), and Amir Afzali (c)
a) KNF Consulting Services LLC, Spokane, USA, b) GNBC Associates, Inc., Denver, USA, c) Southern Company Services, Birmingham, USA

- 399 **SSC Safety Classification and Performance Requirements for Advanced Non-LWRs**
Jason Redd (a), Karl Fleming (b), and Amir Afzali (a)
a) Southern Company Services, Birmingham, USA, b) KNF Consulting Services LLC, Spokane, USA

- 400 **Risk Informed and Performance Based Evaluation of Defense-in-depth**
Edward G Wallace (a), Karl Fleming (b), and Amir Afzali (c)
a) GNBC Associates, Inc., Denver, CO, USA, b) KNF Consulting Services LLC, Spokane, WA, USA, c) Southern Company Services, Birmingham, AL, USA