

| Time | Programme | | | | | | |
|---------------|--|--|---|---|---|---|--|
| 9:00-10:00 | Opening Ceremony | | | | | | |
| 10:00-10:30 | Coffee | | | | | | |
| 10:30-11:00 | Keynote Presentation (1): Operation Condition Monitoring of Wind Turbine Blades | | | | | | Prof. Fulei Chu |
| 11:00-11:30 | Keynote Presentation (2): Learning Based Soft Sensing and Prediction for Industrial Applications | | | | | | Prof. Hamid Reza Karimi |
| 12:30-13:30 | Lunch | | | | | | |
| 13:30-14:00 | Keynote Presentation (3): Machine Learning for Practical Prognosis and Health Management | | | | | | Prof. Mingjian Zuo |
| 14:00-14:30 | Keynote Presentation (4): Progress of Ultrasonic Non-destructive Testing Instruments | | | | | | Prof. Zicheng Wang |
| | Room A | Room B-1 | Room B-2 | Room C-1 | Room C-2 | Room D-1 | Room D-2 |
| Session Chair | Qingbo He | Esko Juuso/Zhaoye Qin | Dong Wang | Longbiao He | Yanhua Sun | Jingjing He/Ruqiang Yan | Jiyuan Zhao/ Xiyue Zou |
| 14:30-14:50 | 1-1-419 Near-field Passive Wireless Strain Sensor for Structure Health Monitoring of Mega | Distinguished Lecture Intelligent indicators for integrating condition monitoring and control Prof. E.K. Juuso | 2-2-417 Study on the laser vibration technology under noise condition | 2-4-082 Ultrasonic Monitoring Method for Oil Film Thickness in the Contact Zone of Roller Bearings | 5-5-249 Structural deformation monitoring based on flexible sensing and data fusion | Distinguished Lecture How Condition Monitoring is More than Testing Critical Assets Prof. Stuart Norman | 3-1-079 Advanced Diagnostic Frameworks Leveraging Graph Neural Networks for Mechanical System |
| 14:50-15:10 | 1-4-350 Study on the Mechanism of Errors Induced by Speed Fluctuations in Blade Tip Timing Signals | 1-5-287 Intelligent indicators for integrating condition monitoring and control | 2-8-521 Coda wave based self-sensing smart aggregate and its potential application | 2-4-178 Damage acterization of carbon fiber composites based on modal acoustic emission | 5-5-352 Bridge Condition Monitoring Based on Vehicle Induced Vibration Response | 3-5-064 Passive aircraft icing detection during flight using ambient noise | 3-1-091 A Dilated Residual Network for Turbine Blade ICT Image Artifact Removal |
| 15:10-15:30 | 1-4-562 Assessment of Lift-off Distance and Thickness of Metallic Plate Using Pulsed Eddy Current Testing with Scikit-learn | 1-5-341 Multi-scale Convolutional Neural Network Gas Turbine Rotor System Fault Diagnosis | 2-8-527 Research on Monitoring Method of Q345R High Temperature Molten Salt Corrosion Process Based on Acoustic Emission | 2-4-182 Condition Monitoring and Non-Destructive Testing of Titanium Alloy Behavior under Cyclic Loading and | 2-16-214 Ultrasonic imaging of high-density polyethylene using spatio-temporal singular value decompositions | 2-16-517 DEVELOPMENT OF A TECHNIQUE FOR ECHANIZED TRASONIC INSPECTION OF ELDED JOINTS OF MAIN | 3-1-101 Molten pool behavior and effect of fluid flow on surface quality in electron beam melting of IN738 |
| 15:30-15:50 | Coffee | | | | | | |
| Session Chair | Ying Zhang | Esko Juuso/ Chaoye Qin | Dong Wang | Longbiao He | Zhichao Li | Jingjing He/Ruqiang Yan | Jiyuan Zhao/ Xiyue Zou |
| 15:50-16:10 | 1-2-167 Research on the Extraction and Diagnosis Methods of Strongly Nonstationary Fault Features for Complex | 1-5-368 Improving classification of imbalanced classes in industrial data: Enhancing defect detection for type IV | 2-8-535 Clarification of Fracture Behaviour of RC Pillar with 3D Concrete Printing Buried Formwork Based on Elastic | 2-4-252 Research on acoustic energy attenuation positioning method for gas leakage in pressure pipeline | 2-9-197 Research on curing monitoring method of the resin in steel epoxy sleeves based on circumferential SH | 3-5-092 Lamb wave reconstruction using transmissibility concept in frequency domain | 3-1-107 A Deeply Supervised Dual-Scale Network for Accurate ICT Image Super-Resolution |
| 16:10-16:30 | 1-2-314 Bearing faults diagnosis under time-varying rotation speed condition based on dual-tree complex wavelet | 1-3-385 Multichannel phase synchronization fusion variational mode decomposition for | 2-8-536 Estimation of Tendon Rupture Locations Inside PC Box Girders Using AE Source Location | 2-4-257 Progress of calibration and verification standards for acoustic emission sensors | 2-9-199 Design of Guided Wave Magnetostrictive Patch Transducer with Vertical Static Bias Magnetic Field | 3-5-151 Optimized piezoelectric transducers array for Lamb waves in arbitrary cross-section structures | 5-18-459 Experimental study on performance indicators of passenger car drivers based on collision monitoring |
| 16:30-16:50 | 1-2-454 Joint Application of Principal Component Analysis and Wavelet Transform for 1D | 1-3-439 Demagnetization Fault Diagnosis of PMSLM Based on Relative Position Matrix Transformation and | 2-6-563 Tx-Rx eddy current probe desginfor axially oriented cracks detection and recognition in pipelines | 2-4-538 Ultrasonic measurement of contact loads between rollers and raceways in wind turbine main shaft bearings | 2-9-201 Optimal design of transducers based on the Halbach arrays permanent magnet structure | 3-5-481 Fatigue Crack Monitoring of Wire and Arc Manufactured material Based on Acoustic Emission Technology | 5-14-448 A Real-Time Compensation Method for Principal Distance Errors in Port-Based Vision Measurement Systems |
| 16:50-17:10 | 1-3-452 Experimental Verification of a new Hyperparameter optimization of Improved Sparse Low-Rank Model for Bearing Fault Signal | 1-3-445 Multi-objective Optimization Guided Sparse Representation for Extracting Non-periodic Fault Features of Variable | | 5-3-354 High-Strength Bolt Axial Force Gauge Based on EMAT | 2-9-574 Multifrequency Torsional Waves-Based Pipelines Condition Monitoring System | 5-14-447 A Distributed Vision Measurement Method for Large Components in Ports | |

| Time | Programme | | | | | |
|---------------|---|---|---|--|--|---|
| 9:00-9:30 | Keynote Presentation (5): Applications and challenges of AI technology in wind turbine condition monitoring, Prof. Andrew Ball | | | | | |
| 9:30-10:00 | Keynote Presentation (6): Physically interpretable fault feature learning: New perspective for realizing simultaneous machine condition monitoring, fault diagnosis and degradation assessment, Prof. Dong Wang | | | | | |
| 10:00-10:20 | Coffee | | | | | |
| | Room A | Room B-1 | Room B-2 | Room C-1 | Room C-2 | Room D-1 |
| Session Chair | Junyan Liu | Tonghai Wu/ Jiang xu | Jindrich Liska | Yue Yu | Jun Zhang | Jiyuan Zhao/Yuan Liu |
| 10:20-10:40 | Distinguished Lecture Autonomy in unmanned surface vehicles Prof. Ning Wang | 2-11-075 Research on image enhancement method for online oil monitoring system | 4-8-006 Monitoring of rotating blades using shaft vibration measurement and tracking in a frequency domain | 5-20-038 Study on the Risk Zone of Hydrogen Leak Diffusion in High-Pressure Hydrogen Transmission Pipeline Station Fields | 5-22-033 Intelligent Detection of Multi-phase Flow Based on Electrical Impedance Tomography (EIT) | Distinguished Lecture Advances in Condition Monitoring for Long Composite Wind Turbine Blades Prof. Wenxian Yang |
| 10:40-11:00 | 2-7-411 A novel feature extraction and enhancement technique for infrared thermal wave imaging based on multi-time pixel local outlier | 2-11-077 Mechanism-driven Model for Adaptive Wear State Diagnosis via Moving Particle Monitoring | 4-8-014 Anomaly detection in the task of remote monitoring of large rotary machines based on the signal-based digital twin | 5-20-046 Dynamics simulation study for blending hydrogen into natural gas networks | 5-22-037 Study of Impedance Correction and Parameters Separation for Precision Oxide Film Thickness Measurement | 3-1-183 Ultrasonic guided wave sparse delay-and-sum high-resolution damage imaging Method |
| 11:00-11:20 | 2-5-208 Optical detection method based on polarized structured light system | 2-11-302 Tribo-informatics approach for condition monitoring of tribological system | 4-8-015 Condition monitoring of axial fan blades | 5-20-223 Research on the Noise Signal Characteristics of Hydrogen Leaks | 5-22-050 Oxide Film Thickness Measurement of Cr Coating Fuel Rod Cladding Using a Swept-Frequency ECT Method | 3-1-216 Analysis of gas-solid two-phase basic pipeline flow field based on Eulerian-Eulerian models |
| 11:20-11:40 | 2-7-319 Outdoor lock-in carrierographic of photovoltaic modules under sunlight and cold conditions | 2-11-172 Recent progress and development trends of online oil wear debris particle detection sensors | 4-8-016 Evaluation of true frequencies of the blade vibrations from blade tip timing measurement | 5-20-258 Rapid monitoring and risk assessment of hydrogen leakage in sem142i enclosed spaces | 5-22-054 Wall thinning quantification with a lift-off distance for metallic structures using pulsed ECT equipped with efficient signal processing | 3-1-230 Design of Array Eddy Current Scanning System for Aluminum Liner of Hydrogen Cylinde |
| 11:40-12:00 | 2-16-519 Intelligent Recognition of Internal Defects in Composite Materials Based on Dual-Modality Ultrasonic Imaging | 2-11-192 Gearbox fault prediction method based on multi-parameter combining and experience-driven | 4-8-019 An Overview of Rotary Machine Failures and the Application of Classification Techniques in Remote Monitoring of Large Rotary | 5-20-259 Typical hydrogen laboratory condition monitoring and safety risk control strategy | 5-22-104 High temperature resistant ultrasonic sensors for temperature and stress monitoring of nuclear power equipment | 3-1-318 Research on Intelligent Operation and Maintenance System for High Speed Maglev |
| 12:00-13:30 | Lunch | | | | | |
| 13:30-14:00 | Keynote Presentation(7): Recent Progression of Eddy Current Non-destructive Testing and Monitoring | | | | | Prof. Guiyun Tian |
| 14:00-14:30 | Keynote Presentation(8): Risk Management of Piping System Based on Wall Thinning Monitoring and Prediction | | | | | Prof. Tetsuya Uchimoto |
| Session Chair | Zhenmao Chen | Tonghai Wu | Xi Shi | Longjun Dong | Zhiyuan Liang | Jiyuan Zhao/ Bin Hu |
| 14:30-14:50 | 2-6-034 Implementation of rope monitoring and conveyor belt monitoring systems at critical industrial facilities | 2-11-235 Principle and application of digital sensor for oil detection | 5-15-147 Knowledge-informed domain generalization method for fault diagnosis of bearings in escalators | 5-6-388 Critical slowing down characteristics of seismic landslides and rockfalls | 5-12-008 Two-dimensional Array TMR Sensors for the Measurement of the Oxide Film Thickness on Nuclear Fuel Cladding | 3-1-343 Research on modulation mechanism of planetary gear set considering time-varying transmission paths under sun |

Day2

16 October 2024

Wednesday

| | | | | | | |
|----------------------|--|--|---|---|---|---|
| 14:50-15:10 | 2-6-102 Macro-micro model of 3D magnetic Barkhausen noise signals: macroscopic nonlinear magnetization and microscopic MBN jumping | 5-14-426 An Improved YOLOv5s Model for Railway Container Flatcar Loading and Unloading Status Detection | 5-15-166 Intelligent Maintenance Technology for Escalators | 6-8-570 Metrological support and standardization of advanced NDT, CM and TD tools based on the use of internet technologies | 5-12-090 Understanding the corrosion behaviour of P92 heat-resistant steel in CO2 using in-situ monitoring technology | 3-1-351 Tool fault diagnosis based on improved DenseNet-ViT joint network and transfer learning |
| 15:10-15:30 | 2-6-139 A Self-enhancement Cycle Thermography Generative Adversarial Network for Complex Defect Profile Reconstruction | 5-17-221 Stress Monitoring and Early Damage Prediction for Large Roller Coasters | 5-15-377 Research on condition monitoring and fault diagnosis of escalator under complex working conditions | 5-9-322 Research on gas kick monitoring technique of deep-water drilling riser based on Doppler effect | 5-3-360 In-service Ultrasonic Inspection System for Wind Turbine Main Shaft | 3-1-472 Damage identification on heat prevention coating of insulate tiles |
| 15:30-15:50 | Coffee | | | | | |
| Session Chair | Zhenmao Chen | Xuefei Guan/ Zhijun Yang | Yihua Kang/ Jianbo Wu | Jianchun Fan | Jun Zhang | Chunguang Xu/ Yang Zheng |
| 15:50-16:10 | 2-6-173 Imaging and non-destructive evaluation of multi-layer GFRP based on microwave | 3-6-081 Lagunas' beamforming with spiked covariance estimation for acoustic array imaging: refining an old idea by Lagunas in 1986 | 2-15-580 Eddy Current Thermography Detection Method for Thickness Reduction Defects of Ferromagnetic Components Based on Magnetic Permeability Perturbation | 5-7-253 Dynamic monitoring and diagnosis strategy of well control device based on digital twin | 5-22-106 Measuring the liquid level inside metal pipes using A0 guided waves | 2-12-005 Monitoring of the stress state of critical fasteners of hydraulic turbine units based on the metal magnetic memory technique |
| 16:10-16:30 | 2-6-315 A Simulation Method for Natural Magnetization of Austenitic Stainless Steel Based on Ising Model | 3-6-089 Correlation between phased array ultrasonic backscattering coefficient and grain size in polycrystal | 2-15-003 Condition Monitoring of Mash Seam Welds for Thin Steel Sheets in a Continuous Galvanizing Line | 5-7-277 Research on the Detection Law of Leakage Sound Wave in Oil and Gas Wells Mixed with CO2 Gas | 5-22-109 Inductance-to-Digital Converters (LDC) based multi-parameter eddy current testing | 2-12-303 Stress characterization based on the Villari Reversal |
| 16:30-16:50 | 2-6-323 Possibility of using direct current potential (DCPD) for stress corrosion cracking (IGSCC) life assessment | 3-6-142 Embedded flaw quantification and imaging in curved components using phased-array ultrasound SAFT | 2-15-011 Rail Near-surface Defect Inspection of Large Lift-off Eddy Current Thermography | 5-7-288 Analysis of stress magnetic memory detection signals of tubing materials under different loading modes | 5-22-111 Regionally coordinated guided wave damage monitoring for large-scale structures | 2-13-013 Structural Monitoring of Prestressed Concrete Containment of Nuclear Power Plants Based on the Multi-dimensional Optical |
| 16:50-17:10 | 2-6-543 A method for thermal aging temperature characterization of 12CrMoV steel using multi parameter fusion of electromagnetic sensors | 3-6-462 A Viterbi-based ray tracing technique for ultrasonic linear array imaging of L-shaped CFRP structures | 2-15-055 Research on early corrosion evaluation of carbon steel based on multiple feature acterization methods | 5-7-293 Research on the tightness testing of flange bolt joint structure based on magnetic-ultrasonic testing system | 5-22-137 Liquid temperature monitoring of spent fuel pool based on ultrasonic transit time measurement | 2-14-010 Challenges In Detecting Welding Anomalies Under Insulation: A Case Study Using Metal Magnetic Memory Technique |
| 17:10-17:30 | | 5-11-218 Progress in Inspection Technology for Atmospheric Pressure Vertical Storage Tanks | 4-7-057 Visualization and quantification of broken wires in steel wire ropes based on induction thermography | | 5-22-461 Design of eddy current array probe for stress corrosion cracking detection | |

| Time | Programme | | | | | |
|---------------|--|--|--|--|---|--|
| 9:00-9:30 | Keynote Presentation(9): Novel electromagnetic inspection technology supporting onshore and offshore pipe-/pipeline condition monitoring Prof. Andreas Boenisch | | | | | |
| 9:30-10:00 | Keynote Presentation(10): Terahertz Nondestructive Testing and Quantitative Evaluation Prof. Shuncong Zhong | | | | | |
| 10:00-10:20 | Coffee | | | | | |
| | Room A | Room B-1 | Room B-2 | Room C-1 | Room C-2 | Room D-1 |
| Session Chair | Hongpeng Zhang | Haichao An | Yonghao Miao | Guide Deng | Zhinong Hongkai Jiang | Ziguang Jia |
| 10:20-10:40 | Distinguished Lecture Structural multi-dimensional dynamic parameters monitoring based on displacement-sensitive fringe pattern Prof. Jianfeng Zhong | 3-8-525 Predictive maintenance standardization leading the high-quality development | 4-4-355 Improved Minimum Entropy Deconvolution based on Dual-domain Separation Technique for Bearing Fault Feature Extraction | 3-3-060 Sensorless based anomaly detection and degradation assessment of roller chain systems | 3-7-600 Research on fault diagnosis method of Aero-engine based on second-order multi-synchroextractingtransform | 5-21-492 Analysis of Ice-Induced Vibrations on Marine Platforms in Liaodong Bay, Bohai Sea Based on Field Monitoring |
| 10:40-11:00 | 5-19-065 An overview of the effectiveness of digital data for monitoring the life cycle of marine engines | 3-8-093 Lubrication monitoring and assessment for wind turbine | 4-4-542 Federation Aggregation Strategy Learning Method for Inter-client Data Imbalance | 3-3-067 Investigation on Hydrogen Dissolution Monitoring and Steam Oxidation Laws of Boiler Tube Inner Wall during Deep Peaking of Coal-fired | 3-7-601 Research on Fault Diagnosis Methods of Aero-engine Spindle Bearings | 5-21-513 Ice load identification of an upright jacket offshore platform based on the state space method |
| 11:00-11:20 | 5-19-169 Fault diagnosis of wind turbine gearboxes under changing operating conditions | 3-8-531 Challenges and Insights in Implementing High-End Equipment Condition Monitoring and Fault Diagnosis | 4-6-280 System Software for Prognostics and Health Management of Large Rotating Machinery and Its Application | 3-3-219 Experimental study on the influence of galvanized iron sheet protective layer on pulsed eddy current testing | 3-7-602 On the detection of casing bolt loosening based on multiple wave mode conversion | 5-21-514 Ice-Induced Vibration Risk Early Warning Analysis for Ice-Resistant Structures in the Bohai Sea Based on Internet of Things Technology |
| 11:20-11:40 | 5-19-412 Federated Diverse Knowledge Learning for Machinery Fault Diagnosis with Data Heterogeneity | 3-8-565 Insight for the application of condition monitoring in coal mining industry | 4-6-285 Research on axial compressor fault early warning and diagnosis based on performance parameters and vibration monitoring | 3-3-255 Prediction of ultimate bearing capacity of vulcanized tank with incomplete penetration defects | 3-7-603 In-Situ Mini-Invasive Maintenance Continuum Robots for Aero-Engines | 5-23-176 Condition Monitoring in the field of extraction and processing machines |
| 11:40-12:00 | 5-19-567 Wear condition monitoring technology for ships and Marine engineering equipment | 3-8-577 Magnetic bearings and condition monitoring: a perfect combination to ensure machine reliability | 5-21-493 Measurement and Analysis of Ice Loads on Jacket Platforms Based on Fibre Optic Strain Sensor | 3-3-289 Safety Evaluation of type IV High Pressure Hydrogen Cylinders | 3-7-604 Bistable Insect-Scale Jumpers with Multimodal Locomotion for Damage Detecting of Aero-engine | |
| 12:00-12:20 | 5-19-572 Complex Domain Signal Detection for Metal Particles in Lubrication Systems Using a Double Lock-in Amplifier Circuit | 3-8-583 Exploration and practice of intelligent operation and maintenance of equipment in iron and steel industry | | | 3-7-605 Aircraft health condition deep sending and intelligent prognosis | |
| 12:20-13:30 | Lunch | | | | | |
| 13:30-14:00 | Keynote Presentation (11): Metrological support and standardization of advanced NDT, CM and TD tools based on the use of internet technologies Prof. Vladimir A. Syasko | | | | | |
| 14:00-14:30 | Keynote Presentation (12): Enhancing Infrastructure Resilience with Advanced NDT Solutions Prof. Tomoki Shiotani | | | | | |

| Session Chair | Xiang Li | Haichao An | Weimin Wang | Guide Deng | Zhinong/ Hongkai Jiang | Shaohua Dong/ Zuopeng Lv |
|---------------|---|---|---|---|---|---|
| 14:30-14:50 | 3-4-007 RUL prediction for rolling bearings using improved LSTM and a degradation detection strategy | 3-8-490 Toward battery-free predictive maintenance | 4-9-035 Layout optimization and parameter identification for blade tip timing-based condition monitoring: A statistical perspective | 3-3-310 Anylysis of effective vision for counterbalanced trucks with mast based on the quick image recognition methods | 3-7-606 Cyclostationary Modulation Signal Bispectrum based Fault Diagnosis of Rotating Machines | 5-13-389 LiftDictNet: A Denoising Unrolling Network Based on Lifting Wavelet Dictionary for Interpretable Intelligent Fault Diagnosis |
| 14:50-15:10 | 3-4-194 Intelligent Health Indicator Construction Method for Aircraft Structures based on Acoustic Emission | 3-8-581 From observations to corrective actions: insights into wind Turbine Gearboxes failure using condition monitoring solution | 5-1-284 A Fault Diagnosis Method for Data Imbalance Situations Using Improved Diffusion Models with Time Series Networks | 3-3-321 Elastic-plastic collapse of short length tube under lateral crushing between two rigid plates considering initial ovality | 3-7-607 Research on dynamic behaviors of a turbo-shaft engine rotor system | 5-13-398 Digital Twin-Based Automatic Detection and Fault-Tolerant Control for Aeroengine Thrust Control Malfunction |
| 15:10-15:30 | 3-4-270 A prediction model for wear-crack coupling degradation process in a gear transmission system based on dynamic | 3-8-526 Intelligent monitoring and analysis of petrochemical dynamic equipment | 5-2-236 Design of urban rail transit track detection probe | 3-3-324 Analysis of fatigue crack propagation in high-pressure thick walled hydrogen storage pressure vessels | 3-7-608 The flexible tensor singular value decomposition and its applications in multisensor signal fusion | 5-13-406 A Study on the Evolution of Pre-set Fault States and Comparative Testing Methods for Aviation Spindle Bearings |
| 15:30-15:50 | Coffee | | | | | |
| Session Chair | Xiang Li | zenghua Liu/ Zhengyang Yin | Weimin Wang | Guide Deng | Zhinong Li Hongkai Jiang | Shaohua Dong/ Zuopeng Lv |
| 15:50-16:10 | 3-4-286 Life Assessment Based on API579-1/ASME FFS-1 Fitness-For-Service for Cr-Mo Ferritic Steel | 4-1-566 Application of elastic guided waves and time reversal technique for damage characterization in plate-like structures with a piezoelectric | 5-2-206 Research on the Impact of Track Irregularity Wavelength on the Dynamic characteristics of High-Speed Maglev Trains | 3-3-260 Analysis and Life Evaluation of Overdue Service Coke Towers | 3-7-609 Adaptive monitoring method of aero-engine based on flight parameters | 5-13-434 An Informer-based Multi-step Prediction Method for Aero-Engine Condition Monitoring |
| 16:10-16:30 | 3-2-381 SUDDEN RISE OF RADIAL VIBRATION LEVELS IN STEAM TURBINE OF PROPYLENE | 4-3-063 Gear pitting diagnostics under various operating conditions by exploiting torque signals | 5-2-309 Aerodynamic Noise Characteristics and Noise Reduction Strategy for High-Speed Trains Operating in | 3-3-325 Limit analysis of pressure-bearing components and constitutive relationship model of metal materials | 3-7-610 Fault Diagnosis Method for Rolling Bearings Based on MTF-PS ResNet | 5-10-186 Corrosion Resistant Silicone Coating with Intrinsic Self-healing Property |
| 16:30-16:50 | 2-16-539 Development of CFRTP Ground Anchor Bearing Plate with Fiber Optic Sensors | 4-3-074 Interpretable wavelet kernel network with attention mechanism | 5-17-237 Intelligent Monitoring System for Ensuring Efficient Lubrication of Roller Coaster Lifting Chains | 3-3-449 The simulation research on ultra-high-pressure water jet for the outer wall of spherical tanks using a welding | 3-7-611 Dry Friction Vibration Reduction Technologies for Aero Engine Blades and Its Simulation Method | 5-10-244 Improved edge detection technology for pipeline weld images based on multi-operator fusion |
| 16:50-17:10 | 2-16-561 Preliminary Exploration of Magnetic Flux Leakage Testing Method for Defects in Thick-Walled Steel Plates | 4-3-098 Research on planetary gear signal model based on acteristic signal enhancement and nonlinear least square parameter optimization | 5-17-304 Research on Typical Fault Diagnosis for Transmission System of Amusement Rides Based on Vibration Monitoring | | 3-7-612 Nonlinear vibration analysis and flow field prediction of aero-engine blades | 5-10-262 Design and Application of Intelligent Ultrasonic Monitoring System for Oil and Gas Station Pipelines |
| 17:10-17:30 | 6-2-382 Study on damage monitoring of carbon fiber composites based on piezoelectric impedance technology | 4-3-267 Numerical bifurcation analysis of gear transmission in non-stationary regimes under angular formalism | 5-17-317 Research on deformation detection of amusement rides component based on coherent lasers | | 3-7-613 Low-quality Fault Signal Enhancement and Diagnosis based on Sparse Strategy | 5-10-265 Design of phase difference hydrogen probe based on COMSOL simulation |
| 17:30-17:50 | | 4-3-291 The diagnostic effect of Localized-CECP algorithm on different rotary components | | | 3-7-614 Discriminative Sparse Representation Theory for Intelligent Fault Diagnosis 3-7-615 Lightweight Intelligent Recognition Method for Acoustic Imaging Features of Scaling Aero-engine Test Rig | |

| Time | Programme | | | | |
|----------------------|--|--|---|---|---|
| 9:00-9:30 | Keynote Presentation(13): Complexity in Biological and Mechanical Systems , Prof Antonio Zippo, Prof. F. Pellicano | | | | |
| 9:30-10:00 | Keynote Presentation(14): Research and Application of Condition Monitoring and Health Evaluation Technology for Large-scale Amusement Rides Prof. Gongtian Shen | | | | |
| 10:00-10:20 | Coffee | | | | |
| | Room A | Room B-1 | Room B-2 | Room C-1 | Room C-2 |
| Session Chair | Zhangyan Zhao/ Yuan Liu | Zhanwen Wu/ Kari Suihkonen | Weike Song | Bin Hu | Yilin Mo |
| 10:20-10:40 | 5-14-433 Study on preventing rail gnawing of rail-mounted gantry crane based on rigid-flexible coupling dynamic simulation | 5-16-432 Case study of elevator speed limiter failure and a self-monitoring elevator speed limiter | 5-17-228 Key Technologies and Application of State Monitoring and Fault Diagnosis for High-parameter Large Amusement Facilities | 6-1-342 Research on on-line condition monitoring and safety data analysis technology of hydrogen energy equipment | 6-2-261 Plug-and-Play Distributed Driving State Estimation for Open Vehicle Platoons |
| 10:40-11:00 | 5-14-460 A Batch Detection Method for Bolt Loosening Angles Based on Machine Vision | 5-16-467 Bearing Fault Diagnosis in Elevator Systems with Variable Operating Conditions based on Attention-guided Multi-Sensor Information-coupled Meta Learning Network | 5-17-263 Steel cable stress monitoring for Ferris wheel based on elastomagnetic method | 6-1-400 Coal Gasification Syngas Pipeline Leak and Damage Prevention Based on Distributed Optical Fiber Temperature Sensing | 6-2-268 Neural Hysteresis Friction Modeling for Industrial Robot Dynamics Identification |
| 11:00-11:20 | 5-14-465 Real-Time Video Transmission Delay Measurement for Port Crane Surveillance Systems | 5-16-474 Elevator status monitoring and health evaluation system | 5-17-278 Research on Testing Method and System Development for Running Speed of Large Roller Coaster | 6-1-409 Application of cloud-based motor equipment monitoring system for motors based on Internet of Things and deep residual contraction network | 6-3-427 Application of Digital Twin Technology in Asset Management: A Comprehensive Literature Review |
| 11:20-11:40 | 5-18-086 Fault diagnosis and critical component life prediction of passenger ropeway | 5-16-523 Research on the Method of Constructing Peer Evaluation Index System for Special Equipment Inspection and Testing Agencies | 5-17-299 A screening method for point cloud clustering to identify the intrusion of roller coaster passenger envelopes | 6-4-327 Research on Robot Detection Technology for Safety Status of Lightning Rods in Substations | 6-5-404 A novel adaptive wavelet feature fusion network for rotating machinery fault diagnosis |
| 11:40-12:00 | 5-14-617 Application of Ultrasonic Characterization Technology in Lithium Battery Safety | 5-16-528 Design of Environmental Monitoring System for Machine Room of Lifts for Explosive Atmospheres | 5-17-301 Safety analysis of typical high-altitude flying amusement rides overspeed protection devices | | 6-6-441 Intelligent identification of bolt joint loosening based on nonlinear guided wave |
| 12:00-12:10 | Closing Ceremony | | | | |

Poster Presentation

| Be posted on October 15th | Be posted on October 16th | Be posted on October 17th |
|---------------------------|---------------------------|---------------------------|
| 1-2-042 | 2-11-328 | 3-1-040 |
| 1-2-370 | 3-1-134 | 3-1-140 |
| 1-2-520 | 3-1-329 | 5-10-073 |
| 1-2-522 | 3-1-335 | 5-11-564 |
| 1-4-058 | 3-1-396 | 5-11-532 |
| 1-4-247 | 3-1-425 | 5-12-080 |
| 1-5-200 | 3-1-540 | 5-12-112 |
| 1-5-361 | 3-3-300 | 5-13-541 |
| 2-4-292 | 3-3-316 | 5-14-387 |
| 2-4-308 | 3-3-332 | 5-14-421 |
| 2-5-196 | 3-3-333 | 5-14-429 |
| 2-5-489 | 3-3-486 | 5-14-442 |
| 2-6-143 | 4-1-356 | 5-14-463 |
| 2-6-250 | 4-4-313 | 5-16-141 |
| 2-7-386 | 4-6-210 | 5-16-413 |
| 2-7-480 | 4-9-248 | 5-16-430 |
| 2-8-469 | 5-2-078 | 5-16-431 |
| 2-10-534 | 5-2-251 | 5-16-453 |
| 2-11-233 | 5-2-236 | 5-16-466 |
| 2-11-282 | 5-3-338 | 5-16-488 |
| 2-11-330 | 5-3-515 | 5-16-524 |
| 2-15-149 | 5-3-533 | 5-16-529 |
| 2-16-113 | 5-5-193 | 5-16-560 |
| 2-16-114 | 6-1-487 | 5-17-269 |
| 2-16-397 | 6-1-407 | 5-17-336 |
| 3-1-056 | 6-1-408 | 5-17-576 |
| 4-9-340 | 6-1-410 | 5-17-275 |
| 5-5-195 | 6-1-416 | 5-17-392 |
| 5-5-477 | 6-1-478 | 5-18-097 |
| 5-6-374 | 6-3-479 | 5-18-451 |
| 5-16-403 | 6-3-482 | 5-21-491 |
| 5-16-405 | 6-4-366 | 6-1-516 |
| 3-2-579 | 5-3-369 | 6-4-339 |
| 5-16-483 | 3-1-088 | |