

W11 Dynamic HRA

Wednesday 9/19/2018 1:30 PM Exploration

Chair: Vinh Dang

- 267 **A Method for Modeling Human Behavior as a Dynamic Process in the Context of External and Internal Hazards**
Joerg Peschke (a), Marina Roewekamp (b)
a) GRS, Garching, Germany, b) GRS, Cologne, Germany
- 292 **Functional Requirement Analysis for Severe Accident Management Support System Using Multilevel Flow Modeling**
Sungheon Lee and Jonghyun Kim
Department of Nuclear Engineering, Chosun University, Gwangju, Republic of Korea
- 230 **Aggregation of Autocalculated Human Error Probabilities from Tasks to Human Failure Events in a Dynamic Human Reliability Analysis Implementation**
Ronald L. Boring (a), Martin Rasmussen (b), Thomas A. Ulrich and Nancy J. Lybeck (a)
a) Idaho National Laboratory, Idaho Falls, Idaho, USA, b) NTNU Social Research, Trondheim, Norway
- 88 **Risk-informed Context-based Human Reliability Assessment Method**
Gueorgui Petkov
Dovre Group Plc, Ouliluoto, Finland

W12 Mathematical Methods in Reliability and Safety III

Wednesday 9/19/2018 1:30 PM Discovery

Chair: Reza Kazemi

- 346 **On the Reliability of Experts' Assessments for Autonomous Underwater Vehicle Risk of Loss Prediction: Are Optimists better than Pessimists?**
 Mario P. Brito and Yujia Chang
University of Southampton, Southampton, United Kingdom

- 340 **Concept Development for a Test Rig and Analysis of the Experiments for Standardized Testing of Shape Memory Alloys**
 Marcin Hinz, Alexander Czechowicz (b), Dominik Brueggemann (a), Peter Dueltgen (b), and Stefan Bracke (a)
a) University of Wuppertal, Wuppertal, Germany, b) Forschungsgemeinschaft Werkzeuge und Werkstoffe e.V. (FGW), Remscheid, Germany

- 210 **Performance of Empirical Bayes Estimation Techniques Used in Probabilistic Risk Assessment on Failure Data collected in U.S NRC Reactor Operating Experience Database**
 Andrei Gribok, Vivek Agarwal, and Vaibhav Yadav
Idaho National Laboratory, P.O. Box 1625, MS 3818, Idaho Falls, ID

- 299 **Commentary on Use of Model-Augmented Data Analytics for Improved Operational Efficiency of Nuclear Power Plants**
 Katrina Groth (a) and Michelle Bensi (b)
a) UMD, Department of Mechanical Engineering, College Park, MD, USA, b) UMD, Department of Civil and Environmental Engineering, College Park, MD, USA

W13 Uncertainty and Sensitivity Analysis II

Wednesday 9/19/2018 1:30 PM Illumination

Chair: Elaheh Rabiei

- 49 **Minimal-Dispersion and Maximum-Likelihood Predictors with a Linear Staircase Structure**
 Luis G. Crespo, Sean P. Kenny, and Daniel P. Giesy
Dynamic Systems and Controls Branch, NASA Langley Research Center, Hampton, VA, USA

- 56 **Moment-Matching Predictor Models with a Linear Staircase Structure**
 Luis G. Crespo, Sean P. Kenny, and Daniel P. Giesy
Dynamic Systems and Controls Branch, NASA Langley Research Center, Hampton, VA, USA

- 102 **Sensitivity Strategy Supporting the Estimate of Extremely Low Probabilities**
 Cédric J. Sallaberry, Robert E. Kurth
Engineering Mechanics Corporation of Columbus (Emc2) Columbus, OH, USA

W14 Internal Hazards PSA/PRA II

Wednesday 9/19/2018 1:30 PM Legacy A

Chairs: Zied Hajej, Vivek Agarwal

- 70 **Internal Events Level 1 PSA study of Armenian NPP Spent Fuel Pools**
 Gurgen Kanetsyan (a), Armen Amirjanyan, and Zoltan Kovacs (b)
a) Nuclear and Radiation Safety Center, Yerevan, Armenia, b) RELKO Ltd., Bratislava, Slovak Republic

- 320 **Estimation of Fire Frequencies in Low Power and Shutdown Fire Probabilistic Risk Assessment**
 Tae-Wook Kang, Dong-Kyu, Myung-Ro Kim, Jae-Gab Kim
KEPCO E&C, Gim-Cheon, Republic of Korea

- 376 **Analysis of Possible Aging Trends in the Estimation of Piping System Failure Rates for Internal Flooding PRA**
 B.O.Y. Lydell (a), K.N. Fleming (b), and J-F. Roy (c)
a) Sigma-Phase Inc., Vail, AZ, USA, b) KNF Consulting Services LLC, Spokane, WA, USA, c) Electric Power Research Institute, Palo Alto, CA, USA

- Overview
- Program at a Glance

Chair: Ola Bäckström

- W16 Consequence Modeling and Management I**

Chair: Marilia Ramos

- ## W17 Nuclear Industry II

Chair: Matt Denman

- 190 **Evaluation of Operation Strategy of Passive and Active Safety Systems during SBLOCA**
Sang Hee Kang, Sun Heo, Sang Won Lee and Hyun Gook Kang
Korea Hydro & Nuclear Power Co., Ltd, 70,1312 Beongil, Yuseoung-Daero, Yuseong-gu, Daejeon, Republic of Korea

358 **Sodium Valve Performance in the NaSCoRD Database**
Matthew R. Denman, Zach Stuart, and Zachary K. Jankovsky
Sandia National Laboratories, Albuquerque, NM, USA

366 **Preliminary Study of Automated Analysis of Nuclear Power Plant Event Reports Based on Natural Language Processing Techniques**
Yunfei Zhao, Xiaoxu Diao, and Carol Smidts
Nuclear Engineering Program, Department of Mechanical and Aerospace Engineering, The Ohio State University, Columbus, USA

383 **Application of a Method to Estimate Risk in Advanced Nuclear Reactors: A Case Study on the Molten Salt Reactor Experiment**
Brandon Chisholm, Steve Krahn (a), Amir Afzali (b), and Eric Harvey (c)
a) Vanderbilt University, Nashville, TN, USA. b) Southern Company Services, Birmingham, AL, USA. c) Electric Power Research Institute (EPRI), Palo Alto, CA, USA