

2025 Global Reliability and Prognostics and Health Management Conference (PHM-Xian 2025)

**Xian, China
10-12 October 2025
Pages 1–567**

IEEE Catalog Number: CFP25T22-POD
ISBN: 979-8-3315-2676-4



Copyright © 2025, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP25T22-POD
ISBN (Print-On-Demand):	979-8-3315-2676-4
ISBN (Online):	979-8-3315-2675-7

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Failure Analysis and Simulation on Wear in Spherical Sockets - Needle Roller Friction Pairs for an Aero-Engine Main Fuel Pump Regulator	1
<i>Yantong Liu, Shunong Zhang, Yuejunfei Huang, Zhenyu Huang, Yan Zhou, Zhouong Fan</i>	
Label-free Autonomous Terahertz damage identification and imaging in composites using Spectral Clustering-guided ResNet	7
<i>Chang Liu, Datong Liu, Huizhen Hua, Hua Zhang, Yafei Xu</i>	
Gearbox Fault Diagnosis Method Based on EEMD-MDS-1DCNN	12
<i>Xiaomei Dong</i>	
Parallel Inference Algorithm for Object-Oriented Diagnostic Bayesian Networks	17
<i>Shigang Zhang, Mengqiao Chen, Yongxuan Fang, Xu Luo, Xudong Suo</i>	
Reliability-Driven Prognostic and Dynamic Analysis of Binder Systems in Sand Casting: Evaluating Strength, Flowability, and Structural Performance	24
<i>Shah Alam Bhuiyan, Anayet Ullah Patwari, Wasib Ul Navid, Khandaker Noman, Yongbo Li</i>	
Application of FT and FFT Continuous Zoom Analysis in Motor Bearing Fault Diagnosis	30
<i>Jian Zhou, Jianfeng Yang, Jing Tang, Xiaojian Ding, Wenwei Liu, Shuaiqun Gao</i>	
Piston Leakage Detection Based on Phase Analysis of Stroke Events for Drilling Pumps	34
<i>Siyi Zou, Xinyu Wang, Xin Zhang, Feilong Liao, Zhiliang Liu</i>	
Rolling Bearing Fault Diagnosis Method Based on VMD-CNN-BiLSTM-CA	40
<i>Chen Zhang, Deran Kong</i>	
Find the Limitation of LLMs in Supercomputing Center Infrastructure Operation and Maintenance	45
<i>Chengxu Sun, Liyuan Ren, Litao Liu, Bo Sun, Ying Li, Zhiliang Liu</i>	
Cascaded Fault Diagnosis Model Based on Evidential Deep Learning	53
<i>Yuxiao Yao, Junrui Kang, Shaowei Chen, Shiqi Hu, Yunxiang Long, Shiyin Wang</i>	
Condition Monitoring of Rotating Machinery Under Time-Varying Conditions Based on Continual Learning	61
<i>Yingying Zhou, Meng Rao, Yaqiang Jin, Yumin Ma, Mingjian Zuo</i>	
Research on Data-Driven Degradation Fault Detection and Diagnosis Model for Landing Gear Brake System	68
<i>Hua Ming, Lu Yang, Zhi Lv, Jian Wang, Guigang Zhang</i>	
Applications of the PatchTST Method in Data Generation for Reliability Modeling of EMU Axle Box Bearings	74
<i>Jili Wu, Buzhao Niu, Chang Peng, Xiang Yu, Yuyang Peng, Weikai Yu</i>	
Data-driven Anomaly Detection Model for The Fluid End Subsystem in Cementing Equipment	79
<i>Jinlong Kang, Hailong Li, Dinesh Krishna Mohan, Karolina Sobczak, Fares Ben Youssef, Ahmed Mosallam</i>	
Weak Local Flaw Signal Detection Based on Multiscale Phase Spectrum Reconstruction for Steel Wire Ropes	85
<i>Leilei Yang, Siyu You, Hailin Zhou, Cheng Zhou, Haibin Liu, Chaojie Wang, Zhiliang Liu</i>	

A Health Assessment Method for Linear Feed Drive based on Holographic Representation and Multi-View Attentional CNN	93
<i>Yuan Yao, Chaojie Wang, Huaiying Lin, Yangguang Yuan, Wu Zheng, Bing Li</i>	
Bayesian Dynamic Event Tree Risk Assessment Method for Risk Assessment in Industrial Systems	99
<i>Xiaomin Hu, Yao Wang, Haoran Gao, Shujuan Li, Mingshun Yang</i>	
Multi-Environmental Factor Coupling and Particle Filter-Based Corrosion Prediction and Maintenance Optimization	107
<i>Bin Wang, Shihan Zhou, Yu Zhao</i>	
MTUTL: Mean Teacher-Based Unsupervised Transfer Learning Method for Fault Diagnosis under Time-Varying Operating Conditions	113
<i>Guoyu Huang, Yufan Lv, Junhui Qi, Kangkang Zhao, Leijun Shi, Yun Kong</i>	
Development of a Digital Twin Robot System for Railway Tunnel Diagnostic Vehicle	119
<i>Zhao-Ning Du, Guang-Zhong Cao, Hong-Jin Hu, Yu Lei, Yan-Liang Du</i>	
Corrosion Damage Monitoring of Lap Structures Based on Weighted Fusion Algorithm Using Piezoelectric Sensors	124
<i>Ziru Yang, Yan Zhao, Zhaofeng Dou, Zeyan Li, Yunmeng Ran, Chaojie Zhu, Yantao Liu, Weifang Zhang</i>	
In-situ Three-dimensional Monitoring of LPBF Processing Reliability by Laser Line Scanning System	130
<i>Yibiao Wang, Jiafeng Tang, Zhibin Zhao, Xingwu Zhang, Ruqiang Yan, Xuefeng Chen</i>	
Deep Learning and Probabilistic Clustering for Anomaly Detection in Nuclear Power Plants	137
<i>Jinxiao Yuan, Shuang Lin, Lin Guo, Sui Fan</i>	
Health Management and Cleaning Operation Strategies of Condensers in Nuclear Power Plant	144
<i>Qian Huang, Xiangyuan Meng, Yifan Zhi, Rongyong Zhang, Qi Li</i>	
Fault Response Testing and Analysis Based on a Coupled Rigid-Flexible Dynamic Model	151
<i>Jiding Yao, Yaqiong Lv, Yu Liu, Xueting Yang, Shiqi Zhao, Kangni Xiong</i>	
Reliability Optimization of Dynamic k-out-of-n Systems with Operating Condition Uncertainty and Fuzzy Parameter Modeling	158
<i>Mingli Liu, Jiangbin Zhao, Wei Wang, Dan Wang, Jiangang Li</i>	
An Enhanced Generative Adversarial Network for Condition-Controllable Fault Signal Synthesis and Imbalanced Bearing Fault Diagnosis	166
<i>Teng Wang, Zhi Chao Ong, Shin Yee Khoo, Pei Yi Siow, Tao Wang</i>	
Hierarchical Distance Similarity Entropy: A Novel Nonlinear Feature Extraction Method for Motor Fault Diagnosis	174
<i>Tao Wang, Shin Yee Khoo, Zhi Chao Ong, Pei Yi Siow, Teng Wang</i>	
Optimal Module Layout Method for Aeronautical Air-Cooled Rack Based on Genetic Algorithms	182
<i>Gongyu Wu</i>	
Fault Diagnosis of Harmonic Drives Based on Blockwise-Aggregated Gramian Angular Difference Field	186
<i>Yan Li, Jing Lv, Xiaoguang Ma, Zhuo Long</i>	

An Intelligent Agent Framework for Algorithmic Composition and Invocation in Civil Aircraft Health Management Based on LLMs	193
<i>Tengfei Zhang, Hua Ming, Guigang Zhang, Jian Wang, Qingyu Zhu, Yijun Huang</i>	
Research on Real-time Early Warning Method for New Energy Vehicle Motor Bearings Based on Vehicle-Cloud Collaborative Architecture	199
<i>Sibo Wang, Xiaojiao Chen, Meina Fang, Zhihao Huang</i>	
A Hybrid Fault Diagnosis Framework Integrating Dependency-Matrix Reasoning and Machine Learning-based Ranking for Aircraft Systems	205
<i>Jie Yang, Zeyu Gao, Chen Lu, Laifa Tao, Jinsong Yu</i>	
Three-phase Motor Fault Diagnosis Based on State Division and Frequency Band Synchronization Correction	210
<i>Xiaojian Ding, Jian Zhou, Shuhan Lu, Minghao Zhou, Jing Tang, Ji Wang</i>	
Investigation of Virtual Maintenance and Health Management System Based on Wireless Communication Platform	215
<i>Chengliang Sun, Xiaotao Xu, Weidong Ma, Simin Ma</i>	
A Test Points Selection Strategy Based on the Improved Binary Particle Swarm-genetic Algorithm	221
<i>Yuhang Liu, Zhiming Yang, Yang Yu, Yu Peng</i>	
An Active Learning Surrogate Model Combining Expected Improvement and Local Prediction Uncertainty for Structural Response Probability Density Estimation	227
<i>Lichang Chen, Guangliang Li, Hong-Xing Zhan, Chengning Zhou, Hongfu Zhang, Wutai Dong</i>	
Cross-Mission Health Index Construction and Predictive Maintenance: A Universal Post-Processing Framework for PHM Time Series Foundation Models	234
<i>Jiachen Jin, Yili Wang, Liming Xuan, Honghua Zhao, Wei Cheng, Yuanxiang Li</i>	
A Parallel Active Learning Kriging Model Incorporating Kernel Functions for Structural Reliability Analysis	242
<i>Lichang Chen, Wutai Dong, Hong-Xing Zhan, Chengning Zhou, Hongfu Zhang, Guangliang Li</i>	
Aeroengine On-board Gas Path Modeling Based on Transfer Learning	249
<i>Manshou Dong, Zepeng Wang, Shenghong Peng, Kaiqiang Yang, Jinghui Xu, Yongjun Zhao</i>	
CGAN-Based Missing Data Imputation for Industrial Data Fault Diagnosis	254
<i>Zhengyang Chen, Yang Yu, Zhiming Yang, Gang Xiang</i>	
Attention-TimeMixer: A Time Series Forecasting Model Combining Multi-Layer Perceptron and Attention Mechanism	260
<i>Heyang Li, Zhaoqiang Wang, Changhua Hu, Ziyang Zheng, Qian Xiang</i>	
Cross-component Transfer Fault Diagnosis via Joint Distribution Adaptation on Envelope Spectrum Features	267
<i>Yu Liu, Yaqiong Lv, Xiaohu Zhang, Nanyue Xiong, Jiding Yao, Jian Hao</i>	
How Much Confidence Do We Have for GenAI-Based Reasoning? A Statistical Inference Perspective for Reliability Estimation	274
<i>Zhaojun Steven Li, Kalyan Bhagavan Tadaka, Rocco Cassandro, William R. Tonti</i>	
Intelligent Fault Diagnosis Strategy for Planetary Gearboxes Based on SVM and CNN Model	281
<i>Xinwei Yang, Shuangye Yang, Zhenyue Gu, Yunzhe Liu, Mian Zhang, Yuhao Song</i>	

A convex optimization model for blind deconvolution and its application in machine condition monitoring	288
<i>Liu He, Jiang He, Wen Li, Cai Yi, Qiuyang Zhou</i>	
Constructing Health Indicators for Multivariate Degrading Devices with Multiple Failure Modes	294
<i>Mengcao Li, Lei Feng, Zhengxin Zhang, Hao Wang, Xiaosheng Si</i>	
Wing Panel Shape Reconstruction Method Using Fiber Optic Sensing and Physics-Informed Neural Networks	300
<i>Yiming Huang, Jie Zeng, Yao Zhang, Siqi Diao, Zhiwei Xu, Rongbing Li, Mingshun Jiang</i>	
Reliability Evaluation Method for High-Temperature Radiation-resistant Piezoelectric Sensors	308
<i>Chengning Zhou, Caixue Liu, Xueying Chen, Hongyou Zhan, Cuiyun Peng, Taibo Yang</i>	
A Root Cause Analysis and Prediction Framework in Quality Control Based on Hierarchical PCMCi	315
<i>Yang Xiong, Shujie Liu, Zihao Li, Youkang Sun</i>	
Fault Root Cause Diagnosis Based on Time Series Prediction and Permutation Algorithm	322
<i>Zihao Li, Shujie Liu, Yang Xiong, Youkang Sun</i>	
WAP-Net: A Wavelet Attention Prototypical Network for Rolling Bearing Fault Diagnosis Under Few-Shot and Multi-Operating Conditions	327
<i>Zhinan Xia, Yanna Zhang, Yifeng Li</i>	
A Domain knowledge Graph Construction Method for Fault Diagnosis of Track Circuit	335
<i>Yanhui Bai, Qifei Wang, Guohui Wen, Honghui Li, Ye Li, Yueyuan Qi</i>	
Anomaly Detection in Time Series via Correlation-Guided Feature Reduction and Residual Distribution Characterization	343
<i>Jiazheng Sun, Yuchen Song, Datong Liu</i>	
Anomaly Detection Method for Door Systems Based on Hybrid CNN-GRU Autoencoder	349
<i>Jialu Wang, Xiangchen Ren, Bo Li, Jing Liu, Liang Liang, Yueqi Qiao</i>	
Joint Condition-Based Maintenance and Spare Parts Ordering for Leased System Using a Customized Deep Reinforcement Learning Algorithm	354
<i>Yunzheng Zhang, Dingpeng Fu, Xiaohong Zhang, Jie Gan, Jiayu Chen, Junying Ding</i>	
Deep Reinforcement Learning-Based Optimization of Imperfect Maintenance for Wind Turbine Blades under Random Shocks	362
<i>Xiaohong Zhang, Junying Ding, Guannan Shi, Yunzheng Zhang, Jie Gan, Jinhe Wang</i>	
Dynamic Optimization of Low-Temperature Heating Target Temperature for Lithium-Ion Battery Energy Storage Systems Based on DAUKF-LSTM	370
<i>Peijin Liu, Wenchi Sun</i>	
Optimization on Control Parameters for a Certain Type of Main Fuel Pump Regulator Based on a Genetic-Particle Swarm Phased Fusion Algorithm	377
<i>Hebin Lv, Shunong Zhang, Zikang Yu, Zhenyu Huang, Yan Zhou, Zhourong Fan</i>	
Localized Gear Fault Diagnosis via Envelope Analysis of Heterodyne Downconverted Ultrasonic Signals	384
<i>Jingchao Zhang, Chunwei Wang, Yupeng Zhang, Shiyu Cen, Yingwei Li</i>	

Strain Distribution Inversion and Load Localization Method for Fuel Tanks Based on Distributed Optical Fiber Sensing	392
<i>Junwei Cai, Jie Zeng, Zhengwen Huang, Hongduo Chen, Shiyang Liu, Yiming Huang, Youhong Zhang</i>	
Trend reasoning approach with multi-perception mechanism for battery SOH estimation	400
<i>Yitong Liu, Leqing Zhan, Te Han, Anastasia Ivanovna Levina, Igor Vasilievich Ilin, Andrey Chernyshov</i>	
Intelligent modeling for creep deformation prediction and reliability analysis of hot end components	407
<i>Hai-Feng Gao, Bing Xu</i>	
Study on Sparse Filtering Based on Rolling Bearing Simulation Model	414
<i>Siqi Gong, Zhiyuan Ma, Shunming Li</i>	
Angular-Domain Synchronous Averaging: A Novel Fault Detection Method for Main Bearing of Shield Machines	421
<i>Yaqiang Jin, Chaojun Xu, Zixuan Zhang, Xingzhi Ba, Mingjian Zuo</i>	
A Bearing Anomaly Detection Method Based on Pretrained Time-series Large Models	427
<i>Bo Li, Liang Liang, Jing Liu, Xiangchen Ren, Yueqi Qiao, Jingwen Ma</i>	
Loosening Feature Identification of Composite Panel Bolt Groups Based on Optical Fiber Sensors	432
<i>Shiao Wang, Jie Zeng, Yao Zhang, Jihong Xu, Chao Zhang, Qinghua Zhu, Hongfeng Ma</i>	
BSLM-CDAN: Batch-Norm-Stabilized and Locality-Weighted Conditional Adaptation for Cross-Condition Fault Diagnosis	440
<i>Yonghui Xu, Yusheng Zhang, Tianyu Gao</i>	
Rotor Skidding Root-Cause Tracing and Regulation Based on Supervised Fine-Tuning of LLM	448
<i>Jianhao Xiong, Leiming Ma, Zhi Xu, Kai Chen, Ningyun Lu</i>	
Multi-Scale Temporal Convolutional Network with Self-Attention for Remaining Useful Life Prediction of Hot Rolling Rolls	455
<i>Canyang Ding, Jun Wang, Di Zhou</i>	
Dynamic Anomaly Detection of UAV Actuators Based on State Identification and Spatio-Temporal Feature Extraction	459
<i>Jun Tu, Shuting Kang, Miao Xu, Yajun Meng, Junyan Guo, Zhou Su</i>	
Intelligent Spare Parts Management for Aviation PHM: Fusion of Predictive Modeling, Reinforcement Learning, and Ensemble Evaluation	465
<i>Daqing Meng, Qiuyan Yao, Hui Yang, Xiaoliang Luo, Lin Li, Xiaojing Wang</i>	
Few Shot Remaining Useful Life Prediction of Aviation Hydraulic Pump Based on Variational Autoencoder and Wiener Process	473
<i>Zhiwei Zheng, Jiahui Sun, Yuhong Huang, Lin Wang, Chao Zhang, Shaoping Wang, Rentong Chen</i>	
Life Prediction Method for Satellite Communication Payloads based on Accelerated Degradation Tests	480
<i>Mengxiang Long, Zuomin Shi, Guicui Fu, Shukai Guan</i>	
Enhanced Time-Series Signal Decomposition via ICEEMDAN-VMD-DFA for Radar SNR Reliability and Fault Detection	487
<i>Yang Chen, Zhijun Cheng, Zhitao Long, Jiacheng Li, Yanlin Wang</i>	
Fault Diagnosis of Rolling Bearing Using Improved Robust Local Mean Decomposition Method	494
<i>Yubin Pan, Xuancheng Zhang, Haowen Chen, Wenda Zhao</i>	

Maximized-Difference PDI Construction based on Spatiotemporal Feature Graph for FTU Health Condition Assessment	499
<i>Yuxin Li, Ran Duan, Yitao Fei, Yujie Liu, Jie Liu, Yongchuan Zhang</i>	
Rotating machinery fault diagnosis based on VMD-POD data fusion and InceptionTime network	505
<i>Yun Ke, Guanqian Shen, Haoxuan Ding, Jinpeng Peng</i>	
Modeling IGBT Modules Degradation Process based on Fractional Weibull	512
<i>Yixin Zhang, Jiaqi Hua, Wanqing Song</i>	
Optimized Well Casing Design for Reliable Drilling in Tarim	516
<i>Clare Zhan, Xianghua Liu, Lian Liu</i>	
Domain Generalization Fault Diagnosis of Rotating Machinery Based on Multimodal Ensemble Learning	522
<i>Hongpeng Xiao, Zhe Cheng, Zhitao Xing, Niaoqing Hu, Guoji Shen, Yi Yang, Ruizhi Li, Duofu Wang</i>	
Relative Position Estimation Algorithm for Inspection UAV Based on Point Cloud Registration	527
<i>Dingci Zhang, Zhipeng Wang, Yixuan Geng, Limin Jia, Yong Qin</i>	
Disentangled Causal and Non-Causal Feature Learning via Adversarial Networks for Cross-Domain Fault Diagnosis	534
<i>Yongsheng Zhang, Honglan Wu</i>	
Mission-Based Scenario Generation Method for Integrated Reliability and Safety Testing of Avionics Systems	542
<i>Jinyong Yao, Yuhui Nie, Jingtao Wu, Zhanpeng Ren</i>	
Noise Reduction Study of Debris Detection Signal under Different Working Conditions Based on GWO-VMD-WT	549
<i>Zhenglan Liang, Shixun Pei, Long Su, Wei Hong</i>	
Reliable Lightweight SAR Aircraft Target Detection Algorithm Based on Partial Downsampling Network	557
<i>Xiaohan Tan, Zhuoran Cai</i>	
Health Condition Prediction of Power Diodes Using Particle Filter	562
<i>Chao Guo, Zhonghai Lu</i>	
A Fault Diagnosis Method for Aerospace Bearings Based on CS-WGAN-PSO	568
<i>Miao Zhou, Yang Yu, Chen Qu, Gang Xiang, Zhiming Yang</i>	
Knowledge-Driven Framework for Online Monitoring and Fault Diagnosis in Manufacturing Lines	575
<i>Chen Zheng, Xudong Li, Chengran Jiang, Qin Wang, Han Wang, Zhiqiang Cai</i>	
Reliable algorithm for SAR images Based on Lightweight Dual-Channel Attention Module	581
<i>Shaohui Pan, Zhuoran Cai</i>	
Efficient Channel Attention Networks for Reliable SAR Image Classification	586
<i>Siwen Zheng, Zhuoran Cai</i>	
Reliable SAR Target Detection Algorithm Based on Hybrid Attention Mechanism	591
<i>Yan Zhao, Zhuoran Cai</i>	

Reliable Lightweight SAR Small Target Detection Algorithm Based on Parallel Fusion of Multi-scale Convolution Kernels	598
<i>Changbing Zhai, Zhuoran Cai</i>	
Long-Tailed Fault Diagnosis of Tunnel Boring Machines Main Bearing Based on Causal Inference	603
<i>Zihe Pang, Shuang Gao, Zhiyao Zhang, Peng Guo, Yuchen Jiang</i>	
Anomaly Detection Model for Industrial Robots Based on State Observer	611
<i>Yao Liu, Ji Wang, Jingjing Hu, Cuiying Wu, Yu Lin, Baolin Zhang</i>	
Anomaly Detection and Feature Inference in Assembly Quality Based on Auto Encoders	615
<i>Yan Wang, Zhiqiang Cai, Yongwei Ke, Han Wang, Wenjin Zhu, Shuai Zhang</i>	
Uncertainty-Aware Remaining Useful Life Prediction with Bayesian Deep Learning: A Function-Space Variational Inference Approach	623
<i>Wei Wang, Zhiqiang Cai, Han Wang, Mingli Liu, Shubin Si</i>	
Zero-Shot Compound Faults Diagnosis Through Entropy-Guided Semantic Representation Learning	630
<i>Yanhong Wu, Ningning Liu, Benyuan Yang, Kesheng Wang</i>	
Bearing Fault Diagnosis Based on a Deep Belief Network Integrated with Time–Frequency Analysis	636
<i>Huijing Yuan, Honghui Li, Yanhui Bai, Pengjie Yan, Xiaorui Yang, Zhen Li</i>	
Digital Twin-Driven Anomaly Detection for Permanent Magnet Synchronous Motors	644
<i>Shifeng Zhao, Suyang Li, Haiyang Jia, Xiaojun Bai, Yanfang Fu, Yu Ji</i>	
Wavelet-based Denoising Diffusion Probabilistic Model for Rotating Machinery Fault Feature Enhancement	652
<i>Chao Teng, Zuogang Shang, Ruqiang Yan</i>	
Fatigue Mechanism Analysis and Life Prediction of Fuel Gear Pump under Variable Loading Conditions	658
<i>Xuanhui Luo, Rentong Chen, Chao Zhang, Shaoping Wang, Jiahui Sun, Lin Wang, Ziwei Xu</i>	
High-Cycle Fatigue Reliability Assessment of Turbo-Fan Blisk Incorporating Circumferential Inlet Disturbance	666
<i>Gao Hai-Feng, Li Qing, Wang Yu-Hang</i>	
Bearing Fault Transfer Diagnosis Based on Maximum Mean Discrepancy	673
<i>Ji Wang, Yisheng Fan, Shuaiqun Gao, Xiaojian Ding, Jing Tang, Chao Liang</i>	
Neurons-State-Attention-Driven Trustworthy Framework: An Interpretable Networks for Wind Turbine Gearbox Fault Diagnosis	678
<i>Chun Zhang, Yuhao Wu, Peng Chen, Meng Rao</i>	
Method for Fault Diagnosis of Pump Bearings in Chemical Plants Under Strong Noise Environments	686
<i>Chen Zhang, Xiangyun Li, Haodong Yang, Jinliang Guo</i>	
Dynamic Optimization of High-Speed Maglev Operation Profile Considering Operational Protection	693
<i>Chenxi Lin, Jianjun Yuan, Pengzi Chu</i>	
Fault Diagnosis for Power Inverter Based on Feature Transformation with Imbalanced Samples	699
<i>Quan Sun, Jiahao Dong, Zhijie Zhang</i>	

Importance Measure of Influencing Factors in Radar Anti-Jamming Experiments Based on the Equal-Frequency Gridding Method	705
<i>Zerui Zhao, Zhijun Cheng, Jiacheng Li, Yang Chen, Zhitao Long</i>	
Transforming Closed-Set to Open-Set Diagnosis: Placeholder Learning for Bearing Faults	712
<i>Chuanmeng Wang, Tongxiao Yang, Zhirui Kai, Xinpeng Wang, Rui Yang, Zenghui An</i>	
Disentangled Representation Learning for Motor Fault Diagnosis Under Variable Working Conditions	720
<i>Yueyan Du, Shaowei Chen, Shiqi Hu, Xinyuan Liao</i>	
Clean Label Backdoor Attack against the Industrial Equipment Fault Detection Model: A Case Study of Railway Switch Machine	728
<i>Xirui Chen, Guangji Zheng, Ye Li, Dingyu Chen, Hui Liu</i>	
In-Situ Method for Gate Oxide Interface Condition Monitoring of SiC Power MOSFETs Under Power Cycling Stress	732
<i>Wenrui Wu, Wenjie Zhou, Yiqiang Chen, Bo Hou, Jianfeng Zhang</i>	
Data-Driven Model Updating and Load Identification for Rotor Blades Using Neural Networks	739
<i>Ye Wei, Mengwei Lu, Zhenguo Zhang, Zhongliang Xie, Shiming Zhang</i>	
Fault Diagnosis of Elevators Based on Empirical Mode Decomposition and Random Forest Algorithm	746
<i>Yuwei Liu, Tianfeng Wang, Mukai Wang, Shuo Yang, Duhui Lu</i>	
Data Mining and Potential Fault Analysis of Aerospace Component Selection	751
<i>Shimin Hong, Bo Wan, Guicui Fu</i>	
Prediction of Delamination Growth in Plastic Encapsulated Devices under Steady-State Temperature and Humidity Stress	757
<i>Xilong Wang, Long Xie, Zhufeng Zhang, Peng Li, Chenyu Wang</i>	
A Confidence Pseudo-Label Updating Strategy for Multi-Source-Free Domain Adaptation in Machinery Fault Diagnosis	763
<i>Kang Wu, Shuang Wang, Xingxing Jiang, Qiuyu Song, Shunming Li, Zhongkui Zhu</i>	
Structural Digital Twin for the Health Monitoring of Aircraft Wings	768
<i>Chenyufan Hu, Teng Wang, Yongbo Li</i>	
ST-MambaFormer: Multi-Scale Spatial-Temporal Feature Fusion for Tool Remaining Useful Life Prediction in Smart Manufacturing	776
<i>Sirun Zhu, Rui Chen, Na Li, Yiming Wu, Wei Guo</i>	
A Fusion Network Based on Improved Inception-Resnet and Gated Attention for Bearing Fault Diagnosis Using Multi-Source Heterogeneous Data	784
<i>Zhenxin Liu, Rui Chen, Na Li, Yiming Wu, Wei Guo</i>	
Dual-Attention Enhanced Diffusion Model for Bearing Signals Denoising	790
<i>Weiwei Qian, Yuna Wang, Yuting Yang</i>	
A Fault Diagnosis Method Based on Multi-Layer Spiking Neural Network	796
<i>Siyuan Zhang, Di Liu, Shaoping Wang, Cun Shi</i>	
Cracks Reflection and Transmission of Lamb Waves	802
<i>Dario J. Pasadas, Mohsen Barzegar, Artur L. Ribeiro, Helena G. Ramos</i>	

Interpretable Laplace Dynamics Network: A Novel Network for AHU Fault Diagnosis	806
<i>Ying Yan, Hao Wang, Jiaqi Zhu, Shanjin Rong, Jun Cai, Edmond Qi Wu, Adrian David Cheok, Aiguo Song</i>	
Physics-Guided Spatio-Temporal Graph Multi-Task Learning for Aircraft Engine Prognostics and Health Management	813
<i>Le Tian, Yiping Gao, Zerui Xi, Liang Gao, Xinyu Li</i>	
Bearing Life Prediction Based on Data Distribution Adaptation Transfer Learning Regressor	820
<i>Wenda Zhao, Yubin Pan, Hui Liu, Xianshui Gong, Siyu Li</i>	
Data-driven Remaining Useful Life Prediction for Optical Modules in Intelligent Computing Networks	825
<i>Ningchun Liu, Aiyue Wang, Anyi Tang, Geyang Xiao, Jun Zhu, Tao Zou</i>	
Deep Reinforcement Learning for Dynamic Predictive Maintenance Task Assignment with Heterogeneous Workforce	829
<i>Yifan Li, Mengxuan Zhang, Yumeng Zhang</i>	
A Condition-based Predictive Maintenance Framework: A Case Study of Railway Point Machines	836
<i>Qi Jiang, Wei Shangguan, Linguo Chai, Junjie Chen</i>	
Battery Prognostics and Health Management Using CNN-BiGRU with Temporal Attention on CS2 Cells	842
<i>Amrit Dhakal, Yu Wu, Umar Saleem</i>	
A Unified Latent-Space Autoencoder Framework for RUL Prediction Under Sensor Limited Conditions	848
<i>Xizhen Wang, Juanzhang Xie, Zepeng Wang, Ziyi Wang, Peng Ren, Yongjun Zhao</i>	
Flow-Augmented Domain Adaptation for Fault Diagnosis under Varying Operating Conditions	855
<i>Zhiyan Zhan, Guang Zhao, Shiqiang Hu, Lingkun Luo</i>	
LLM-Assisted Contrastive Learning for Robust Fault Diagnosis in Nuclear Power Plants	862
<i>Zongyu Xu, Hang Wang</i>	
The Early Fault Intelligent Diagnosis Method of EHA Based on Hypergraph Attention Network	870
<i>Yibo Song, Shuanglu Li, Chun Zhao, Zhan Zhang, Xiansong He, Xiaoli Zhao, Jianyong Yao, Chuanjie Lu</i>	
Aircraft Engine Integrated Layout Design of PHM Driven	876
<i>Yanggang Teng, Shunli Li, Yu Chen, Qinchao Wang, Ruina Tian, Lijuan Zhang, Haiyang Zhang, Yanting Hou</i>	
Influences of Local Wear on Vibration Characteristics of Cylindrical Roller Bearing Systems	881
<i>Tao Wu, Shuhui Cui, Yeyin Xu, Mukai Wang, Shuo Yang, Duhui Lu</i>	
Fault Diagnosis of Electromechanical Equipment Based on LSTM-CVAE for Data Loss	887
<i>Yu Zhang, Xiaoxuan Jiao, Ran Yang, Zigang Cai</i>	
SDDI: A Sparse Distilled Dual-branch Informer for Aero-engine Remaining Useful Life Prediction	892
<i>Siyang Wu, Dongfeng Shi, Ada Che, Xiaopei Li, Yanhong Li, Bei Wu</i>	
A Fault Diagnosis Method for Axial Piston Pumps Based on Temporal-Textual Feature Alignment Using Large Language Models	900
<i>Keyan Yuan, Gang Wang, Maojun Yuan, Guoliang Lu</i>	
Aircraft Structural Strength Verification Based on Cyber-Physical Fusion	906
<i>Simeng Ding, Yangming Guo, Yan Kang, Xiaodong Wang, Qiang Min</i>	

Mechanical Model and Failure Prediction of Aircraft Ground Towing Stability	913
<i>Yang Nanshan, Yu Jinhai, Li Wenwu</i>	
Finite-Horizon Maintenance Optimization for Performance-Sharing Systems Using Attention-Enhanced Reinforcement Learning	919
<i>Ze Li, Ning Zhang, Yifan Zhou</i>	
A Health Monitoring Model for the Intake and Exhaust System of Locomotive Diesel Engine	927
<i>Kebei Chen, Liyi Ma, Zhipeng Wang, Limin Jia, Yong Qin, Yakun Zuo</i>	
Bearing Fault Diagnosis Based on CycleGAN Data Enhancement	934
<i>Ximing Liu, Lei Xiao, Jun Wang</i>	
A Test Duration-Based Quantitative Evaluation of Results from Salt Spray Test	942
<i>Xingyu Guo, Xiaohui Wang</i>	
Operational response-based neural network approach for model update	948
<i>Mengwei Lu, Ye Wei, Rihuan Yu, Zhenguo Zhang, Zhongliang Xie, Shiming Zhang</i>	
Edge Training of Lightweight Bearing Fault Diagnosis Model via Dataset Distillation	953
<i>Yichao Li, Yanfang Liu, Xudong Wang, Bing Liu, Kaixuan Zhang, Huanhuan Lu</i>	
Fault Diagnosis of Axial-Flow Blades Based on Multi-Source Signal Feature Fusion	958
<i>Yingli Li, Wenhai Zhang, Peng Zhang, Kun Feng</i>	
A Collaborative PHM and Ergonomics Approach to Maintainability Design in Civil Aircraft	966
<i>Qing Zheng, Yin Chen</i>	
Dynamic Rebalancing and Reliability-Oriented Optimization for Cabinet-based Battery Swapping Systems	971
<i>Zeyu Lin, Yaoming Zhou, Isabelle Ji, Ying Zhu, Tangbin Xia</i>	
Quantifying Fault Causality via Adaptive Mode Decomposition: A Novel Framework for Multi-Fault Diagnosis in Noisy Aero-Engine Rotors	977
<i>Haoyang Wu, Zhiwen Zhao, Xiongfei Zhai, Yankai Wang</i>	
Digital Twin-Driven Subdomain Adaptation Transfer Learning Network for Bearing Fault Diagnosis Under Imbalanced Data	984
<i>Zhongding Fan, Xianzeng Liu, Hang Wang, Yuanyuan Zhou, Huaiwang Jin, Yongbin Liu</i>	
Progressive Damage Modeling of Impact Deformation in Aircraft Drag Chute Lock Mechanism	990
<i>Jiang Deyin, Zhang Hao, Fu Bowen, Liu Jingyi, Pang Huan, Cui Weimin</i>	
A high-precision spacecraft bearing fault diagnosis method based on improved EMD-CNN-LSTM fusion	997
<i>Jiaqiang Li, Yi Du, Xiaoyang Pan</i>	
Multi-Source Data Fusion for Aircraft Structural Health Monitoring: A Review	1003
<i>Jianfei Feng, Jiangwei Lian, Kang Cao, Yongjie Zhang</i>	
Fault Response of Intermediate Rotating Elastic Support Fracture: Analytical Solution and Simulation Analysis	1009
<i>Xiao Luo, Jian-Bing Zhao, Bin Shi, Ya-Wei Zeng, Yan-Kai Wang</i>	

State Information Embedded Method for Zero-Sample Fault Diagnosis of Propulsion Shaft System	1017
<i>Qi Deng, Junyun Wu, Zhongdian Tian, Lixiang Wang</i>	
A Fault Diagnosis Method under Data Imbalance Conditions Based on Denoising Diffusion Probabilistic Model and Efficient Conv2Former	1023
<i>Zheng Gengfeng, Zhang Xin, Tianzhuang Yu, Yongchao Zhang</i>	
Hybrid Compression for Accurate End of Life Prediction on Edge Battery Management System	1028
<i>Taeyi Kim, Younggeon Seo, Stephane Barde</i>	
Self-supervised Uncertainty Guided Adversarial Open-Set Cross-domain Fault Diagnosis Under Time-varying Conditions	1036
<i>Li Wang, Liang Gao, Xinyu Li, Yiping Gao</i>	
Modal Identification and Damage Detection for Wing Spar Structures Based on Fiber Optic Sensing	1042
<i>Fengshuo Zhang, Shiwei Zhao, Yongkang Li, Peng Shu, Rui Lv, Lingqi Kong</i>	
Vision-based Wear Detection Method for Elevator Traction Steel Belts	1048
<i>Yimin Wei, Dong Lei, Xiaoli Leng, Shaokang Li, Shujian Chen</i>	
An Industrial Noise Anomaly Detection Method Based on Transfer Learning with Large-Scale Speech Models	1054
<i>Tianxing Zhan, Yingli Li, Dandan Xiao, Kun Feng</i>	
Flight Parameter Exceedance Classification for Aircraft State Monitoring via Data-Augmented Self-Attention	1060
<i>Yin Chen, Lin Lin, Hao Cai</i>	
Development of a Simplified Multi-Agent System for Fault Diagnosis	1068
<i>Chunzhi Wu, Hua Zhong, Zhixin Jiao, Gaihong Yuan, Shuqi Hu, Jianyi Zhang, Rujun Sun, Chunyan Peng, Yougao Xiao</i>	
Analysis and Prediction of Corrosion fatigue life for 16Mn spiral steel pipe via Gumbel Extreme Value	1076
<i>Huiting Liu, Hang Yu, Xintian Liu</i>	
A Prior-knowledge-embedded Causal-aware Adaptive Regulation Network for Open-set Domain Generalization in Fault Diagnosis	1080
<i>Ning Jia, Lei Gu, Weiguo Huang</i>	
TGNet: Texture-Guided Network for Strip Steel Surface Defect Detection	1086
<i>Sheng Gao, Honghao Wang, Lianlei Lin, Jiawei Wang</i>	
Fault Diagnosis of Rolling Bearings on Sea Launch Hydrological Ship Based on Hierarchical Weighted Cross Diversity Entropy	1094
<i>Chong Yao, Xianyu Zou, Xinyue Zheng, Enzhe Song, Yun Ke</i>	
Memory-Assisted Transformer for Unsupervised Fault Detection	1102
<i>Yifei Ding, Yudong Cao, Qiuhua Miao, Shuying Yang</i>	
An Interpretable Fault Diagnosis Method for Sea Launch Hydrological Ship Diesel Engine Injectors Based on MLP and SHAP	1109
<i>Yao Chong, Tongyu Hou, Enzhe Song, Yun Ke</i>	
Robust SOH Prediction for Lithium-Ion Batteries via ProbSparse Informer Architecture	1115
<i>Younggeon Seo, Taeyi Kim, Barde Stephane</i>	

Crack Defect Detection and Evaluation Method Based on Spiking Neural Network	1123
<i>Yanxiao Wang, Zihao Lei, Zhizhen Ren, Guangrui Wen, Yu Su, Zhifen Zhang</i>	
Ansys-based study on the thermal-mechanical coupling life of the skin honeycomb bonding interface	1129
<i>Zheng Wei, Qingyu Huang, Sa Wu</i>	
Modeling of Product Quality Cost in the Manufacturing Process Considering Infant Failures	1135
<i>Qingxia Lin, Yihai He, Jiayang Li, Yuqi Cai, Chao Guo</i>	
Comparison of Traditional and Large Model Methods for Bearing Fault Classification Tasks	1141
<i>Kangli Xu, Chao Li, Wei Dong, Chunxiao Xing, Yunya Sun</i>	
Fault Diagnosis of the Shaft System of Sea Launch Hydrological Ship Based on Dual-Path Residual Convolutional Network under Strong Noise Conditions	1149
<i>Yun Ke, Jinpeng Peng, Haoxuan Ding, Enzhe Song, Qintao Gong, Lingjie Jiang</i>	
Generalized zero-shot compound fault diagnosis of bearings in sea launch hydrological ship based on OC-SVM and physical information constraints Variational Autoencoder	1156
<i>Chong Yao, Renjie Zhu, Enzhe Song, Yun Ke</i>	
A Transferable Deep Learning Framework for Lithium-ion Battery State-of-Health Prediction Based on CL-Transformer	1162
<i>Xuanang Gui, Tong Zhao, Junrong Du, Yuheng Cheng, Ruihua Yu, Junhua Zhao</i>	
MSF-AE: An Autoencoder with Multi-Scale Fusion for Imbalanced Bearing Fault Diagnosis	1170
<i>Ke Meng, Jun Wang, Chuancang Ding, Yifan Huangfu, Weiguo Huang, Zhongkui Zhu</i>	
The Non-contact Signal Measurement and Compensation Method Based on Improved Non-Negative Tikhonov Regularization within the Bayesian Framework	1176
<i>Yuyang He, Lixin Wang, Kaixing Chang, Shaocong Li</i>	
Digital Twin-Enhanced Remaining Useful Life Prediction for Bearings using Multi-Scale CNN-Transformer Hybrid Model	1181
<i>Jie Zhou, Zhensheng Lin, Gang Niu</i>	
A Method on Life Assessment for O-Ring Seals Based on Finite Element Analysis-Assisted Compression Set Calculation	1187
<i>Shiyu Chen, Shunong Zhang, Zhenyu Huang, Lixu Wang, Jian Wang, Zuocheng Li</i>	
Application of the TF-ResNet-MSA Model in the Complex Fault Diagnosis of EHA System Plunger Pumps	1194
<i>Wenqi Zhang, Zhenbao Liu, Zhen Jia, Xingchen Ge, Luyao Wang</i>	
An Electromechanical Actuators Fault Simulation Table Designed for the Development of Fault Diagnosis Algorithms	1202
<i>Yunteng Jing, Yunxiang Long, Shaowei Chen</i>	
Probabilistic analysis of vibrations in a marine shafting system with parametric uncertainties	1208
<i>Jingyi He, Xuecong Hu, Yang Liu, Chengyi Liu, Zhenguo Zhang</i>	
The experimental analysis of the impact of oil supply pressure on the rotor-squeeze film damper system	1213
<i>Zhongyu Yang, Yihang Shi, Yinli Feng</i>	

A Deep Reinforcement Learning Method with Generative Adversarial Network for Imbalanced Bearing Fault Diagnosis	1219
<i>Yuxuan Wang, Tianci Guo, Penghui Shang, Yicheng Xiao, Jianxiao Zou</i>	
Hazard Identification and Risk Early-warning Method for Civil Aircraft Product	1226
<i>Xu Meiqi, Zheng Youshi</i>	
Fault Diagnosis of Linear Synchronous Motor Based on Time-Frequency Representation and CNN	1231
<i>Junyao Yuan, Xun Dong, Ying Zhou, Gang Niu</i>	
Epistemic Uncertainty Quantification in Product Degradation Modeling Considering Manufacturing Defects	1239
<i>Liyang Zhang, Yihai He, Chao Guo, Yuqi Cai, Jiayang Li, Qingxia Lin</i>	
A Novel Feature Block-Adaptive Idler Roller Bearing Fault Diagnosis Method for Low Sampling Frequency and Small Sample Data	1244
<i>Guoqing Ma, Gongbo Zhou, Ping Zhou, Tianbing Ma</i>	
A Reliability Optimization Design Method for Aircraft Structures Based on Vibration Modal Analysis	1251
<i>Ping Zhang, Muxiao Li, Haifeng Liu</i>	
A Multi-Scale Cost-Sensitive Contrastive Domain Adaptation Network for Imbalanced Fault Diagnosis	1256
<i>Jian Yong, Guangrui Wen, Zihao Lei, Shuaiqing Deng, Yu Su, Zhifen Zhang</i>	
Adversarial Graph Transfer Network with Sinkhorn Distance for Cross-Domain Fault Diagnosis of Civil Aircraft Landing Gear System	1264
<i>Tingqian Tu, Ningyun Lu, Mengjie Zeng, Bin Jiang</i>	
An Interpretable State-Aware Variational Network with Dual Invertible Flows for Remaining Useful Life Prediction of Aero-Engines	1271
<i>Ruoyao Tian, Biao Mei, Weidong Zhu</i>	
A More Reliable Power-Compensated Iterative Downward extension of Geomagnetic Data via Gravity-Magnetic Filter Adaptation	1279
<i>Xinyuan Yang, Qinghua Luo, Zimo Han, Weicheng Liang</i>	
Novel NIR-Polarimeter/Radiometer For Stratospheric Aerosol Study Onboard CubeSat Satellite	1285
<i>Gennadi Milinevsky, Ivan Syniavskyi, Yevgen Oberemok, Mikhail Sosonkin, Vassyl Danylevsky Yuriy Ivanov</i>	
A Weighted Distance-Time Algorithm for Large-Scale Task Allocation with Time Window Constraints in Multi-Robot Systems	1290
<i>Mengtong Wu, Jiajun Li, Yangming Guo, Qiqi Ma</i>	
Aircraft Cabin Critical System Fault Fusion Diagnosis	1297
<i>Shengnan Li, Changhong Zhou</i>	
Fault Diagnosis of Spiral Bevel Gears Driven by Deep Signal Decoupling and Focused Multi-Period Model	1304
<i>Zheng Tian, CanFei Sun, JingLin Wang</i>	
Fault Diagnosis of Open-circuit in Two-Level Three-Phase Inverter based on Data Augmentation and Graph Convolutional Neural Network	1311
<i>Yu Ji, Yanfang Fu, Xiaojun Bai, Binbin Zhang, Suyang Li</i>	

Performance Modeling with Mixed Influence Factors Based on LSTM for Reliability Analysis	1319
<i>Qiang Chen, Baokun Wu, Miao Wang, Xiang Jia</i>	
A MsMamba-FEN-Based Model for Engine Remaining Useful Life Prediction	1325
<i>Congbao Tian, Zhaoqiang Wang, Hongdong Fan, Ziyang Zheng, Ziang Du</i>	
Mathematical Modeling on PM Pressure in Factory Testing for the Main Fuel Pump Regulator of an Aero-Engine	1331
<i>Yan Zhou, Zhourong Fan, Zikang Yu, Shunong Zhang, Zhenyu Huang</i>	
Multi-source Information Attention Mechanism Feature Fusion Method for Motor Fault Diagnosis	1339
<i>Xiaoyun Gong, Shikang Zhang, Lin Zhao, Yuemin Zhang, Ming Han</i>	
Physics-Informed and Data-driven Feature Fusion with Gated Convolution and Transformer for RUL Prediction of Aero-Engines	1346
<i>An Wang, Dongfeng Shi, Bei Wu, Xiaopei Li, Yanhong Li, Ada Che</i>	
Equipment Fault Diagnosis Method Based on Time Window Association and Rule Mining	1353
<i>Chao Liang, Ji Wang, ShuaiQun Gao, NaoXi Dou, HongTao Wang, ZhiPeng Ye</i>	
Fusion of Adversarial Domain Adaptation and Multi-Kernel Alignment for Unsupervised Aero-Engine Fault Diagnosis	1358
<i>Sicheng Zhang, Dongfeng Shi, Ada Che, Xiaopei Li, Qifei Xie, Bei Wu</i>	
Multi-Condition Rolling Bearing Fault Diagnosis Based on Prototype Contrast Federated Transfer Learning	1365
<i>Zhenghao Ke, Yang Yang, Zhongding Fan, Yuanyuan Zhou, Hang Wang, Yongbin Liu</i>	
A Novel Rail Defect Classification Method Based on Adaptive Wavelet Filtering and SAINT	1370
<i>Yawen Zhang, Xiaoyuan Wei</i>	
Adaptive lighting Adjustment Method for Image Enhancement	1375
<i>Shuo Kong, Yanbo Zhang, Guoliang Lu</i>	
Design of Reliability Demonstration Test Plan for Weibull Products	1381
<i>Dian Zhang, Yunlei Tan, Ping Jiang, Guang Jin</i>	
Feature Parameter Prediction Based on A Hybrid CNN-Bi-LSTM with Attention Mechanism Fusion	1386
<i>Xiaoxu Chu, Jinjun Cheng, Changjun Li, Haizhen Zhu</i>	
Integrated Reliability Assessment of Critical Components via Bayesian Fusion of Small Samples	1393
<i>Chizhi Chris Zhang, Zunxiang Wang, Jian Jiang</i>	
AWFSCNet: Time Series Prediction Model for Liquid Rocket Engines	1398
<i>Weiqi Yin, Guangqing Kang, Zhihang Fu, Meng Ma</i>	
Fine-Grained Health Monitoring of Optical Modules in Computing Clusters using Transformers	1406
<i>Aiyue Wang, Ningchun Liu, Congqi Shen, Jun Zhu, Tao Zou</i>	
Cyber-physical Fusion based State Assessment and Fault Diagnosis for UAV Flight Control System	1412
<i>Yan Kang, Yangming Guo, Simeng Ding, Qiqi Ma, Bo Ma</i>	
Multimodal Mechanical Fault Diagnosis Method Based on LassoNet-DS Fusion	1418
<i>Weiyuan Kong, Zhenfeng Li, Chang Guo, Yanyun Lu, Yinhao Zhou, Ying Li</i>	

SPM-Based Adaptive Resonant Frequency Band Extraction and Fault Diagnosis Method Using Restructured Feature Mode Decomposition	1426
<i>Yongjia Peng, Kun Feng</i>	
Intelligent Detection Method for Infrared Defects in Aircraft Honeycomb Structures Based on Lightweight Deep Learning	1434
<i>Qirui Yang, Feng Jin, Tengfei Zhang, Guigang Zhang, Junling Fan, Wei Zhang, Dan Wang</i>	
Bivariate Degradation Reliability Assessment Method of Aero-engine based on Stochastic Process and Copula Function	1441
<i>Juanzhang Xie, Xizhen Wang, Xueshun Li, Jinxu Cai, Jinghui Xu, Yongjun Zhao</i>	
A Class-Enhanced Multi-Source Domain Adaptation Method for Rotary Machinery Fault Diagnosis	1448
<i>Ye Li, Tianyu Gao, Jingli Yang, Zheng Cui, Shuangyan Yin</i>	
Time-varying Meshing Stiffness and Dynamic Modeling of Local Faults in Gearing Systems	1456
<i>Honghai Wang, Jiacheng Li, Yuan Liu, Xing Ai, Yankai Wang</i>	
A Novel Data-driven Method for Performance Degradation Prediction of Composite Laminates	1464
<i>Xin He, Datong Liu, Huizhen Hua, Hua Zhang, Yafei Xu</i>	
A Novel Deep Multi-Scale Parallel Fine-Tuning Framework for Remaining Useful Life Prediction across Operating Condition	1469
<i>Junrong Du, Yanan Zhang, Xiran Wang, Xuanang Gui, Xinyun Ji, Jianfang Wei</i>	
A Quantitative Diagnosis Method for Flow Components Driven by Physics and Deep Learning Fusion	1474
<i>Hao Su, Yulong Ying, Jingchao Li</i>	
Weibull-Enhanced Deep Learning Framework for Fault Prediction of Port Belt Conveyor Systems	1482
<i>Shuzheng Yang, Wenyuan Wang, Jianqiang Song, Xiongfei Geng, Yun Peng</i>	
Gear weak fault feature extraction based on adaptive successive variational mode decomposition	1489
<i>Qiao Duan, Yeping Peng, Desheng Kong, Chao Wu, Guangzhong Cao</i>	
Quantitative Characterization of Rolling Bearing Lubrication Conditions Using Broadband Vibration Signal Analysis	1497
<i>Chen Zhang, Yukun Qin, Mao Ye, Kun Feng</i>	
Big Data-oriented Root Cause Analysis Based on PCA and Random Forest for Product Infant Failure	1504
<i>Zhenzhen He, Yang Gao, Haiying Gao, Jiayang Li, Yihai He</i>	
Hardware-in-the-Loop Validation of a Prognostics and Health Management System for a Marine Methanol Fuel Supply System	1510
<i>Enzhe Song, Yuchen Fu, Yun Ke, Junhua Wu, Xiaoqian Lu</i>	
OPR-Free Blade Vibration Parameter Identification Method Based on Pulse Waveform Analysis	1517
<i>Bohao Xiao, Yongmin Yang, Haifeng Hu, Fengjiao Guan, Wenkang Huang, Zifang Bian, Minghao Pan Ang Li</i>	
Few-Shot Fault Diagnosis for Electro-Hydrostatic Actuators Based on CNN Feature Extraction and Meta-Learning	1524
<i>Zhan Zhang, Shuanglu Li, Chun Zhao, Chuanjie Lu, Yibo Song, Xiaoli Zhao, Jianyong Yao</i>	

An Interpretable Wear-trend Feature-constrained Domain Generalization Network for Tool Wear Monitoring under Unseen Working Conditions	1530
<i>Kun Ding, Kai Zhang, Qing Zheng, Guofu Ding, Bin Zhang</i>	
DAGFormer-DMLPH: Advancing Aero-Engine Performance Prediction through Spatiotemporal Decoupling and Gated Attention	1538
<i>Xinyu Tang, Dongfeng Shi, Bei Wu, Xiaopei Li, Qifei Xie, Ada Che</i>	
A Fault Diagnosis Method for Rotating Machinery Using Iris Spectrogram to Represent Medium and Low Frequency Acoustic Features	1545
<i>Xiangang Cao, Xiangyu Li, Xinyuan Zhang, Hongwei Fan, Yong Duan, Xin Yang, Ming Dong Yingying Dang</i>	
Internal Water States Estimation of Dead-end PEMFC Based on Multi-modal Data Fusion	1553
<i>Ziwen Liu, Chang Ke, Xuanyu Wang, Yangrui Zhang, Kai Han</i>	
APF-SAC: Real-Time Autonomous Navigation System for Railway Inspection UAVs Based on Improved SAC Algorithm	1561
<i>Lijia Guo, Zhipeng Wang, Yixuan Geng, Limin Jia, Yong Qin</i>	
Remaining Useful Life Prediction for Linear Actuator Systems Based on the Robust Student's t-Based Kalman Filter	1567
<i>Zihan Zhang, Song Xue, Peiyuan Lian, Yu Cu, Qian Xu, Congsi Wang</i>	
Attribute Space Based Zero-Shot Fault Diagnosis for Manufacturing Process	1575
<i>Boyang Zhao, Hanjun Guo, Yun Lin, Wei Dai</i>	
Time-Shift Multiscale Improved Diversity Entropy for Fault Diagnosis of Diesel Injector in Sea Launch Hydrological Ship	1580
<i>Yun Ke, Weili Meng, Enzhe Song, Yao Teng</i>	
Image Learning-Enhanced Gearbox Fault Diagnosis Using Integrated Variational Mode Decomposition and a Hybrid CNN-Transformer Network	1587
<i>Yingjun Shen, KeXu, Da Huo, JiaHui Wang, Guoyuan Liang, Zhe Song</i>	
Variational Sideband-based Shift-invariant Sparse Convolution for Rolling Bearings Demodulation Feature Extraction	1593
<i>Aiguo Li, Haibo Liang, Xiaoxi Ding, Wenbing Huang, Quanchang Li</i>	
A Novel Fault Diagnosis Method for Planetary Gearbox based on Swin-Transformer and Acoustic-Vibration Information Fusion	1601
<i>Zhou Zihao, Li Jing, Li Xianzhou, Lin Yanghui, Liu Juanjuan, GuYingkui</i>	
A Dual-Dimension Feature Extraction and Multi-Scale Attention Fusion Model for Aero-Engine Remaining Useful Life Prediction	1609
<i>Zhe Lu, Bing Li, Changyu Fu</i>	
A Domain Generalization Method with Contrastive Learning and Centroid Entropy Regularization for Motor Fault Diagnosis	1616
<i>Ying Pu, Yixiang Huang, Pengcheng Xia, Yue Wang, Yirui Ma, Chengliang Liu</i>	
Hybrid Convolutional Network for Bearing Remaining Useful Life Prediction	1623
<i>Huaiwang Jin, Sheng Wang, Yang Yang, Hang Wang, Zhongding Fan, Yongbin Liu</i>	

Dynamic Ellipsoidal Potential Fields Based UAV Formation Fault-Tolerant Formation Transformation	1628
<i>Kai Wang, Zhenbao Liu, Zhen Jia</i>	
Knowledge Graph-Driven Graph Neural Network with Multi-Source Knowledge for Industrial Fault Diagnosis	1635
<i>Penglong Lian, Jiyang Zhang, Junlin Song, Jianxiao Zou, Shicai Fan</i>	
Physics Informed Neural Networks with Flow Loss for Axial Piston Pump Health Assessment	1641
<i>Yue Wang, Yixiang Huang, Pengcheng Xia, Ying Pu, Chengliang Liu, Yanming Li</i>	
Fault Injection and Diagnosis of Stator Insulation Fault in Permanent Magnet Synchronous Motor	1649
<i>Jing Tang, Shuhan Lu, Shuaiqun Gao, Jianfeng Yang, Ji Wang, Xiaojian Ding</i>	
RUL Prediction Of Rolling Bearings Based On Feature Fusion And Mixture Weibull Proportional Hazards Model	1655
<i>Xiong Siyuan, Qiu Guangqi, Liu Xiaoxu</i>	
A Novel Dispersion Compensation Framework for High-Resolution Measurement of Terahertz Wave in Structural Health Monitoring	1663
<i>Peihan Li, Datong Liu, Hua Zhang, Yafei Xu</i>	
Multi-source feature fusion guided by prior knowledge for gearbox health assessment	1668
<i>Desheng Kong, Yeping Peng, Qiao Duan, Chao Wu, Guangzhong Cao</i>	
The Reliability-Redundancy Problem in Multi-Level Systems Based on Reinforcement Learning	1674
<i>Baokun Wu, Qiang Chen, Lin Zhu, Xiang Jia</i>	
Fault Detection for Liquid Rocket Engines Based on The Combined Method of ARMA and ARMAX	1682
<i>Tianli Ding, Xiaoguang Zhang, Zehao Chen, Chunmin Wang</i>	
Unsupervised Anomaly Detection for Six-Axis Robots Considering Multivariate Coupling Network	1688
<i>Fengqi Zhang, Zhiye He, Guojin Si, Tangbin Xia, Lifeng Xi</i>	