

M11 Risk Perception and Communication

Monday 8/17/2018 1:30 PM Exploration

Chair: Sunil Weerakkody

- 63 **The Dynamics of Risk Perception for Soft Target Terrorism**
Matt Baucum, Richard John (a), Marcus Mayorga(b,c), Paul Slovicbc, William Burns(b), Kent Portney, & Jeryl Mumpower (d)
a) University of Southern California, Los Angeles, CA, U.S.A., b) Decision Research, Eugene, OR, U.S.A., c) University of Oregon, Eugene, OR, U.S.A., d) Texas A&M University, College Station, TX, U.S.A.
- 359 **Risk Analysis of Taiwan Food Import from Japan after the Fukushima Nuclear Accident**
Tsu-Mu Kao
Institute of Nuclear Energy Research, Taiwan
- 429 **The MIT Symposium on Realizing the Value of Nuclear Energy, 26 and 27 March 2018**
Michael W. Golay
Massachusetts Institute of Technology, Cambridge, MA, USA
- 116 **Recognition of Risk Information --- Adaptation of J. Bertin's Ordinal Matrix for Social Communication**
Keiichi Ishida
Hosei University / Zurich Insurance company, Tokyo, Japan

M12 Prognostics and System Health Management I

Monday 8/17/2018 1:30 PM Discovery

Chair: Marcio Moura

- 47 **Reliability-Based Regression Model for Complex Systems Considering Environmental Uncertainties**
Amin Moniri-Morad, Mohammad Pourgol-Mohammad, Hamid Aghababaei (a), Javad Sattarvand (b)
a) Sahand University of Technology, Tabriz, Iran, b) University of Nevada Reno, Reno, USA
- 112 **A Comprehensive Sensor Placement Determination in Condition Monitoring Process Using Combined Fault Detection, Fault Diagnosis and Risk Indexes**
Farzin Salehpour-Oskouei (a), Mohammad Pourgol -Mohammad (b)
a) Department of Mechanical Engineering, Shabestar Branch, Islamic Azad University, Shabestar, Iran, b) Department of Mechanical Engineering, Sahand University of Technology, Tabriz, Iran
- 161 **On the Application of Machine Learning Techniques in Condition Monitoring Systems of Complex Machines**
Marcin Hinz, Dominik Brueggemann, and Stefan Bracke
University of Wuppertal, Wuppertal, Germany
- 139 **Prognostics using Particle filter for Steam Generator Tube Rupture in Nuclear Power Plants**
Gibeom Kim (a), Hyeonmin Kim (b), and Gyunyoung Heo (a)
a) Kyung Hee University, b) Nuclear ICT research division, Korea Atomic Energy Research Institute, Republic of Korea

M13 Oil and Gas Industry

Monday 8/17/2018 1:30 PM Illumination

Chair: Luiz Oliveira

- 118 **Pressure Vessel Fitness-for-Service Evaluation Based on API579 and API581 Standards**
Ramon Sandim Espíndola Gomes, Gilberto Francisco Martha de Souza
University of São Paulo, São Paulo, Brazil
- 361 **Use of Simplified Risk Assessment Methodology in the Process Industry**
Mardy Kazarians, Kirk Busby
Kazarians & Associates, Inc., Glendale, USA
- 260 **Identification of the Main Contributors to the Security of Supply in a Gas Transmission Network**
Vytytis Kopustinskas, Pavel Praks
European Commission, Joint Research Centre (JRC) Directorate C for Energy, Transport and Climate, Ispra, Italy
- 285 **Dragged anchors interaction scenarios: detailed frequency analysis for Pipeline Design**
A. Di Padova, C. Zuliani, and F. Tallone
Saipem S.p.A. - Onshore E&C Plant and Floaters Division, Fano, Italy

M14 Industrial Safety

Monday 8/17/2018 1:30 PM Legacy A

Chair: Jonathan DeJesus

- 15 **Agile Practices When Developing Safety Systems**
Thor Myklebust, Narve Lyngby (a), and Tor Stålhane (b)
a) SINTEF Digital, Trondheim, Norway, c) NTNU, Trondheim, Norway
- 270 **Analysis on Safety Defect of Port Dangerous Goods Enterprise**
Zhiqiang Hou, Xiaoyu Wang, and Yongrui Wen
China Waterborne Transport Research Institute, Beijing, China
- 214 **Multi-Sectioned Predictive Model of Cable Insulation under Reaction- and Diffusion-Controlled Degradation**
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

M15 External Hazard PSA/PRA I

Monday 8/17/2018 1:30 PM Legacy B

Chair: Ola Bäckström

- 6 **Fragility Evaluation with Aleatory and Epistemic Uncertainty against Fault Displacement for Reactor Buildings**
Hirokazu Tsuji (a), Minoru Kanechika, Yoshinori Mihara, and Kenshiro Ishiki (b)
a) Japan Nuclear Safety Institute, Tokyo, Japan, b) Kajima Corporation, Tokyo, Japan
- 35 **Loss of Offsite Power Frequency Estimates Due to External Events at a Finnish Nuclear Power Plant**
Mikael Biese
Fennovoima Oy, Helsinki, Finland
- 66 **Computation of Annual Strike Probability of a Wind-borne Tumbling Missile using TOMAXI**
Yuzuru Eguchi, Soichiro Sugimoto, Yasuo Hattori, Takahiro Murakami and Hiromaru Hirakuchi
Central Research Institute of Electric Power Industry, Abiko, JAPAN
- 104 **Coupling Large-Scale and Detailed Site Flooding Simulations**
Niels Montanari, Ramprasad Sampath (a), Donna Calhoun (b), Steven Prescott, Curtis Smith (c)
a) Centroid LAB, Inc., Mar Vista, CA, USA, b) Boise State University, Boise, ID, USA, c) Idaho National Laboratory, Idaho Falls, ID, USA

M16 Aeronautics and Aerospace I

Monday 8/17/2018 1:30 PM Pathways

Chair: Roger Boyer

- 20 **Identification of Safety Critical Scenarios for Airlines using Machine Learning in Filter Trees**
Lukas Höhndorf and Florian Holzapfel
Institute of Flight System Dynamics, Technical University of Munich, Garching, German
- 244 **Experience Gained from Developing a PRA During the Design Phase of NASA Human Exploration Missions**
Diana L. DeMott (a), Roger L. Boyer, Mark Bigler (b), Courtenay B. Clifford, and C. Joseph Kahn (a)
a) SAIC, Houston, Texas, USA, b) NASA, Houston, Texas, USA
- 277 **Modeling In-Space Aborts for NASA Human Exploration Missions**
Mark A. Bigler
NASA Johnson Space Center, Houston, USA

M17 Special Session: Overview & Progress in MUPRA

Monday 8/17/2018 1:30 PM Laureatte

Chair: Mohammad Modarres

38 **A Study for Identifying Multi-Unit Initiating Event and Estimating Frequency**

Seungwoo Lee, Ar Ryum Kim, Namchul Cho, Sokchul Kim, Hyowon Kim, and Dohyoung Kim

Korea Institute of Nuclear Safety(KINS), Daejeon, Korea

124 **An Emergency Response Study during Multi-Unit Accidents**

Wonjong Song, Hoyoung Shin, and Moosung Jae

Department of Nuclear Engineering, Hanyang University, Seoul, 04763, Korea

125 **A Consideration of the Single Release Location for the Multi-Unit Accidents**

Yein Seo, Hyunae Park, Byeong-Mun Ahn, and Moosung Jae

Department of Nuclear Engineering, Hanyang University, Seoul, Korea

113 **A Study of Multi-Unit Seismic Probabilistic Risk Assessment**

Taotao Zhoua, Mohammad Modarres (a), and Enrique López Droguett (a,b)

a) Center for Risk and Reliability, University of Maryland, College Park, MD, USA, b) Department of Mechanical Engineering, University of Chile, Santiago, Chile