Tuesday, August 27th

09:00-09:20 Opening & Registration

09:20-10:20 Session 1: Keynote 1

> 09:20 *Tadashi Dohi*
>
> **Multimodel Inference in Software Reliability**

10:20-10:40 Coffee Break

10:40-12:00 Session 1A: Maintenance I

> 10:40 *Tien-Yu Chan*, *Ruey-Huei Yeh* and *Chao-Peng Liu*
>
> **Optimal preventive maintenance policy for a proportional resilience system with Weibull lifetime**

> 11:00 *Guido Lagos*, *Jorge Navarro*, *Hector Olivero* and *Catalina Gajardo*
>
> **Exact expressions for simple repair policies for coherent systems with simultaneous failures**

> 11:20 *Shey-Huei Sheu*
>
> **Replacement last policy under shock damage interaction**

> 11:40 *Jing Wu*, *Junjun Zheng*, *Hiroyuki Okamura*, *Tadashi Dohi* and *Cunhua Qian*
>
> **A note on block type policies with Markovian opportunity arrival process**

10:40-12:00 Session 1B: Reliability I

> 10:40 *Butong Li*, *Junjie Zhu* and *Xufeng Zhao*
>
> **A physics-informed predictive scheme for predicting low-cycle fatigue life and reliability of aerospace materials under multiaxial loading conditions**

> 11:00 *Junjie Zhu*, *Butong Li* and *Xufeng Zhao*
>
> **Analysis of fatigue behavior under multiaxial loading environment and calculation of low-cycle fatigue life in TC4 alloy**

> 11:20 *Shuen-Lin Jeng* and *Tzu-Chi Chiu*
>
> **Remaining Useful Life Prediction of Lithium-ion Batteries with Rest Effect**

> 11:40 *Sungeu Chae* and *Suk Joo Bae*
>
> **An Adaptive Mixture Prior in Bayesian Convolutional Autoencoder for Early Detecting Anomalous Degradation Behaviors in Lithium-Ion Batteries**

12:00-14:00 Lunch Break

14:00-15:00 Session 2A: Special Session: Stochastic Process Based Modelling for Reliability Systems

14:00 *Lirong Cui*, *Weixin Jiang* and *Mengqian Wang*

Reliability Analysis for Warm Standby Systems with Two Different Spare Areas

14:20 *Chen Fang*

Balanced Systems by Considering Multi-state Competing Risks Under Degradation Processes

14:40 *He Yi*, *Narayanaswamy Balakrishnan* and *Xiang Li*

Reliability analyses of linear two-dimensional consecutive k-type system

14:00-15:00 Session 2B: Reliability II

14:00 *Jingchi Wu*, *Tadashi Dohi* and *Hiroyuki Okamura*

Exploring the Dependency Relationship between Software Bug Prediction and Information Criteria (abstract)

14:20 *Kento Oiwa* and *Xiao Xiao*

Deriving the confidence interval for the cumulative number of software faults using parametric simulation

14:40 *Kwang Yoon Song*, *Youn Su Kim* and *In Hong Chang*

Prediction of the software faults using deep neural networks

15:00-15:20 Coffee Break

15:20-16:20 Session 3A: Special Session: Stochastic Process Based Modelling for Reliability Systems

15:20 *Jingyuan Shen*

Reliability analysis of system with self-healing components and neglected downtime

15:40 *Xujie Jia*, *Meiyu Tian* and *Hui Yang*

Reliability and Safety Analysis of Load-Dependent System with Cascading Failures

16:00 *Nan Zhang*

A general preventive maintenance framework of a production system considering dynamic maintenance accessibility

15:20-16:40 Session 3B: Statistics

15:20 *Shao-Tung Chang* and *Kang-Ping Lu*

An Approach to Switching Quantile Regressions for bounded data

15:40 *Kang-Ping Lu* and *Shao-Tung Chang*

Mixture Regression Models for Skew Data

16:00 *Shuhei Ota* and *Mitsuhiro Kimura*

A note on asymmetric dependence modeling by combined copulas for bivariate reliability analysis

16:20 *Sarah Marshall*, *Richard Arnold*, *Stefanka Chukova* and *Yu Hayakawa*

Generating Synthetic Warranty Data

Wednesday, August 28th

09:00-09:20 Registration
09:20-10:20 Session 5: Keynote 2

09:20 *Yan-Fu Li*

Recent Research Progresses on Optimal System Reliability Design

10:20-10:40 Coffee Break
10:40-12:00 Session 4A: Machine Learning I

10:40 *Chen-Ju Lin* and *Pei-Chun Chou*

Data Fusion and Feature Selection for Multiclass Classification

11:00 *Tsang-Chuan Chang*, *Jyun-Yu Jhang*, *Wei-Ling Lin* and *Lu-Wen Liao*

Reliable comparison and determination of performance of classification models

11:20 *Jian Zhou* and *Xiaoting Nie*

Deep reinforcement learning based resilient microgrid expansion planning considering power supply flexibility

11:40 *Yu-Hsun Lin* and *Chang-Wen Wang*

A Heuristic Improvement of Anomalous Sound Detection by Compound Scaling in Deep Learning

10:40-12:00 Session 4B: Reliability III

10:40 *Hung-Ping Tung* and *Meng-Jhang Zeng*

Optimal Designs for Gamma Accelerated Degradation Tests with Quadratic Stress Relation

11:00 *Nanxiang Qiu*, *Tadashi Dohi* and *Hiroyuki Okamura*

Evaluation of software reliability models based on Hawkes process

11:20 *Yufan Li*, *Hiroyuki Okamura*, *Junjun Zheng* and *Tadashi Dohi*

Estimating Metrics-Based Software Reliability Models with Elastic Net

11:40 *Nikolay Lyapunov*, *Mikita Marus*, *Him Ting Wong*, *Tak Lam Chan*, *Stanislav Markov* and *Haibo Hu*

Reliability and failure mechanisms of thermal imaging modules undergone highly accelerated stress tests

12:00-14:00 Lunch Break

14:00-15:20 Session 5A: Special Session: Advances in Reliability Assessment and Maintenance Optimization

14:00 *Mizuki Kasuya* and *Lu Jin*

Maintenance Policy for Deteriorating k-out-of-n Systems Subject to Random Shocks

14:20 *Nozomu Ogura*, *Mizuki Kasuya* and *Lu Jin*

Joint optimization of maintenance and spare unit management with partial observations

14:40 *Takumi Wakimoto*, *Watalu Yamamoto* and *Lu Jin*

On Planning Accelerated Life Tests for Model Selection

15:00 *Luyao Wang* and *Yan-Fu Li*

Dynamic Assessment of Mission Reliability for Autonomous Vehicles Considering Mission Criticality

14:00-15:00 Session 5B: Security and Safety

14:00 *Ai Ho Thi Thu* and *Yu-Chung Tsao*

Optimal cybersecurity investment and green hydrogen supply chain reliability under supply disruption risk

14:20 *Rindi Kusumawardani*, *Nani Kurniati* and *Pebiria Vorenza*

Advancing Layer of Protection Analysis (LOPA) and Augmented Analytics System to Optimize SIL in Train Automatic Door Systems

14:40 *Shinji Inoue* and *Shigeru Yamada*

Describing Behavior of Safety-Related Systems with Proof-Testing and Its Applications

15:20-15:40 Coffee Break

15:40-17:00 Session 6A: Special Session: Advances in Reliability Assessment and Maintenance Optimization

15:40 *Shoichiro Miyamoto*, *Lei Zhou*, *Yoshinobu Tamura* and *Shigeru Yamada*

Estimation Method Based on SRGM Using Uncertain Fault Information on Open BTS

16:00 *Qingpei Hu*

Subsampling Approach for Massive Lifetime Data Analysis

16:20 *Zheyi Fan*, *Zhaohui Li* and *Qingpei Hu*

A Bayesian Robust Regression Method for Corrupted Space Solar Array Data Reconstruction

16:40 *Yoshinobu Tamura*, *Haruki Takeda*, *Souta Heima*, *Shoihiro Miyamato*, *Lei Zhou*, *Adarsh Anand*, *P.K. Kapur* and *Shigeru Yamada*

Performability Assessment Measure Based on Deep Learning for Open Source Software

15:40-17:00 Session 6B: Quality Control

15:40 *Kuen Suan Chen*, *Chin Chia Liu* and *Chi Han Chen*

Developing the MAIC Model for the Key Component of Spindle Floating Seat Utilizing Process Capability Indices

16:00 *Shui-Chuan Chen* and *Sung-Chang Lin*

Evaluate the yield rate of multi-process products using the Six Sigma DMAIC method (abstract)

16:20 *To-Cheng Wang*, *Chien-Wei Wu* and *Ming-Hung Shu*

Constructing a Variables Two-Plan Sampling System for Validation of Product Reliability

16:40 *Chien-Wei Wu*, *Zih-Huei Wang*, *Zhao-Rui Qiu* and *Shih-Wen Liu*

A modified repetitive group sampling plan with a switching rule

Thursday, August 29th

09:00-09:20 Registration

09:20-10:20 Session 9: Keynote 3

09:20 *Won Young Yun*

Mean Residual Life-based Replacement in Multi-Unit Systems

10:20-10:40 Coffee Break

10:40-12:00 Session 7A: Maintenance II

10:40 *Jae-Hak Lim*, *Dae-Kyung Kim* and *Dongho Park*

The Optimal Post-Warranty Age Replacement Policy Allowing A Number of Minimal Repairs for the Second-Hand Product

11:00 *Nani Kurniati*, *Zukhrof Romadhon* and *Rindi Kusumawardani*

Integration Model of Maintenance and Spare Provisioning by Considering Spare parts Deterioration and Leadtime Delay

11:20 *Chia-Huang Wu*, *Yin-Ying Dai* and *Dong-Yuh Yang*

Availability Characteristics of Repairable Systems with Two Types of Components and Working Breakdown (abstract)

11:40 *Lubing Wang*, *Zhengbo Zhu* and *Xufeng Zhao*

Adynamic predictive maintenance framework for multiple components based on remaining useful life prediction

10:40-12:00 Session 7B: Economics

10:40 *Wen-Yau Liang*

A Novel Aggregation Algorithm to Group Dinner Recommendation

11:00 *Masatoshi Tanaka*

An Optimal Budget Allocation Problem Considering Product Development and Market Penetration

11:20 *Dheka Bakti Krisnamurti Winarno* and *Herry Nugraha*

Strategy of Capital Investment Decision-Making by Integrating Engineering Analysis to Financial Analysis at the Corporate Level for the Electricity Company Sustainability

11:40 *Hiroto Saito* and *Tomoaki Akiba*

Solution Algorithm for the Portfolio Optimization Problems of Real Estate Investment Trust Using Genetic Algorithm

12:00-14:00 Lunch Break

14:00-15:00 Session 8A: Maintenance III

14:00 *Qian Qian Zhao*, *Zhenggeng Ye*, *Il Han Chung* and *Won Young Yun*

Dynamic maintenance optimization of multi-indenture systems

14:20 *Zilong Feng* and *Won Young Yun*

Mean residual Life-based Maintenance of Lamp Systems

14:40 *Chia-Huang Wu*, *Pei-Wen Li* and *Dong-Yuh Yang*

Reliability Analysis for Multi-Machine System with Heterogeneous Failure Modes and Unstable Repairman

14:00-15:00 Session 8B: Optimization

14:00 *Chun-Chia Su* and *Cheng-Ta Yeh*

Enhancing Transmission Reliability through Optimal Component Assignment-A Hybrid Genetic Algorithm and Monte Carlo Simulation Approach (abstract)

14:20 *Taishin Nakamura* and *Koji Shingyochi*

Enhancing Metaheuristic Algorithms for the Component Assignment Problem of Sliding Window Systems

14:40 *Taichi Iwadate* and *Tomoaki Akiba*

Efficient Obtaining Initial Population of Genetic Algorithm for Pareto Solutions of Bi-objective Network

15:00-15:20 Coffee Break

15:20-17:00 Session 9A: Special Session: Performance Evaluation and Optimization of Complex Systems

15:20 *Yuting Wang*, *Mengbi Yang* and *Shubin Si*

Analysis of brain network resilience in patients with major depression based on EEG data

15:40 *Jiangang Li*, *Dan Wang*, *Wenjin Zhu* and *Shubin Si*

A general model for redundancy allocation problem based on Markov chain

16:00 *Dan Wang*, *Shubin Si*, *Ning Wang* and *Shuai Zhang*

A novel importance measure for multi-constrained selective maintenance optimization

16:20 *Wei Wang*, *Zhiqiang Cai* and *Mingli Liu*

Aero-engine remaining useful life prediction with missing data using diffusion model

16:40 *Changchun Lv*, *Jiansong Bao*, *Cong Yao*, *Yizhuo Sun* and *Dongli Duan*

Resilience of trade network in uncertain environment based on trade data

15:20-16:40 Session 9B: Network Reliability

15:20 *Chen-Yu Yeh*, *Cheng-Fu Huang* and *Ping-Chen Chang*

Reliability Evaluation for a Stochastic-Flow Production Network with Automatic and Manual Lines

15:40 *Kotaro Fujikura*, *Tetsushi Yuge* and *Natsumi Takahash*

Resilience of Networks with Edge Capacities and Node Weights

16:00 *Natsumi Takahashi* and *Tetsushi Yuge*

Searching for Optimal Strategies in Maximum Flow Network Interdiction

16:20 *Thi-Phuong Nguyen*, *Cheng-Fu Huang* and *Ding-Hsiang Huang*

A Fast Algorithm for a Quickest Path Flow System Reliability Problem Using a Monte Carlo Method

18:00-20:00 Banquet

Friday, August 30th

09:00-10:00 Session 10A: Maintenance IV

09:00 *Ji Hwan Cha*, *Hyunju Lee* and *Maxim Finkelstein*

A Condition-based Replacement Policy for Reparable Items from Heterogeneous Populations (abstract)

09:20 *Munwon Lim* and *Suk Joo Bae*

Spatio-Temporal Diffusion Process for Image Degradation Modeling and Condition-Based Maintenance

09:40 *Nobuyuki Tamura*

Optimal CBM Policy for a Degrading System with two Weighted Components

09:00-10:00 Session 10B: Performance Evaluation

09:00 *Avus Hou*

Exploring Intra-telecom Service Switching from 4G to 5G: A Migration Model Lens

09:20 *Kazuma Tomaru* and *Ken'Ichi Kawanishi*

Performance analysis of hybrid systems with setup and delayed-off policy

09:40 *Aissani Amar* and *Lassel Chahrazade*

On a Queueing Model with Two Kinds of Working Vacations (abstract)

10:00-10:20 Coffee Break

10:20-12:00 Session 11A: Special Session: Advanced Reliability / Maintenance Modeling and Their Application

10:20 *Toshio Nakagawa* and *Satoshi Mizutani*

New Schemes of Mean Deviation, Redundant x Units and Scalability in Reliability Theory

10:40 *Takahiro Nakamura*, *Junji Koyanagi* and *Kodo Ito*

Measures to minimize sales support costs for financial service providers to continue doing business with corporate clients

11:00 *Kenichiro Naruse* and *Toshio Nakagawa*

Optimal Execution Times with Forward and Backward Recoveries

11:20 *Mitsuhiro Imaizumi* and *Mitsutaka Kimura*

Reliability Evaluation of a Server System with Multiple Types of Attacks

11:40 *Mitsutaka Kimura*, *Mitsuhiro Imaizumi* and *Toshio Nakagawa*

Modified Reliability Model of High-performance and Flexible Protocol with Hybrid ARQ

10:20-11:40 Session 11B: Machine Learning II

10:20 *Chuen-Kai Fan* and *Yung-Hsiang Hung*

Enhancing Small Object Detection with YOLOv7tiny-SPD: A Case Study on Asian Hornet Identification for Ecosystem Preservation

10:40 *Shota Kusabiraki*, *Yuta Shimmura*, *Kento Yamamoto* and *Kazunori Iwata*

Assessing Creation Methods of Word Embedding Models for Analyzing and Repairing Classical Japanese Literature

11:00 *Yu-Min Chiang* and *Dian Zheng Wu*

Preliminary Study on Liquor Impurities Detection Using Deep Learning and Machine Vision

11:20 *Yen Chun Huang*, *Mingchih Chen* and *Ming-Hsien Tsai*

Improving Machine Learning Models with Feature Selection for Predicting Mortality in Chronic Hemodialysis Patients

12:00-12:15 Closing

12:15-13:30 Lunch Break

13:30-18:00 Excursion