

Day1

15 October 2024

Tuesday

Time	Programme						
9:00-9:45	Opening Ceremony						
9:45-10:00	Coffee						
10:00-10:45	Keynote Presentation (1)						
10:45-11:30	Keynote Presentation (2)						
12:30-13:30	Lunch						
13:30-14:00	Keynote Presentation (3)						
14:00-14:30	Keynote Presentation (4)						
	Room1 (P1-1,6) Session Chair: Xiyue Zou	Room2 (P1-4) Session Chair: Qingbo He	Room3 (P1-5) Session Chair: Esko Juuso	Room4 (P2-4) Session Chair: Longbiao He	Room5 (P2-9) Session Chair: Zhichao Li	Room6 (P2-8) Session Chair: Wei Li	Room7 (P2-15) Session Chair: Jianbo Wu
14:30-14:50	Rotational speed estimation by exploiting smartphone sensors (017)	An emissivity-correctable global detection method for infrared thermography (058)	Intelligent indicators for integrating condition monitoring and control (287)	Ultrasonic Monitoring Method for Oil Film Thickness in the Contact Zone of Roller Bearings (082)	Research on curing monitoring method of the resin in steel epoxy sleeves based on circumferential SH guided waves (197)	Numerical Simulation Study of Multi-Field Coupling for High-Temperature Flange Micro-Leakage (435)	Condition Monitoring of Mash Seam Welds for Thin Steel Sheets in a Continuous Galvanizing Line (003)
14:50-15:10	Near-field Passive Wireless Strain Sensor for Structure Health Monitoring of Mega Structures (419)	Study on the Mechanism of Errors Induced by Speed Fluctuations in Blade Tip Timing Signals (350)	EMD-WT based multi-scale convolutional neural network gas turbine rotor fault diagnosis (341)	Damage acterization of carbon fiber composites based on modal acoustic emission (178)	Design of Guided Wave Magnetostrictive Patch Transducer with Vertical Static Bias Magnetic Field for Pipe Inspection (199)	Weak Signal Separation and Identification in Acoustic Health Monitoring of Major Hazardous Equipment (468)	Rail Near-surface Defect Inspection of Large Lift-off Eddy Current Thermography (011)
15:10-15:30	Effect on the Relationship between Acoustic Emission and Dislocation Motion during SA387 steel Tensile Strength Test (254)	Assessment of Lift-off Distance and Thickness of Metallic Plate Using Pulsed Eddy Current Testing with Scikit-learn (562)	Improving classification of imbalanced classes in industrial data: Enhancing defect detection for type IV high-pressure hydrogen vessels (368)	Condition Monitoring and Non-Destructive Testing of Titanium Alloy Behavior under Cyclic Loading and Bending (182)	Magnetostrictive patch transducer, Torsional Guided Waves, Halbach, Permanent magnet (201)	Study on Acoustic Emission Signals Characteristic of Damage (469)	Research on early corrosion evaluation of carbon steel based on multiple feature acterization methods (055)
15:30-15:50	Coffee						
	Room1 (P1-2) Session Chair: Zhipeng Feng	Room2 (P1-3) Session Chair: Shibin Wang	Room3 (P3-5) Session Chair: Jingjing He	Room4 (P2-4) Session Chair: Longbiao He	Room5 (P2-5) Session Chair: Yanjun Fu	Room6 (P2-8) Session Chair: Wei Li	Room7 (P4-1,4,5) Session Chair: Zenghua Liu or Yiping Shen or Jing Lin
15:50-16:10	Research on the Extraction and Diagnosis Methods of Strongly Nonstationary Fault Features for Complex Equipment (167)	Multichannel phase synchronization fusion variational mode decomposition for mechanical fault diagnosis (385)	Passive aircraft icing detection during flight using ambient noise (064)	Research on acoustic energy attenuation positioning method for gas leakage in pressure pipeline (252)	Single-frame temporal phase-shifting shearography for real-time nondestructive testing (084)	Coda wave based self-sensing smart aggregate and its potential application (521)	Application of elastic guided waves and time reversal technique for damage characterization in plate-like structures with a piezoelectric sensor network (566)
16:10-16:30	Bearing faults diagnosis under time-varying rotation speed condition based on dual-tree complex wavelet transforms and order tracking (314)	Near-field microwave sensing based dynamic displacement measurement method (394)	Lamb wave reconstruction using transmissibility concept in frequency domain (092)	Progress of calibration and verification standards for acoustic emission sensors (257)	A Novel Phase Measuring Deflectometry Method Using a Curved Screen (110)	Research on Monitoring Method of Q345R High Temperature Molten Salt Corrosion Process Based on Acoustic Emission (527)	Improved Minimum Entropy Deconvolution based on Dual-domain Separation Technique for Bearing Fault Feature Extraction (355)
16:30-16:50	Variational generalized nonlinear mode decomposition for the analysis of non-stationary signals with both chirp modes and dispersive modes (383)	Demagnetization Fault Diagnosis of PMSLM Based on Relative Position Matrix Transformation and EfficientNetV2 Classification (439)	Optimized piezoelectric transducers array for Lamb waves in arbitrary cross-section structures (151)	High-Strength bolt axial force gauge based on EMAT (354)	Optical detection method based on polarized structured light system (208)	Clarification of Fracture Behaviour of RC Pillar with 3D Concrete Printing Buried Formwork Based on Elastic Wave Technique (535)	Federation Aggregation Strategy Learning Method for Inter-client Data Imbalance (542)
16:50-17:10	Joint Application of Principal Component Analysis and Wavelet Transform for 1D Convolutional Neural Network Signal Classification (454)	Multi-objective Optimization Guided Sparse Representation for Extracting Non-periodic Fault Features of Variable-speed Rolling Bearings (445)	Fatigue Crack Monitoring of Wire and Arc Manufactured material Based on Acoustic Emission Technology (481)	Ultrasonic measurement of contact loads between rollers and raceways in wind turbine main shaft bearings (538)	Overview of landslide monitoring (489)	Estimation of Tendon Rupture Locations Inside PC Box Girders Using AE Source Location (536)	EMAT Bolt Stress Condition Monitoring with Double Waves (036)
17:10-17:30		Intelligent fault diagnosis framework based on convolutional neural network and improved time-frequency domain feature mapping algorithm (456)					

Time	Programme						
9:00-9:30	Keynote Presentation (5)						
9:30-10:00	Keynote Presentation (6)						
10:00-10:20	Coffee						
	Room1 (P2-7) Session Chair: Junyan Liu	Room2 (P2-2,6) Session Chair: Zhenmao Chen	Room3 (P2-11) Session Chair: Chunguang Xu	Room4 (P2-12,13,14) Session Chair: Xiyue Zou or Yang Zheng or Zhifeng Tang	Room5 (P2-10,16) Session Chair: Jiang Xu	Room6 (P3-4) Session Chair: Yaguo Lei	Room7 (P3-6) Session Chair: Xuefei Guan
10:20-10:40	Outdoor lock-in carrierographic of photovoltaic modules under sunlight and cold conditions (319)	Distinguish (1)	Research on image enhancement method for online oil monitoring system (075)	Monitoring of the stress state of critical fasteners of hydraulic turbine units based on the metal magnetic memory technique (005)	Stress monitoring method of prestressed concrete steel strands based on magnetostrictive guided waves (144)	RUL prediction for rolling bearings using improved LSTM and a degradation detection strategy (007)	Lagunas' beamforming with spiked covariance estimation for acoustic array imaging: refining an old idea by Lagunas in 1986 (081)
10:40-11:00	Natural Cracks Diagnosis System based on Novel L-shaped Electromagnetic Sensing Thermography (373)	Distinguish (2)	Mechanism-driven Model for Adaptive Wear State Diagnosis via Moving Particle Monitoring (077)	Stress characterization based on the Villari Reversal (303)	Design of credit evaluation model of security evaluation agency based on cloud model (133)	Intelligent Health Indicator Construction Method for Aircraft Structures based on Acoustic Emission (194)	Correlation between phased array ultrasonic backscattering coefficient and grain size in polycrystal (089)
11:00-11:20	A novel feature extraction and enhancement technique for infrared thermal wave imaging based on multi-time pixel local outliner factor (411)	Study on the laser vibration technology under noise condition (417)	Root cause analysis of EH oil system solenoid valve jamming and wear failure in nuclear power plant turbine unit (083)	Structural Monitoring of Prestressed Concrete Containment of Nuclear Power Plants Based on the Multi-dimensional Optical Fiber (013)	Ultrasonic imaging of high-density polyethylene using spatio-temporal singular value decompositions (214)	Corrosion rate prediction for small samples based on DeWaard model with PSO-SVM algorithm (227)	Embedded flaw quantification and imaging in curved components using phased-array ultrasound SAFT (142)
11:20-11:40	Study on multi-source damage inspection for CF/BMI composites using array laser spots spatial and temporal modulation excitation thermography (443)	Implementation of rope monitoring and conveyor belt monitoring systems at critical industrial facilities (034)	Lubrication monitoring and assessment for wind turbine (093)	Experimental Research on the Influence of Couplant on Stress Evaluation by using Ultrasonic Critically Refracted Longitudinal Waves (290)	Development of a technique for ultrasonic inspection of welded joints of main pipelines using phased array and use of the usd-60fr-16/128 (517)	A prediction model for wear-crack coupling degradation process in a gear transmission system based on dynamic analysis (270)	Utilizing phased array ultrasound technique to examine premium connections at cryogenic temperatures (311)
11:40-12:00	Research on intelligent NDT of subsurface delamination defects in fiber-reinforced composites based on super-resolution lock-in thermography (480)	Macro-micro model of 3D magnetic Barkhausen noise signals: macroscopic nonlinear magnetization and microscopic MBN jumping (102)	Non-Newtonian thermal elastohydrodynamic mixed lubrication in elliptical contact for nutation-driven double circular-arc spiral bevel gear pair (135)	Challenges In Detecting Welding Anomalies Under Insulation: A Case Study Using Metal Magnetic Memory Technology (010)	Intelligent Recognition of Internal Defects in Composite Materials Based on Dual-Modality Ultrasonic Imaging (519)	Life Assessment Based on API579-1/ASME FFS-1 Fitness-For-Service for Cr-Mo Ferritic Steel (286)	A Viterbi-based ray tracing technique for ultrasonic linear array imaging of L-shaped CFRP structures (462)
12:00-12:20		A Self-enhancement Cycle Thermography Generative Adversarial Network (CT-GAN) for Complex Defect Profile Reconstruction (139)	Tribological properties of polyaromatic organics as lubricating grease (138)				
12:30-13:30	Lunch						
13:30-14:00	Keynote Presentation (5)						
14:00-14:30	Keynote Presentation (5)						
	Room1 (P3-1) Session Chair: Jiyuan Zhao	Room2 (P2-2,6) Session Chair: Zhenmao Chen	Room3 (P2-11) Session Chair: Tonghai Wu	Room4 (P4-6) Session Chair: Qingfeng Wang	Room5 (P2-10,16) Session Chair: Jiang Xu	Room6 (P4-7) Session Chair: Xiyue Zou	Room7 (P4-9) Session Chair: Weimin Wang
14:30-14:50	Analysis of weld fracture of circulating jellyfish pipe in a power plant (040)	Imaging and non-destructive evaluation of multi-layer GFRP based on microwave (173)	Research and Application of Industrial Equipment Intelligent Monitoring, Early Warning and Operation and Maintenance Platform for Lubrication Safety Based Industrial Internet (163)	System Software for Prognostics and Health Management of Large Rotating Machinery and Its Application (280)	(520)	Online monitoring method for wire rope abrasion based on eddy current displacement sensing (052)	Layout optimization and parameter identification for blade tip timing-based condition monitoring: A statistical perspective (035)
14:50-15:10	Advanced Diagnostic Frameworks Leveraging Graph Neural Networks for Mechanical System Maintenance (079)	Research on electromagnetic tomography detection method for carbon fiber composites cable (179)	Recent progress and development trends of online oil wear debris particle detection sensors (172)	Research on axial compressor fault early warning and diagnosis based on performance parameters and vibration monitoring (285)	Development of CFRTP Ground Anchor Bearing Plate with Fiber Optic Sensors (539)	Walking mileage measurement method for wire rope based on wire strand signal (053)	Tip timing pulse signal analysis based on CEEMDAN-wavelet combined noise reduction (295)
15:10-15:30	Analysis of tube burst in boiler platen reheater of 600MW sub-critical coal turbine generator set (088)	Development of Flexible Magnetostrictive Patch Guided-Wave Transducers for Structural Health Monitoring (184)	Gearbox fault prediction method based on multi-parameter combining and experience-driven (192)	Non-contact mechanical seal state recognition and end-face control (307)	Preliminary Exploration of Magnetic Flux Leakage Testing Method for Defects in Thick-Walled Steel Plates (561)	Visualization and quantification of broken wires in steel wire ropes based on induction thermography (057)	A novel parameter estimation method of BTT data without gridding error (340)
15:30-15:50	Coffee						

Day2

16 October 2024

Wednesday

	Room1 (P3-1) Session Chair: Jiyan Zhao	Room2 (P2-2,6) Session Chair: Zhenmao Chen	Room3 (P2-11) Session Chair: Tonghai Wu	Room4 (P3-2,3) Session Chair: Hui Ma or Guide Deng	Room5 (P5-2) Session Chair: Jingyu Huang	Room6 (P5-3) Session Chair: Bin Hu	Room7 (P5-10) Session Chair: Shaohua Dong
15:50-16:10	A Dilated Residual Network for Turbine Blade ICT Image Artifact Removal (091)	A Simulation Method for Natural Magnetization of Austenitic Stainless Steel Based on Ising Model (315)	The principle of digital sensors for oil detection and their application in digital production (235)	SUDDEN RISE OF RADIAL VIBRATION LEVELS IN STEAM TURBINE OF PROPYLENE COMPRESSOR (381)	Design of urban rail transit track detection probe (236)	Defect detection based on ultrasonic least squares reverse time migration and deep learning (358)	Corrosion Resistant Silicone Coating with Intrinsic Self-healing Property (186)
16:10-16:30	Molten pool behavior and effect of fluid flow on surface quality in electron beam ive melting of IN738 superalloy (101)	Possibility of using direct current potential (DCPD) for stress corrosion cracking (IGSCC) life assessment. (323)	Tribo-informatics approach for condition monitoring of tribological system (302)	Sensorless based anomaly detection and degradation assessment of of roller chain systems (60)	Research on the Impact of Track Irregularity Wavelength on the Dynamic Characteristics of High-Speed Maglev Trains (243)	In-service Ultrasonic Inspection System for Wind Turbine Main Shaft (360)	Improved edge detection technology for pipeline weld images based on multi-operator fusion (244)
16:30-16:50	A Deeply Supervised Dual-Scale Network for Accurate ICT Image Super-Resolution (107)	A method for thermal aging temperature characterization of 12CrMoV steel using multi parameter fusion of electromagnetic sensors (543)	Research on design method of online monitoring and early warning model for oil of wind turbine gearbox (305)	Investigation on Hydrogen Dissolution Monitoring and Steam Oxidation Laws of Boiler Tube Inner Wall during Deep Peaking of Coal-fired Power Units (67)	Research on irregularity detection of track for high-speed maglev transit (245)	Ultrasonic signal sparse reconstruction based on improved support matching pursuit with adaptive Gabor sub-dictionaries (369)	Design and Application of Intelligent Ultrasonic Monitoring System for Oil and Gas Station Pipelines (262)
16:50-17:10	A low-cost and efficient defect detection system using laser ultrasonic microphone array system based on near field beamforming algorithms (164)	Tx-Rx eddy current probe desginfor axially oriented cracks detection and recognition in pipelines (563)	The influence of temperature on thick film electrode monitoring of lubricating oil acid number (326)	Degradation state assessment method for gearbox bearing of quayside container crane (85)	Aerodynamic Noise Characteristics and Noise Reduction Strategy for High-Speed Trains Operating in Low-Vacuum Tube (309)	Acoustic feature extraction and fault localization of low-speed heavy-duty bearings (515)	Design of phase difference hydrogen probe based on COMSOL simulation (265)
17:10-17:30		Development and Trends of Modern Pipeline Internal Inspection Technology (353)	DSU-LSTM based state prediction method for lubricating oil (328)				
17:30-17:50			Modeling the correlation of different sizes of wear abrasive grains in gearboxes based on multivariate nonlinear regression (330)				

Day3

17 October 2024

Thursday

Time	Programme						
9:00-9:30	Keynote Presentation (9)						
9:30-10:00	Keynote Presentation (10)						
10:00-10:20	Coffee						
	Room1 (P3-1) Session Chair: Jiyuan Zhao	Room1 (P3-8) Session Chair: Haichao An	Room1 (P4-3) Session Chair: Fuqing Hu	Room1 (P3-2,3) Session Chair: Hui Ma or Guide Deng	Room1 (P4-8) Session Chair: Jindrich Liska	Room1 (P5-7) Session Chair: Jianchun Fan	Room1 (P3-7) Session Chair: Zhinong Li
10:20-10:40	Distinguish (3)	Lubrication monitoring and assessment for wind turbine (093)	Gear pitting diagnostics under various operating conditions by exploiting torque signals (063)	Experimental study on the influence of galvanized iron sheet protective layer on pulsed eddy current testing (219)	Monitoring of rotating blades using shaft vibration measurement and tracking in a frequency domain (006)	Dynamic monitoring and diagnosis strategy of well control device based on digital twin (253)	Research on fault diagnosis method of Aero-engine based on second-order multi-synchro extracting transform (570)
10:40-11:00	Distinguish (4)	Toward battery-free predictive maintenance (490)	The Research on Intelligent Diagnosis Method of Gearbox Failure Based on Transfer Learning (074)	Prediction of ultimate bearing capacity of vulcanized tank with incomplete penetration defects (255)	Anomaly detection in the task of remote monitoring of large rotary machines based on the signal-based digital twin (014)	Research on the Detection Law of Leakage Sound Wave in Oil and Gas Wells Mixed with CO2 Gas (277)	Research on Fault Diagnosis Methods of Aero-engine Spindle Bearings (571)
11:00-11:20	A method for monitoring damage during thermal recovery process (165)	Predictive maintenance standardization leading the high-quality development (525)	Research on planetary gear signal model based on acteristic signal enhancement and nonlinear least square parameter optimization (098)	Analysis and Life Evaluation of Overdue Service Coke Towers (260)	Condition monitoring of axial fan blades (015)	Analysis of stress magnetic memory detection signals of tubing materials under different loading modes (288)	On the detection of casing bolt loosening based on multiple wave mode conversion (572)
11:20-11:40	Analysis on Laser Ultrasonic Velocity of Metal Additive Manufacturing Parts under High Temperature (168)	石化动设备智能监测分析(526)	The diagnostic effect of Localized-CECP algorithm on different rotary components (291)	Stability Analysis of Large Ferris Wheel during Installation Process (281)	Evaluation of true frequencies of the blade vibrations from blade tip timing measurement (016)	Research on the tightness testing of flange bolt joint structure based on magnetic-ultrasonic testing system (293)	In-Situ Mini-Invasive Maintenance Continuum Robots for Aero-Engines (573)
11:40-12:00	Ultrasonic guided wave sparse delay-and-sum high-resolution damage imaging Method (183)	Challenges and Insights in Implementing High-End Equipment Condition Monitoring and Fault Diagnosis (531)	FMLCD: A fast and accurate multivariate signal decomposition method for gear fault diagnosis (298)	Safety Evaluation of Type IV High Pressure Hydrogen Cylinders (289)	An Overview of Rotary Machine Failures and the Application of Classification Techniques in Remote Monitoring of Large Rotary (019)	Numerical Investigation of Fluid-Thermal Coupling and Acoustic Signature Generation During Small Hole Leakage in CO2 Injection Wells (294)	Bistable Insect-Scale Jumpers with Multimodal Locomotion for Damage Detecting of Aero-engine (574)
12:00-12:20	Erosion simulation of gas-solid two-phase flow elbow based on CFD method (216)	NB-IoT 传感器技术在煤炭洗选设备中的应用优势(565)		Intelligent monitoring and health evaluation of port machinery structure based on digital twin (296)		Utilizing phased array ultrasound technique to examine premium connections at cryogenic temperatures (357)	Aircraft health condition deep sending and intelligent prognosis (575)
12:30-13:30	Lunch						
13:30-14:00	Keynote Presentation (11)						
14:00-14:30	Keynote Presentation (12)						
	Room1 (P3-1) Session Chair: Jiyuan Zhao	Room1 (P5-1) Session Chair: Huaqing Wang	Room1 (P5-5) Session Chair: Yanhua Wang	Room1 (P3-2,3) Session Chair: Hui Ma or Guide Deng	Room1 (P5-6) Session Chair: Longjun Dong	Room1 (P5-9,12) Session Chair: Fangwei Luo or Zhiyuan Liang	Room1 (P3-7) Session Chair: Zhinong Li
14:30-14:50	Design of Array Eddy Current Scanning System for Aluminum Liner of Hydrogen Cylinde (230)	A Fault Diagnosis Method for Data Imbalance Situations Using Improved Diffusion Models with Time Series Networks (284)	Development and application of data acquisition embedded system for wire rope magnetic flux leakage detection (195)	Research on Detection and Monitoring Technology for Hydrogen Storage Cylinder Groups in Hydrogen Refueling Stations (300)	Velocity-Free acoustic emission source localization for complex structures using any-angle pathfinding algorithm (229)	Research on gas kick monitoring technique of deep-water drilling riser based on Doppler effect (322)	Cyclostationary Modulation Signal Bispectrum based Fault Diagnosis of Rotating Machines (576)
14:50-15:10	Research on Intelligent Operation and Maintenance System for High Speed Maglev (318)	Experimental study of nonlinear ultrasonic detection of fatigue damage in nickel-based alloy (306)	Structural deformation monitoring based on flexible sensing and data fusion (249)	Anylysis of effective vision for counterbalanced trucks with mast based on the quick image recognition methods (310)	Mechanisms of Stress Dynamic Evolution and Regulation Methods in Deep Hard Rock Mining Areas (374)	Two-dimensional Array TMR Sensors for the Measurement of the Oxide Film Thickness on Nuclear Fuel Cladding (008)	Monitoring and Diagnosis of Gas Turbine Blade Fracture Faults Synergy-Driven by Acoustic and Vibration (577)
15:10-15:30	Research on Health Monitoring Methods for Ship Machinery Based on Multivariable Data Analysis and Machine Learning (329)		Bridge Condition Monitoring Based on Vehicle Induced Vibration Response (352)	Elastic-plastic collapse of short length tube under lateral crushing between two rigid plates considering initial ovality (321)	Internal damage and response mechanism of rock mass under multi-stage blasting (375)	Understanding the corrosion behaviour of P92 heat-resistant steel in CO2 using in-situ monitoring technology (090)	Cross-domain diagnosis and prediction of aircraft bearings in non-collaborative data scenarios (578)
15:30-15:50	Coffee						

Day3

17 October 2024

Thursday

	Room1 (P3-1) Session Chair: JiYuan Zhao	Room1 (P5-11) Session Chair: Zhijun Yang	Room1 (P5-13) Session Chair: Ming Cao	Room1 (P3-2,3) Session Chair: Hui Ma or Guide Deng	Room1 (P5-6) Session Chair: Longjun Dong	Room1 (P5-15) Session Chair: Xi Shi	Room1 (P3-7) Session Chair: Zhihong Li
15:50-16:10	Design of a diesel engine fault diagnosis system based on performance indicators (334)	Progress in Inspection Technology for Atmospheric Pressure Vertical Storage Tanks (218)	LiftDietNet: A Denoising Unrolling Network Based on Lifting Wavelet Dictionary for Interpretable Intelligent Fault Diagnosis (389)	Analysis of fatigue crack propagation in high-pressure thick walled hydrogen storage pressure vessels (324)	Waveform based Bayesian method for mine microseismic event location and source mechanism inversion (378)	Knowledge-informed domain generalization method for fault diagnosis of bearings in escalators (147)	Adaptive monitoring method of aero-engine based on flight parameters (579)
16:10-16:30	Interface debonding detection based on nonlinear ultrasonic Lamb waves (335)	Detection and Analysis of Micro Leakage in Stainless Steel Tank Bottom Plate (220)	Digital Twin-Based Automatic Detection and Fault-Tolerant Control for Aeroengine Thrust Control Malfunction (398)	Limit analysis of pressure-bearing components and constitutive relationship model of metal materials (325)	Microseismic monitoring-based risk field identification of rock instability risk areas in deep mining processes (379)	Intelligent Maintenance Technology for Escalators (166)	Fault Diagnosis Method for Rolling Bearings Based on MTF-PS ResNet (580)
16:30-16:50	Research on modulation mechanism of planetary gear set considering time-varying transmission paths under sun gear fault. (343)	Acoustic Emission Recognition Model for Corrosion Damage in Flow Noise Environment Based on VMD-HT and Deep Learning (232)	A Study on the Evolution of Pre-set Fault States and Comparative Testing Methods for Aviation Spindle Bearings (406)	Research on Real time Monitoring Digital Twin Platform for Ship Shafting (332)	Critical slowing down characteristics of seismic landslides and rockfalls (388)	Intelligent identification of the escalator abnormalities through time-delayed reconstruction of signal spaces (212)	Dry Friction Vibration Reduction Technologies for Aero Engine Blades and Its Simulation Method (581)
16:50-17:10	Tool fault diagnosis based on improved DenseNet-VIT joint network and transfer learning (351)	Quantitative acoustic emission characterisation of dynamic corrosion activity in metals (476)	An Informer-based Multi-step Prediction Method for Aero-Engine Condition Monitoring (434)	X-CT characterization on micro-structure of C/SiC composite at room and high temperature (422)	Research on rapid assessment technology of wind damage limit of light steel construction color steel plate in railway perimeter (438)	Research on automatic detection of high-pressure pump defects through deep learning (213)	vibration characteristics of rotor system with large imbalance (582)
17:10-17:30	Damage identification on heat prevention coating of insulate tiles (472)	Ergonomic Design and Application of Robot Systems for Surface Operations on Large-scale Spherical Tanks (564)		The simulation research on ultra-high-pressure water jet for the outer wall of spherical tanks using robot. (449)		Research on condition monitoring and fault diagnosis of escalator under complex working conditions (377)	Low-quality Fault Signal Enhancement and Diagnosis based on Sparse Strategy (583)
17:30-17:50	Condition Monitoring in the field of extraction and processing machines (176)						Towards data-poor and knowledge-rich machinery fault diagnosis (584)

Time	Programme						
9:00-9:30	Keynote Presentation (13)						
9:30-10:00	Keynote Presentation (14)						
10:00-10:20	Coffee						
	Room1 (P5-14,18) Session Chair:Zhangyan Zhao or Yuan Liu	Room2 (P5-16) Session Chair:Zhanwen Wu	Room3 (P5-17) Session Chair:WeiKe Song	Room4 (P5-22) Session Chair:Ming Li	Room5 (P6-1,7) Session Chair:Bin Hu or Ming J Zuo	Room6 (P6-2,3) Session Chair:Yilin Mo or Ruqiang Yan	Room7 (P6-4,5,6) Session Chair:Liqiang Zhong or Yinghao Cai or Jing Rao
10:20-10:40	Automatic measurement system for cable crane tower displacement based on GeoCom (387)	Recognition of Fault Classification for Lift Door System Based on Edge AI Models (141)	Stress Monitoring and Early Damage Prediction for Large Roller Coasters (221)	Intelligent Detection of Multi-phase Flow Based on Electrical Impedance Tomography (EIT) (033)	Coal Gasification Syngas Pipeline Leak and Damage Prevention Based on Distributed Optical Fiber Temperature Sensing (400)	Plug-and-Play Distributed Driving State Estimation for Open Vehicle Platoons (261)	Research on Robot Detection Technology for Safety Status of Lightning Rods in Substations (327)
10:40-11:00	Transient Dynamic Analysis of a Quay Crane under Seismic Conditions Based on the Vector Finite Element Method (421)	Regional elevator fault prediction based on random forest (402)	Infrared thermography for amusement facility status monitoring (224)	Study of Impedance Correction and Parameters Separation for Precision Oxide Film Thickness Measurement (037)	Application of cloud-based motor equipment monitoring system for motors based on Internet of Things and deep residual contraction network (409)	Neural Hysteresis Friction Modeling for Industrial Robot Dynamics Identification (268)	Full coverage path planning and path tracing algorithm based on ROS system (339)
11:00-11:20	An Improved YOLOv5s Model for Railway Container Flatcar Loading and Unloading Status Detection (426)	Online Detection of Elevator Guide Rail Straightness Based on Computer Vision (413)	Key Technologies and Application of State Monitoring and Fault Diagnosis for High-parameter Large Amusement Facilities (228)	Oxide Film Thickness Measurement of Cr Coating Fuel Rod Cladding Using a Swept-Frequency ECT Method (050)	Experimental study on ultrasonic thickness measurement of tank bottom plate (416)	Study on damage monitoring of carbon fiber composites based on piezoelectric impedance technology (382)	Full coverage path planning and path tracing algorithm based on ROS system (444)
11:20-11:40	Study on preventing rail gnawing of rail-mounted gantry crane based on rigid-flexible coupling dynamic simulation (433)	Research on Piston Effect of High-Speed Elevator on Door System (430)	Intelligent Monitoring System for Ensuring Efficient Lubrication of Roller Coaster Lifting Chains (237)	Wall thinning quantification with a lift-off distance for metallic structures using pulsed ECT equipped with efficient signal processing (054)	Voiceprint image localization algorithm integrating Harris Eagle optimization algorithm (516)	Large language model and knowledge graph-based digital twin aviation equipment fault diagnosis technology (380)	A novel adaptive wavelet feature fusion network for rotating machinery fault diagnosis (404)
11:40-12:00	Cross-Device Fault Diagnosis Method for Rolling Bearings Based on Pre-training and Multi-loss (442)	Research on Main Drive Chain Damage under Large Variable Load Conditions Based on Dynamic Simulation (431)	Steel cable stress monitoring for Ferris wheel based on elasto-magnetic method (263)	High temperature resistant ultrasonic sensors for temperature and stress monitoring of nuclear power equipment (104)	please cancel this submission (530)	Application of Digital Twin Technology in Asset Management: A Comprehensive Literature Review (427)	Ultrasonic wave propagation in honeycomb sandwich composite structures (401)
12:00-12:20		Case study of elevator speed limiter failure and a self-monitoring elevator speed limiter (432)	Roller coaster track 3D data collected by UAV Distance measurement method and visual presentation analysis (269)			An Aero-Engine Visual Inspection and Intelligent Maintenance Framework based on Digital Twins (485)	Intelligent identification of bolt joint loosening based on nonlinear guided wave (441)
12:30-13:30	Lunch						
13:30-14:00	Keynote Presentation (15)						
	Room1 (P5-14,18) Session Chair: Zhangyan Zhao or Yuan Liu	Room1 (P5-16) Session Chair: Zhanwen Wu	Room1 (P5-17) Session Chair: WeiKe Song	Room1 (P5-22) Session Chair: Ming Li	Room1 (P5-19) Session Chair: Hongpeng Zhang	Room1 (P5-21) Session Chair: Dayong Zhang	
14:00-14:20	A Real-Time Compensation Method for Principal Distance Errors in Port-Based Vision Measurement Systems (448)	A Brief Discussion on the Standardization Development of Domestic Lift Internet of Things (466)	Research on Testing Method and System Development for Running Speed of Large Roller Coaster (278)	Measuring the liquid level inside metal pipes using A0 guided waves (106)	An overview of the effectiveness of digital data for monitoring the life cycle of marine engines (065)	Analysis of Ice-Induced Vibrations on Marine Platforms in Liaodong Bay, Bohai Sea Based on Field Monitoring (492)	
14:20-14:40	A Batch Detection Method for Bolt Loosening Angles Based on Machine Vision (460)	Bearing Fault Diagnosis in Elevator Systems with Variable Operating Conditions based on Attention-guided Multi-Sensor Information-coupled Meta Learning Network (467)	Research on early warning method of typical failure of Ferris wheel based on small sample fault data (283)	Inductance-to-Digital Converters (LDC) based multi-parameter eddy current testing (109)	Fault diagnosis of wind turbine gearboxes under changing operating conditions (169)	Ice load identification of an upright jacket offshore platform based on the state space method (513)	
14:40-15:00	Real-Time Video Transmission Delay Measurement for Port Crane Surveillance Systems (465)	Elevator status monitoring and health evaluation system (474)	A screening method for point cloud clustering to identify the intrusion of roller coaster passenger envelopes (299)	Regionally coordinated guided wave damage monitoring for large-scale structures (111)	Federated Diverse Knowledge Learning for Machinery Fault Diagnosis with Data Heterogeneity (412)	Ice-Induced Vibration Risk Early Warning Analysis for Ice-Resistant Structures in the Bohai Sea Based on Internet of Things Technology (514)	
15:00-15:20	Coffee						

Day4

18 October 2024

Friday

15:20-15:40	Room1 (P5-14,18) Session Chair: Zhangyan Zhao or Yuan Liu	Room1 (P5-16) Session Chair: Zhanwen Wu	Room1 (P5-17) Session Chair: Weike Song	Room1 (P5-22) Session Chair: Ming Li	Room1 (P5-20) Session Chair:Fuyuan Yang		
15:40-16:00	Research on the Method of Constructing Peer Evaluation Index System for Special Equipment Inspection and Testing Agencies (523)	Semantic Segmentation-based Intelligent Safety Harness Detection for Elevator Maintenance Operations (483)	Safety analysis of typical high-altitude flying amusement rides overspeed protection devices (301)	Liquid temperature monitoring of spent fuel pool based on ultrasonic transit time measurement (137)	Study on the Risk Zone of Hydrogen Leak Diffusion in High-Pressure Hydrogen Transmission Pipeline Station Fields (038)		
16:00-16:20	Fault diagnosis and critical component life prediction of passenger ropeway (086)	Research on the Method of Constructing Peer Evaluation Index System for Special Equipment Inspection and Testing Agencies (523)	Research on Typical Fault Diagnosis for Transmission System of Amusement Rides Based on Vibration Monitoring (304)	Development and application of thermal fatigue monitoring system in nuclear power plant (152)	Dynamics simulation study for blending hydrogen into natural gas networks (046)		
16:20-16:40	Study on the characteristics and influencing factors of magnetic flux leakage signal of broken wire damage of passenger ropeway wire rope (097)	A root cause location approach for elevator vibration based on Transformer and KNN (524)	Research on deformation detection of amusement rides component based on coherent lasers (317)	Design of eddy current array probe for stress corrosion cracking detection (461)	Research on the Noise Signal Characteristics of Hydrogen Leaks (223)		
16:40-17:00		Design of Environmental Monitoring System for Machine Room of Lifts for Explosive Atmospheres (528)	Risk and countermeasures of bolt connection in amusement rides (336)		Rapid monitoring and risk assessment of hydrogen leakage in semi enclosed spaces (258)		
17:00-17:20		Case analysis of elevator speed limiter failure and self-monitoring scheme (560)	Safety analysis of typical hydraulic-driven high-altitude flying supersonic protection devices (446)				
17:20-17:40	Closing Ceremony						