

The 9th Asia-Pacific International Symposium on Advanced Reliability and Maintenance Modeling (APARM 2020) Virtual Meeting (August 20-23, 2020)

[Final Conference Program \(August 20, 2020\)](#)

| Beijing Time Zone (Asia) | | Activities Planned | | | | North America | | |
|--------------------------|-------------|--|---|---|--|--|-----------------------|----------------|
| Date | Time | | | | | Mountain Daylight Time | Date | Vancouver Time |
| Friday August 21 | 09:00-09:30 | Conference Opening Ceremony Ying Tsui, Associate Dean of Engineering, University of Alberta Jason Rupe, VP Meetings & Events, IEEE Reliability Society Way Kuo, President of City University of Hong Kong Yi-Kuei Lin, Chair of APARM Steering Committee Ming Zuo, General Chair of APARM 2020 (Chair: Prof. Ming Zuo) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | | 19:00-19:30 | Thursday August 20 | 18:00-18:30 |
| | 09:30-10:30 | Keynote Speech #1: Data-driven Crisis Management Prof. Way Kuo (1 hour, 9:30am Hong Kong time) (Chair: Prof. Min Xie) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | | 19:30-20:30 | | 18:30-19:30 |
| | 10:30-11:30 | Keynote Speech #2: Reliability in the 21st Century Prof. William Q. Meeker (1 hour, 9:30pm US Central Time) (Chair: Prof. Min Xie) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | | 20:30-21:30 | | 19:30-20:30 |
| | 11:30-11:40 | Break | | | | 21:30-21:40 | | 20:30-20:40 |
| | 11:40-13:00 | Invited Session #7: Models and applications in network reliability (Session Chairs: Yi-Kuei Lin, Hansi Jiang) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (4 papers) | Invited Session #3: Degradation analysis and remaining useful life prediction of components in aircraft utility systems (Session Chairs: Shaoping Wang, Chao Zhang) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) (4 papers) | Regular Session #9: Random process (Session Chairs: Richard Arnold; Stefanka Chukova) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (4 papers) | Regular Session #4: Machine health management (Session Chairs: Jian Guo, Hu-Chen Liu) VooV Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (4 papers) | Regular Session #12: Transfer learning (Session Chairs: Zhisheng Ye, Wei Guo) Voov Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (4 papers) | | 21:40-23:00 |
| 13:00-21:00 | Break | | | | 23:00-07:00 | 22:00-06:00 | | |

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|--------------------------|--|---|--|--|---|---|-----------------|---------------------|-----------------|-----------------|
| Friday August 21 | 21:00- 23:00 | <p>Invited Session #1: Advanced reliability and safety management techniques in rail transits (Session Chairs: Wei Guo, Chengning Zhou) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (6 papers)</p> | <p>Invited Session #6: Life analysis with deterioration with field applications (Session Chairs: Qingpei Hu, Lu Jin) Zoom Meeting Link: https://zoom.us/j/99793633698(See email for passcode) (6 papers)</p> | <p>Invited Session #5: Dynamic reliability analysis of complex structural and mechanical systems (Session Chairs: Xihui Liang, Sajad Afshari) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (6 papers)</p> | <p>Regular Session #7: Nonstationary signal processing (Session Chairs: Ramin Moghaddass, Zhipeng Feng) Zoom Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (6 papers)</p> | <p>Regular Session #6: General (Session Chairs: Shaomin Wu, Jian Guo) Zoom Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (6 papers)</p> | 07:00- 09:00 | Friday August 21 | 06:00- 08:00 | |
| | <p>1570629514: A Sparse FP-VAR Model for Representing Multichannel Non-Stationary Baseline Vibration Signals from a Gearbox (Yuejian Chen; Qing Li; Dongdong Wei; Ming Jian Zuo)</p> <p>1570633646: An Optimal Band-pass Filter based on Adaptive Identification of Bearing Resonant Frequency Band (Wei Guo)</p> <p>1570634478: Fault Feature Extraction based on Cyclic Correntropy for Train Axle Bearings in Impulsive Noise (Xuejun Zhao; Yong Qin; Limin Jia; Zhiliang Liu)</p> <p>1570635433: An Intelligence Fault Diagnosis Approach for Rolling Bearings Based on Non-local Convolutional Neural Network (Haoran Han; Huan Wang; Zhiliang Liu; Yijia Hao)</p> <p>1570636703: Multi-Scale CNN based on Attention Mechanism for Rolling Bearing Fault Diagnosis (Yijia Hao; Huan Wang; Zhiliang Liu; Haoran Han)</p> <p>1570638413: Vibration Features of High-speed Train Gearbox Induced by Bearing Fault (Jiufeng Cai; Yifan Li; Jianxin Liu)</p> | <p>1570638603: Exponential Superimposed Renewal Processes (Watalu Yamamoto)</p> <p>1570638567: Threshold Type Maintenance Policies for Systems Under Cumulative Damage From Random Shocks (Jin Lu; Shoma Matoba)</p> <p>1570630354: Statistical Analysis and Correlation Study of Tool Wear in NC Machining (Peipei Zhang)</p> <p>1570638916: Statistical Inference for Lifetime Delayed Degradation Process with Gamma Process (Zan Li; Qingpei Hu; Dan Yu)</p> <p>1570638971: Wiener processes with random initial degradation values for step-stress accelerated degradation tests data (Chengjie Wang; Qingpei Hu; Dan Yu)</p> <p>1570653467: Asset life assessment by utilizing Weibull analysis with application on tank bottom components (Saif Eldin Mohamed Youssef)</p> | <p>1570617298: The simulation and dynamic reliability estimation of multiple-crack system (Shan Jiang; Yan-Fu Li)</p> <p>1570619815: Dynamic Modeling of a Planetary Gearbox with Sun Gear Crack and Bearing Clearance (Xianhua Chen; Xingkai Yang; Ming Jian Zuo; Zhigang (Will) Tian)</p> <p>1570629937: A Novel Nonlinear Analysis Tool: Multi-scale Symbolic Sample Entropy and Its Application in Condition Monitoring of Rotary Machinery (Shun Wang; Yongbo Li)</p> <p>1570632145: Analysis and Evaluation of Dynamic Reliability for Mechanical Structures Considering Mixed Uncertain Parameters (Xueguang Yu; Xintian Liu; Jiachi Tong; Xu Wang; Xiaolan Wang)</p> <p>1570632406: Approximate Reliability Analysis for New Generation Avionics Network (Lin Guo; Xiaodong Wang; Zhuqing Wang; Shuang Zhang; Yangming Guo)</p> <p>1570637790: Time-dependent Reliability Analysis of a Nonrepairable Multifunctional System Containing Multifunctional Components (Jiangbin Zhao; Shubin Si; Zhiqiang Cai; Haitao Liao)</p> | <p>1570629287: Normalization of Gearbox Vibration Signal for Tracking Tooth Crack Severity Progression Under Time-Varying Operating Conditions (Xingkai Yang; Ming Jian Zuo; Zhigang (Will) Tian)</p> <p>1570638321: Varying Speed Bearing Fault Diagnosis Based on Synchroextracting Transform and Deep Residual Network (Jie Shang; Tian Ran Lin)</p> <p>1570630226: A Fault Classification Method for Rotor under Fluctuating Condition based on COTHS-CNN (Changjie Yue; Kesheng Wang)</p> <p>1570638108: Matching time-frequency enhancement and its application to bearing fault diagnosis under time-varying speed conditions (Zehui Hua; Juanjuan Shi; Xingxing Jiang; Zhongkui Zhu)</p> <p>1570638147: Fault Diagnosis of Planetary Gearbox under Nonstationary Conditions Based on the Velocity Synchronous Chirplet Transform (Yunpeng Guan; Zhipeng Feng)</p> <p>1570638540: Synchrosqueezing transform based general linear chirplet transform of instantaneous rotational frequency estimation for rotating machines with speed variations (Yi Liu; Zhansi Jiang; Gang Wang; Jiawei Xiang)</p> | <p>1570637445: A Segmented CRC-Aided PSS-SS-SCL Algorithm for Polar Codes (Jianping Li; Huanhuan Liu)</p> <p>1570638528: A new switching model for sampling plan based on process yield (Shih-Wen Liu; Chien-Wei Wu)</p> <p>1570638534: Developing a Variables Modified Chain Sampling Plan with Taguchi Capability Index (Zih-Huei Wang; Chien-Wei Wu; Wei-Ren Lin)</p> <p>1570638624: A Creep Model For Pressure Sensitive Adhesives Under Shear Load (Abhishek Deshpande; Zhichao Song; Swanand Vaidya)</p> <p>1570638664: On the Coverage Probability of Bias-Corrected Confidence Bounds (Tamer Tevetoglu; Bernd Bertsche)</p> <p>1570635572: Machine learning approaches in reliability and maintenance (Shaomin Wu; Di Wu; Rui Peng)</p> | | | | | |
| | 23:00- 08:00 | Break | | | | | | 09:00- 18:00 | | 08:00- 17:00 |
| Saturday August 22 | 08:00- 9:00 | <p>Keynote Speech #3: An Analytic Tool Box for Optimizing CBM Decisions Prof. Andrew Jardine (1 hour, 8:00pm Eastern Time) (Chair: Prof. Tadashi Dohi) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode)</p> | | | | | | 18:00- 19:00 | | 17:00- 18:00 |
| | 9:00- 10:00 | <p>Keynote Speech #4: Condition Monitoring and Fault Diagnosis of Technical Processes for Reliability Enhancement with Applications to Nuclear Power Plants Prof. Jing Jiang (1 hour, 9:00pm Eastern Time) (Chair: Prof. Tadashi Dohi) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode)</p> | | | | | | 19:00- 20:00 | | 18:00- 19:00 |

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| | | Break | | | | | 20:00-20:10 | | 19:00-19:10 |
|--------------------------|-------------|---|---|--|--|--|-------------|---------------------|-------------|
| Saturday August 22 | 10:00-10:10 | | | | | | | | |
| | 10:10-12:10 | <p>Regular Session #10: Rotating machinery diagnostics (Session Chairs: Guoliang Lu, Zhigang (Will) Tian) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (6 papers)</p> <p>1570629520: Use of Autoregressive Conditional Heteroskedasticity Model to Assess Gear Tooth Surface Roughness (Yuejian Chen; Ke Feng; Robert Randall; Pietro Borghesani; Ming Jian Zuo)</p> <p>1570630348: Hierarchical Graph Model Based Approach for Change Detection in Bearing Degradation Process (Shaohua Yang; Zhenjie Zhu; Guoliang Lu)</p> <p>1570629517: Study on A Special Category of FM Signals with Applications to Planetary Gearbox Fault Diagnosis Under Non-stationary Conditions (Peng Zhou; Zhike Peng; Zhigang (Will) Tian; Ming Jian Zuo)</p> <p>1570638414: Dynamic Modeling of Spur Gear with Spalling Fault Considering Manufacture Pitch Error (Qiuyuan Chen; Liming Wang; Yimin Shao; Xiaoxi Ding; Guorong Long)</p> <p>1570638698: Vibration mechanism of gear system with angular misalignment error based on an improved meshing stiffness calculation method (Guorong Long; Liming Wang; Yimin Shao; Qiuyuan Chen)</p> <p>1570638888: A Fault Feature Extraction Method for Rolling Bearing Based on Intrinsic Time-Scale Decomposition and AR Minimum Entropy Deconvolution (Jiakai Ding; Dongming Xiao; Liangpei Huang)</p> | <p>Invited Session #10: Reliability modelling and optimal configuration of complex systems (Session Chairs: Hansi Jiang, Rui Peng) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) (6 papers)</p> <p>1570616305: Imperfect Maintenance Scheduling for High Pressure Feedwater Heater System in Nuclear Power Plant (Mengyu Du; Chen Zhang; Taotao Zhou; Yan-Fu Li)</p> <p>1570616316: Degradation Assessment and Remaining Useful Life Prognostics of Centrifugal Pump Using Multi-Sensor Process Monitoring (Taotao Zhou; Yan-Fu Li)</p> <p>1570616416: Prediction of Software Fault Detection and Correction Processes with Time Series Analysis (Rui Peng; Yingchun Li; Kaiye Gao; Ye Ma)</p> <p>1570619603: Cascading Failures of Overload Behaviors on Interdependent Networks (Ziyang Jin; Ning Wang; Jiao Zhao)</p> <p>1570632017: Modelling of Inspection Cycles for Power Distribution Transformers (Sathishkumar Nachimuthu; Ming Jian Zuo; Stephen Seewald; Jebb Richard; Connor Thicke)</p> <p>1570637687: Research on the Technology to Build Safety Integration Model of Complex System Based on Relevant Failure (Nie Guojian; Hongqi Yang; Yong Pan; Yujie Liu; Zhe Lai)</p> | <p>Regular Session #2: Asset reliability analysis (Session Chairs: Zhiqiang Cai, Lin Zhu) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (6 papers)</p> <p>1570625528: Positioning Accuracy and Reliability Analysis of Rigid-Flexible Coupling Model of Six-DOF Manipulator (Jianmin Li)</p> <p>1570638223: Reliability assessment of corroded pipeline considering multiple defects interaction based on an artificial neural network method (Han Zhang; Zhigang (Will) Tian)</p> <p>1570638480: Lindley Type Distributions and Software Reliability Assessment (Qi Xiao; Tadashi Dohi; Hiroyuki Okamura)</p> <p>1570638484: Reliability Analysis of Manufacturing Machine with Degradation and Low-quality Feedstocks (Zhenggang Ye; Zhiqiang Cai; Hui Yang)</p> <p>1570638486: Reliability Analysis of Position Accuracy of Welding Robot (Wenxue Qian; Shuai Song; Changhui Yao; Xiaowei Yin)</p> <p>1570638621: Reliability Analysis of Vacuum Circuit Breakers with Multiple Failure Modes (Will C Wascom; Yisha Xiang)</p> | <p>Regular Session #3: Degradation analysis (Session Chair: Tieling Zhang, Zhiliang Liu) VooV Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (6 papers)</p> <p>1570629644: Quantitative Method of Health State Assessment Inside the Safe Region (Yuhua Yin; Zhiliang Liu; Zhe Cheng)</p> <p>1570634162: A Review of State-of-health Estimation of Lithium-ion Batteries: Experiments and Data (Ruomei Zhou; Shasha Fu; Weiwen Peng)</p> <p>1570634563: A Particle-Filter-Based Online Method for Degradation Analysis with Exponential-Dispersion Process (Ricong Huang; Weiwen Peng)</p> <p>1570636187: Bayesian-based Method for the Remaining useful life and reliability prediction of steel structure (Teng Wang; Zheng Liu; Xiaoli Zhao; Min Liao; Nezhir Mrad)</p> <p>1570638363: Life prediction for the tractor of an elevator based on the sliding displacement (Yimin Wei; Jun Pan; Tong Li; Meide Wang; Bin Feng; Yonglei Dai)</p> <p>1570660464: Energy Pipeline Degradation Modeling (Wenxu Li; Tieling Zhang; Richard Dwight)</p> | <p>Regular Session #1: Advanced machine learning techniques (Session Chairs: Kesheng Wang, Chao Liu) VooV Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (6 papers)</p> <p>1570622900: Aero-engine Life Limit Parts Replacement Policy Optimization: Reinforcement Learning Method (Lin Lin; Jie Liu; Jinshan Liu; Shisheng Zhong; Feng Guo)</p> <p>1570630155: A comparison study on the different SNR levels to the accuracy of two deep learning techniques in fault diagnosis of planetary gearbox (Ruiyuan Wang; Kesheng Wang)</p> <p>1570631622: A Novel Anomaly Detection Method for Gas Turbines Using Weight Agnostic Neural Network Search (Shisheng Zhong; Dan Liu; Lin Lin; Minghang Zhao; Xuyun Fu; Feng Guo)</p> <p>1570638393: Bearing Fault Diagnosis Based on Extreme Machine Learning Optimized by Differential Evolution (Yongtao Hu; Jinfeng Gao; Qiang Zhou; Xiaoyu Chen)</p> <p>1570638409: A two-stage algorithm of railway sleeper crack detection based on edge detection and CNN (Gang Wang; Yi Liu; Jiawei Xiang)</p> <p>1570638688: Unsupervised Fault Diagnosis of Machine via Multiple-Order Graphical Deep Extreme Learning Machine (Xiaoli Zhao; Zheng Liu; Teng Wang; Junchi Bin; Minping Jia)</p> | 20:10-22:10 | Friday August 21 | 19:10-21:10 |
| | | Break | | | | | 22:10-07:00 | | 21:10-06:00 |
| | | <p>Tutorial #1: Building Multicriteria Decision Models for Risk, Reliability, and Maintenance Decision Analysis Prof. Cristiano Cavalcante and Alexandre Alberti (1 hour, 10-11am Brazil Time) (Chair: Prof. Steven Li) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode)</p> | | <p style="text-align: center;">Reserved slot</p> <p style="text-align: center;">Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode)</p> | | | 07:00-08:00 | | 06:00-07:00 |
| | | <p>Tutorial #2: History of System Reliability Optimization Prof. David Coit (1 hour, 10-11am Eastern Time) (Chair: Prof. Liudong Xing) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode)</p> | | <p>Tutorial #3: Machine Learning in Data-Driven Prognostics and Health Management (PHM) for condition-based and predictive maintenance Prof. Enrico Zio (1 hour, 4-5pm Italy Time) (Chair: Prof. Tao Yuan) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode)</p> | | | 08:00-09:00 | | 07:00-08:00 |
| | | Break | | | | | 09:00-18:00 | | 08:00-17:00 |

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|------------------------|--|--|---|--|---|---|-------------|-------------|-------------|
| Sunday August 23 | 08:00-9:00 | Tutorial #4: Mechanical Applications of Cepstrum Analysis in Machine and Structural Health Monitoring Prof. Robert Randall (1 hour, 10-11am Sydney Time) (Chair: Prof. Ming J Zuo) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | Tutorial #5: Design a Practical and Effective Reliability Test Dr. Harry Guo (1 hour, 8-9pm Eastern Time) (Chair: Prof. Jae-Hak Lim) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) | | | 18:00-19:00 | 17:00-18:00 |
| | 09:00-10:00 | Tutorial #6: Past, Present and Future Directions and Advances in Reliability Prof. Kailash Kapur (1 hour, 6-7pm Pacific Time) (Chair: Prof. Sukjoo Bae) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | Panel: Autonomous Vehicles Prof. Eric Wong (1 hour, 8-9pm Central Time) (Chair: Prof. Steven Li) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) | | | 19:00-20:00 | 18:00-19:00 |
| | 10:00-10:10 | Break | | | | | | 20:00-20:10 | 19:00-19:10 |
| | 10:10-11:30 | Invited Session #8.1: New models and approaches for the reliability & quality (Session Chairs: Hisashi Yamamoto, Xufeng Zhao) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (4 papers) | Invited Session #12.1: System reliability and maintenance modeling (Session Chairs: Zhigang Tian, Tongdan Jin) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) (4 papers) | Regular Session #11.1: Maintenance strategy (Session Chairs: Alexandre Ramalho Alberti, Alireza Khalilabad) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (4 papers) | Invited Session #9.1: Reliability data analysis and decision making (Session Chairs: Rui Peng, Chi Zhang) VooV Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (4 papers) | Regular Session #5.1: Fundamental reliability analysis theory (Session Chairs: Liyang Xie, Jian Guo) Voov Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (4 papers) | 20:10-21:30 | 19:10-20:30 | |
| | | 1570636867: Periodic and Sequential Inspection Policies with Mission Failure Probabilities (Xufeng Zhao; Xujie Jia; Mingchih Chen; Cunhua Qian; Toshio Nakagawa) | 1570638385: Joint optimization of maintenance and production scheduling for unrelated parallel-machine system (Mageed Ghaleb; Sharareh Taghipour; Hossein Zolfagharinia) | 1570638711: An Alternative Maintenance Policy for Protection Systems Subject to Shocks Due to Demands (Alexandre Ramalho Alberti; Cristiano Alexandre Virginio Cavalcante) | 1570625390: Maintenance of a System with Increasing Energy Consumption Rate (Di Wu; Rui Peng; Ye Ma; Li Yang) | 1570627261: On Two New Quantum Lifetime Distributions (Kunsong Lin; Jiaxiao Zhu; Yunxia Chen) | | | |
| | | 1570636883: Algorithm for Finding the Optimal Arrangement of Consecutive-k-out-of-n:F Systems with Multiple Types of Components (Taishin Nakamura; Sawa Murata; Hisashi Yamamoto) | 1570626355: Variance of Reliability Estimate for K-Out-Of-N System with Cold Standby Units (Tingdan Jin; Jose Espiritu; Heidi Taboada) | 1570633011: Assessment of Maintenance Effectiveness for Repairable Systems: PM and CM Case Studies (Syamsundar Annamraju; V. N. Achutha Naikan) | 1570634148: Reliability of dynamic k-out-of-n systems with coupling components in power transmission systems (Heping Jia; Yi Ding; Liudong Xing; Dunnan Liu) | 1570635750: A sample truncation rule for product reliability estimation with multiple censoring data (Liyang Xie; Ningxiang Wu) | | | |
| | | 1570637287: A Simulation Study on Resilience of Systems with Simultaneous Failures (Tetsushi Yuge) | 1570638640: Maintenance Decision Making using State Dependent Markov Analysis with Failure Couplings (Xinyang Liu; Pingfeng Wang) | 1570636624: Expected Maintenance Actions for Imperfect Production Processes Using a Markovian Approach (Wael I. Al Hajailan; David He) | 1570638468: Integrating Protection, Restoration, and Flow Redistribution for Building Resilient Networked Critical Infrastructures (Huaxing Zhu; Su Wu; Chi Zhang; Raúl Monroy; Jose Ramirez-Marquez) | 1570636699: Reliability analysis for competing failure processes with mutual dependence of system under the cumulative shock (Lina Bian; Guanjun Wang) | | | |
| | | 1570637603: A Study on Evaluation of Stability in Process Mean Using Bayesian Updating (Yasuhiko Takemoto; Ikuo Arizono) | 1570638712: Optimal Maintenance Policies for degrading hydrocarbon pipelines using Markov Decision Process (Eric Bediako; Suzan Alaswad; Yisha Xiang; Zhigang (Will) Tian) | 1570638032: Optimal Post-Warranty Maintenance Strategy For The Second-Hand Product (Jak-Hak Lim; Dae Kyung Kim; Dong Ho Park) | 1570631732: A New Compound Negative Binomial Distribution and Its Applications in Reliability (Xiaoyue Wang; Xian Zhao; Jinglei Sun) | 1570637284: Reliability evaluation based on historical batch information (Wenda Kang; Houbao Xu; Huiling Zheng) | | | |
| | 11:30-11:40 | Break | | | | | | 21:30-21:40 | 20:30-20:40 |
| | 11:40-13:00 | Invited Session #8.2: New models and approaches for the reliability & quality (Session Chairs: Sajad Afshari, Xufeng Zhao) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (4 papers) | Invited Session #12.2: System reliability and maintenance modeling (Session Chair: Lin Zhu, Yu Liu) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) (4 papers) | Regular Session #11.2: Maintenance strategy (Session Chairs: Nobuyuki Tamura, Guangyu Chen) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (4 papers) | Invited Session #9.2: Reliability data analysis and decision making (Session Chairs: Huimin Wang, Liyang Xie) VooV Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (3 papers) | Regular Session #5.2: Fundamental reliability analysis theory (Session Chairs: Xiaoyang Li, Ning-cong Xiao) Voov Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (3 papers) | 21:40-23:00 | 20:40-22:00 | |
| | 1570637810: Optimization Problems for Consecutive-k-out-of-n:G Systems with Exchangeable Components (Lei Zhou; Hisashi Yamamoto; Xiao Xiao) | 1570624408: A Multi-State k-out-of-n:F Balanced System with a Rebalancing Mechanism (Siqi Wang; Xian Zhao; Ming Jian Zuo) | 1570638730: Structure of an optimal maintenance policy for a Semi-Markovian deteriorating system with major and minor failures (Nobuyuki Tamura) | 1570635755: A Knowledge Synthesis Method for Weibull Distribution Estimation with Four Right-Censored Life Data (Liyang Xie; Jungang Ren) | 1570637314: Adaptive sampling with neural networks for system reliability analysis (Ning-cong Xiao; Hongyou Zhan; Kai Yuan) | | | | |
| | 1570639951: Factor copula modeling of coherent systems with dependent components (Shuhe Ota; Mitsuhiro Kimura) | 1570629310: Optimal Maintenance Strategy for Second-Hand Product Considering Preventive Maintenance Actions (Minjae Park; Ki Mun Jung; Dong Ho Park) | 1570638765: Preventive maintenance optimization for large-scale systems under life cycle cost (Ruiqi Wang; Guangyu Chen; Na Liang) | 1570635756: Reliability of a Star Configuration Power Grid System with Performance Sharing (Peng Su; Guanjun Wang) | 1570638260: Belief Reliability Evaluation with Limited Time-to-Failure Data under Uncertain Right Censoring (Wenbin Chen; Xiaoyang Li; Fangrong Li; Rui Kang) | | | | |
| | 1570639996: Random Replacement Policies for Two Failure Modes (Satoshi Mizutani; Xufeng Zhao; Toshio Nakagawa) | 1570637650: Maintenance Optimization of Multi-State Systems with Single Maintenance Capacity and Arbitrarily Distributed Maintenance Time (Yiming Chen; Tao Jiang; Yu Liu) | 1570638343: Predictive maintenance framework of the aircraft system based on PHM information (Hongsheng Yan; Hongfu Zuo; Jianqi Tang; Ronghui Wang; Xiaojun Ma) | 1570637371: Bayesian Based Data Analysis Method for Reliability Prediction of Electronics (Lixiang Zheng; Yu Di; Nie Guojian; Yang Yun; Lei Ting; Liu Yuke) | 1570638275: An effective Kriging-based Approach for System Reliability Analysis with Multiple Failure Modes (Chengning Zhou; Ning-cong Xiao; Ming Jian Zuo; Wei Gao; Qing Li) | | | | |
| | 1570640996: Bi-objective Optimization of Network Reliability by Genetic Algorithm (Natsumi Takahashi; Tomoaki Akiba; Hisashi Yamamoto; Shao-Chin Sung) | 1570637698: Reliability analysis for competitive failure processes with multi-state degradation (Aiping Jiang; Leqing Huang; Yisha Xiang) | 1570638440: Maintenance task scheduling of wind turbine based on task priority (Longfei Wang) | | | | | | |

Saturday
August 22

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| | | Break | | | | 23:00-07:00 | | 22:00-06:00 |
|------------------------|-------------|---|--|--|--|--|-------------|-------------|
| Sunday August 23 | 13:00-21:00 | Invited Session #2: Decision support systems for improving the construction and maintenance of wind farm projects (Session Chairs: Nima Seresht, Yuejian Chen) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) (4 papers) | Invited Session #11: Reliability tests and data analysis (Session Chairs: Tao Yuan, Alireza Khalilabad) Zoom Meeting Link: https://zoom.us/j/99793633698 (See email for passcode) (4 papers) | Regular Session #8: Optimization (Session Chairs: Zhe-George Zhang, Hiroyuki Okamura) Zoom Meeting Link: https://zoom.us/j/95536125725 (See email for passcode) (4 papers) | Regular Session #13: Stability analysis (Session Chairs: Junjun Zheng, Zhiyuan Wang) Voov Meeting Link: https://meeting.tencent.com/s/Ru0AFmOz2akB (See email for passcode) (4 papers) | Invited Session #4: Degradation modeling and Inference (Session Chairs: Zhiliang Liu, Jia Wang) Voov Meeting Link: https://meeting.tencent.com/s/PE7I9zMSSSWW (See email for passcode) (4 papers) | | |
| | 21:00-22:20 | 1570636632: Simulation-based approach for risk assessment in onshore wind farm construction projects (Emad Mohamed; Nima Gerami Seresht; Stephen Hague; Simaan AbouRizk) 1570636642: Framework for Risk Identification of Renewable Energy Projects Using Fuzzy Case-Based Reasoning (Sahand Somi; Nima Gerami Seresht; Aminah Robinson Fayek) 1570629844: Wind Turbine Power Output Estimation with Probabilistic Power Curves (Siyun Ge; Ming Jian Zuo; Zhigang (Will) Tian) 1570638655: A PdM framework Through the Event-based Genomics of Machine Breakdown (Morad Danishvar; Alireza Mousavi; Veerendra C. Angadi) | 1570621081: Planning Accelerated Destructive Degradation Test with Block Effects (Jiaxiang Cai; Zhisheng Ye) 1570638378: Remaining useful life prediction using machine learning (Xiaoyan Zhu; Ping Zhang; Min Xie) 1570638397: A Differential Burn-in Policy Considering Nonhomogeneous Distribution of Spatial Defects in Semiconductor Manufacturing (Tao Yuan; Yuan Chen; Yue Kuo) 1570635836: A Bayesian Model Averaging Method for Software Reliability Assessment (Qiumin Yu; Steven Li) | 1570633910: Optimum replacement last policy for a cumulative damage model (Shey-Huei Sheu; Zhe-George Zhang; Tzu-Hsin Liu; Jau-Chuan Ke) 1570637614: Electric Bus Charging Station's Location and Capacity Based on Routes and Grid AP Clustering Algorithm (Fan Yanhong; He Chunhui; Fei Danxiong; Gu Jiu; Da Xie) 1570638638: Formulation of Opportunity-Based Age Replacement Models with Markovian Arrival Process (Hiroyuki Okamura; Junjun Zheng; Tadashi Dohi) 1570638713: Inventory Control Optimization via Neural-Nets Based Demand Prediction (Haoyu Wang; Xiaoyu Fan; Yan Zhang; Xiaoyue Du; Bohan Cui; Yingjun Deng) | 1570638438: A Note on Uncertainty Propagation for Availability Model of Mobile Cloud Computing Systems (Junjun Zheng; Jiahao Zhang; Hiroyuki Okamura; Tadashi Dohi) 1570629552: Stability Analysis of Wireless Powered Communication Networks (Mingfu Li; Ching-Chieh Fang; Huei-Wen Ferng) 1570637573: Structural Robustness-based SHM Point Arrangement Strategy for In-service Cable-stayed Bridge Subjected to Cable Damage Effect (Qiwen Jin; Zheng Liu) 1570638873: Effects of flow rate and silt particle on vibration of a double-suction centrifugal pump (Zhiyuan Wang; Zhongdong Qian) | 1570639329: Optimal design of accelerated life tests for one-shot devices (Chinuk Lee; Suk Joo Bae) 1570634003: Optimal design of degradation testing and life testing based on Wiener process models (Zhonghai Ma; Songlin Nie; Fanglong Yin; Hui Ji) 1570638515: Modeling the degradation-shock dependence with the consideration of system resistance (Jia Wang; Luyu Zhang; Guanghan Bai) 1570638656: Planning of an Accelerated Degradation Test under Different Constraints of Operating Conditions (I-Chen Lee; Zi-Yu Lin) | 07:00-08:20 | 06:00-07:20 |
| | 22:20-23:00 | Closing Ceremony Zhigang Tian: Announcing Best Paper Awards Ming Zuo: Summary of APARM 2020 Yi-Kuei Lin: Announcing Venue of APARM 2022 APARM 2022 Hosting Team: Promotion of APARM 2022 (Chair: Prof. Ming Zuo) Zoom Meeting Link: https://zoom.us/j/92493246918 (See email for passcode) | | | | 08:20-09:00 | 07:20-08:00 | |