

WCAE-2019 Schedule

(2019.10.30)

Hotel Landmark Canton		
Tue., Nov. 5th		
14:00~17:00	Registration of WCAE-2019	Lobby
18:00~21:00	Welcome Reception for WCAE-2019	39F Paradise Westem Restaurant
Wed., Nov. 6th		
Morning sessions, 11F Conference Center		
8:30~8:45	Welcoming address	G.T. Shen
8:45~9:15	Keynote presentation	R. Pullin
9:15~10:00	3 technical presentations, 15 min each, PP 6-1 to PP 6-3	G.T. Shen
10:00~10:30	Photo & Coffee break	
10:30~12:00	6 technical presentations, 15 min each, PP 6-4 to PP 6-9	G. Qi
12:00~13:30	Lunch	39F Paradise Westem Restaurant
Afternoon sessions, 11F Conference Center		
14:00~14:30	Keynote presentation	J. Dong
14:30~15:00	2 technical presentations, 15 min each, PP 6-10 to PP 6-11	A. Tan, W. Li
15:00~15:15	Coffee break	
15:15~16:00	3 technical presentations, 15 min each, PP 6-12 to PP 6-14	R. Pullin, G.H. Li
16:00~16:30	Exhibition & Poster presentation No. PP 6-15 to PP 6-40	
16:30~17:30	ISAE business meeting	G.T. Shen
18:00~21:00	Banquet	11F Conference Center
Thu., Nov. 7th		
Morning sessions, 11F Conference Center		
8:30~8:35	Welcoming address	
8:35~9:05	Keynote presentation	T. Shiotani
9:05~10:35	6 technical presentations, 15 min each, PP 7-1 to PP 7-6	P. Tscheliesnig, S.F. Liu
10:35~10:50	Coffee break	
10:50~12:05	5 technical presentations, 15 min each, PP 7-7 to PP 7-11	G. Lackner, L.J. Dong
12:05~13:30	Lunch	39F Paradise Westem Restaurant
Afternoon sessions, 11F Conference Center		
14:00~14:30	Keynote presentation	L.J. Dong
14:30~15:00	2 presentations, 15 min each, PP 7-12 to PP 7-13	T. Shiotani, Y.T. Xu
15:00~15:15	Coffee break	
15:15~16:30	5 presentations, 15 min each, PP 7-14 to PP 7-18	H. Vallen, Q.R. Duan
19:00~22:00	Pearl River Night Cruise	
Fri., Nov. 8th		
Morning sessions, 11F Conference Center		
8:30~8:35	Welcoming address	
8:35~9:05	Keynote presentation	G.T. Shen

9:05~10:35	6 technical presentations, 15 min each, PP 8-1 to PP 8-6	J. Dong, F.J. Xu
10:35~10:50	Coffee break	
10:50~12:05	5 technical presentations, 15 min each, PP 8-7 to PP 8-11	Y. Mizutani, K.Q. Ding
12:05~13:30	Lunch	39F Paradise Westem Restaurant
Afternoon sessions, 11F Conference Center		
14:00~15:15	5 technical presentations, 15 min each, PP 8-12 to PP 8-16	W. Li
15:15~15:30	Closing address	
15:45~16:45	ChSNDT – AE Working Committee business meeting	W. Li

Technical Programs (2019-10-30)

Wednesday, Nov. 6th

8:30-8:45 Welcoming address

SESSION 1: Chair: Prof. Gongtian Shen(China Special Equipment Inspection and Research Institute, China)

8:45-9:15 **Keynote presentation**

R. Pullin

Cardiff University, UK

“Advanced Source Location and Characterisation of AE signals ”

9:15 PP 6-1 Shifeng Liu, Jiehui Xie

QingCheng AE Institute Co., LTD, China

“Internet of Things Acoustic Emission: Systems and Applications”

9:30 PP 6-2 Sergey Elizarov, Alexander Alyakritsky, Pavel Trofimov,

Alexey Bugankov, Arkady Shimansky

“INTERUNIS-IT” LLC, Russia

“The Overview of A-Line AE Systems”

9:45 PP 6-3 Hartmut Vallen

Vallen Systeme GmbH, Germany

“About an initial draft of a standard concerning sensitivity verification of acoustic emission sensors”

10:00-10:30 Photo & Coffee break

SESSION 2: Chair: Prof. Gang Qi (University of Memphis, USA)

10:30 PP 6-4 H. Marihart, Gerald Lackner, G. Schauritsch

TÜV AUSTRIA SERVICES GMBH, Austria

“Acoustic emission monitoring on pressure carrying metallic components of industrial plants”

- 10:45 PP 6-5 Yanting Xu, Yadong Wang, Jianyong Zheng
Zhejiang Academy of Special Equipment Science, China
“Waveguide Methods for AE Online Testing of Several Cryogenic Vertical Double-wall Tanks”
- 11:00 PP 6-6 Huatian Xu, Yewei Kang, Zhenghong Guo
Petro China Pipeline R&D Center, China
“Difference Analysis of Acoustic Emission Testing Methods on Storage Tank Floor”
- 11:15 PP 6-7 F. Zohora, D. Holmes, P. Borghesani, M. Cholette, Y. Gu
Queensland University of Technology, Australia
“Study of acoustic emission response to vortex shedding of a bluff body”
- 11:30 PP 6-8 Ke Bo, Sanjiang Liu , hui Luo, baodi Zhao
China Special Equipment Inspection and Research Institute, China
“Experiment Research on Acoustic Emission of Impact-damaged Fully-wrapped Composite Gas Cylinder with Non-metallic Liner”
- 11:45 PP 6-9 Rongshun Jin, Gongtian Shen, Qiang Wang,
China Jiliang University, China
“The giant ferris wheel rolling bearings fault diagnosis with acoustic emission and support vector machine”
- 12:00-13:30 Lunch**

SESSION 3: Chair: Prof. Andy Chit Tan (Universiti Tunku Abdul Rahman, Malaysia), Prof. Wei Li (Northeast Petroleum University, China)

- 14:00-14:30 Keynote presentation**
J. Dong
Mistras Group Inc., USA
“Advancements of Acoustic Emission on Structure Health Monitoring
- 14:30 PP 6-10 Yanting Xu, Yadong Wang, Gangyi Cai
Zhejiang Academy of Special Equipment Science, China,

“AE Detection of Leakage Location in An Ethylene Oxide Reactor”

14:45 PP 6-11

Viet Tra, Jong-Myon

Kim University of Ulsan, South Korea

“Improving Bearing Diagnostic Performance by Using New Discriminatory Fault-Feature Evaluation”

15:00-15:15

Coffee break

SESSION 4: Chair: Prof. Rhys Pullin (Cardiff University, UK), Prof. Guanghai Li

(China Special Equipment Inspection and Research Institute, China)

15:15 PP 6-12

Yang Yitao, Asaue Hisafumi, Shiotani Tomoki, Hashimoto.K

Kyoto University, Japan

“Damage Evaluation inside the Concrete Dam by Tomography and AE Analysis”

15:30 PP 6-13

Vladimir Bardakov, S. Elizarov, V. Barat, V. Kharebov, K. Medvedev,

D. Terentyev

INTERUNIS-IT LLC, Russia

“AE testing of energy field objects”

15:45 PP 6-14

Hui Luo, Ke Bo, Baodi Zhao, Sen Chai

China Special Equipment Inspection and Research Institute, China

“Experiment Research on Tensile Process of Glass Fiber Reinforced Plastics Basing on AE”

16:00-16:30

Exhibition & Poster presentation

Exhibition:

QingCheng AE Institute(Guangzhou) Co.,Ltd

INTERUNIS-IT LLC

Beijing Crahesion Science& Trade Co.Ltd (Vallen Systeme GmbH)

Physical Acoustics Corporation

Beijing Softland Times Scientific & Technology Co.Ltd

Optics11

Poster presentation:

- PP 6-15 Shijie Zhang
Tianjin Research Institute for Water Transportation Engineering, M. O. T., China
“Comparison and Analysis of Oil Tank Test Results by PAC and Vallen Acoustic Emission Instrumentations”
- PP 6-16 Xiaobo Rui, Yu Zhang, Lei Qi, Guixuan Yue, and Zhoumo Zeng, Zhao Yin
Tianjin University, China
“Research on Continuous Leakage Location of Stiffened Plate Based on Frequency Domain Eigenvalue Mapping Method”
- PP 6-17 Zhengjie Shao, Siyi Liu, Wei Wu, Xi Chen, Guanhua Wu
Nanchang Hangkong University, China
“The AE monitoring in Load testing in Helicopter tail beam with Prefabricated defects”
- PP 6-18 Yao Fu
PHYSICAL ACOUSTICS CORP, China
“AE Monitoring Application In High Energy Pipeline”
- PP 6-19 Wang Qiong
SINOPEC Research Institute of Safety Engineering, China
“The Experimental Research on Acoustic Emission of Petrochemical Valve Gas Inner Leakage”
- PP 6-20 Ping Yang, Yun Li, Yang Yu
Shenyang University of Technology, China
“Identification of Acoustic Emission Signals for Bearings Fault based on Neural Network of Cuckoo Search Algorithm”
- PP 6-21 WANG Xinying, ZHANG Huiran, ZHANG Ruicheng, ZHAO Bin, HUANG Xuan, ZHANG Ying
Changzhou University, China
“Prediction of residual life of oil and gas pipeline corrosion based on Deep Learning”
- PP 6-22 ZHANG Jiwang, DING Keqin, WANG Hongzhu
China Special Equipment Inspection And Research Institute, China

- “Bearing Fault Transfer Diagnosis Based on Acoustic Emission signal under Variable Working Conditions”
- PP 6-23 QI Lei, SUN Lichen, RUI Xiaobo, LIU Tao, WANG Lina
Tianjin University, China
- “A Method for Vacuum Leak Detecting Based on Acoustic Emission”
- PP 6-24 Y. C. Zhang, J. Meng, L. X. Song
Shanghai Institute of Ceramics, Chinese Academy of Sciences, China
- “Acoustic Emission In Coatings - A Review”
- PP 6-25 Gang Rou , Hongda Zhang , Xuecheng Zhu , Shiyu Chen
PHYCICAL ACOUSTICS CORP, China
- “Application of acoustic emission technology in Oil-immersed transformer partial discharge detection and location of local discharge source””
- PP 6-26 Yantao Liu, Guoliang Xu, Gang Sun, Zhe Wang
Beijing Institute of Structure and Environment Engineering, China
- “Study on the Propagation Law of Lamb Wave in High Stiffened Panels”
- PP 6-27 Shijie Zhang
Tianjin Research Institute for Water Transportation Engineering, M. O. T., China
- “Using Hilbert-Huang Transform to Process and Analyze the Corrosion Acoustic Emission Signal of the Tank Bottom Plate”
- PP 6-28 Zhuotao Wang, Jianyu Li, Gang Qi, Yingli Zhu
Tianjin Key Laboratory of Integrated Design and On-line Monitoring for Light Industry & Food Machinery and Equipment, China
- “Detection of the Fatigue Damage Accumulation Evolution of AZ31B Magnesium Alloy by Acoustic Emission”
- PP 6-29 Yang Yu, Yangyang Guo
Shenyang University of Technology, China
- “Application of Kurtosis Analysis in Fault Detection of Rolling Bearing”
- PP 6-30 Shang xiandong, Zhang hao, Kuang jigui
Shandong Special Equipment Inspection Institute Co., Ltd.

- “Condition Monitoring and Diagnosis by Using AE technology of Multi-layer Binding Ammonia converter”
- PP 6-31 F. Qiu, M. J. Li, D. R. Qu, G. Dai, X. B. Huang
- Laboratory of Safety and Control for Chemicals, Sinopec Qingdao Research Institute of Safety Engineering, China
- “Acoustic multi-source identification of tank bottom corrosion”
- PP 6-32 Longjun Dong, Daoyuan Sun, Zixin Huang
- Central South University, China
- “Application of Velocity-free Method in Localization of Underground Autonomous Driving Vehicles”
- PP 6-33 Qingchun Hu, Longjun Dong
- Central South University, China
- “A localization method based ant colony without premeasured velocity”
- PP 6-34 Xiaolin Li, Hao Chen, Gang Sun, Lixia Wang, Changwei Shi
- Institute of Structure and Environment Engineering, China
- “Study on AE Detection Signal of Composite Barrel under Axial Compression Failure Load”
- PP 6-35 Xiaonong Wang, Jingyu Huang, Xiong Zhou, Xiangyun Kong
- Tongji University, China
- “An Improved Variable Step Size LMS Adaptive Filtering Algorithm and Analysis”
- PP 6-36 YUE Kai-bai, MA Xue-rong, LU Jun, ZUO Ji-feng, YAO Li
- China Aerodynamics Research and Development Center, China
- “Acoustic Emission Testing For the Large Vacuum System and Analysis of Signal Source Data”
- PP 6-37 Zhihai Wang, Xiaoqin Liu, Xing Wu
- Kunming University of Science & Technology, China
- “Fatigue Evolution of Ball Bearing with Improved Acoustic Emission Indicator”
- PP 6-38 Zhihai Hu, Keqin Ding, Huazhong Wei
- China Special Equipment Inspection and Research institute, China

“Study on a method of corrosion acoustic emission location for the tank floor”

PP 6-39

Longjun Dong, Zheng Tang

Central South University, China

“Discrimination of Mining Microseismic Events and Blasts using Convolutional Neural Networks”

16:30-17:30

ISAE business meeting

18:00-21:00

Banquet

Thursday, Nov. 7th

8:30-8:35

Welcoming address

SESSION 5: Chair: Mr. Peter Tscheliesnig (AT - Consult e.U., Lower Austria),

Prof. Shifeng Liu (QingCheng AE Institute(Guangzhou) Co.,Ltd, China)

8:35-9:05

Keynote presentation

T. Shiotani

Kyoto University, Japan

“Implementation of advanced acoustic approaches onto the flow of maintenance program in civil infrastructures”

9:05 PP 7-1

Weiping Wu, Zhejun Liu

National Center of Quality Inspection and Testing for Hydro Steel

Structure Ministry of Water Resource, China

“Localization of Acoustic Emission Sources in the Steel Bifurcated Pipe of Hydropower Station”

9:20 PP 7-2

Yu Wang, Rhys Pullin, Matthew Pearson, Robert Davies

Cardiff University, UK.

“Detection and Evaluation of Vascular Network based Self-Healing Concrete using Acoustic Emission”

9:35 PP 7-3

Yongzhen Zhang, Xiaoyan Tong, Leijiang Yao

Northwestern Polytechnical University, China

“Cluster Analysis of Acoustic Emission Signals on Tensile Damage Process of C/SiC using An Improved K-means Algorithm”

9:50 PP 7-4 Guodong Bai, Xiaoyan Tong, Andy T. Augousti

Northwestern Polytechnical University, China

“High-temperature damage evolution of C/SiC based on acoustic emission”

10:05 PP 7-5 Stephen Grigg, B. Wright, R. Pullin

Cardiff University, UK

“A comparison of Acoustic Emission in Cadaveric Specimens and Artificial Sawbone during Surgical Screw Implants”

10:20 PP 7-6 Guangquan Hou, Yangming An, Xiaohua Fan

Bei Jing Nan Yang Si Yuan Intelligent Technology Co.,Ltd, China

“Condition monitoring of cutting tool based on AE signal”

10:35-10:50 Coffee break

SESSION 6: Chair: Mr. Gerald Lackner (TÜV AUSTRIA SERVICES GMBH, Austria), Prof. Longjun Dong (Central South University, China)

10:50 PP 7-7 Hisafumi Asaue, T. Shiotani, S. Fukumoto, T. Maeshima

Kyoto University, Japan

“Evaluation of Fatigue Damage in RC slabs Considering Water Infiltration by Means of 3D AE & Elastic Wave Tomography”

11:05 PP 7-8 L L Ting, J Y Tey, A C Tan, Y J King, d A R Faidz

Universiti Tunku Abdul Rahman, Malaysia

“Acoustic emission and dual-tree complex wavelet transform with soft threshold de-noising to enhance pipeline leak detection and location”

11:20 PP 7-9 Antolino Gallego, Francisco J. Rescalvo, Leandro Morillas, C. Abarkane

University of Granada, Spain

“Acoustic emission of poplar wood subjected to compressive loading”

11:35 PP 7-10 E. Lowenhar, J. Dong

Mistras Group Inc., USA

11:50 PP 7-11 Zeng Xianglong, Deng Qiong, Wang Bo, Deng zhilun, Wang xudong
Northwestern Polytechnical University, China

“Tablet AE - A Smart Acoustic Emission System for Handy NDT Applications”
“The influence of a waveguide on changes in the parameters of acoustic emission signals”

12:05-13:30 Lunch

**SESSION 7: Chair: Prof. Tomoki Shiotani (Kyoto University, Japan),
Mr. Yanting Xu (Zhejiang Provincial Special Equipment Inspection and
Research Institute, China)**

14:00-14:30 Keynote presentation

L.J. Dong

Central South University, China

“Localization and Control of Microseismic/AE Sources in Mining: from Data to Information”

14:30 PP 7-12 Xiao Denghong, Gao Yong

Beijing Electro-Mechanical Engineering Institute, China

“Study on acoustic emission character of C/SiC structure in random vibration testing”

14:45 PP 7-13 Shuizhou Song, Jianguo Ning, Huilan Ren

Beijing Institute of Technology, China

“Investigation on mechanism of micro-cracks of concrete failure In Brazilian test”

15:00-15:15 Coffee break

**SESSION 8: Chair: Mr. Hartmut Vallen (Vallen Systeme GmbH, Germany),
Mr. Qingru Duan (Beijing Crahesion Science & Trade Co.Ltd, China)**

- 15:15 PP 7-14 Khodijah Kholish Rumayshah, Noriaki Inagaki, Qirong Zhu, Yoshihiro Mizutani
Tokyo Institute of Technology, Japan
“Source Location of Acoustic Emission on Anisotropic Plate utilizing Artificial Intelligence”
- 15:30 PP 7-15 Liu Wugang, H Chuantao, W Long, K Fanjin, G Wenran, W Zhenqiang
Beijing Institute of Structure and Environment Engineering, China
“Correlation Analysis of Acoustic Emission Signals at Different Distance form Damage Source”
- 15:45 PP 7-16 Bach Phi Duong, Jaeyoung Kim, IkyuJeoung, Jong-Myon Kim
University of Ulsan, South Korea
“Acoustic Emission Burst Extraction for Multi-level Leakage Detection in a Pipeline”
- 16:00 PP 7-17 Weiping Wu, Zhejun Liu
National Center of Quality Inspection & Testing for Hydro Steel
Structure Ministry of Water Resources, China
“Study on Acoustic Emission Characteristics of B610CF Steel for Hydropower Station in Tensile Test”
- 16:15 PP 7-18 Noriaki Inagaki, Khodijah Kholish Rumayshah, Qirong Zhu, Yoshihiro Mizutani
Tokyo Institute of Technology, Japan
“AE source location by single three-axis accelerometer utilizing AI”
- 19:00-22:00 Pearl River Night Cruise**

Friday, Nov. 8th

8:30-8:35 Welcoming address

**SESSION 9: Chair: Dr. Jason Dong (Mistras Group Inc., USA), Mr. Fengjing Xu
(Physical Acoustics Corpration Beijing office, China)**

- 8:35-9:05** **Keynote presentation**
- G.T. Shen**
- China Special Equipment Inspection and Research Institute, China**
- “International acoustic emission standard system analysis and development”**
- 9:05 PP 8-1 Yoshihiro Mizutani, Takeshi Ashizawa, Ryuichiro Otonari
- Tokyo Institute of Technology, Japan
- “Acoustic Emission Propagation in CFRP Structures”
- 9:20 PP 8-2 Jaeyoung Kim, Jong-Myon Kim
- University of Ulsan, South Korea
- “Bearing Fault Diagnosis using Grad-CAM and Acoustic Emission Signals”
- 9:35 PP 8-3 Kai Zhang, Baojun Pang, Runqiang Chi
- Changshu institute of technology, China
- “Damage Localization of Debris Cloud Hypervelocity Impact Based on Acoustic Emission”
- 9:50 PP 8-4 Xinglin Lei, Xiaying Li
- National Institute of Advanced Industrial Science and Technology,
Japan
- “Enhanced Acoustic Emission Processing Using an Template Matching Method”
- 10:05 PP 8-5 Junwei Gao, Ying Zhang, Rui Cong, Xinying Wang, Xiao Zhang
- Changzhou University, China
- “Research on immersion-type acoustic emission detection and location method for large tank bottom”
- 10:20 PP 8-6 Peng Jiang, Wei Li, Luying Zhang, Hongyuan Zhang, Zhiyuan Zhang, Peng Liu
- University of Northeast Petroleum, China
- “Damage Modal Characteristics Analysis and Pretrigger Energy Study of Carbon Fiber Composites”
- 10:35-10:50** **Coffee break**

SESSION 10: Chair: Prof. Yoshihiro Mizutani (Tokyo Institute of Technology, Japan), Prof. Keqin Ding (China Special Equipment Inspection and Research Institute, China)

- 10:50 PP 8-7 He Yan, Gongtian Shen, Liang Du
China Special Equipment Inspection and Research institute, China
“Research on acoustic emission technology for tank floor under interference of nitrogen sealing system”
- 11:05 PP 8-8 Cheng YE, Zhongzheng Zhang, Jun Jiang, Zheng Duan, YU Xue
Nanjing Boiler and Pressure Vessel Inspection and Research Institute, China
“Acoustic Emission Monitoring of Corrosion on Zirconium metal”
- 11:20 PP 8-9 Yu Luo, Shengxiang Li, Xiling Liu, Xibing Li
Central South University, China
“Acoustic Emissions of Cathode Carbon Block from Aluminum electrolytic cell under deformation”
- 11:35 PP 8-10 Longjun Dong, Xiaojie Tong, and Ju Ma
Central South University, China
“Quantitative study on tomography effects in abnormal regions of complex structures”
- 11:50 PP 8-11 Wenjun Zhang, Gongtian Shen, Yongna Shen
China Special Equipment Inspection and Research Institute, China
“Fatigue Crack Growth of TC4 Titanium Alloy Using Acoustic Emission Technique”
- 12:05-13:30 Lunch**

SESSION 11: Chair: Prof. Wei Li (Northeast Petroleum University, China)

- 14:00 PP 8-12 W. Zhou, P. F. Zhang, R. Liu, Z. Y. Wei, S. Yang
Hebei University, China

“Investigation of Flexural Progressive Damage of Three Dimensional Braided Composites by Acoustic Emission and Micro-CT”

14:15 PP 8-13

Zihao Zhao, Ran Zhao, Jianwen Wang, Tian He, Qiang Pan, Xianlei Ye

Beihang University, Beijing

“A new method for Acoustic Emission source localization in thin plates”

14:30 PP 8-14

Zheyu Gao, Yudi Shen

Chang’an University, China

“AE Behavior of Metal Burn Under Different Temperature by Laser Heating”

14:45 PP 8-15

Wuxiong Cao, Pengyu Zhou, Baojun Pang, Runqiang Chi, Zhongqing Su

Harbin Institute of Technology, China

“Hypervelocity Impact Damage Pattern Recognition in Aluminum Alloy

Plates based on D-S Evidence Theory and BP Neural Network”

15:00 PP 8-16

Yue Li, Ying Zhang, Rui Cong, Xinying Wang, Xiao Zhang

Changzhou University, China

“Experimental Study on Quantification of Microscopic Damage of Q245R Steel Based on Acoustics Emission”

15:15-15:30

Closing address

15:45-16:45

ChSNDT – AE Working Committee business meeting

Note: underlined is the presenting author in this program.