

## Conference Agenda

Wednesday, Oct. 19, 2016				
9:00 – 18:00	Conference Registration			
9:00 – 18:00	<b>Tutorials:</b> CRESCI-PHM Tutorial, organized by Prof. Rui Kang, Beihang University IEEE Reliability Tutorial, organized by Prof. Eric Wong, University of Texas, Dallas			
Thursday, Oct. 20, 2016				
9:00 – 18:00	Conference Registration			
9:00 – 10:00	Opening Ceremony			
10:00 – 10:30	Group Photo and Morning Break			
10:30-12:00	Keynote Speech: Design of CPS-based Digital-Twin PHM in Future Industrial Systems, by Prof. Jay Lee			Conference Hall
	Keynote Speech: Diagnostic indicators in vibration-based Condition Monitoring: connections between cyclostationarity, higher-order statistics, and sparsity, by Prof. Jerome Antoni			
	Golden Sponsor Talk by Chengdu CALABAR Information Technology Corp. Ltd.			
12:00 – 13:30	Lunch			
13:30-15:30	Keynote Speech: Impact of PHM on Systems Reliability and Life Cycle Cost, by Mr. Russell Morris			Conference Hall
	Keynote Speech: Machinery Health Monitoring and Intelligent Fault Diagnosis in Big Data Era, by Prof. Yaguo Lei			
	Keynote Speech: Issues and Challenges of Bayesian Inference in PHM: Prior, Data, or Lying, by Prof. Steven Li			
	Session A-1 Room 1	Session A-2 Room 2	Session A-3 Room 3	Session A-4 Room 4
	Session A-5 Room 5	Session A-6 Room 6	Session A-7 Room 7	
15:30 – 15:50	Afternoon Break			
15:50 – 17:20	Keynote Speech: Prognostics and Health Management in the Energy Industry, by Prof. Piero Baraldi			Conference Hall
	Keynote Speech: New challenges of reliability technology in New Energy Battery Industry, by Prof. Yunxia Chen			
	Silver Sponsor Talk by Beijing Watertek Information Technology Co.,Ltd.			
15:50 – 18:10	Session B-1 Room 1	Session B-2 Room 2	Session B-3 Room 3	Session B-4 Room 4
	Session B-5 Room 5	Session B-6 Room 6	Session B-7 Room 7	
19:00 – 21:00	Conference Banquet			

## Conference Agenda

Friday, Oct. 21, 2016		
9:00 – 17:00	Conference Registration	
	Parallel Technical Sessions	
8:30 – 10:10	Session C-1 Room 1	Session C-2 Room 2
	Session C-3 Room 3	
10:10 – 10:30	Morning Break	
10:30 – 12:10	Session C-1 Room 1	Session C-2 Room 2
	Session C-3 Room 3	
12:10 – 13:30	Lunch	
	Parallel Technical Sessions	
13:30 – 15:30	Session D-1 Room 1	Session D-2 Room 2
	Session D-3 Room 3	Session D-4 Room 4
	Session D-5 Room 5	Session D-6 Room 6
	Session D-7 Room 7	
15:30 – 15:50	Afternoon Break	
15:50 – 18:10	Session E-1 Room 1	Session E-2 Room 2
	Session E-3 Room 3	Session E-4 Room 4
	Session E-5 Room 5	Session E-6 Room 6
	Session E-7 Room 7	

## Conference Agenda – Paper Nos.

**Technical Sessions – Paper Nos., Oct. 20, 2016**

Thursday, Oct. 20, 2016				
<b>13:30 – 15:30</b>	<b>Session A-1 (Room 1)</b>	<b>Session A-2 (Room 2)</b>	<b>Session A-3 (Room 3)</b>	<b>Session A-4 (Room 4)</b>
	2016339	2016158	2016067	2016389
	2016343	2016409	2016099	2016030
	2016167	2016095	2016101	2016372
	2016206	2016091	2016110	2016188
	2016317	2016012	2016183	2016353
	2016308	2016329	2016048	2016340
	<b>Session A-5 (Room 5)</b>	<b>Session A-6 (Room 6)</b>	<b>Session A-7 (Room 7)</b>	
	2016137	2016102	2016076	
	2016290	2016310	2016139	
	2016136	2016044	2016371	
	2016207	2016261	2016249	
2016001	2016018	2016400		
2016336	2016375	2016175		
<b>15:50 – 18:10</b>	<b>Session B-1 (Room 1)</b>	<b>Session B-2 (Room 2)</b>	<b>Session B-3 (Room 3)</b>	<b>Session B-4 (Room 4)</b>
	2016122	2016004	2016079	2016363
	2016160	2016273	2016112	2016073
	2016005	2016272	2016238	2016223
	2016241	2016032	2016080	2016379
	2016288	2016092	2016293	2016060
	2016065	2016388	2016292	2016198
	2016344	2016411	2016061	2016234
	<b>Session B-5 (Room 5)</b>	<b>Session B-6 (Room 6)</b>	<b>Session B-7 (Room 7)</b>	
	2016281	2016064	2016242	
	2016355	2016383	2016039	
	2016199	2016178	2016050	
	2016038	2016056	2016003	
	2016306	2016161	2016266	
2016333	2016143	2016412		
2016335	2016131	2016275		

## Conference Agenda – Paper Nos.

**Technical Sessions – Paper Nos., Oct. 21, 2016**

Friday, Oct. 21, 2016				
<b>8:30 – 10:10</b>	Session C-1 (Room 1)	Session C-2 (Room 2)	Session C-3 (Room 3)	
	2016294	2016037	2016328	
	2016270	2016121	2016368	
	2016358	2016349	2016109	
	2016331	2016104	2016145	
	2016202	2016155	2016346	
<b>10:30 – 12:10</b>	Session D-1 (Room 1)	Session D-2 (Room 2)	Session D-3 (Room 3)	
	2016231	2016401	2016245	
	2016191	2016397	2016036	
	2016396	2016362	2016020	
	2016415	2016345	2016115	
	2016009	2016404	2016315	
<b>13:30 – 15:30</b>	Session E-1 (Room 1)	Session E-2 (Room 2)	Session E-3 (Room 3)	Session E-4 (Room 4)
	2016399	2016026	2016159	2016322
	2016421	2016132	2016338	2016203
	2016378	2016195	2016156	2016417
	2016208	2016405	2016041	2016327
	2016153	2016268	2016114	2016350
	2016337	2016357	2016224	2016002
	Session E-5 (Room 5)	Session E-6 (Room 6)	Session E-7 (Room 7)	
	2016403	2016414	2016394	
	2016377	2016324	2016201	
	2016410	2016243	2016312	
	2016369	2016176	2016361	
	2016387	2016163	2016398	
2016014	2016211	2016393		

## Conference Agenda – Paper Nos.

**Technical Session – Paper Nos., Oct. 21, 2016**

Friday, Oct. 21, 2016				
<b>15:50 – 18:10</b>	Session F-1 (Room 1)	Session F-2 (Room 2)	Session F-3 (Room 3)	Session F-4 (Room 4)
	2016071	2016419	2016228	2016323
	2016096	2016057	2016380	2016418
	2016164	2016085	2016209	2016006
	2016027	2016373	2016360	2016047
	2016299	2016347	2016385	2016264
	2016278	2016364	2016186	2016119
	2016103	2016098	2016359	2016280
	2016066	2016265	2016031	2016287
	Session F-5 (Room 5)	Session F-6 (Room 6)	Session F-7 (Room 7)	
2016220	2016072	2016354		
2016229	2016053	2016180		
2016314	2016100	2016051		
2016285	2016316	2016078		
2016289	2016420	2016232		
2016286	2016307	2016010		
2016313	2016152	2016413		
2016149	2016271	2016007		



Conference Agenda – Technical Session Arrangement

**Technical Session Arrangement, Oct. 20, 2016**

<b>Room 1</b>	<b>Session A-1: Vehicle Health Management-1</b>
	<b>Chair:</b>
13:30 –	<b>Hybrid Maintenance Cost Optimization for EPC Brake System of PMSM Driven Rail Vehicle [2016339]</b>
15:30	<i>Junjie Jiang, Gang Niu</i>
	<b>A Comprehensive Safety Analysis Method Research for Vehicle Management System [2016343]</b>
	<i>Huadong Ji, Xiaohong Bao</i>
	<b>Fault Propagation Analysis of IGBT Fault in CRH5 Traction System Based on Signed Directed Graph [2016167]</b>
	<i>Xi Xu, Ningyun Lu, Jiaqi Yong and Bin Jiang</i>
	<b>The Influence of Locomotive Primary Longitudinal Damping on Wheel Tread Damage [2016206]</b>
	<i>Chen Wang, Shihui Luo, Weihua Ma and Wengwu Fang</i>
	<b>Train Operation Intervals Optimization Based on a Group Dynamics Model [2016317]</b>
	<i>Xuelei Meng, Wanli Xiang, Yong Qin and Limin Jia</i>
	<b>A Novel Diagnosis Method for Intelligent IETM Platform based on Cosine Similarity and Fuzzy Semantic Inference [2016308]</b>
	<i>Hao Li, Gang Niu</i>
<b>Room 2</b>	<b>Session A-2: PHM for Electronics</b>
	<b>Chair:</b>
13:30 –	<b>Discriminating Defects Method for Plastic Encapsulated Microcircuits by Using Scanning Acoustic Microscope [2016158]</b>
15:30	<i>Jiaoying Huang and Daming Yang</i>
	<b>A method for assessing soft error rate based on the resource configuration of netlist-level circuit topology in SRAM-based FPGAs [2016409]</b>
	<i>Guochang Zhou, Xiang Gao, Xiaoling Lai, Qi Zhu and Yangming Guo</i>
	<b>An Integrated Method for Hardware FMEA of New Electronic Products [2016095]</b>
	<i>Zenghui Yuan, Ying Chen and Ning Tang</i>
	<b>Application of DE-ELM in Analog Circuit Fault Diagnosis [2016091]</b>
	<i>Lihua Zhang, Qi Qin, Yue Shang, Shaiwei Chen and Shuai Zhao</i>
	<b>Research on Typical Wear Fault Diagnosis of Electro-hydraulic Servo Valve Element [2016012]</b>
	<i>Peng Ren, Jinhu Chen, Yanping Hu and Hongjie Yuan</i>
	<b>FPGA Testing Points Optimization Method Based on Important Analysis [2016329]</b>
	<i>Guochang Zhou, Yaqian Yuan, Hao Wu and Yangming Guo</i>

Conference Agenda – Technical Session Arrangement

<b>Room 3</b>	<b>Session A-3: PHM for Aerospace-1</b> <b>Chair:</b>
13:30 – 15:30	<b>A Fault Diagnosis Approach for Airborne Fuel Pump based on EMD and Probabilistic Neural Networks [2016067]</b> <i>Xiaoxuan Jiao, Bo Jing, Yifeng Huang, Wei Liang, Guangyue Xu</i>
	<b>The Method for Identifying the Health State of Aircraft Hydraulic Pump based on Grey Prediction [2016099]</b> <i>Zeli Lin, Guo Zheng, Jinglin Wang, Yong Shen, Bo Chu</i>
	<b>Research on Aviation Oil Monitoring Technology Based on Information Fusion [2016101]</b> <i>Jinglin Wang, Guo Zheng, Yong Shen and Yu Liu</i>
	<b>Fluctuation Feature Extraction of Satellite Telemetry Data and On-Orbit Anomaly Detection [2016110]</b> <i>Zheng Lu, Guang Jin and Tang Shihan</i>
	<b>A Novel Fault Detection Method for Flight Data Based on Wavelet Transform Algorithm [2016183]</b> <i>Haoqiang Liu, Hongbo Zhao, Lei Chen and Wenquan Feng</i>
	<b>Integrated Vehicle Health Management in the Aviation Field [2016048]</b> <i>Li Xingwang, Fu haiyan, Wang Huiyun and Shen Yong</i>
<b>Room 4</b>	<b>Session A-4: Reliability Modeling, Simulation and Optimization – 1</b> <b>Chair:</b>
13:30 – 15:30	<b>Reliability Data Analysis of Bogie Components of High Speed Train [2016389]</b> <i>Ting Yun, Yong Qin, Yong Fu, Jinchu Zheng and Limin Jia</i>
	<b>Reliability Evaluation for An Electronic System Subject to Competing Risks of Dependent Soft and Hard Failures [2016030]</b> <i>Shuai Zhao, Viliam Makis, Shaowei Chen and Yong Li</i>
	<b>Analysis of Tram Conflict Risk with Pedestrian at the Intersection Based on ATA [2016372]</b> <i>Dongxiu Ou, Huang Yan, Yang Yang and Jingyi Xu</i>
	<b>Reliability analysis of phased-mission complex systems for warship [2016188]</b> <i>Zhiwei Chen, Yufeng Sun, Tingdi Zhao and Fangfang Shao</i>
	<b>Dynamic Reliability Analysis of Cutting Tool for Milling Difficult to Machine Materials Ti-6Al-4V [2016353]</b> <i>Yan Guo, Peipei Zhang and Bo Wang</i>
	<b>Research on Reliability Simulation Evaluation of Electronic Products Based on Thermal-vibration Combined Loading [2016340]</b> <i>Hao Wang, Yuege Zhou, Shouwen Liu, Xiaokai Huang and Jinming Chen</i>



Conference Agenda – Technical Session Arrangement

<b>Room 5</b>	<b>Session A-5: Fault Detection and Diagnosis - 1</b>
	<b>Chair:</b>
13:30 – 15:30	<b>The Diagnosis of Aero-engine's State based on Rough Set and Improved BP Neural Network [2016137]</b> <i>Zhijun Xu, Yanguang Hu and Xiangkun Liu</i>
	<b>Current Similarity Based Fault Diagnosis for Induction Motor Drives with Discrete Wavelet Transform [2016290]</b> <i>Hao Yang, Jin Zhao and Feng Wu</i>
	<b>Traction Power Supply System Fault Diagnosis Model Based on Bayesian Network Considering the Uncertainty of Information [2016136]</b> <i>Sheng Lin, Xiyang Chen and Qi Wang</i>
	<b>Research on fault diagnosis of the fan blade of turbofan engine [2016207]</b> <i>Zhiying Han, Jing Chen, Bangcheng Zhang, Yilong Wang, Zhi Gao</i>
	<b>Failures Analysis of Wind Turbines: Case Study of a Chinese Wind Farm [2016001]</b> <i>Su Chun, Yang Yang, Xiaolin Wang and Zhaoyong Hu</i>
	<b>Health Assessment and Management of Wind Turbine Blade Based on the Fatigue Test Data [2016336]</b> <i>Xuezhong Bai, Qiang Ma and Zongwen An</i>
<b>Room 6</b>	<b>Session A-6: Testability and Optimization -1</b>
	<b>Chair:</b>
13:30 – 15:30	<b>Error Analysis and Amelioration Method of Internal Vapor Analysis Test for Small Hermetic Devices [2016102]</b> <i>Cheng Gao, Yongkang Wan and Jiaoying Huang</i>
	<b>Test Point Optimization Selection based on Qualitative Fault Propagation Analysis [2016310]</b> <i>Xiaodong Tan</i>
	<b>A Method of Test Points Optimization Selection based on Improved Bacterial Foraging Algorithm [2016044]</b> <i>Wenkui Hou, Zhiming Zhang</i>
	<b>A Testability Modeling Method for Analog Circuit Fault Prediction [2016261]</b> <i>Wenkui Hou, Xiaolin Fan</i>
	<b>An Improved Sensor Placement algorithm for Fault Diagnosis [2016018]</b> <i>Zebin Sun, Qi Zhao, Hongbo Zhao, Wenquan Feng and Xu Tan</i>
	<b>Dynamic Bayesian Networks in Electronic Equipment Health Diagnosis [2016375]</b> <i>Hongwei Xie, Junyou Shi</i>
	<b>The Design of the Prognostics and Health Management System for Special Vehicle [2016175]</b> <i>Jian Gao, Hui Shi, Hongzheng Fang, Kai Luo, Shou Liu</i>

Conference Agenda – Technical Session Arrangement

<b>Room 7</b>	<b>Session A-7: Classification and Prognosis - 1</b> <b>Chair:</b>
13:30 – 15:30	<b>Study about Health Assessment of Circuit Based on three-state Health DBN Algorithm [2016076]</b> <i>Junyou Shi, Yawei Zhao and Xiaowei Duan</i> <b>Classification of Bearing Data Based on Deep Belief Networks [2016139]</b> <i>Ran Zhang and Lifeng Wu</i> <b>A Deep Learning-Based Multi-Sensor Data Fusion Method for Degradation Monitoring of Ball Screws [2016371]</b> <i>Li Zhang and Hongli Gao</i> <b>Research Advances in Fault Diagnosis and Prognostic based on Deep Learning [2016249]</b> <i>Guangquan Zhao, Guohui Zhang, Qiangqiang Ge and Xiaoyong Liu</i> <b>A Comparison between Extreme Learning Machine and Artificial Neural Network for Remaining Useful Life Prediction [2016400]</b> <i>Zhe Yang</i>
<b>Room 1</b>	<b>Session B-1: Reliability Modeling, Simulation and Optimization - 2</b> <b>Chair:</b>
15:50 – 18:10	<b>Failure Physics Analysis of the Thermoelastic Instability in Automotive Wet Friction Disks Based on Pressure Distributions of Return Springs [2016122]</b> <i>Ke Bao, Ridong Liao</i> <b>Modeling and Analysis of Failure Mechanism Dependence Based on Petri Net [2016160]</b> <i>Yingyi Li, Ying Chen, Ning Tang, Liu Yang</i> <b>A Cascading Failure Analyzing Approach Based on the Axiomatic Functional and Physical Domain Mapping for Complex Product [20160005]</b> <i>Jiaming Cui, Yihai He, Zhenzhen He</i> <b>A Strategy for Fatigue Life Estimation under Variable Amplitude Loading in Consideration of Load Sequence Based on Damage Mechanics [2016241]</b> <i>Yahui Li, Yunxia Chen</i> <b>A Fault Propagation Analysis Method of SRAM-based FPGA based on Directed Graph [2016288]</b> <i>Xiangfen Wang, Cheng Gao, Jinyong Yao, Huizhuang Gao</i> <b>Identification of Active Destructive Processes in Unloaded Early-Age Concrete with the Use of the Acoustic Emission Method [2016065]</b> <i>Magdalena Bacharz, Wiesław Trąmpczyński</i> <b>Rough Surface Simulation and Electrical Contact Transient Performance [2016344]</b> <i>Qinmu Shen, Jing Qiu, Guanjun Liu, Kehong Lv, Yong Zhang</i>

## Conference Agenda – Technical Session Arrangement

<b>Room 2</b>	<b>Session B-2: Classification and Prognosis - 2</b> <b>Chair:</b>
15:50 – 18:10	<p><b>Big Data Oriented Root Cause Identification Approach Based on PCA and SVM for Product Infant Failure [2016004]</b> <i>Zhenzhen He, Yihai He, Yi Wei</i></p> <p><b>Fault Classification of Rolling Bearing Based on LMD-Sample Entropy and LS-SVM [2016273]</b> <i>Jie Bian, Changqing Huo, Guang Tang, Jun Gao and Lisheng Lin</i></p> <p><b>A Support Vector Regression-Based Prognostic method for Li-ion Batteries Working in Variable Operating States [2016272]</b> <i>Tao Tao, Zhao Wei</i></p> <p><b>A Fusion Prognostic Approach Based on Multi-kernel Relevance Vector Machine and Bayesian Model Averaging [2016032]</b> <i>Liu Yuefeng, Zhao Guangquan, Peng xiyuan, Liu Yuefeng</i></p> <p><b>A GKPCA-NHSMM Based Methodology for Accurate RUL Prognostics of Nonlinear Mechanical System with Multistate Deterioration [2016092]</b> <i>Gaige Chen, Jinglong Chen, Yanyang Zi</i></p> <p><b>Performance Degradation Assessment of Train Rolling Bearings based on SVM and Segmented Vote Method [2016388]</b> <i>Yong Qin, Dandan Wang, Xuejun Zhao, Hui Ma Limin Jia, Yuan Zhang</i></p> <p><b>Weighted Bagging Gaussian Process Regression to Predict Remaining Useful Life of Electro-Mechanical Actuator [2016411]</b> <i>Yujie Zhang, Xiyuan Peng, Yu Peng, Jingyue Pang, Datong Liu</i></p>
<b>Room 3</b>	<b>Session B-3: Failure Analysis and Prediction</b> <b>Chair:</b>
15:50 – 18:10	<p><b>A Degradation-Modeling Based Prognostic Approach for Systems with Switching Operating Process [2016079]</b> <i>Zhengxin Zhang, Changhua Hu, Xiaosheng Si, and Shaohua Zhou</i></p> <p><b>A Failure Rate Model for Traction Transformer Based on PHM Considering Multiple Factors [2016112]</b> <i>Sheng Lin, Xiaojun Sun, Ding Feng</i></p> <p><b>Fatigue Life Prediction for Structure Under Fatigue and Low-energy Impact based on Continuum Damage Mechanics [2016238]</b> <i>Yi Jin, Yunxia Chen, Rui Kang, Yahui Li</i></p> <p><b>A Fault Prediction Method for Closed-loop SEPIC Converters under Variable Operating Conditions [2016080]</b> <i>Yuanyuan Jiang, Youren Wang, Quan Sun, Yi Wu</i></p> <p><b>Failure Analysis of High-voltage Power MOSFET in The Three Phase Inverter [2016293]</b> <i>Peng Xue, Guicui Fu</i></p> <p><b>Research on Equipment Failure Rate Forecasting Based on Gray-linear Regression Combined Model [2016292]</b> <i>Kunpeng Bi, Guohui Yan, Hongyuan Zhang, Na Tang</i></p>

## Conference Agenda – Technical Session Arrangement

### **A Novel Approach for Analog Fault Diagnosis Based on LMD Decomposition and Reconstruction [2016061]**

*Donglei Chen, Youren Wang, Jiang Cui, Hui Luo, Deming Kong*

#### **Room 4      Session B-4: Reliability Modeling, Simulation and Optimization - 3 Chair:**

**15:50 –      Relativity Modeling of Work Motivation and Human Error Probability  
18:10      Based on Neural Network [2016363]**

*Jialei Chen, Xing Pan*

**A Novel Adaptive Particle Swarm Optimization Algorithm with Foraging Behavior for Reliability Redundancy Allocation Problem [2016073]**

*Qi Wang, Jiao Wang*

**Research on Relationship Between Manufacturing Process Quality Variation and Product Reliability [2016223]**

*Jinyong Yao, Bobo Xiong, Yun Zhou, Yihai He*

**Review of Board-level Solder Joint Reliability under Environmental Stress [2016379]**

*Lu Fang, Jing Bo, Tang Wei*

**Generalized Confidence Intervals for Process Capability Indices of Log-Normal Distribution in the One-way Random Model [2016060]**

*Chen Yao, Yang Jun*

**Research on the Assurance of Reliability During the Manufacturing Process of Mechanical Products [2016198]**

*Wei Wang, Yinping Ren, Jing Lv*

**A Prototype System for Acoustic Emission-Based Structural Health Monitoring of Mỹ Thuận Bridge [2016234]**

*Grzegorz Świt, Aleksandra Krampikowska*

#### **Room 5      Session B-5: Fault Detection and Diagnosis - 2 Chair:**

**15:50 –      Rolling Bearing Fault Diagnosis based on Deep Boltzmann Machines  
18:10      [2016281]**

*Shengcai Deng, Zhiwei Cheng, Chuan Li, Zhiqiang Chen, Xingyan Yao, René-Vinicio Sanchez*

**Incipient Rotating Machinery Fault Diagnosis Based on Multi-stable Stochastic Resonance Driven by Alpha-stable Noise [2016355]**

*Gang Yu, Uqab Butt, Tasleem Kausar*

**A Tacho-free Technique for Bearing Fault Diagnosis Via the Oscillatory Behaviors Based Signal Decomposition and Generalized Demodulation [2016199]**

*Juanjuan Shi, Hua Ju, Gaigai Cai, Zhongkui Zhu*

**The Bearing Health Condition Assessment Method Based on Alpha-stable Probability Distribution Model [2016038]**

*Changning Li, Xueli Zhu, Xuezhe Li, Qixin Zhu, Gang Yu*

## Conference Agenda – Technical Session Arrangement

### **An Improved EMD Method for Fault Diagnosis of Rolling Bearing [2016306]**

*Yongbo Li , Minqiang Xu , Wenhui Huang ,Ming J. Zuo , Libin Liu*

### **Incipient Fault Detection of Guided Missiles Based on Adaptive and Sliding-mode Observer [2016333]**

*Yongjin Liu, Lin Zhang, Wenfeng Wang, Xiaowei Ma, Jianjun Wang*

### **Research on Fault Diagnosis of Complex Equipment Based on an Improved Disturbance Search Attribute Reduction [2016335]**

*Ni Zheng, Lin Zhang, Bo Zhang, Yu Zhao*

## **Room 6      Session B-6: Testability and Optimization - 2**

### **Chair:**

15:50 –      **An Application of an Optical Measuring System to Reinforced Concrete Beams Analysis [2016064]**

18:10

*Paweł Tworzewski*

**Research on the Acquisition and Expression of Virtual Interactive Features [2016383]**

*Dequan Yu, Chuan Lv, Zhiyi He, Xinv Zhu*

**Automatic Test Pattern Generation Method of Flash Memory Based on Labview [2016178]**

*Cheng Gao, Linjiang Hu, Jiaoying Huang*

**Multi-source Data Equivalence Methods for Testability Integrated Evaluation [2016056]**

*Jing Wang, Tianmei Li, Huafeng He*

**Analysis of Demonstrable Index and Test Method of Prognostic Capability [2016161]**

*Zhiao Zhao, Jing Qiu, Guanjun Liu, Yong Zhang, Jiangpo Bai*

**Cloud Computing and Exploration of its Application to Test Field and PHM [2016143]**

*Zhao Yang, Mingqing Xiao, Xin Zhao, Delong Feng, Lei Zhang, Haifang Song*

**Sensitive Bits Based Prediction Method of Functional Failure Time for SRAM-Based FPGA [2016131]**

*Cheng Gao, Yongkang Wan, Cheng Zhang, Xiangfen Wang, Jiaoying Huang*

## **Room 7      Session B-7: Sensors and Health Evaluation - 1**

### **Chair:**

15:50 –      **Quantitative Description of Sensor Data Monotonic Trend for System Degradation Condition Monitoring [2016242]**

18:10

*Liansheng Liu, Shaojun Wang, Datong Liu, Yu Peng*

**Research on Prediction Model and Method for Equipment State and Fault in Test Range [2016039]**

*Jiongqi Wang*

**Feature Dimension Reduction Method of Rolling Bearing Based on Quantum Genetic Algorithm [2016050]**

*Xiaochen Zhang, Dongxiang Jiang, Te Han, and Nanfei Wang*

## Conference Agenda – Technical Session Arrangement

**Additive Hazard Model Based on Equipment Age and Health Index**  
**[2016003]**

*Jianping Chen, Yanguang Hu, Xiangkun Liu, Zhijun Xu, Kunyun Wang*

**Multi-damage Life Assessment Under Continuous Damage Mechanics**  
**[2016266]**

*Chaojie, Qi, Yufeng, Sun*

**An Ensemble SVR Based on Modified Adaboost.RT Algorithm for Predicting the Degradation of a Gas Turbine Compressor** **[2016412]**

*Zhicai Zhou, Dongfeng Liu*

**A Cross-layer MAC Protocol of Embedded Sensor Network for PHM**  
**[2016275]**

*Dile Chen, Shengchun Huang, Rui Zhang, Jibo Wei*

Conference Agenda – Technical Session Arrangement

**Technical Session Arrangement, Oct. 21, 2016**

**Room 1      Session C-1: Mechanism and Numerical Analysis - 1**  
**Chair:**

**8:30 – 10:10    A Mesh Stiffness Evaluation Model to Reflect Tooth Pitting Growth of a Pair of External Spur Gears [2016294]**

*Xihui Liang, Ming J. Zuo, Zhipeng Feng, Libin Liu*

**A Rigid-flexible Coupled Model for A Planetary Gearbox with Tooth Crack and Its Dynamic Response Analyses [2016270]**

*Cheng Chen, Wei Guo, Lingjian Huang*

**Study on Fault Mechanism of Meshing Gear Based on Virtual Prototype for Gearbox [2016358]**

*Lixia Zhang, Fuzhou Feng, Mingguang Bi, Pengcheng Jiang*

**Research on Mesh Stiffness and Dynamic Characteristic of Tooth Crack [2016331]**

*Lingli Cui, Tianchang Yao*

**Dynamic Analysis of Multi-mesh Geared Rotor System Using Modal Analysis [2016202]**

*Ankur Saxena, Anand Parey Manoj Chouksey*

**Room 2      Session C-2: Residual Life Prediction**  
**Chair:**

**8:30 – 10:10    Predicting the Remaining Useful Life of Roller Bearings Based on a Novel Damage Mechanics Failure Model [2016037]**

*Wenli Ouyanga, Chunyu Tenga, Yun Wang, Yonghong Lia*

**Predicting Remaining Useful Life for a Multi-Component System with Public Noise [2016121]**

*Hanwen Zhang, Maoyin Chen, Donghua Zhou*

**An Adaptive State-Space Model for Predicting Remaining Useful Life of Planetary Gearbox [2016349]**

*Xianglong Ni, Xin Zhang, Fucheng Sun, Jinsong Zhao, Jianmin Zhao*

**An Improved Remaining Useful Life Prediction Method for System with Volatile Degradation Path [2016104]**

*Dangbo Du, Changhua Hu, Xiaosheng Si, Zhengxin Zhang, Wei Zhang*

**Real-Time Bearing Residual Life Prediction Based on Status Excursion [2016155]**

*Tianmin Shan, Jinglin Wang, Guo Zheng, Yong Shen, Chen Lu*

**Room 3      Session C-3: Testability and Optimization - 3**  
**Chair:**

**8:30 – 10:10    Research on the Design Methodology of Accelerated Thermal Cycling Test for Train Electronic Assemblies Basing on PoF [2016328]**

*Ce Liang, Jianwei Yao, Yutai Su*

## Conference Agenda – Technical Session Arrangement

### **Research on Comprehensive Environmental Tests Method of Avionics Cases under Marine Environment [2016368]**

*Xiaohui Wang, Qingming Xu, Yue Shao, Liwei Sun*

### **Equivalent Optimum Design for Accelerated Life Test Scheme Based on D-efficiency [2016109]**

*Wenbin Sun, Yunxia Chen*

### **Correction Method of Testability Verification Test Plan for Electronic Product Based on Physics of Failure [2016145]**

*Chen Chen, Zhaoyang Zeng, Jueyi Jiang, Xiaolong Ma*

### **Research on Design of Military Ammunition Container Monitoring System Based on IoT [2016346]**

*Liang Cao, Guo Zheng, Yong Shen*

## **Room 1      Session D-1: Mechanism and Numerical Analysis - 2**

### **Chair:**

### **10:30 –      Effects of Crack on Modal Parameters of Mistuned Blades [2016231]**

*Hailong Xu, Zhongsheng Chen, Yongmin Yang, Limin Tao*

**12:10**

### **A novel crack size quantification method based on Lamb wave simulation [2016191]**

*Jingjing He, Yunmeng Ran, Jingsong Yang, Wei Zhang*

### **Experimental research on Metal Magnetic Memory characterization of crankshaft fatigue damage behavior [2016396]**

*Nan Xue, Chenhui Zeng, Zhi Bian, Tengyue Hu, Sheng Sun, Jiang Shao, Xin Du*

### **Random Vibration Measured Signal Induction Method Research [2016415]**

*Anqi Xie, Shu Dong, Haibo Mi*

### **Integrity Checking Based Soft Error Recovery Method for DSP [2016009]**

*Yangming Guo, Hao Wu, Wangxu Chai, Guochang Zhou, Jiezhong Ma*

## **Room 2      Session D-2: Classification and Prognosis - 3**

### **Chair:**

### **10:30 –      Dealing with Missing Data for Prognostic Purposes [2016401]**

*Panagiotis Loukopoulos, Suresh Sampath, Pericles Pilidis, George Zolkiewski, Ian Bennett, Fang Duan, David Mba*

**12:10**

### **Environmental Worthiness Prediction Method for Electronic Product Based on Physics-of-Failure [2016397]**

*Jiang Shao, Chenhui Zeng, Fengming Lu, Yang Wu*

### **A Framework for Asset Prognostics from Fleet Data [2016362]**

*Jie Liu, Enrico Zio*

### **Data-based Anomaly Detection Model for Solar Array Power of In-orbit Satellites [2016345]**

*Guoyong Zhang, Jun Zhou, Fengning Han, Datong Liu*



## Conference Agenda – Technical Session Arrangement

### **Multi-sensor Monitoring Based On-line Diesel Engine Anomaly Detection with Baseline Deviation [2016404]**

*Muheng Wei, Bohua Qiu, Yunpeng Jiang, Xiao He*

#### **Room 3 Session D-3: Maintenance Strategy**

##### **Chair:**

**10:30 – Research on Maintenance Strategy of Multi-Component Parallel Repairable with the Goal of Cost-effective [2016245]**

**12:10**

*Mingming Sun, Naichao Wang, Lin Ma, Pei Xue*

**Study on the Maintainability Layout Design about Complicated Equipment [2016036]**

*Dequan Yu, Chuan Lv, Yaoyao Wang, Quanlei Wu*

**A New Model of Preventive Maintenance Scheduling for Parallel Production Line [2016020]**

*Qiang Wang, Xiaojie Zhang, Dongming Li*

**Maintenance Decision-making Model Based on POMDP for Traction Power Supply Equipment and Its Application [2016115]**

*Sheng Lin, Ao Zhang, Ding Feng*

**Optimization of Maintenance Strategy for Multi-Component System Subject to Degradation Process [2016315]**

*Shuyang Guo, Guangyan Zhao, Yufeng Sun, Zhiwei Chen*

#### **Room 1 Session E-1: Vehicle Health Management - 2**

##### **Chair:**

**13:30 – Design and Analysis of Six-phase Fault-tolerant PMSM for Electric Vehicle [2016399]**

**15:30**

*Yong Chen, Jin-long Song, Jian-jian Zhang, Qiu-liang Huang*

**An Integrated Feature Extraction Algorithm for Condition Monitoring of Railway Point Machine [2016421]**

*Zhipeng Wang, Limin Jia, Yong Qin*

**Early Diagnosis of Processing Faults Based on Machine Online Monitoring [2016378]**

*Yongjiao Chi, Wei Dai*

**Research of the Drive Mode and Reliability for Rail Vehicle LED Drive System [2016208]**

*Bangcheng Zhang, Hong Su, Xiaojing Yin, Minmin Chen, Zhi Gao*

**Research on Health Monitoring of LED Lighting System [2016153]**

*Caihong Ding, Tianyu Zhang*

**Study on Vibration Characteristics of a Locomotive with Gear Tooth Root Crack by Simulation [2016337]**

*Zaigang Chen, Jie Zhang, Zichao Wang, Tao Zhang, Zhifang Zhu*

## Conference Agenda – Technical Session Arrangement

### Room 2      **Session E-2: Reliability Modeling, Simulation and Optimization - 4** Chair:

- 13:30 –      **Evaluation the Performance of Supply Chain based on the Network Reliability [2016026]**  
15:30              *Weichang Yeh, Chialing Huang*
- Service Reliability Modeling of the IT Infrastructure of Active-active Cloud Data Center [2016132]**  
*Yue Liu, Xiaoyang Li, Rui Kang, Lianghua Xiao*
- Reliability Modeling and Analysis of Cloud Service Based on Complex Network [2016195]**  
*Bai Yaxin, Zhang Hong, Fu Yangzhen*
- System Reliability Improvement Based on Importance Measures for Coherent Systems [2016405]**  
*Hongyan Dui*
- A Comprehensive Reliability Analysis Method for Electronic Products Based on Simulation and Hardware Test [2016268]**  
*Libing Zhao, Wei Zhang, Haijing Zhou, Ling Shen, Jian Li*
- Research on Design of Aircraft Autonomous Support System Based on IoT [2016357]**  
*Wei Zheng, Jinglin Wang, Yong Shen*

### Room 3      **Session E-3: PHM for Aerospace -2** Chair:

- 13:30 –      **Vibration Diagnostic Method Based on Improved Intrinsic Time-scale Decomposition and Energy Operator Demodulation for Fault Diagnosis of Helicopter Planetary Gearboxes [2016159]**  
15:30              *Canfei Sun, Youren Wang, Yan Zhang*
- Influence of Laser Shock Peening on Fatigue Life of Transmission Gears in Aeroengine [2016338]**  
*Yuzhe Xiao, Chong Peng*
- A Method of Health Evaluation for the Gear of Helicopter Main Gearbox [2016156]**  
*Yong Shen, Tianmin Shan, Xingwang Li, Huiyun Wang, Canfei Sun, Yifei He*
- Using Empirical Mode Decomposition Scheme for Helicopter Main Gearbox Bearing Defect Identification [2016041]**  
*Fang Duan, Michael Corsar, David Mba*
- An Anti-Radiation Evaluation Method for Satellite Power System Based on Quantification of Margins and Uncertainties [2016114]**  
*Tang Shihan, Jin Guang, Liu Yan*
- Modeling of NMOS Transistors for Simulation of Atmospheric Neutron Environment and SEEs on SRAM-based FPGAs [2016224]**  
*Cheng Gao, Yuanyuan Xiong, Jiaoying Huang*

Conference Agenda – Technical Session Arrangement

**Room 4      Session E-4: PHM for Gearbox**

**Chair:**

**13:30 –      Dependence Analysis of Planetary Gearbox Vibration Marginals**  
**15:30      [2016322]**

*Libin Liu, Ming J. Zuo, Xihui Liang*

**A Signal Selection Scheme through Order Tracking Techniques for Planetary Gearbox Condition Monitoring [2016203]**

*Ke Feng, K. S. Wang, and Peng Chen*

**Understanding Theories and Methods on Fault Diagnosis for Multi-Fault Detection of Planetary Gears [2016417]**

*Lei Wang, Xin Zhang, Qiang Miao*

**A Novel Synergistic Diagnostic Scheme for Planetary Gearboxes Based On an Analytical Vibration Model of Planetary Gear-sets [2016327]**

*Liu Hong, Yongzhi Qu, Jaspreet Singh Dhupia, Yuegang Tan*

**Reassigned Wavelet Scalogram for Gear Fault Detection under Nonstationary Operational Conditions [2016350]**

*Xiaowang Chen, Zhipeng Feng, Chuan Zhao*

**Health Indicator Extraction Based on Sparse Representation of Vibration Signal for Planetary Gearbox [2016002]**

*Zhe Cheng, Niaoqing Hu, Xihui Liang, Libin Liu*

**Room 5      Session E-5: PHM for Aerospace - 3**

**Chair:**

**13:30 –      A Condition-based Maintenance Optimization Method for Multi-phased**  
**15:30      Aircraft Fleet Oriented to The Mission Success [2015403]**

*Qiang Feng, Xiong Bi, Wenjing Bi, Yi Ren, Bo Sun*

**Study on the Output Performance of an Aerospace Pyrotechnic Device using Numerical Simulation [2016377]**

*Li Cheng, Huina Mu, Xiaogang Li, Xiaoyu Yang*

**Multi-objective Optimal Path Finding in Stochastic Time-dependent Transportation Networks Considering Timeliness Reliability and Travel Expense [2016410]**

*Yuting Li, Linhan Guo*

**Analysis and Development of the Integrated System of Operation Maintenance Support for Helicopter [2016369]**

*Ding Jie, Chen Shengbin, Zeng Mancheng*

**Step-Stress Accelerated Life Test for Secondary Power Supply of Spacecraft [2016387]**

*Zhou Yuege, Zheng Huiming, Wang Hao, LIU Shouwen, LIU Chuang*

**The Safety Assessment Process of Carrier Aircraft's Control System [2016014]**

*Binghao Hu, Qing Liang, Deming Zhong, Hao Wang*

Conference Agenda – Technical Session Arrangement

**Room 6      Session E-6: Fault Detection and Diagnosis - 3**

**Chair:**

**13:30 –  
15:30**

**Fault Diagnosis Techniques for Planetary Gearboxes Under Variable Conditions: A Review [2016414]**

*Xin Zhang, Lei Wang, Qiang Miao*

**Mesh Characteristic and Vibration Response Comparison for Geared Systems with Crack and Spalling Faults Using Different Modelling Method [2016324]**

*Hui Ma, Mengjiao Feng, Ranjiao Feng, Jin Zeng, Bangchun Wen*

**Helicopter Gearbox Bearing Fault Detection using Separation Techniques and Envelope Analysis [2016243]**

*Linghao Zhou, Fang Duan, David Mba, Michael Corsar, Matthew Greaves, Suresh Sampath*

**An Exhaust Debris Monitoring Method for Gas Turbine PHM by Using a Planar Array of Hemisphere-Shaped Electrostatic Sensors [2016176]**

*Xin Tang, Yue Li, Zhongsheng Chen, Zheng Hu and Yongmin Yang*

**Finite Sensors Failure Precursor Detection of the Gas Turbine Engine Using Information Entropy and Deep Belief Networks [2016163]**

*FENG Delong, XIAO Mingqing, Zhao Yang, Yawei Ge, LIU Yingxi*

**Application of Order-Tracking Holospectrum to Cracked Rotor Fault Diagnostics under Nonstationary Conditions [2016211]**

*Peng Chen, K. S. Wang and Ke Feng*

**Room 7      Session E-7: Degradation and Reliability Assessment - 1**

**Chair:**

**13:30 –  
15:30**

**Multi-stage Bayesian Reliability Growth Assessment for Laser Facilities [2016394]**

*Nan Liu, Dangpeng Xu, Chengcheng Wang, Jufang He, Guangyu Chen*

**Bayesian Optimal Design of Sequential Stress Accelerated Degradation Testing [2016201]**

*Xiaoyang Li, Yuqing Hu, Renqing Li, Le Liu*

**Parameter Estimation of Weibull Mixtures Based on Improved Cuckoo Search Algorithm [2016312]**

*Kuo Chi, Jianshe Kang, Guangyan Wang, Ruifeng Yang*

**Reliability Simulation Method on a Flange-sealing Structure [2016361]**

*Shouqing Huang, Feng Gao, Xiaokai Huang, Shouwen Liu, Fang Hu, Long Ma*

**System reliability analysis method based on functional model [2016398]**

*Wang Tao, Wang Ruping, Zhang Hui, Yan Haoping*

**Derating design for power supply module based on Saber simulation [2016393]**

*Haoping Yan, Tao Wang*

Conference Agenda – Technical Session Arrangement

<b>Room 1</b>	<b>Session F-1: Sensors and Health Evaluation – 2</b> <b>Chair:</b>
15:50 – 18:30	<p><b>On-line Component-level Soft Fault Diagnostics for Power Converters [2016071]</b> <i>Quan Sun, Youren Wang, Yuanyuan Jiang, Yi Wu</i></p> <p><b>A Possible Conflicts Based Distributed Diagnosis Method for Hybrid System [2016096]</b> <i>Wenquan Feng, Ruokai Qin, Wenfeng Zhang, Qi Zhao</i></p> <p><b>A Method of Health Monitoring on Helicopter Speed Reducer based on FMECA [2016164]</b> <i>Liqing Xu, Cheng Zhang, Huiyun Wang, Xingwang Li, Yong Shen, Zhaohua He</i></p> <p><b>A Comparative Study of Interpolation Discrete Fourier Transform Algorithms under Strong Noise [2016027]</b> <i>Jiufei Luo, Hong Xiao, Chuan Li, Yong Yang</i></p> <p><b>A Temperature Sensor Failure Diagnosis Approach in Frequency [2016299]</b> <i>Xiaojia Han, Jin Jiang, Aidong Xu, Bingjun Yan, Chao Pei</i></p> <p><b>Finding Abnormal Data-points of A Long Time Series based on Probabilistic Suffix Tree [2016278]</b> <i>Xiyang Ding, Zhipeng Xie, Weidong Yang</i></p> <p><b>Risk Evaluation for Deteriorating Systems with Accuracy Analysis of Parameters Estimation [2016103]</b> <i>Jianxun Zhang, Changhua Hu, Xiao He, Xiaosheng Si, Donghua Zhou</i></p> <p><b>Structural Integrity Assessment of Aircraft Composites by Ultrasonic Guided Waves Modulation Technique [2016066]</b> <i>Weibin Li, Mingxi Deng and Younho Cho</i></p>
<b>Room 2</b>	<b>Session F-2: Degradation and Reliability Assessment – 2</b> <b>Chair:</b>
15:50 – 18:30	<p><b>An Improved Time-Variant Reliability Method for Structural Components Based on Gamma Degradation Process Model [2016419]</b> <i>Meichen Yan, Bo Sun, Tianyuan Ye, Zhifeng Li, Dezhen Yang, Jinghua Yao, Mumeng Wei</i></p> <p><b>Sparse Components Separation-Based Operational Reliability Assessment Approach [2016057]</b> <i>Ruonan Liu, Boyuan Yang, Meng Ma, Xuefeng Chen, Guotao Meng</i></p> <p><b>Reliability Assessment of High Microgravity Science Experiment System Based on Probabilistic Risk Assessment [2016085]</b> <i>Yongshi Jie, Wei Wang, Gong Wang, Mengying Zhang</i></p> <p><b>D-S Quantification of Aleatory Uncertainty based on Error Assessment of Intervals' Endpoints [2016373]</b> <i>Shengyong Hu</i></p>

## Conference Agenda – Technical Session Arrangement

### **Reliability Modeling of Repairable System Based on A Stochastic Model [2016347]**

*Guangpeng Liu, Chong Peng*

### **Failure Analysis of VDMOS Device with VSD and RDS (on) Exceeded Limit Based on Reliability Physics [2016364]**

*Qing Li, Bo Gao, Haitao Deng, Lulu Wang, Dandan Yang, Lixin Wang, Jiajun Luo, Zhengsheng Han*

### **A Method for Inhibition of Product Reliability Degradation based on Manufacturing Process Quality Variation Control [2016098]**

*Jinyong Yao, Hao Wu, Yun Zhou*

### **A Study on Performance Reliability of Civil Aviation Engines Based on State Space-based Degradation Model [2016265]**

*Lei Zhu*

#### **Room 3**

#### **Session F-3: Mechanism and Numerical Analysis – 3**

##### **Chair:**

15:50 –

#### **Effects of different vibration directions on the damage mechanism of BGA under vibration loading coupled with cyclic thermal [2016228]**

18:30

*Zengjin Sheng, Bo Jing, Wei Tang, Jiaying Hu, Jiayan Dong*

#### **A Quantitative Method to Evaluate System Resilience Based on Minimal Cut-set and Sensitivity Analysis [2016380]**

*Chenxuan Yang, Rui Kang, Yanbo Zhang, Yi Yang*

#### **Built-in test Design and Optimization Method Based On Dependency model [2016209]**

*Jueyi Jiang, Fan Li*

#### **Reconstitution of the three-dimensional temperature field inside the impenetrable solid [2016360]**

*Jinwei Zhao, Xinhong Hei, Jingfei Fu, Jinwei Zhao, Guirong Yan, Longlei Dong, Shilin Li, Qi Wang*

#### **Damped SVD for Operational Transfer Path Analysis [2016385]**

*Wei Cheng, Yapeng Chu, Yingying Lu, Yanyang Zi*

#### **Dynamic Analysis for Nonlinear Behaviors of Joint Interface [2016186]**

*Dong Wang, Jie Hu, Qiang Wan*

#### **A Condition Indicator Performance Assessment Method Based on Signal Detection Theory [2016359]**

*Lun Zhang, Niaoqing Hu, Lei Hu, Zhe Cheng*

#### **Color Shift Failure Prediction for White LEDs by Modeling Features of Spectrum Power Distribution with a Nonlinear Filter Approach [2016031]**

*Jiajie Fan, Cheng Qian, Mengni Zhang, Xuejun Fan, Guoqi Zhang, Michael Pecht*

Conference Agenda – Technical Session Arrangement

<b>Room 4</b>	<b>Session F-4: Fault Detection and Diagnosis – 4</b> <b>Chair:</b>
15:50 – 18:30	<b>A Study on the Suppression of Cavitation Flow Inside an Axial Piston Pump [2016323]</b> <i>Yingxun Shi, Tianran Lin, Guangyao Meng, Juxin Huang</i>
	<b>Generalized S Transform and Its Application in Mechanical Fault Diagnosis [2016418]</b> <i>Zhinong Li, Mengdi Ye, Ming Zhu</i>
	<b>Arc Fault Modeling and Simulation in DC System Based on Habedank Model [2016006]</b> <i>Minghao Ju, Li Wang</i>
	<b>Sparse Representation based Fault Diagnosis of Bearings [2016047]</b> <i>Likun Ren, Weimin Lv</i>
	<b>Cascaded and Parallel Stochastic Resonance for Weak Signal Detection and Its Simulation Study [2016264]</b> <i>Wei Guo, Zheming Zhou, Cheng Chen</i>
	<b>Multi-objective Spare Parts Inventory Optimization in Uncertain Environment [2016119]</b> <i>Fujian Ge, Meilin Wen, Qiao Han</i>
	<b>Incipient Gear Fault Diagnostics with Optic Fiber Sensors [2016280]</b> <i>Yongzhi Qu, David He, Liu Hong, Zude Zhou and Yuegang Tan</i>
	<b>Plant-wide Online Monitoring of a Process Industry System Base on Scientific Data Visualization [2016287]</b> <i>Xu Gao, Kai Sun and Jianmin Gao</i>
<b>Room 5</b>	<b>Session F-5: Advanced PHM Methods</b> <b>Chair:</b>
15:50 – 18:30	<b>PHM Applications in Medicine and Medical Implantable Devices [2016220]</b> <i>Sergey Kirillov, Aleksandr Kirillov, Michael Pecht, Yuri Kaganovich, Alexander Khodos, Vitalii Iakimkin</i>
	<b>Influence of the Number of Acoustic Emission Descriptors on the Accuracy of Destructive Process Identification in Concrete Structures [2016229]</b> <i>Grzegorz Świt, Aleksandra Krampikowska</i>
	<b>Resilience-based Component Importance Measures for Complex Networks [2016314]</b> <i>Yanbo Zhang, Rui Kang, Ruiying Li, Chenxuan Yang, Yi Yang</i>
	<b>An Improved Method of HDP for Optimal Control in Wiped Film Molecular Distillation System [2016285]</b> <i>Hui Li, Wenjie Sun</i>
	<b>Research on Heading Sensitive Drift Storage Behavior of Inertial Platform System Under the Action of Assembly Stress Relaxation [2016289]</b>

## Conference Agenda – Technical Session Arrangement

*Guoqing Zha, Xiaokai Huang, Wengen Liu*

### **The Wire Beltline Diameter ACO-KF-PID Control Research [2016286]**

*Hui Li, Qiangqiang Yu*

### **A Method of Fault Alarm Recognition based on Hidden Markov Model [2016313]**

*Fei Guan, Jie Wu, Weiwei Cui*

### **Basic Principles Models and Algorithms for Creation of Self-Maintenance and Self-Recovery Systems for Engines Gas Turbines and Mechanics [2016149]**

*Aleksandr Kirillov, Sergey Kirillov, Vitalii Iakimkin and Alexander Khodos*

## **Room 6 Session F-6: Classification and Prognosis - 3**

### **Chair:**

**15:50 – 18:30 Prognostics and Health Management Solution Development in LabVIEW: Watchdog Agent® Toolkit and Case Study [2016072]**

*Zhe Shi, Peng Cui, Jay Lee*

### **A Prognostic Model for Degrading Systems with Randomly Arriving Shocks [2016053]**

*Xiaosheng Si, Tianmei Li, Qi Zhang, and Zhengxin Zhang*

### **Development of a Prognostics and Health Management System for the Railway Infrastructure – Review and Methodology [2016100]**

*Mehdi Brahimi, Kamal Medjaher, Mohammed Leouatni, Nouredine Zerhouni*

### **Availability Evaluation and Design Optimization of Multi-state Weighted k-out-of-n Systems [2016316]**

*Jing Li, Guangyu Chen, Jun Li, Ruiqi Wang*

### **A Type-2 Fuzzy DEMATEL-ANP Model for Rail Transit Operation Safety Evaluation [2016420]**

*Wang Wei, Xinwang Liu*

### **Research on determination method of equipment PHM system application scope [2016307]**

*Shoujun Wu, Fuzhou Feng, Meijie Zhai, Qingjun Meng*

### **Degradation Analysis of 830nm Laser Diodes Based on PSpice Model [2016152]**

*Guishan Wang, Peng Yang, Jing Qiu, Guanjun Liu*

### **Remaining useful life estimation for mechanical systems based on multi-performance degradation similarity of phase space trajectory [2016271]**

*Caiyun Niu, Jiang Jiang, Bingfeng Ge*

## **Room 7 Session F-7: Reliability Modeling, Simulation and Optimization - 5**

### **Chair:**

**15:50 – 18:30 Optimization Modeling of System Lifecycle Cost with Availability Constraints and Inventory Optimization [2016354]**

*Ruiqi Wang, Guangyu Chen, Wen Zhang*

### **Technology Maturity Evaluation for DC-DC Converter Based on AHP and KPA [2016180]**



## Conference Agenda – Technical Session Arrangement

*Jiaoying Huang, Can Cui, Cheng Gao, Xubo Lv*

### **The Moment-Independence Importance Measure for Fuzzy Failure Criterion and Its Kriging Solution [2016051]**

*Guijie Li, Chaoyang Xie, Fayuan Wei*

### **Non-Homogeneous Wiener or Gamma Process Models for Modeling Lube Oil Deterioration [2016078]**

*R. Jiang, P. Zhao*

### **System Resilience Modeling and Assessment based on Minimal Paths [2016232]**

*Zi Li, Xiaoyang Li, Rui Kang*

### **A Healthy Charging Method Based on Estimation of Average Internal Temperature Using an Electrochemical-Thermal Coupling Model for LiFePO<sub>4</sub> Battery [2016010]**

*Chao Lyu, Qingzhi Lai, Lixin Wang, Junfu Li, Wei Cong*

### **Hybrid Approach of Iterative Updating for Lithium-Ion Battery Remaining Useful Life Estimation [2016413]**

*Yuchen Song, Chen Yang, Tao Wang, Datong Liu, Yu Peng*

### **A Method for Parallel Relative System Maintenance Decision-making Based on Product Health [2016007]**

*Wenqiang Zhou, Dong Zhou, Long Xue*