

T11 Special Session: HRA data analysis II

Tuesday 9/18/2018 1:30 PM Exploration

Chair: James Chang

- 57 **Using Microworlds to Support Dynamic Human Reliability Analysis**
Thomas A. Ulrich, Ronald L. Boring, and Diego Mandelli
Idaho National Laboratory, Idaho Falls, USA
- 183 **Informing HRA by Empirical Data, Halden Reactor Project Lessons Learned and Future Direction**
Andreas Bye
OECD Halden Reactor Project, IFE, Halden, Norway
- 187 **Attempt to Predict Human Failure Rate in Different Industry Sectors Using Data from Major Accidents and Bayesian Networks**
C. Morais (a,b), R. Moura (b,a), M. Beer (c,d) and E. Patelli (a)
a) University Institute for Risk and Uncertainty, University of Liverpool, United Kingdom, b) National Agency for Petroleum, Natural Gas and Biofuels (ANP), Brazil, c) Institute for Risk and Reliability, Leibniz University Hannover, Germany, d) School of Civil Engineering & Shanghai Institute of Disaster Prevention and Relief, Tongji University, China
- 391 **Use of IDHEAS General Methodology to Incorporate Human Performance Data for Estimation of Human Error Probabilities**
Jing Xing and Y. James Chang
U.S. Nuclear Regulatory Commission, Washington DC, USA

T12 Mathematical Methods in Reliability and Safety II

Tuesday 9/18/2018 1:30 PM Discovery

Chair: Enrique Lopez Droguett

- 300 **Comparison of MCUB and MCS BDD Fault Tree Solution Algorithms using Leibstadt Nuclear Power Plant Model**
Pavol Zvoncek and Olivier Nusbaumer
Leibstadt Nuclear Power Plant, Leibstadt, Switzerland
- 312 **Predictive Model on the Degradation of the Electrical Resistance of Cable Insulation**
Yuan-Shang Chang and Ali Mosleh
B. John Garrick Institute for the Risk Sciences, and Department of Materials Science & Engineering, University of California, Los Angeles (UCLA), USA
- 313 **Predictive Model on the Reliability of the Insulation Made from Special Heat-Resistant Polyvinyl Chloride**
Yuan-Shang Chang, Yizhen Zhang, and Ali Mosleh
B. John Garrick Institute for the Risk Sciences, and Department of Materials Science & Engineering, University of California, Los Angeles (UCLA), USA
- 25 **Safety Assessments of Nuclear Power Plants I&C Systems Architecture**
Hervé Brunelière, Pierre Lacaille, Jean-Yves Brandelet (a), and Mariana Jockenhoevel-Bartfeld (b)
a) Framatome, Paris La Défense, France, b) Framatome, Erlangen, Germany

Program at a Glance

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PSAM 14



T16 Dependence Modeling and Analysis

Tuesday 9/18/2018 1:30 PM Pathways

Chair: Mohammad Modarres

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Zhegang Ma, John Schroeder, and Curtis Smith
Idaho National Laboratory, Idaho Falls, USA
- 114 **A Physics-of-Failure Approach for Common Cause Failures Subject to Age-Related Degradation**
Taotao Zhou (a), Enrique López Droguett (a,b), and Mohammad Modarres (a)
a) Center for Risk and Reliability, University of Maryland, College Park, MD, USA, b) Department of Mechanical Engineering, University of Chile, Santiago, Chile
- 246 **Recent Insights from the International Common Cause Failure Data Exchange (ICDE) Project**
Benjamin Brück (a), Gunnar Johanson (b), Michelle Gonzalez (c), Jan Stiller (a)
a) Gesellschaft für Anlagen- und Reaktorsicherheit (GRS) gGmbH, Cologne, GERMANY, b) ÅF Industry, Stockholm, SWEDEN, c) United States Nuclear Regulatory Commission, Washington, DC, United States

T17 Risk Informed Applications II

Tuesday 9/18/2018 1:30 PM Laureatte

Chair: Fernando Ferrante

- 162 **Framatome's lessons learned on Risk-Informed Applications**
Hervé Brunelière, Jean-Yves Brandelet (a), Heiko Kollasko (b), Pierre Lacaille (a) and Jari Pesonen (c)
a) Framatome, Paris, France, b) Framatome, Erlangen, Germany, c) TVO, Olkiluoto, Finland
- 257 **Level 1 PRA Considering Optimization of Safety Systems for the iB1350**
Go Tanaka, Yuji Komori, Keiji Matsumoto and Takashi Sato
Toshiba Energy Systems & Solutions Co., Yokohama, Japan
- 307 **Review of Risk-Informed Approach and Challenges in its Application for Floating Nuclear Power Plant**
Wang, Jiaqun, Wang Qianglong (a), Yang Linping (b), Qiu Jinrong, Yao Shiwei (a), Wu Jie (c)
a) Wuhan 2nd Ship Design and Research Institute, Wuhan, China, b) Chongqing Huayu Electric Group CO., LTD., Chongqing, China, c) Institute of Nuclear Energy Safety Technology Chinese Academy of Sciences, Hefei, China