Beijing	Time	Activities Planned
Date	Time	ACTIVILES Flatilled
	08:30- 08:45	Conference Opening Ceremony and Guest Address Prof. Li Zheng (Chair: Prof. Yan-Fu Li) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	08:45- 09:30	Keynote Speech #1: Managing Global Pandemic Prof. Way Kuo (Chair: Prof. Min Xie) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	09:30- 10:15	Keynote Speech #2: Fault Injection, and It's Relationship to Software Testing Dr. Jeff Voas (Chair: Prof. Min Xie) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	10:15- 10:30	Break
Friday	10:30- 11:15	Keynote Speech #3: Reliability Engineering: Today and Beyond Prof. Mohammed Modarres (Chair: Prof. Ming Zuo) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
October 16	11:15- 12:00	Keynote Speech #4: Engineering for Resilience: Beyond Reliability and Health Management Prof. Ali Mosleh (Chair: Prof. Ming Zuo) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	12:00- 14:00	Break
	14:00- 14:45	Keynote Speech #5: Shaping a Forward-Looking Quality Profession Prof. Thong-Ngee Goh (Chair: Prof. Kaibo Wang) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	14:45- 15:30	Keynote Speech #6: On-Line Monitoring and Diagnosis of Complex Data Prof. Zhaojun Wang (Chair: Prof. Kaibo Wang) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095
	15:30- 15:45	Break
	15:45- 16:30	Keynote Speech #7: Data modeling and monitoring in additive manufacturing: opportunities and challenges Prof. Bianca Maria Colosimo (JQT EIC) (Chair: Prof. Kaibo Wang) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095

Beijing	Time	Activities Planned	
Date	Time		
Friday October 16	16:30- 17:30	Panel: Quality and Reliability in semiconductor manufacturing (Panelists: Wei Kuo, Kary Chien, Bianca Colosimo, TN Goh, Kaibo Wang, Min Xie) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095 Password: 202010	
	08:45- 09:30	Rail Transportation Workshop Opening Ceremony and Guest Address Profs. Kwok Tsui and Yanfu Li Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095	
	09:30- 10:15	Keynote Speech #8: Predictive Maintenance in Multimodal Transportation: a "System of Systems" Challenge Dr. Pierre Dersin (Chair: Prof. Yan-Fu Li) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095	
Saturday	10:15- 10:30	Break	
October 17	10:30- 11:15	Keynote Speech #9: Towards Autonomours Systems that Provide Fault detection, Diagnostics, Prognosis and Repair Assets Prof. Clive Roberts (Chair: Prof. Yan-Fu Li) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095	
	11:15- 12:00	Keynote Speech #10: Active Risk Control Methodologies for High-Speed Train Operations Process Prof. Yong Qin (Chair: Prof. Yan-Fu Li) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095	
	12:00- 13:40	Break	

Beijing	Time	Activities Planned				
Date	Time		Activities	Fiaimeu		
			Invited Session #2: Mechanical Systems Reliability Enhancement through Vibration Analysis (Session Chairs: Zhenguo Zhang, Xihui Liang) VooV Meeting Link: https://meeting.tencent.com/s/I2WA61HAYM2r Password: 202010 (6 papers)	Invited Session #3: Industrial Big Data Mining and Deep Learning for PHM (Session Chairs: Jun Wu, Carman K.M. Lee, Juncal Xu, Yuanhang Wang) VooV Meeting Link: https://meeting.tencent.com/s/MBcHWQqS8dw L Password: 202010	Invited Session #1.1: Reliability Modeling for Various Special Types of Data (Session Chairs: Renyan. Jiang, Yifan Zhou) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010 (6 papers)	
			10:Analysis of the Interface Lubrication Performances of Water Lubrication Bearing (Zhongliang Xie, Chunmin Cheng, Nawei Shen, Yun Zhang and Liang Hao)		7:Operating Optimization of Multi-energy System From Perspective of accuracy and real-time Performance (Fengjiao Liu, Yulong Ying and Zhongzhu Qiu)	
			25:Research on the future state evaluation of satellite functional components (Changwen Zhu, Jun Zhou and Jianchen Dang)	13:A deep learning method with ensemble learning for Capacity estimation of lithium-ion battery (Mengda Cao, Tao Zhang, Yu Wang, Shihui Zhang and Yajie Liu)	9:Multidimensional performance degradation data fusion and residual life prediction for machine tools (Renyan Jiang)	
Saturday October 17	13:40- 15:40	(Chairs: Yan-Fu Li) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095	41:Structural-fluid interaction analysis of a membrane air-spring based on finite element method (Haosen Yang, Lijun Zhai and Wei Tan) 50:An Efficient Sequential Method for Predictive		12:Research on the Degradation Process Analysis of the Rail Transit Door System (Yinming Guo, Yifan Zhou, Zhisheng Zhang and Mengya Yuan) 32:Modeling And Calculating Method of Ship	
			Maintenance of Equipment Health (Yaochun Hou, Ning Chu and Dazhuan Wu)	27:Prognosis of wheel tread degradation status based on PCA-NARX neural network (Bing Huang, Mingcheng E, Zengqiang Jiang and Qi Li)	Availability for Service Period (Zhang Yang and Huang Jine)	
			68:Stiffness and Deformation Characteristics of the Rabbet Joint Structure in the Central Tie-rod Fastening Rotor (Ze Wang and Mingfu Liao)	33:One-dimensional Residual Neural Network - based for Tool Wear Condition Monitoring (Junjun Dong, Wei Dai and Zhiiyuan Lu)	35:Bayesian Estimation of Residual Life for Exponentially Distributed Components by Fusing Different Types of Expert Knowledge (Yao Tan, Qian Zhao, Xiang Jia and Bo Guo)	
			73:Research on the Modeling and Simulation of the Equipment Installation System with Flexible Foundation (Baocheng Zhang, Ziwei Deng, Shuqing Wang and Kaisheng Zhang)	of metro systems based on statistical machine	64:Change Point Reliability Modelling for Open Source Software with Masked Data Using Expectation Maximization Algorithm (Jianfeng Yang, Xibin Wang Yujia Huo and Jing Cai)	
	15:40- 15:50		Br	eak		

Beijing	Time	Activities Planned			
Date	Time		Activities	T lamica	
			Invited Session #4: Energy Storage and Electrical Device Reliability (Session Chairs: Yongquan Sun, Xuning Feng, Xianzhong Sun) VooV Meeting Link: https://meeting.tencent.com/s/12WA61HAYM2r Password: 202010 (6 papers)	Invited Session #5: PHM for transportation (Session Chairs: Janet (Jing) Lin, Baoping Cai, Liangwei Zhang, Haidong Shao) VooV Meeting Link:https://meeting.tencent.com/s/MBcHWQqS 8dwL Password: 202010 (6 papers)	Invited Session #1.2: Reliability Modeling for Various Special Types of Data (Session Chairs: Renyan Jiang, Yifan Zhou) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010 (3 papers)
Saturday October 17	15:50- 17:50	Rail Transportation Workshop (Chairs: Yan-Fu Li) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095	Electromagnet Suspension System (Xuejie Cao and Gang Niu) 81:Consistency and degradation of elecrochemical double layer capacitors under calendar ageing (Bo Liu, Jia Qi, Xitong Yin and Yongquan Sun) 83:The Effects of Environmental Factors on the Stability of Smart Electricity Meters (Jiahai Zhang, Baoliang Zhang and Yining Yang) 85:A new temperature control strategy for lithiumion battery forced air-cooling system without temperature overshoot (Chao Lyu, Shihuai Zhu,	Broad Learning System (Chong Wang and Jie Liu) 22:Railway Wagon Wheelset Fault Diagnosis Method Based on DBN (Hongkun Wang, Honghui Li, Yusheng Li and Yuhang Duan) 29:Reliability assessment of few-failure data and	(Chaoqun Huang, Zhisheng Zhang and Yifan Zhou) Workshop: ALA (Asset Life Assessment) in

Beijing	Time	Activities Planned			
Date	Time		Activities	s i lainteu	
		Invited Session #6: PHM for Wind Turbine Operation and Maintenance (Session Chairs: Longfei Wang, Bin Yan) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095 (5 papers)	Regular Session #1: Regular - Machine Diagnostics and Prognostics (Session Chairs: Qiang Guo, Yingcai Tang) VooV Meeting Link: https://meeting.tencent.com/s/I2WA61HAYM2r Password: 202010 (5 papers)	Regular Session #2: Optimization (Session Chairs: Qinghua Luo, Wanying Shi) VooV Meeting Link: https://meeting.tencent.com/s/MBcHWQqS8dw L Password: 202010 (5 papers)	Panel #3: Reliability and Safety in Offshore and Marine Engineering Time:10:00-10:50 (Chairs: Baoping Cai, Janet Lin, Zengkai Liu Panelists: Yingying Wang, Wenming Wang, Xingwei Zhen, Shengnan Wu) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
Sunday		18:Improved ADMM for Sparse Reconstruction of Bearing Vibration Signal (He Liu, Shouwu Duan and Wanqing Song) 44:Multi-echelon inventory optimization of spare parts considering cross-region transshipment and changing demand (Liudong Gu and Yifan Zhou)	Bearing Fault Diagnosis (Minglei Lu, Siqi Qiu, Xin Chen, Chunfeng Kong and Yingmao Cheng) 30:Distance-Based Embedding Learning for Remaining Useful Life Estimation (Yini Zhang,	8:Dynamic path planning for multi-handling robots in warehousing system (Minghang Li, Xiaozhen Yan and Qinghua Luo) 21:Path Planning Using Artificial Potential Field Method And A-star Fusion Algorithm (Chunyu Ju, Qinghua Luo and Xiaozhen Yan)	
Sunday October 18	9:40	58:Research on spare parts inventory optimization based in wind power industry (Bin Yan, Yinbo Ma and Yifan Zhou) 63:Route optimization of wind turbines based on vehicle GPS data (Longfei Wang and Jingjing Liu) 92:Reliability assessment of wind turbine generators by fuzzy universal generating function (Tudi Huang, Tangfan Xiahou, Hong-Zhong Huang, Yan-Feng Li, Hua-Ming Qian and Peng Huang)	Yuanxiang Li, Yuxuan Zhang and Lei Jia) 34:Probabilistic Fatigue Life Prediction for Crankshaft of Marine Diesel Engine (Xiaohui Feng, Jingjing He and Xiaopeng Chang) 39:Direct Remaining Useful Life Estimation Based on Random Forest Regression (Xin Chen, Ge Jin, Minglei Lu, Siqi Qiu, Danjiong Yu) 40:Intelligent Fault Diagnosis System Based on Vibration Signal Edge Computing (Siyuan Zhang, Chuangxin He and Zhonghua Miao)	43:Research on MTTR Allocation of Commercial Aircraft (Zheng Wang, Xixi Yan and Linlong Ma) 54:Energy Efficient Path Planning for Indoor Wheeled Mobile Robots (Jing Liu, Zhaojun Li, Liping He and Wanying Shi) 95:Condition-based Maintenance Optimization for Gearbox Using Proportional Hazards Model (Chiming Guo, Yongsheng Bai, Handong Wang and Rui Tong)	Panel #2: Reliability Statistics and Maintenance Policies for Production Systems Time: 8:50-9:40 (Chairs: Qingqing Zhai, Piao Chen Panelists: Piao Chen, Jiawen Hu, Xiujie Zhao, Yudong Wang) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
	09:40-		l Br	eak	

Beijing	_		Activities Planned		
Date	Time				
		Tutorial #1: State-Space Modeling for Sensor- Driven Monitoring, Control, and Decision Making in Dynamic Systems Prof. Ramin Moghaddass Time: 10:00-11:00 (Chair: Steven Li) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095	Regular Session #6: General Reliablity Analysis (Session Chairs: Hong-Zhong Huang, Yingcai Tang) VooV Meeting Link: https://meeting.tencent.com/s/I2WA61HAYM2r Password: 202010 (6 papers)	Regular Session #4: Date Driven Methods for PHM (Session Chairs: Yunxia Chen, Haidong Shao) VooV Meeting Link: https://meeting.tencent.com/s/MBcHWQqS8dw L Password: 202010	https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
			47:Reliability Allocation and Prediction for Command and Control System (Yifan Li, Haitao Chen, Jun Huang, Xiang Li, Ting-Yu Zhang and Hong-Zhong Huang) 48:Construction of health index for aircraft airconditioning system health prediction (Xin Yin, Yuanxiang Li, Yuxuan Zhang, Yini Zhang and Lei Jia)	Propagation Neural Network (Yongtang Ye, Wenbo Zhang, Kunsong Lin and Yunxia Chen) 28:Internal Leakage Detection of Hydraulic Cylinder Based on Wavelet Analysis and BP Neural Network (Liqin Wang, Dongfeng Wang, Jianjun Qi and Yong Xue)	
Sunday October 18	10:00-12:00	Tutorial #2: The Future of Blockchain Technology in Electronic Medical Records Prof. Gautam Srivastava Time: 11:00-12:00 (Chair: Yuejian Chen) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095	49:Reliability Analysis for Photoelectric Pods Based on FMEA (Ying Zeng, Yan-Feng Li, Jun Huang, Xiaohong Hao, Haitao Chen and Hong-Zhong Huang) 91:Optimal abort policy of a distributed system of computers with Weibull failure time (Kaiye Gao, Qingqing Zhai, Hui Xiao, Rui Peng and Jie Mi) 69:Reliability Growth Method and Application Based on Operation Fault Analysis (Xuerui Yang) 80:Method and Application of Civil Aircraft Reliability Monitoring Based on Critical Items (Xuerui Yang)	55:Prediction of Lithium-ion Battery Capacity based on ARMA method (Bo Ma, Zhaojun Li and Wei Guo) 57:Parameters Estimation of Mixed Weibull Distribution based on Nonlinear Least Square Method and Simulated Annealing Algorithm (Youyuan Wang, Zhaojun Li, Liping He and Meiyan Li) 61:A Feature Selection Method Based on Improved Genetic Algorithm (Liang Kui, Dai Wei, and Rui Du) 71:Comparison Research of Feature Fusion Methods in Characterizing Performance Degradation of Aeroengine (Haidong Shao and Wei Li)	Panel #5: Reliability Analysis and Design Optimization under Epistemic Uncertainty Time: 13:30-14:20 (Chairs: Yu Liu, Jinhua Mi Panelists: Sifeng Bi, Siqi Qiu, Zhe Zhang, Jialong He, Zhiguo Zeng) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
	12:00- 13:30		Br	eak	

Beijing Time		Activities Planned			
Date	Time		Adiivido	T Idilliod	
		Regular Session #5: Remaining Useful Life Predication (Session Chairs: Ningcong Xiao, Reza M. Nejad) Zoom Meeting Link: https://ualberta- ca.zoom.us/j/97768037095 (5 papers)	Regular Session #3: Aircraft health management (Session Chairs: Hu-Chen Liu, Jianfeng Yang) VooV Meeting Link: https://meeting.tencent.com/s/I2WA61HAYM2r Password: 202010 (5 papers)	Regular Session #7: Advanced machine learning for PHM (Session Chairs: Yifan Zhou, Zhenhua Wen) VooV Meeting Link: https://meeting.tencent.com/s/MBcHWQqS8dw L Password: 202010	(Chairs: Rui Peng, Kaiye Gao Panelists: Yixiao Zhao, Yihai He, Jingjing Wang, Feng Liu, Fuqiang Li, Hefei Liu, Xiaoping Zhu, Chiming Guo) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ
		useful life prediction of aircraft engines (Ruihua Jiao, Kaixiang Peng, Liang Ma, Peng Tang and Chuanfang Zhang)	15:The Improvement of Remaining Useful Life Prediction for Aero-engines by Injecting Noise (Junxuan Tang, Lei Xiao, Nailong Wu and Jingsong Zhao) 72:Application Research of Highly Accelerated Life	37:Multi-component Maintenance optimization: an approach combining genetic algorithm and multi-	
Sunday		with Typical Distributions (Qian Zhao, Ping Jiang,	Test on Civil Aircraft Airborne Equipment (Peng Lu and Hua Lu)	Spare Parts Inventory Control (Cheng Yu, Yifan Zhou and Zhisheng Zhang)	
October 18		Correlation Analysis (CCA) and Neural Network fitting method (Lian Die Zhu, Wei Dai and Xiaoliang Wang)	75:Research on Dispatch Reliability Allocation in Commercial Aircraft Development (Dunyong Bao	59:Machinery Fault Diagnosis Using Recurrent Neural Network: A Review (Tongrui Xu, Huan Wang, Zhiliang Liu and Yijia Hao) 66:A Knowledge Acquisition Method Based on	Panel #6: Traffic Health Management Time: 14:20-15:10
		for single equipment based on accelerated degradation modeling (Zhongyi Cai, Zezhou Wang, Yan Li and Tao Wang)	76:Research on Dispatch Reliability Prediction in Commercial Aircraft Development (Dunyong Bao and Jiawei Sun)	Rough Set Theory and Neural Networks to Electrostatic Monitoring Systems for the gas path in an Aero-Engine (Zhenhua Wen and Xiaofei Zhao) 93:Application of A Taylor Expansion Criterion- based Pruning Convolutional Network for Bearing Intelligent Diagnosis (Yuan Si and Wei Guo)	(Chair: Daqing Li Panelists: Xiangdong Xu, Peng Chen, Ke Wang, Guanwen Zeng) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
	15:10- 15:20		Br	eak	

	g Time		Activities Planned		
Date	Time				
		Regular Session #8: Fault Detection and Diagnosis (Session Chairs: Guoliang Lu and Zhiyuan Wang) Zoom Meeting Link: https://ualberta-ca.zoom.us/j/97768037095 (5 papers) 26:Bearing Fault Diagnosis under Varying Speed	Regular Session #9: Reliability Analysis and Testing (Session Chairs: Shunong Zhang and Qiang Miao) VooV Meeting Link: https://meeting.tencent.com/s/I2WA61HAYM2r Password: 202010 2:A review on testability verification test and fault	Regular Session #10: General (Session Chairs: Liping He and Yu Liu) VooV Meeting Link: https://meeting.tencent.com/s/MBcHWQqS8dw L Password: 202010 (5 papers) 51:Evidential Fusion Method of Feature Points	Panel #7: System Reliability Analysis and Diagnostics Time: 15:20-16:10 (Chair: Yincai Tang Panelists: Tiejun Cui, Han Wang, Fode Zhang, Jiawei Xu) VooV Meeting Link: https://meeting.tencent.com/s/mXRtJn15F8GZ Password: 202010
		Conditions Based on Multi-Resolution Singular Value Decomposition (Yujing Huang, Gang Tang, Han Wang and Dongdong Wang)	injection technology (Weiwei Cui, Weikang Xue, Lianfeng Li and Xiao Hu) 5:Stress Reliability Sensitivity Analysis for A	Matching for the Visual Odometry (Shidong Liu, Li- Ping He, Linqiao Xing and Hao Qin) 52:Kinematics Analysis and Simulation Verification for the Chassis of Mobile Robots Based on An	
		36:Bending deflection estimation of the beam-like structure based on strain measurements from a fiber Bragg grating sensing network (Jieming Yin, Liu Hong, Zechao Wang and Yuegang Tan) 45:Integrated quality diagnosis approach for manufacturing system based on the quality transmission chain (Jian Wang, Lingli Mu, Yixiao Zhao, Yihai He and Wenzhuo Wang)	Flexibility Rotor (Lisha Zhu, Yuhang Wang, Zisheng Lin, Haonan Chen, Guo Yao and Wenzhu Wang) 16:Radar Health Management System Based on Multi-agent (Qixiao Zhang, Peng Dong, Jianjun Yang and Yi Cai) 70:Evaluation Method of Smart Meters Operating Status Based on Improved TOPSIS and Cluster Analysis (Dan Xu, You Li and Shaobo Sui)	Obstacle-crossing Index (Hao Qin, Li-Ping He, Linqiao Xing and Shidong Liu) 53:A Robust RGB-D SLAM with Loosely-Coupled Semi-Direct Method (Wenbin Liang, Li-Ping He, Jing Liu and Youyuan Wang) 84:Resilience Enhancement for Multi-State Interdependent Infrastructure Networks (Kai Wang, Zhaoping Xu and Yu Liu)	
		79:Anomaly Detection of Marine Diesel Engine Valve System based on Mahalanobis Distance (Sun Yue, Xu Aidong, Wang Kai,Shuli Jia Haifeng Guo and Xiaojia Han) 94:Early Fault Detection Of Rolling Element Bearings Based On Graph Modeling Of Component Signals (Zixu Chen and Guoliang Lu)	90:Experimental Research on Step Stress Accelerated Degradation Test Considering Impacts of Stress Conversion (Wenwen Shi, Shunong Zhang, Xing Xu and Cong Shao)	88:An Internet of Things (IoT) Perspective of Understanding the Boeing 737 MAX Crash (Pan Luo, Meiyan Li and Zhaojun Li)	Reserved slot
	17:00- 17:30		(Chair: S	Ceremony Steven Li) berta-ca.zoom.us/j/97768037095	