WCEMNT2025 CONFERENCE PROGRAM

	Nov. 18th		
08:30-22:30	Registration & Booth Set-up		
18:30-21:30	Conference Dinner		
	Nov. 19th		
08:30-09:35	**Opening Ceremony**		
09:35-10:05	Keynote 1 【25-1-189】	**Academician Jianrong Tan** Zhejiang University, China Machine Learning and Performance Visualization: Key Technologies and Development Trends	Chair: Prof. Zhenmao Chen
10:05-10:30	Keynote 2 【25-1-161】	**Prof. Antonello Tamburrino** University of Cassino and Southern Lazio, Italy Fast Methods for Electromagnetic Imaging and Material Characterization	
10:30-10:45	Coffee Break		
10:45-11:10	Keynote 3 【25-1-188】	**Prof. Gongtian Shen** China Special Equipment Inspection and Research Institute, China Progress of ISO Standards for Electromagnetic Non-destructive Testing and the Development of ISO 22500	Chair: Prof. Antonello Tamburrino
11:10-11:35	Keynote 4 【25-1-169】	**Prof. Yiming Deng** Michigan State University, USA Deployment Relevant Uncertainty Quantification for NDE 4.0 Applications	
11:35-12:00	Keynote 5 【25-1-172】	**Prof. Guiyun Tian** Chongqing University of Technology, China Recent Progression of Electromagnetic Nondestructive Testing and Application	
12:00-13:30	Lunch		
	Poster Session 1		
13:30-14:50	**Poster Session 1-1:** **Advanced electromagnetic sensor technologies and integrated systems**		
	Poster-01A 【25-1-007】	**B Wei, S Huang, L Peng** Tsinghua University, China A Novel Lorentz Force Sensor for Simultaneous Measurement of Defects and Motion Velocity in Nonferromagnetic Materials	Chair: Prof. Yingwei Li Prof. Ahmed Soltan Prof. Hai Yan Prof. Haochen Liu
	Poster-02A 【25-1-019】	**C Tian, C Pei, Z Chen** Xi'an Jiaotong University, China Research on Pulse Electromagnetic-ultrasonic Composite Detection Sensor and Method of Underwater Steel Structure	
	Poster-03A 【25-1-028】	**P Huang, L Peng, S Li, S Huang** Tsinghua University, China Electromagnetic Tomography for Magnetic Sample Defect Detection using PID-Controlled Iterative L1 Regularization Method	

13:30-14:50	Poster-04A 【25-1-030】	**Z Zhang, Z Fan, J Tang, Z Wang** Zhejiang University of Technology, China Research on Pulsed Eddy Current Array Sensor for Localized Corrosion in Cladded Pipelines	Chair: Prof. Yingwei Li Prof. Ahmed Soltan Prof. Hai Yan Prof. Haochen Liu
	Poster-05A 【25-1-041】	**Y Lu, Z Liu, X Zhao, J Cheng** Beijing University of Technology, China An Improved Design of a Logarithmic Spiral Coil EMAT for Enhancing the Signal Amplitude	
	Poster-06A 【25-1-050】	**H Sun, S Liu, Y Zhang, J Hou, X Qing** Xiamen University, China Eddy Current Sensing-Enabled Smart Composite Bolts: Fabrication and Self-Diagnosis Capabilities for Hole-Edge Damage Monitoring	
	Poster-07A 【25-2-055】	**Y Liu, Y Kang, Y Li, D Ha** Huazhong University of Science and Technology, China Detection Method for Broken Wires in Thickly Insulated Cables Based on a Composite Flexible Eddy Current Probe	
	Poster-08A 【25-2-056】	**Y Li, Y Kang, C Li** Huazhong University of Science and Technology, China A Cloud-based Detection Method and Device for Wire Ropes Based on Wear-resistant Iron Tile Sensing	
	Poster-09A 【25-1-059】	**Y Wang, Y Li, Z Liu, W Gao, P Wang, G Tytko, Z Chen** Xi'an Jiaotong University, China Pulsed Eddy Current Sensing and Screening of Interlaminar Flaws in Heterogeneous Cladded Conductors	
	Poster-10A 【25-1-061】	**Y Zhang, J Wu, D Zheng** Sichuan University, China Flexible Array Eddy Current Sensor for Defect Detection in Petroleum Drill Pipe Threads	
	Poster-11A 【25-1-155】	**D Zhu, J Zhang** Guangdong University of Technology, China RFID Enabled Wireless Passive Sensor of Long-Term Weak Magnetic Monitoring	
	Poster Session 1-2: **Innovative principles, methods, and modeling of electromagnetic non-destructive testing**		
	Poster-01B 【25-1-198】	**Y Fu, Y Wang, Z Ou** Nanchang Hangkong University, China Research on the Equivalent Model and Thickness Quantification in Pulsed Eddy Current Testing	
	Poster-02B 【25-1-015】	**K Honjo, M Tokitani, N Yusa** Tohoku University, Japan Probabilistic Depth Evaluation Method for Cracks on Fusion Reactor Divertors using Direct Current Potential Drop Technique	

13:30-14:50	Poster-03B 【25-1-026】	**S Zhang, Z Deng, X Song** Hubei University of Technology, China A Wall Thickness Detection Method for Thick-walled Pipe Based on Low-Frequency AC Magnetization	Chair: Prof. Yingwei Li Prof. Ahmed Soltan Prof. Hai Yan Prof. Haochen Liu
	Poster-04B 【25-1-027】	**C Guo, Z Deng, X Song** Hubei University of Technology, China Quantitative Detection Method for Deep Cracks in Ferromagnetic Materials Based on Electromagnetic Resonance	
	Poster-05B 【25-1-031】	**N Brienza, N Khunsombutcharoen, B Poopat, C Janya-anurak, C Jirarunsatian, R Mudthanu, C Jomdecha** King Mongkut's University of Technology Thonburi, Thailand Development of High-speed Inspection Technique Based on Motion Induced Eddy Current Testing for Surface Railway Defects	
	Poster-06B 【25-1-034】	**Q Sang, Z Deng, X Song** Hubei University of Technology, China Tomographic Imaging Method for Deep Defects Based on Magnetic Permeability Perturbation with Low-Frequency Swept Magnetization	
	Poster-07B 【25-1-036】	**X Liu, L Peng, S Wang, S Huang** Tsinghua University, China Modeling and Experimental Study of Magnetic Barkhausen Noise in Creep-Damaged Ferromagnetic Materials	
	Poster-08B 【25-1-040】	**X Wang, Y Fang, H Chen, Z Chen** Xi'an Jiaotong University, China A Debonding Detection Method for Multilayer Heterogeneous Bonded Structures Based on Electromagnetic Acoustic Resonance	
	Poster-09B 【25-1-042】	**J Cheng, Z Liu, X Zhao, Y Lu** Beijing University of Technology, China Low-Voltage EMAT Thickness Measurement using Pulse Compression	
	Poster-10B 【25-1-044】	**Q Zhang, W Zheng, X Sun, Z Wang** China University of Petroleum (Beijing), China Design and Detection Performance Study of an Integrated ECT/ACFM Excitation Probe for Small-Diameter Nozzle Fillet Welds in Pressure Vessels	
	Poster-11B 【25-1-105】	**A Bingler, T Uchimoto, S Bilicz, J Pávó** Budapest University of Technology and Economics, Hungary Analysis of Inductive, Capacitive and Resistive Effects in Carbon Fiber Reinforced Plastics using an Integral Equation Model	

13:30-14:50	**Poster Session 1-3:** **Frontier NDT applications of artificial intelligence and machine learning**		Chair: Prof. Yingwei Li Prof. Ahmed Soltan Prof. Hai Yan Prof. Haochen Liu
	Poster-12A 【25-1-003】	**X Zhang, Y Gu, R Pyle, X Niu, X Song, Y Zhang** Hubei University of Technology, China Text-Guided Diffusion for Data Augmentation of PWI Images to Improve Defect Characterization	
	Poster-13A 【25-1-005】	**J Feng, M Li, G Zhou, N Xu, C Ye** ShanghaiTech University, China Compensating for Temperature Drift in ECT Oxide Film Thickness Measurement using a Convolutional Generative Adversarial Network	
	Poster-14A 【25-1-009】	**H Zhang, Z Chen, Y Peng** Fujian Polytechnic Normal University, China MRDC-BiLSE: A Deep Learning Framework for PECT-based Thickness Recognition	
	Poster-15A 【25-1-013】	**X Wang, W Li, Y Yang** Donghua University, China A Knowledge Graph-based Method for Identifying Surface Cracks on Bearing Rings via Magnetic Particle Testing	
	Poster-16A 【25-1-014】	**H Zhang, Z Chen** Fujian Polytechnic Normal University, China Wavelet-Guided Dynamic Kernel Transformer for THz Image Super-Resolution	
	Poster-17A 【25-1-065】	**W Li, X Wang, Y Yang** Donghua University, China Quantitative Study of Crack Angle on the Surface of Steel Pipe Based on GA-BP Neural Network	
	Poster-18A 【25-1-103】	**H Zhang, Q Zhao, Y Zhao, G Chen, Y He, W Yin** Qufu Normal University, China Research on Defect Classification of Metallic Plates Based on Convolutional Neural Networks and Support Vector Machines	
	Poster Session 1-4: **Intelligent damage imaging and quantitative evaluation of key structural components**		
	Poster-19A 【25-1-022】	**H Zeng, R Huang, W Yin** Fuzhou University, China A Novel Arc-shaped Probe Based Defect Detection Method using Eddy Current Testing in Pipelines	
	Poster-20A 【25-1-043】	**Z Tong, S Xie, Z Chen** Xi'an Jiaotong University, China A Novel Spatio-Temporal Multi-scale Analysis for Depth and Planar Quantification of Stress Corrosion Cracks from Eddy Current Thermography	

13:30-14:50	Poster-12B 【25-1-057】	**H Wei, Y Li, R Wang, W Ren, Y Fang, Z Chen** Xi'an Jiaotong University, China Machine Learning-based Feature Selection of Microwave Testing Signals and Visualised Evaluation of Backside Wall-thinning Defects in Polyethylene Components	
	Poster-13B 【25-1-060】	**R Wang, Y Li, H Wei, P Wang, Y Fang, Z Chen** Xi'an Jiaotong University, China Planar Imaging of Internal Damages in Polyethylene Pipes via Cross-polarisation Microwave Reflectometry	
	Poster-14B 【25-1-073】	**B Liu, Y Yang, J Hu, H Chen, W Guo, C Pei, Z Chen** Xi'an Jiaotong University, China Efficient Detection of Delamination Defect in CFRP Tube Wall Based on a Laser Infrared Thermography Method Equipped with a Thermal Wave Reflector	
	Poster-15B 【25-1-076】	**Y Yang, H Chen, B Liu, Z Tong, C Pei, Z Chen** Xi'an Jiaotong University, China Intelligent Quantitative Non-destructive Evaluation Method for Delamination Defects in CFRP Tube Wall Based on the Mirror-reflection Infrared Thermography	
	Poster Session 1-5: **Electromagnetic structural health monitoring technologies for life cycle safety management**		Chair: Prof. Yingwei Li Prof. Ahmed Soltan Prof. Hai Yan Prof. Haochen Liu
	Poster-16B 【25-1-033】	**H Yang, Y Yu, F Wang, C Sun** University of Electronic Science and Technology of China, China Research on Yarn Tension Detection Approach Based on Eddy Current Technique	
	Poster-17B 【25-1-038】	**J Hou, H Sun** Xiamen University, China An Embedded RFEC Method for Hole-Edge Crack Monitoring in Bolted Joints: From Theoretical Modelling to Experimental Validation	
	Poster-18B 【25-1-045】	**Y Liu, L Peng, S Huang, S Li** Tsinghua University, China A Cable Insulation Defect Location Method Based on Instantaneous Frequency Correlation	
	Poster-19B 【25-1-069】	**J Li, G Cai, H Yang, L Yang, C Yang, T Xi** Institute of Metal Research, Chinese Academy of Sciences, China The Influence of the Straightening Process on Eddy Current Testing of Waspaloy (GH738) Alloy Thin-Walled Tubes	
	Poster-20B 【25-1-088】	**J Li, S Liu, G Xia** Nanchang Hangkong University, China Damage Evolution Mechanism and Fracture Early-Warning for Elevator Traction Steel Belts: A Feature Fusion and Health Indicator Based Approach	
14:50-15:00	Coffee Break		

15:00-15:25	Keynote 6 【25-1-116】	**Prof. Isaratat Phung-On** King Mongkut's University of Technology Thonburi, Thailand A New Vision for Surface Inspection: In-situ Corrosion Detection with a Smart Thermal Camera	
Oral Session 1-1: Eddy Current, Microwave, and Thermal Testing			
15:25-15:45	Invited 1 【25-1-191】	**Prof. Chuanyu Zou** China National Institute of Standardization, China International Standards: Bridging Global NDT Technology Advancement	Chair: Prof. Zenghua Liu Prof. Shejuan Xie
15:45-16:00	Oral 1 【25-1-008】	**Prof. Chaofeng Ye** ShanghaiTech University, China Assess Oxide Layer Thickness in the Absence of Calibration Samples: An Investigation of a Novel ECT Probe Employing Internal Calibration Distances	
16:00-16:15	Oral 2 【25-1-138】	**Prof. Guanyu Piao** Shanghai University, China High-Speed Inspection of Ferromagnetic Materials by Fusing Motion-Induced Eddy Current and Transient Permeability Perturbation	
16:15-16:30	Oral 3 【25-1-127】	**Prof. Xin'an Yuan** China University of Petroleum (East China), China Omnidirectional Regulation and In-situ Characterization of Alternating Electromagnetic Fields in Metallic Structures	
16:30-16:40	Coffee Break		
Oral Session 1-2: Eddy Current, Microwave, and Thermal Testing			
16:40-17:00	Invited 2 【25-1-053】	**Prof. Dongfeng He** National Institute for Materials Science, Japan Corrosion Evaluation of Steel Rebar and Steel Cable using the Eddy Current Testing Method	Chair: Prof. Wuliang Yin Prof. Jianchun Fan
17:00-17:15	Oral 4 【25-1-058】	**Wenlong Gao** Xi'an Jiaotong University, China An Efficient Time-domain Solution to Transient Eddy Current Evaluation of Volumetric Defects in Coated Conductive Slabs via Analytical-Numerical Hybrid Modelling	
17:15-17:30	Oral 5 【25-1-037】	**Prof. Changyou Li** Northwestern Polytechnical University, China Time Reversal of Guided Microwave for Detecting Small Defects in Aircraft Skin	
17:30-17:45	Oral 6 【25-1-124】	**Prof. Lei Zhang** Agency for Science, Technology and Research, Singapore Electromagnetic Wave-based Detection of Damage in Concrete Structures	
17:45-18:00	Oral 7 【25-1-047】	**Prof. Yijun Guo** Chongqing University of Technology, China Quantitative Evaluation of Wall Thinning in a Metal Pipe using Guided Microwaves and Deep Learning	
18:30-21:30	Conference Dinner		

		Nov. 20th		
08:30-08:55	Keynote 7 【25-1-183】	**Prof. Junming Lin** Eddysun (Xiamen) Electronic Co., Ltd., China The Evolution of Industrial Eye: From Eddy Current Testing to the Path of AI-enabled Intelligent Diagnosis	
Oral Session 2-1: Multiphysics-based nondestructive testing			
08:55-09:15	Invited 3 【25-1-099】	**Prof. Shejuan Xie** Xi'an Jiaotong University, China Non-destructive Evaluation of Defects in Thermal Barrier Coating System via Advanced Electromagnetics-driven Multi-Physics Fusion	Chair: Prof. Guiyun Tian Prof. Bo Hu
09:15-09:35	Invited 4 【25-1-032】	**Prof. Cherdpong Jomdecha** King Mongkut's University of Technology Thonburi, Thailand Data Processing Approaches for Electromagnetic Survey and Inspection of Subsurface Structures	
09:35-09:50	Oral 8 【25-1-018】	**Prof. Zhichao Li** Harbin Institute of Technology, China Improvement of Pulse Compression Rayleigh-wave EMATs	
09:50-10:05	Oral 9 【25-1-085】	**Jiannan Zhang** Pusan National University, Korea EMAT-driven Metamaterial-assisted Single-Shot Dual-Mode (S & A) Lamb-Wave Sensing for Simultaneous Defect Detection in Containment Liner Plates: A Feasibility Study	
10:05-10:15		Coffee Break	
10:15-10:40	Keynote 8 【25-1-168】	**Prof. Younho Cho** Pusan National University, Korea A Complete Story of NDT with Fracture Mechanics	
Oral Session 2-2: Multiphysics-based nondestructive testing			
10:40-11:00	Invited 5 【25-1-167】	**Prof. Yunze He** Hunan University, China Online Detection Technology for Self-excited Electromagnetic-thermal Vibration in Power Devices	
11:00-11:20	Invited 6 【25-1-196】	**Prof. Adi Mahmud Jaya Marindra** Institut Teknologi Kalimantan, Indonesia Advancing Passive Electromagnetic Sensing: Retransmission-based Flexible Chipless RFID for Curved Metallic Structures	Chair: Prof. Isaratat Phung-On Prof. Yunze He
11:20-11:40	Invited 7 【25-1-164】	**Prof. Bin Gao** University of Electronic Science and Technology of China, China Electromagnetic Multi-physic AI Sensing NDT Technology and its Application	
11:40-11:55	Oral 10 【25-1-051】	**Prof. Jun Tu** Hubei University of Technology, China Design and Optimization of a Dual-Arc V-Shaped Electromagnetic Acoustic Transducer for Weld Defect Detection	
11:55-12:10	Oral 11 【25-1-035】	**Shuzhi Wen** Tsinghua University, China An Electromagnetic Voiceprint Method for Aging Condition Diagnosis of IGBT Devices under Multiple Operating Conditions	

12:10-13:30	Lunch		
13:30-14:50	**Poster Session 2**		Chair: Prof. Hai Zhang Prof. Xiaokang Yin Prof. Ali Sophian Prof. Ali Sunny Prof. Dong Li
	Poster Session 2-1: **Advanced electromagnetic sensor technologies and integrated systems**		
	Poster-01A 【25-1-062】	**C Deng, J Wu, R Ke** Sichuan University, China A Real-time Wellhead Drill Pipe Inspection Method Based on Open-loop Permanent Magnet Magnetization	
	Poster-02A 【25-2-066】	**H Ma, Y Kang, C Li** Huazhong University of Science and Technology, China Development of a Robot-assisted Flexible PMFP Testing System for Hub Bearing Inspection	
	Poster-03A 【25-1-070】	**F Li, J Wu, H Xia, C Deng** Sichuan University, China Defect Detection using Infrared Thermography at High Temperatures	
	Poster-04A 【25-1-077】	**Y Han, Y Kang, B Feng** Huazhong University of Science and Technology, China Conductivity Imaging with Magneto-Electric Microspheres for Crack Detection: a Novel Magnetic Particle Inspection Method	
	Poster-05A 【25-1-078】	**Y Chen** Huazhong University of Science and Technology, China Automatic Crack Identification using a Novel 3D Profilometry-based Magnetic Particle Testing Method	
	Poster-06A 【25-1-081】	**Z Wang, Q Li, R Qin, X Li, R Zhou** Nanchang Hangkong University, China Study on Corrosion Imaging of Aircraft Riveted Structures Based on Pulsed Eddy Current	
	Poster-07A 【25-1-095】	**Q Li, Y Li, X Li, R Zhou, R Qin, Z Wang, C Lu** Nanchang Hangkong University, China Optimization Design and Experimental Study of Pulse Eddy Current Detection Probe for Interlayer Corrosion Defects in Multi-Layer Riveted Aluminum Plate	
	Poster-08A 【25-1-097】	**H Zhang, X Cui, Y Zhao, H Wan, Q Liu, J Zhang, C Chen, H Tan** Nanchang Hangkong University, China Research on Hysteresis Loop Reconstruction and Parameter Prediction Method Based on Barkhausen Noise Signals	
	Poster-09A 【25-1-102】	**Z Liu, J Wu** Sichuan University, China High-Speed Ultrasonic Thickness Measurement using Chirp-Excited EMAT and Power Spectral Density Analysis	
	Poster-10A 【25-1-117】	**X Zeng, X Xiao, Z Han, J Cai, Y Wang** Xiamen University, China Detection of Lubricant Wear Debris using Coaxial Electromagnetic Induction Coils	

	Poster-11A 【25-1-156】	**Z Weng, J Zhang** Guangdong University of Technology, China A Low-cost Phased Array with 2-D Beam Steering for High-Spatial-Resolution Electromagnetic Non-destructive Testing	
		Poster Session 2-2: **Innovative principles, methods, and modeling of electromagnetic non-destructive testing**	
13:30-14:50	Poster-01B 【25-2-106】	**P Gao, W Gong, L Yang, R Lu, H Geng** Xiamen University of Technology, China Research on Intelligent Defect Quantification Models for Pipeline Data-Driven Applications	Chair: Prof. Hai Zhang Prof. Xiaokang Yin Prof. Ali Sophian Prof. Ali Sunny Prof. Dong Li
	Poster-02B 【25-1-064】	**F Qiu, X Feng, X Guo, R Liu** Yunnan Power Grid Co., Ltd., China Improved Correction of Terahertz Spectroscopy for Measuring the Thickness of Insulating Materials	
	Poster-03B 【25-1-071】	**Y Xiao, Y Kang, B Feng** Huazhong University of Science and Technology, China Effect of Excitation Frequency on Motion-Induced Eddy Current Speed Measurement	
	Poster-04B 【25-1-074】	**K Deng, Z Wang, Y Qu, H Chen, Z Chen** Xi'an Jiaotong University, China A Multi-Featured Signal Fusion Method for NDE of Fatigue Material Degradation of a Ferromagnetic Steel Based on Magnetic Adaptive Testing Signals	
	Poster-05B 【25-1-075】	**Y Qu, X Wang, H Chen, C Pei, Z Chen** Xi'an Jiaotong University, China An Improved Extraction Method for Attenuation Coefficient of EMAR Signals for Non-destructive Evaluation of Fatigue Damage in 304 Austenitic Steel	
	Poster-06B 【25-1-082】	**C Li, F Sun, M Fan, B Cao** Anhui University of Science and Technology, China Compensation Method for Thickness Measurement Based on Error Estimation of Thermal Barrier Coatings in Eddy Current System	
	Poster-07B 【25-1-083】	**R Qin, Q Li, Z Wang, X Li, R Zhou** Nanchang Hangkong University, China Pulsed Eddy Current Differential Probe Design and Research on Rotary Differential Detection of Aircraft Riveted Components	
	Poster-08B 【25-1-084】	**Z Guo, J Fan, Y Tao, S Dai** China University of Petroleum (Beijing), China Online Detection and Quantitative Analysis of Erosion Damage Based on Magnetic Memory Signals	
	Poster-09B 【25-1-093】	**S Zhang, T Sui, L Yang, G Cai** Institute of Metal Research, Chinese Academy of Sciences, China Far-Field Static Magnetic Detection for Quantifying Oxide Scale Blockage in Weakly Ferromagnetic Boiler Tubes	

13:30-14:50	Poster-10B 【25-1-125】	**X Luo, H Yang, W Jiang** Chengdu University of Technology, China WTD-WOA-SVMD Based Signal Processing for Coiled Tubing Stress Distortion Zones	Chair: Prof. Hai Zhang Prof. Xiaokang Yin Prof. Ali Sophian Prof. Ali Sunny Prof. Dong Li
	Poster-11A 【25-1-133】	**Z Cao, Z Zeng** Xiamen University, China Profile Reconstruction of Curved CFRP Components Based on Eddy Current Method	
	Poster-12A 【25-1-134】	**R Khatiwada, Z Xu, J Guo, K Song** Nanchang Hangkong University, China Pulse Eddy Current Testing of Carburizing Damage in Ethylene Cracking Furnace Tubes	
	Poster-13A 【25-1-136】	**G Qiu, B Feng, Y Kang** Huazhong University of Science and Technology, China A Novel Method for Delamination Defects Detection in Steel Plates Based on Static Magnetic Field Perturbation	
	Poster-14A 【25-1-139】	**J Li, Y He, G Piao** Shanghai University, China Microwave Nondestructive Testing Method for Moisture Content Detection	
	Poster-15A 【25-1-149】	**Y Zeng, F Qiu, Y He** Nanchang Hangkong University, China Multi-Physical Field Coupling Effect on Macro-Micro Magnetic Response of Q235 Steel under Tensile and Compressive Stress	
	Poster-16A 【25-1-159】	**B Liu, Z Lian, H Yu, Z Wu, L He, L Yang, J Rao** Shenyang University of Technology, China Research on the Signal Quantization Method for In-line Inspection of Composite Defects in Pipeline Welds using Weak Magnetic Method	
	Poster-17A 【25-1-193】	**Z Wu, Z Lian, B Liu, L Yang, J Rao** Shenyang University of Technology, China Magneto-Mechanical Response Mechanism and Detection Method of Hydrogen-Induced Damage in Pipeline Steels	
	Poster Session 2-3: **Frontier NDT applications of artificial intelligence and machine learning**		
	Poster-18A 【25-1-087】	**J Li, J Gao, H Zheng, S Jiao, D Li, Z Kou** Taiyuan University of Technology, China Research on Eddy Current Testing of Conveyor Belt Joint Twitch Based on MixUp-CS-BP Method	
	Poster-19A 【25-1-101】	**Q Wen, D Xu, Y He, P Li, Z Long, J Mao, J Tang** Central South University, China Electromagnetic Nondestructive Testing for Defect Detection in Copper Plate Processing using Intelligent Techniques	

13:30-14:50	Poster-20A 【25-1-114】	**Y Kou, X Zhang, T Li, H Che, S Jiao, J Han, Y He** North University of China Research on Quantitative Evaluation of Surface Defect Parameters in Eddy Current Testing Based on AUN-CNN-LSTM Algorithm	Chair: Prof. Hai Zhang Prof. Xiaokang Yin Prof. Ali Sophian Prof. Ali Sunny Prof. Dong Li
	Poster-20B 【25-1-126】	**X Li, Z Zeng, Y Ren** Xiamen University, China Quantitative Eddy Current Testing of Dense Rail Cracks Based on Machine Learning	
	Poster-19B 【25-1-130】	**S Tian, Z Li , P Liu, S Wang, L Zhang, Z Chen** Zhengzhou University of Light Industry, China Damage Detection of Composite Laminated Plates Based on Ultrasonic Lamb Waves and Deep Learning Algorithms	
	Poster-18B 【25-1-145】	**H Tang, F Zhang, C Zhou, C Jin** Ningxia University, China Research on Eddy Current Stress Testing and Inversion for Metallic Components	
	Poster Session 2-4: Photoelectric-electromagnetic integrated testing and interdisciplinary innovations		
	Poster-17B 【25-1-039】	**Y Wu, Z Liu, R Li** Beijing University of Technology, China Quantitative Estimation of Surface Protective Coating Thickness on CMC Based on Terahertz Time-Domain Spectroscopy	
	Poster-16B 【25-1-098】	**Q Liu, X Cui, H Wan, Y Zhao, H Zhang, J Zhang, C Chen** Nanchang Hangkong University, China Visualization of Grinding Burn on Shaft-type Components of 25Mn Alloy Steel via Eddy Current Pulsed Thermography: Simulation and Experiment	
	Poster-15B 【25-1-115】	**Z Zhao, Z Liu, Z Wang** Shandong University, China Research on Simultaneous In-situ Detection of Carbon Fiber Composite Surface Morphology and Subsurface Crack Damage Based on Fiber-Optic-Eddy Current Hybrid Nondestructive Testing Principles	
	Poster-14B 【25-2-121】	**S Bai, L Gai, X Bai, F Hou, M Zhang, K Li, J Shen, Y Kang, H Chen, T Li** Shenyang University of Technology, China Research on Bio-Physical Behavior Analysis of Multi-Parameter Superparamagnetic Nanoparticles and ACS Imaging Technology for Sentinel Lymph Node Biopsy	
	Poster-13B 【25-1-122】	**J Wang, B Deng, Y He** Hunan University, China Photovoltaic Module Inspection Based on Electromagnetic Induction-assisted Scanning Photoluminescence Imaging	
	Poster-12B 【25-1-190】	**M Fan, J Guo, B Cao, F Sun** China University of Mining and Technology, China Characterization of Micro-defects in Engine Blades using Eddy Current Array System	

14:50-15:00		Coffee Break

15:00-15:25	Keynote 9 【25-1-178】	**Prof. Evangelos Hristoforou** National Technical University of Athens, Greece New Advances in Steel Health Monitoring	Chair: Prof. Yiming Deng, Prof. Bin Gao

Oral Session 3-1: Advanced sensing technologies

15:25-15:45	Invited 8 【25-1-004】	**Prof. Yingwei Li** Yanshan University, China The Development of High-Intensity and High-Frequency Transcranial Magnetic Stimulation Device	Chair: Prof. Yiming Deng, Prof. Bin Gao
15:45-16:05	Invited 9 【25-1-177】	**Prof. Ahmed Soltan** Nile university, Egypt Smart and Secure IoT for Continuous Monitoring Based on Smart NDT Sensor Nodes	
16:05-16:20	Oral 12 【25-1-054】	**Prof. Jiuhao Ge** Nanjing University of Aeronautics and Astronautics, China Damage Detection in Nylon-Liner of Multilayer Composites using Coplanar Capacitive Sensing Technique	
16:20-16:35	Oral 13 【25-1-129】	**Prof. Haishun Liu** China University of Mining and Technology, China Additive Manufactured Magnetic Sensor Core with High Strength and Low Loss	

16:35-16:45		Coffee Break

16:45-17:10	Keynote 10 【25-1-176】	**Prof. Zhenmao Chen** Xi'an Jiaotong University, China Some Research Advances on Rotating and Motion Induced Eddy Current Testing	Chair: Prof. Cherdpong Jomdecha Prof. Jianbo Wu

Oral Session 3-2: Advanced sensing technologies

17:10-17:30	Invited 10 【25-1-175】	**Prof. Shengfeng Qin** Northumbria University, UK Resilient Cognitive Digital Twin for Smart Cities	Chair: Prof. Cherdpong Jomdecha Prof. Jianbo Wu
17:30-17:45	Oral 14 【25-1-089】	**Zeyi Shang** China University of Petroleum (Beijing), China An Intelligent Diagnosis Method Based on Magnetic-Acoustic Composite Testing for Assessing Flange Connection Status	
17:45-18:00	Oral 15 【25-1-100】	**Yue Li** Xi'an Jiaotong University, China Wireless-Flexible Magnetic Sensing Based on Magneto-Thermal Effect for High-Intensity High-Frequency Magnetic Field	

18:30-21:30		Gala Dinner

		Nov. 21st	
08:30-08:55	Keynote 11 【25-1-072】	**Prof. Mohamed Missous** University of Manchester, UK Semiconductor Quantum Devices for Electromagnetic Non-destructive Testing of Metallic and Composite Materials	
Oral Session 4-1: Electromagnetic imaging and tomography			
08:55-09:15	Invited 11 【25-1-173】	**Prof. Wuliang Yin** University of Manchester, UK Electromagnetic Array Imaging Techniques for Industrial Applications	Chair: Prof. Benjamin Ducharne Prof. Lisha Peng
09:15-09:35	Invited 12 【25-1-166】	**Prof. Hai Zhang** Harbin Institute of Technology, China Frequency Multiplexed Truncated-Correlation Tomography (FM-TCT)	
09:35-09:50	Oral 16 【25-1-090】	**Prof. Haochen Liu** Xidian University, China A Frequency-Modulation Laser Thermography Method for Enhancement and Identification of Electronic Components	
09:50-10:05	Oral 17 【25-1-020】	**Prof. Xifeng Li** University of Electronic Science and Technology of China, China Calibration and Fractional-order Back Projection for Near-Field MIMO-SAR Imaging with Applications to Non-destructive Testing	
10:05-10:25		Coffee Break	
10:25-10:50	Keynote 12 【25-1-163】	**Prof. Guoqiang Liu** Institute of Electrical Engineering, Chinese Academy of Sciences, China Momentum Reciprocity in Electromagnetic and Acoustic Fields with Imaging Applications	
10:50-11:10	Invited 13 【25-1-170】	**Prof. Davoud Shahgholian** Tarbiat Modares University, Iran Subsea Pipeline Failure Assessment Due to Complex Shaped Corrosion Defects using Image Processing and Deep Learning Methods	Chair: Prof. Evangelos Hristoforou Prof. Luyao He
11:10-11:30	Invited 14 【25-1-165】	**Prof. Bo Wang** Tsukuba Technology Co., Ltd., Japan Development and Application of Carbon Nanotube Cold Cathode X-Ray Technology	
11:30-11:45	Oral 18 【25-1-086】	**Igor Sakhabiev** Pusan National University, Korea An Intelligent Adaptive Tomography Method for Defect Characterization using EMATs	
11:45-12:00	Oral 19 【25-1-192】	**Vincenzo Mottola** University of Cassino and Southern Latium, Italy A New Class of Invariant Transformations for Eddy Current Testing	
12:00-13:30		Lunch	

13:30-13:55	Keynote 13 【25-1-024】	**Prof. Weiying Cheng** Japan Power Engineering and Inspection Corporation, Japan Electromagnetic Nondestructive Testing and Evaluation - From DC to Gigahertz	
Oral Session 5-1: Magnetic methods in nondestructive testing			
13:55-14:15	Invited 15 【25-1-157】	**Prof. Luyao He** Shenyang University of Technology, China Magneto-Stress Internal Inspection Technology for Composite Defects in Long-distance Oil and Gas Pipelines	Chair: Prof. Adi Mahmud Jaya Marindra Prof. Yong Li
14:15-14:35	Invited 16 【25-1-171】	**Prof. Benjamin Ducharne** Institut Nationale des Sciences Appliquées de Lyon, France Magnetization Mechanisms for the Non-destructive Evaluation of Ferromagnetic Steel Parts	
14:35-14:50	Oral 20 【25-1-021】	**Prof. Hongen Chen** Xi'an Jiaotong University, China A Study of Pinning Effect on Barkhausen Noise and Hysteresis Loop Based on Modified Ising Model	
14:50-15:05	Oral 21 【25-1-151】	**Prof. Fasheng Qiu** Nanchang Hangkong University, China Effects of Stress Gradient and Biaxial Stress on Barkhausen Noise and Magnetic Domain Wall Dynamics	
15:05-15:20	Oral 22 【25-1-096】	**Dongyang Huang** China University of Petroleum (Beijing), China Metal Magnetic Memory-based Damage Detection Technology for Oil and Gas Flange Bolts	
15:20-15:35	Coffee Break		
15:35-16:00	Keynote 14 【25-1-162】	**Prof. Zhiwei Zeng** Xiamen University, China Advances in Eddy Current Testing of Isotropic and Anisotropic Materials: Modeling, Theoretical Analysis, and Inspection Technology Development	
Oral Session 5-2: Magnetic methods in nondestructive testing			
16:00-16:20	Invited 17 【25-1-052】	**Prof. Bo Hu** Nanchang Hangkong University, China Magnetic Detection Technology for Metal Component Defects	Chair: Prof. Weiying Cheng Prof. Chaofeng Ye
16:20-16:40	Invited 18 【25-1-194】	**Prof. Ali Sophian** International Islamic University Malaysia, Malaysia Pulsed Eddy Current Array System for Corrosion Detection of Large Surface Areas	
16:40-17:00	Invited 19 【25-1-195】	**Prof. Ali Sunny** Ernst & Young Ltd, UK Machine Learning-based UHF RFID Tag Sensing for Non-destructive Corrosion Monitoring	
17:00-17:15	Oral 23 【25-1-104】	**Prof. Banarot Oboun** King Mongkut's University of Technology Thonburi, Thailand Study of MBN Features for Classifying Stages of Rail Material Degradation under 4-Point Bending Fatigue	

17:15-17:30	Oral 24 【25-1-147】	**Prof. Fuchen Zhang** Ningxia University, China Detection Method of Compressive Stress-Induced Magnetic Anisotropy in Ferromagnetic Materials under Weak AC Excitation	Chair: Prof. Weiying Cheng Prof. Chaofeng Ye
17:30-17:45	Oral 25 【25-1-119】	**Prof. Jia Liu** Southwest Jiaotong University, China Multi-Scale Analysis of the Influence of Microstructure on Stress Detection Based on Magnetic Barkhausen Noise	
17:45-18:00	Oral 26 【25-1-063】	**Prof. Haiyan Xing** Northeast Petroleum University, China Co-RF-SVM Cooperative Training: A Semi-supervised Approach for Weak Magnetic Signal Denoising	
18:30-21:30	Conference Dinner		
Nov. 22nd			
08:30-12:00	Technical Tour		
12:00-13:30	Lunch		
13:30-18:00	Return trip & Exhibitor Move-out		