



The Japanese Society for Non-Destructive Inspection
The 22nd International Acoustic Emission Symposium
(IAES22-SENDAI)
November 11-14, 2014
Sakura Hall, Tohoku University, Sendai Japan

Tentative Program

Tuesday, November 11

Registration 17:30-19:30

Welcoming Reception 18:00-20:00
(at Restaurant Hagi)

Wednesday, November 12

Registration 9:00-17:00

Opening Address 9:30-9:45

Prof. Tomoki SHIOTANI
Kyoto University, Japan

Concrete & Rock 9:45-10:45

Chairperson: C. R. Rios-Soberanis

Application of Acoustic Emission and Elastic Wave to Buckle Plate Slab under Wheel Load Running Test

Kentarō OHNO, K. UJI and A. UENO, Tokyo Metropolitan University, Japan

Verification of Self-healing Performance of Fly Ash Concrete by AE Method

Ryosei HOSOGLI, T. WATANABE and C. HASHIMOTO, The University of Tokushima, Japan

New Contributions for Damage Assessment in RC Structures Subjected to Earthquakes using Acoustic Emission

Francisco Antonio SAGASTA-MORENO, A. GALLEGO and A. BENAVENT-CLIMENT, University of Granada, Spain

Monitoring of Fracture Mechanisms due to Rebar Corrosion in RC under Bending Test by Acoustic Emission

Yuma KAWASAKI, T. GONNO and K. IZUNO, Ritsumeikan University, Japan

Coffee Break 10:45-11:15

Manufacturing 11:15-12:00

Chairperson: D. J. Yoon

Acoustic Emission during Direct Joining Process of Metal and Plastic

Takeshi YASUDA and K. NISHIMOTO, Anan National College of Technology, Japan

Classification of Defects in Dissimilar Friction Stir Welding by AE Method

Qiwei WANG, K. ITO, E. YUKUTAKE and M. ENOKI, The University of Tokyo, Japan

Evaluation of Laser Shock Peening by AE Propagated in Water Layer

Tomoki TAKATA, M. ENOKI, A. MATSUI and Y. KOBAYASHI, The University of Tokyo, Japan

Lunch 12:00-13:30

Diagnostics 13:30-15:00

Chairperson: H. Yuki

Development of Noninvasive Diagnosis Method for Knee Osteoarthritis using Acoustic Information

Takenobu SAKAI, K. KODAMA, Y. TOZAWA, A. ANDO, T. NAKAMURA, Y. KAWADA, K. KAGEYAMA, S. WAKAYAMA, K. HASE and S. OTA, Saitama University, Japan

Investigation of Mechanical Behavior of Periodic Mesh Plates with AE Method

Fabien BRIFFOD, T. SHIRAIWA and M. ENOKI, The University of Tokyo, Japan

Impact Damage Assessment of Cylindrical Composite Structures by Energy Based Acoustic Emission Analysis

Dong-Jin YOON, B.-H. HAN, I.-B. KWON and Y.-S. LEE, Korea Research Institute of Standards and Science, Korea

Condition Monitoring of Oscillating Bearings with Acoustic Emission Technology

Dennis ROLLINGER, K. NIENHAUS, D. BOOS, T. VRAETZ and R. BALTES, RWTH Aachen University, Germany

Brief Review of Acoustic Emission Monitoring on Two Movable Bridges

David Edward KOSNIK, CTLGroup, USA

A New Waveform Capture Method Masters Shortest, Longest, and Almost Overlapping AE Bursts

Hartmut Richard VALLEN, T. THENIKL, G. CORNEANU, Vallen Systeme GmbH, Germany

Coffee Break 15:00-15:30

Material 1 15:30-16:45

Chairperson: A. Tan

Localization of Initial Cracks in Laminated Glass using Acoustic Emission Analysis, Part II

Gerd MANTHEI, C. ALTER and S. KOLLING, THM, University of Applied Sciences, Germany

Identification of the Mechanisms of Fracture on Acrylic Bone Cements Elaborated with Nano-structured Particles using Acoustic Emission Technique

Oscar Fernando PACHECO-SALAZAR, C. R. RIOS-SOBERANIS, J. M. CERVANTES-UC, S. WAKAYAMA and T. SAKAI, Saitama University, Japan

Acoustic Emission in Thin Carbon Fiber Cementitious Laminae Subjected to Tensile Strength

Carlos Emilio. VINAJERA-REYNA, V. LEY-PAREDES, C. R. RIOS-SOBERANIS, Centro de Investigación Científica de Yucatán, Mexico

Friday, November 14

Application of AE Technique for The Assessment of Mechanical Strength of High-pressure, Double-acting Hybrid Cylinders Used in The Mining Industry

Jerzy. Czeslaw SCHMIDT, B. IRENEUSZ, N. TOMASZ and H. RYSZARD, Cracow University of Technology, Poland

Study on Evaluation of Craze Phenomenon of Polycarbonate Resin with AE Method

Masanori TAKUMA, H. OBAYASHI, K. SAITOH, Y. TAKAHASHI and Y. ASAGOE, Kansai University, Japan

Thursday, November 13

Registration 8:45-12:30

Material 2 9:00-10:45

Chairperson: M. Shiwa

Study of the Damage Evaluation Method for the CFRP Material Using F.C.O.G part 1

Mami. TAKIZAWA, H. KAWASAKI, H. NAKAMURA, H. SATO and I. IIDA, IHI Inspection & Instrumentation Co., Ltd., Japan

Study of the Damage Evaluation Method for the CFRP Material Using F.C.O.G part 2

Hiraku KAWASAKI, M. TAKIZAWA, H. NAKAMURA, H. SATO and I. IIDA, IHI Inspection & Instrumentation Co., Ltd., Japan

Estimation of Fracture Toughness in Various Mg Alloys by AE Analysis

Yuki MUTO, T. SHIRAIWA and M. ENOKI, The University of Tokyo, Japan

Data-Enabled Science for Nondestructive Evaluation of Material Damage

Gang QI, and S. F. WAYNE, Tianjin University of Science and Technology, China

Experimental Study of Crack Propagation in Carbon Steel using Acoustic Emission

Fatematuz ZOHORA, A. C. C. TAN, M. KAPHLE and S. FAWZIA, Queensland University of Technology, Australia

Acoustic Emission Response as Complementary Method in Mechanical Behavior Characterization of Different Graphites

Rami CARMI, I. ALON, E. CHAKOTAY and A. BUSSIBA, NRCN, Israel

Bending of Textile Reinforced Cement Beams Monitored by Acoustic Emission

Dimitrios G. AGGELIS, J.BLOM, M. E. KADI and J. WASTIELS, Vrije Universiteit Brussel, Belgium

Excursion for Matsushima 11:00-18:00

(Departing from Sakura Hall)

Buffet Party at Sendai Kokusai Hotel 19:00-21:00

Registration 9:00-12:00

Rock, Concrete & Structures 9:15-10:15

Chairperson: G. Manthei

Evaluating Damage and Mechanical Behavior of Mayan Archeological Stones by using Acoustic Emission Technique

Victor Jose LEY-PAREDES, C. R. RIOS-SOBERANIS, and C. VINAJERA-REYNA, Centro de Investigación Científica de Yucatán, Mexico

Damage Visualization of Rock Material in Triaxial Compression Test with 3D-AE Tomography

Satoshi OSAWA, T. SHIOTANI, S. MOMOKI and Y. KOBAYASHI, Kyoto University, Japan

Evaluation of Improved Water Flow Performance in Pipeline using AE Monitoring

Tetsuya SUZUKI, T. NAKA and H. TARUYA, Niigata University, Japan

Study of Quantitative Assessment Standard for Type 1 and Type 2 Gas Cylinder using Acoustic Emission Testing

Dong-Hyun KIM, S.-B. LEE, K.-H. KIM, D.-J. YOON and D.-M. BAE, RECTUSON CO.,LTD., Korea

Coffee Break 10:15-10:30

Fatigue & Corrosion 10:30-11:15

Chairperson: S. Yuyama

Acoustic Emission during Fatigue Crack Growth in Austenitic Stainless Steels

Alexei VINOGRADOV, M. Linderov, E. POMPONI, C. SIEGEL, A. WEIDNER and H. BIERMANN, Togliatti State University, Russia

Monitoring of Stress Corrosion Cracking in High Temperature and High Pressure Environment by Optical Fiber AE System

Keita SANO, T. MATSUO, Y. SAKAKIBARA and G. NAKAYAMA, Meiji University, Japan

AE Mechanisms of SCC in SUS304 Stainless Steel

Mitsuharu SHIWA, H. MASUDA, H. YAMAWAKI, K. ITO and M. ENOKI, National Institute for Materials Science, Japan

Coffee Break 11:15-11:45

Diagnostic, Materials & Sensor 11:45-12:45

Chairperson: D. Kosnik

Fundamental Study on Evaluation of Sealability of Engine Gaskets Based on Acoustic Emission Technique

Kazuki TADA, H. YUKI, M. YAKUSHIJI and H. NAKAJIMA, The University of Electro-Communications, Japan

Acoustic emission activity from the two main types of small multi-cylinder Diesel engine fuel injection systems

D. P. LOWE and Andy C. C. TAN, Queensland University of Technology, Australia

European and International Standardization on the field of AT

Peter TSCHELIESNIG, TÜV Austria Services, Austria

Influence of Resonant Frequency of Sensor on AE Measurement of Tendon

Fumito MATSUOKA, S. WAKAYAMA, S. SUZUKI, T. SAKAI and E. YAMAMOTO, Tokyo Metropolitan University, Japan

Lunch 12:45-13:45

Signal Processing 13:45-14:45

Chairperson: Peter Tscheliesning

Real-time Noise Reduction of Continuously Recorded AE Waveforms using GPU Based Parallel Computing Technique

Kaita ITO and M. ENOKI, The University of Tokyo, Japan

Estimation of Viscoelastic Properties of Thin Polymer Plates by Lamb Wave Analysis

Yoshihiro MIZUTANI, K. SUENAGA, A. TODOROKI and Y. SUZUKI, Tokyo Institute of Technology, Japan

Verification of Source Location Accuracy by AE Tomography

Shohei MOMOKI, Y. KOBAYASHI and T. SHIOTANI, Tobishima Corporation, Japan

Two-dimensional Source Location Technique on Anisotropic Medium on the Basis of Ray-tracing

Yoshikazu KOBAYASHI and T. SHIOTANI, Nihon University, Japan

Closing Address 14:45-15:00