

Program of Post SMiRT28 seminar

Monday - December 1st		
	Desk	Hall A+B
9:00	Desk Open	
9:30 - 9:50		Welcome Chair Tsuyoshi Takada (JAEA, JASMiRT)
9:50 - 10:30		Plenary Lecture 1 Prof. Abhinav Gupta (North Carolina State University)
10:30 - 10:45	Break	
10:45 - 11:25		Keynote Lecture - Application of AI (1)- Prof. Kazuyuki Demachi (The University of Tokyo)
11:25 - 11:35	Break	
11:35 - 13:15		Technical Session 1 - Application of AI (1)-
13:15 - 14:05	Lunch	
14:05 - 14:45		Plenary Lecture 2 Dr. Emmanuel Viallet (EDF)
14:45 - 15:00	Break	
15:00 - 17:00		Technical Session 2 - Special Topics -
17:00 - 17:10	Break	
17:10 - 17:50		Plenary Lecture 3 Dr. Minkyu Kim (Korea Atomic Energy Research Institute)
18:00 - 20:00	Banquet	

Tuesday - December 2nd			
	Desk	Hall A	Hall B
9:00	Desk Open		
9:30 - 10:10		Keynote Lecture - Application of AI (2) - Dr. Masanobu Horie (RICOS)	
10:10 - 10:20	Break		
10:20 - 11:20		Technical Session 3-A Application of AI (2)-	10:20 - 12:00 Technical Session 3-B - Risk Assessment and Management Technologies (Impact) -
11:20 - 11:30	Break		
11:30 - 13:10		Technical Session 4-A - New Reactor -	
13:10 - 13:55	Lunch		
13:55 - 15:35		Technical Session 5-A - Risk Assessment and Management Technologies (Seismic) -	13:55 - 15:35 Technical Session 5-B - Seismic Isolation -
15:40 - 16:00		Closing ceremony	

Monday - December 1st

Hall A+B

9:50 - 10:30	Plenary Lecture 1 (Chair: Tsuyoshi Takada, JAEA) Abhinav Gupta (NC State Univ.) "Laboratory Based Demonstration of an AI-Enabled Digital Twin for Piping Systems"	
10:45 - 11:25	Keynote Lecture - Application of AI (1)- (Chair: Tatsuya Itoi, Univ. Tokyo) Kazuyuki Demachi (Univ. Tokyo) "Development of AI Models that Contribute to the Implementation of Online Maintenance"	
11:35 - 13:15	Technical Session 1 - Application of AI (1)- (Chair: Kazuyuki Demachi, Univ. Tokyo)	
	A007	Yuki Kondo (JAEA); Satoshi Futagami (JAEA); Kenichi Kurisaka (JAEA); Hidemasa Yamano (JAEA) "Automatic Tools to assist Probabilistic Risk Assessment Engineers - Fault Tree Creation Using Artificial Intelligence Technology -"
	A022	Yu Takano (Tokyo City Univ.); Wiles Auron Ryu (Tokyo City Univ.); Ryoto Kobayashi (Tokyo City Univ.); Yasuki Ohtori (Tokyo City Univ.); Hitoshi Muta (Tokyo City Univ.) "Efficient Creation of Fragility Curves Using AI"
	A016	Yusuke Tomozawa (Kajima); Junki Yamaguchi (Kajima); Tomoki Hikita (Kajima); Toshihide Saka (Kajima) "Generation of Synthetic Seismograms Using Conditional Generative Adversarial Networks and Generalized Inversion Technique"
	A019	Sangwon Lee (Univ. Tokyo); Taro Yaoyama (Univ. Tokyo); Kenzo Kodera (Taisei); Minoru Matsubara (Taisei); Takeshi Ugata (Taisei); Tatsuya Itoi (Univ. Tokyo) "Machine Learning-Aided Bayesian Finite Element Model Updating for Seismic Safety Evaluation of Reinforced Concrete Nuclear Facility Buildings"
	A018	Yongmoon Hwang (KAERI); Tae-Hyun Kwon (KAERI); Minkyu Kim (KAERI) "Machine Learning Framework for Estimating Un-instrumented Floor Seismic Responses in NPP Structures"
14:05- 14:45	Plenary Lecture 2 (Chair: Masato Nakajima, CRIEPI) Emmanuel Viallet (EDF) "Recent Advances and Future Developments in Seismic Risk Assessments"	
15:00 - 17:00	Technical Session 2 - Special Topics - (Chair: Naoto Kasahara, Tokyo City Univ.)	
		Irmela Zentner (EDF) "Integrated Approach for Seismic Fragility Assessment Including Site Response - Application to METIS case study"
	A004	Naoto Kasahara (Tokyo City Univ.); Izumi Nakamura (Tokyo City Univ.); Tohru Suzuki (Tokyo City Univ.); Takashi Takata (Univ. Tokyo); Shunichi Suzuk (Univ. Tokyo); Takafumi Narukawa (Univ. Tokyo); Tomoyoshi Watakabe (JAEA); Tai Asayama (JAEA); Takashi Onizawa (JAEA) "New Project on Structure and Safety Coordinate Measures for Beyond Design Basis Events"
	A005	Tatsuya Itoi (Univ. Tokyo) "Engineering Aspects of Fault Displacement Safety"
	A025	Beom-Jin Kim (KAERI); Daegi Hahm (KAERI) "Estimation of Probabilistic Precipitation Impacts due to Climate Change at Nuclear Power Plants"
	A035	Byunghyun Choi (JAEA); Akemi Nishida (JAEA); Tatsuya Itoi (JAEA); Tsuyoshi Takada (JAEA) "Development of a Probabilistic Risk Assessment Method for Combined Hazards and Application Examples"
17:10 - 17:50	A024	Daegi Hahm (KAERI) "Optimal Capacity Evaluation of MACST Facilities for NPPs under Combined Hazards"
	Plenary Lecture 3 (Chair: Tatsuya Itoi, Univ. Tokyo) Minkyu Kim (KAERI) "Recent Research on Combined External Hazard Safety Assessment of Nuclear Facilities in Korea"	

Tuesday - December 2nd

Hall A

9:30 - 10:10	Keynote Lecture - Application of AI (2) - (Chair: Naoto Kihara, CRIEPI) Masanobu Horie (RICOS) "Integrating Physical Laws into Machine Learning for Reliable Predictions"	
10:20 - 11:20	Technical Session 3-A - Application of AI (2)- (Chair: Taro Yaoyama, Univ. Tokyo)	
	A029	Ayumi Nishi (TEPSCO); Gaku Shoji (Univ. Tsukuba) "Surrogate modeling using Gaussian process regression for analyzing uncertainty associated with various tsunami scenarios of a coastal power infrastructure"
	A023	Ryoto Kobayashi (Tokyo City Univ.); Yu Takano (Tokyo City Univ.); Yasuki Ohtori (Tokyo City Univ.); Hitoshi Muta (Tokyo City Univ.) "Development of AI Surrogate Models for Seismic Risk Assessment"
	A020	Taro Yaoyama (Univ. Tokyo); Sangwon Lee (Univ. Tokyo); Masaru Kitahara (Hokkaido Univ.); Tatsuya Itoi (Univ. Tokyo) "Uncertainty-aware and adaptive metamodeling of seismic response analyses using deep generative models"
11:30 - 13:10	Technical Session 4-A - New Reactor - (Chair: Masataka Sawada, CRIEPI)	
	A001	Hiroyuki Sato (JAEA); Hiroaki Takegami (JAEA); Nariaki Sakaba (JAEA) "Overview of HTGR Project in JAEA"
	A003	Shingo Terada (Toshiba) "Experimental Study on Steel Plate Reinforced Concrete against Aircraft Impact, and Application to Innovative Light Water Reactor iBR"
	A038	Yuriko Onishi (Hitachi GE Vernova); Takao Kondo (Hitachi GE Vernova); Kazuaki Kito (Hitachi GE Vernova) "Safety-Enhanced HI-ABWR and Global Deployment of the BWRX-300"
	A037	Toshitake Kurashige (MHI); Kazuki Azekawa (MHI); Yuji Momose (MHI) "Development of Advanced Light Water Reactor "SRZ-1200""
	A012	Yuki Sato (JGC); Hiromasa Yanagisawa (JGC); Daisuke Koike (IHI), Kent Welter (NuScale); Paul Boyadjian (NuScale) "NuScale SMR - Technologies and Safety Features"
13:55 - 15:35	Technical Session 5-A - Risk Assessment and Management Technologies (Seismic) - (Chair: Seiichiro Fukushima, RKK Consulting)	
	A014	Junhee Park (KAERI); Sanghoon Han (KAERI); Min-Kyu Kim (KAERI); In-Kil Choi (KAERI) "Introduction of a Seismic Scenario-Based Risk Analysis Software for Nuclear Power Plant Safety Evaluation"
	A031	Yohei Ninomiya (CRIEPI); Ayumi Yuyama (CRIEPI); Masato Nakajima (CRIEPI) "Modeling of the Seismic Capacity of Reinforced Concrete Structures Considering Deterioration Effects"
	A039	Jae-Wook Jung (KAERI); Jeong-Gon Ha (KAERI); In-Kil Choi (KAERI); Hong-Pyo Lee (Korea Hydro Nuclear Power) "Probabilistic Soil-Structure Interaction Effects on Seismic Demand and Fragility of NPP Equipment"
	A032	Sanghyung Kim (Seoul National Univ.); Wonhui Goh (Seoul National Univ.); Yunbyeong Chae (Seoul National Univ.) "Damage-State-Based Parameter Identification of the Bouc-Wen Class Model for Seismic Performance Assessment of RC Structures"
	A036	Wonhui Goh (Seoul National Univ.); Yunbyeong Chae (Seoul National Univ.) "Accuracy Comparison of Model Updating Using Responses vs. Modal Data"

Tuesday - December 2nd

Hall B

10:20 - 12:00	Technical Session 3-B - Risk Assessment and Management Technologies (Impact) - (Chair: Akemi Nishida, JAEA)	
	A002	Yuzuru Eguchi (CRIEPI); Yasuo Hattori (CRIEPI); Daisuke Nohara (CRIEPI); Takahiro Murakami (CRIEPI); Kosuke Namba (CRIEPI); Mitsuharu Nomura (CRIEPI) "Assessment Methods of Wind-Borne Missile Strike Probability in Typhoon and Tornado Events"
	A006	Takuya Toriyama (NRA); Nobuo Ishida (NRA); Kei Yamashita (NRA) "Collision Probability of a Small Ship Drifted by Tsunami on Seawalls with Plunging Breaker"
	A013	Hideki Kaida (CRIEPI); Naoto Kihara (CRIEPI) "Probabilistic Evaluation of Tsunami-borne Debris Collisions"
	A027	Kohei Kawano (Kansai EPCO); Taro Ito (Kansai EPCO); Koki Murakami (Kansai EPCO); Toru Kuriyama (Kansai EPCO) "Overview and Results of a Research Project on Advanced Evaluation Methods for Collisions Involving Tsunami-Borne FRP Boats"
	A028	Koji Shirai (CRIEPI); Toshiko Udagawa (WDB); Daichi Nagai (CRIEPI) "Applicability of Numerical Analysis Models to the Perforation Phenomena of Steel Plates Subjected to Medium- to High-Velocity Missile Impacts"
13:55 - 15:35	Technical Session 5-B - Seismic Isolation - (Chair: Dan M. Ghiocel, Ghiocel Predictive Tech.)	
	A026	Kenji Kanazawa (CRIEPI); Ryo Umemura (CRIEPI) "Challenge of Development on Seismic Isolation Design to Earthquake-Prone NPPs' Sites in Japan, Part 1: Some Unique Earthquake Situation and Ultimate Seismic Response Analysis"
	A017	Ryo Umemura (CRIEPI); Kenji Kanazawa (CRIEPI) "Challenge of Development on Seismic Isolation Design to Earthquake-Prone NPPs' Sites in Japan, Part 2: The Residual Performance of Completely Ruptured Rubber Bearings"
	A030	Dan M. Ghiocel (Ghiocel Predictive Tech.) "Seismic SSI Effects for Base-Isolated Structures Using Different Isolation System Types under Coherent and Incoherent Waves"
	A015	Dan M. Ghiocel (Ghiocel Predictive Tech.); Daniel Lemley (United Engineers & Constructors Inc.); Jeff Pieper (Hopper Engineering Associates); Enver Odar (ARC - Clean Technology) "Efficient Base-Isolation Systems for Deeply Embedded SMR Structure under Severe Earthquakes"
A033	Yukihiko Okuda (JAEA); Ryota Morobishi (Obayashi); Kenji Kanazawa (CRIEPI); Nobuo Murota (Bridgestone) "Numerical analysis and Trial Design of Seismic Isolation systems applied to an SMR - Simplified Analysis Results -"	