**Final Program**

**Tuesday, 16th of November**

**Registration** 16:00-19:00

**Welcoming Reception** 17:00-19:00

**Wednesday, 17th of November**

**Registration** 8:30-17:00

**Opening Address** 9:00-9:15

*Prof. Shuichi WAKAYAMA*,
Tokyo Metropolitan University, Japan

**Sensor Devices** 9:15-10:30

*Chairperson: Christian U. GROSSE*

**Characterization of AE Sensors for Moment Tensor Analysis**
GerD MANTHEI, University of Applied Sciences, Giessen-Friedberg, Germany

**GPU Acceleration of AE Signal Processing Algorithms**
Lubomir RIHA, R. SMID, H. EL-SAYED, and A. DOCEKAL,
Bowie State University, U.S.A.

**Time and Continuous Waveform Calibration to uniform the Sensitivity Frequency Characteristics of AE Sensors and Amplifiers**
Kaita ITO and M. ENOKI, University of Tokyo, Japan

**Fundamental Study on Interferometer Type Optical Fiber AE Sensor for Underwater Measurement**
Daisuke KAI and H. YUKI, University of Electro-Communications, Japan

**Dependence of AE parameters on the propagation distance**
Demosthenes POLYZOS, A. PAPACHARA-LAMPOPOULOS, T. SHIOTANI and D. G. Aggelis,
University of Patras, Greece

**Coffee Break** 10:30-11:00

**Materials Characterization-1** 11:00-12:00

*Chairperson: Kanji ONO*

**AE Technique for Detecting the Delayed Cracks Under Thermal Sprayed Coating**
Mikio TAKEMOTO, G. UENO, S. UENO, S. MASANO and M. NAKAMURA, Kanmeta Engineering Co., Japan

**Evaluation of AE Behavior during the Tensile Deformation of Al-Mg-Si Alloys with Different Heat Treatment**
Yusuke KUNIYASU, Y. TOKUYAMA, H. NISHINO and K. YOSHIDA, University of Tokushima, Japan

**Growth Behavior Monitoring of Martensitic Transformation in Cu-Al-Ni Shape Memory Alloy based on AE Waveform Simulation utilizing FEM**
Takeshi YASUDA, B. PANG, H. NISHINO and K. YOSHIDA, University of Tokushima, Japan

**Study on Evaluation of Deterioration Conditions for FRP Laminates with AE Method - Influence of Ultraviolet Rays and Water Absorption**
Masanori TAKUMA, N. SHINKE and K. KAMIMURA, Kansai University, Japan

**Lunch** 12:00-13:30

**Structure and Manufacturing-1** 13:30-15:00

*Chairperson: Shuichi WAKAYAMA*

**AE Applications of Infrastructure Monitoring**
Kanji ONO, Prof. Emeritus, UCLA, U.S.A.

**Detection of Gus-Liquid Flow in Service Open Type Pipeline using AE**
Tetsuya SUZUKI, T. NAKA, H. TARUYA, M. AOKI and M. OHTSU, Nihon University, Japan

**Study of Application Method of AE Measurement in Full-Scale Bending Test for Blades of Wind Turbine**
A. DEGUCHI, H. KAWAI, M. ZAKO, Hideyuki NAKAMURA and H. KAWASAKI, Kinden Co., Japan

**Problem of Test of Double-Wall Storage Tank for Liquid Ethylene with AE Method**
Marek NOWAK, I. BARAN, Z. Nicewicz, J. SCHMIDT and A. ZAGORSKI, Cracow University of Technology, Poland

**New AE Measurement System AMSY-6**
Hartmut VALLEN, J. VALLEN and T. THENIKL, Vallen Systeme GmbH, Germany

**AE Testing (AT) of Surface Transport Products**
Peter TSCHELIESNIG, TUV Austria Services GmbH, Austria

**Coffee Break** 15:00-15:30

**Structure and Manufacturing-2** 15:30-17:30

*Chairperson: Kenichi YOSHIDA*

**Degradation Process in Flexible Thin Film Solar Cells under Tensile Loading Characterized by AE**
Shuichi WAKAYAMA and A. Mizutani, Tokyo Metropolitan University, Japan

**A Study on Failure Behavior of CFRP Bolted Joints with Cone Washers by AE Analyses**
Tsukasa KATSUMATA, Y. Mizutani, A. Todoroki and R. Matsuzaki, Tokyo Institute of Technology, Japan

**Investigation of AE Signal Characteristics of Main Spindle on Giant Wheel**
Zhanwen WU, G. SHEN and J. YUAN, China Special Equipment Inspection and Research Institute, China
Application of AE Measurement in Damage Evaluation for CFRP Fluted Plate
Hikaru KAWASAKI, H. NAKAMURA and T. INADA, IHI Inspection & Instrumentation Co. Ltd., Japan

Remote Structural Health Monitoring of a Fracture Critical Bridge
Richard S. GOSTAUTAS, T. VALATKA, P. BANAKIEWICZ and E. ZHOU, Mistras Group Inc., U.S.A.

Characteristics of AE from Impact-Damaged CFRP Laminates during Tensile Tests
Sota SUGIMOTO, Y. MIZUTANI, A. TODOROKI and R. MATSUZAKI, Tokyo Institute of Technology, Japan

AE Testing of a Containership During Voyage
Richard S. GOSTAUTAS, T. VALATKA, S. TERNOWCHEK, G. WANG and M. LEE, Mistras Group Inc., U.S.A.

Improvement of Localization of AE Clusters based on Similarity of AE Events
Lumbomir RIHA and R. SMID, Bowie State University, U.S.A.

Thursday, 18th of November

Registration 8:30-17:00

Keynote: Onoe-Lecture 9:00-9:30
Chairperson: Shigenori YUYAMA
Condition monitoring of material processing by AE
Prof. Manabu ENOKI, University of Tokyo, Japan

Materials Characterization-2 9:30-10:30
Chairperson: Shigenori YUYAMA
Monitoring of AE during Fatigue of Metal Plates
Dimitrios G. AGGELIS, E. Z. KORDATOS and T. E. MATIKAS, University of Ioannina, Greece

Damage Kinetics and Kaiser Effect under the Framework of Interactive Damage and Stress Fields in evaluating Material's Mechanical Behavior
Gary QI and Ming FAN, University of Memphis, U.S.A.

AE Measurements on Piezoelectric/Ferroelectric Materials
Hideaki ABURATANI, Kitakyushu National College of Technology, Japan

Detection of Fatigue Crack Initiation and Monitoring Crack Growth in Ti-6Al-4V Alloy using AE Technique
Shivanand BHAVIKATTI, M. R. BHAT and C. R. L. MURTHY, Indian Institute of Science, India

Coffee Break 10:30-11:00

Concrete and Composite-1 11:00-12:00
Chairperson: Gerd MANTHEI
Damage Identification of RC Bridge Decks with AE Monitoring
Tomoki SHIOTANI, K. KAWAI, S. MOMOKI, H. K. CHAI, H. OHNISHI and T. KAMADA, Kyoto University, Japan

Verification of Promising AE Parameters for Damage Assessment of Bridge Deck using In-Situ-Sampled Specimens
Keisuke KAWAI, T. SHIOTANI, S. MOMOKI and H. K. CHAI, Kyoto University, Japan

Evaluation of Mechanical Behavior of Activated Carbon Composites by 4-Point Flexural Test using AE Technique
Takenobu SAKAI, C. R. R. SOBERANIS, T. MASUKO, S. KOBAYASHI and S. WAKAYAMA, Tokyo Metropolitan University, Japan

Failure Process in Bending of Thin Concrete Members estimated by AE
Kentaro OHNO, K. UJI and A. UENO, Tokyo Metropolitan University, Japan

Lunch 12:00-13:30

Geotechnical Engineering and System 13:30-15:00
Chairperson: Tomoki SHIOTANI
Discriminatory Wavelet Packet Method for locating Damage in Stressed Rock
Chu-Shu KAO, N. F. INCE, Q. LIN, M. KAVEH and J. F. LABUZ, University of Minnesota, U.S.A.

A Study on Application of Fiber Optical AE Sensor for Monitoring Rock Mass Failure around a Deep Underground Chamber
Hirokazu FUJI, Y. SAITO, M. TANAKA, K. HATA and H. MIYAZAKI, Lazoc, Inc., Japan

The Athena Temple of Syracuse: Structural Stability Investigation by AE
A. CARPINTERI, S. INVERNIZZI, Giuseppe LACIDOGNA, A. MANUELLO and G. NICCOLINI, Politecnico di Torino, Italy

Numerical Simulation to examine AE Sensor Arrangement on Accuracy for Source Location and Its Application
Tsunoshi ISHIDA, Kyoto University, Japan

On-Site Health Assessment of RC Bridge with AE Technique
Nobuhiro OKUDE, T. IWAHARA, K. KAWAI and T. SHIOTANI, Tokai Technology Center, Japan

Imaging of Deep Structure using Reflection Waves detected by Spectral Matrix Analysis and Confidence Levels
Hirokazu MORIYA, Tohoku University, Japan

Coffee Break 15:00-15:30

Special Lecture 15:30-16:30
Chairperson: Masayasu OHTSU
Dawn of AE Research
Dr. Morio ONOE, Professor Emeritus, University of Tokyo, Japan

Buffet Party 18:00-20:00
Master of Ceremony: Prof. Mitsuhiro SHIGEISHI
Kumamoto University, Japan
Friday, 19th of November

Registration  8:30-14:00

Keynote: GCOE-Lecture  9:00-9:30  Chairperson: Masayasu OHTSU
New Trends and Applications in the AE Testing of Construction Materials and the Monitoring of Structures  
Prof. Christian U. GROSSE, Technical University Munich, Germany

Concrete and Composite-2  9:30-10:30  Chairperson: Masayasu OHTSU
Study of AE Data Analysis Tools for Structural Health Monitoring Applications  
Manindra KAPHLE, A. C. C. TAN, D. P. THAMBIRATNAM and T. H. T. CHAN, Queensland University of Technology, Australia

Monitoring of Corrosion Process in Reinforced Concrete due to Salt Attack by AE  
Yuma KAWASAKI, M. KITAURA, Y. TOMODA and M. OHTSU, Kumamoto University, Japan

Study on the damage evaluation of CFRP in AE measurement  
Hikaru KAWASAKI and H. NAKAMURA, IHI Inspection & Instrumentation Co. Ltd., Japan

The Fundamentals of Structural Health Monitoring by the AE Method  
Boris MURA VIN, G. MURA VIN and L. LEZVINSKY, Margan Physical Diagnostics Ltd., Israel

Coffee Break  10:30-11:00

Materials Characterization-3  11:00-12:15  Chairperson: Hideo CHO
The Estimation of Deformation Behavior of Coated Layer of the Paperboard during the Scratching Test with AE Method  
Hiroyuki KISHI, T. KATO, S. KANAI, K. YAMASHITA, S. NAGASAWA and Y. FUKUZAWA, Nagaoka University of Technology, Japan

AE Behavior of Single Crystal Fe-Si Steels with Different Si Contents during Tensile Deformation  
Pornthep CHIVAVIBUL, S. A. KHAN, P. SEDLAK and M. ENOKI, University of Tokyo, Japan

Necessary Condition for Delayed Fracture of Meta- S type-304 Stainless Steel with Strain-Induced Martensite  
Mikio TAKEMOTO, S. UENO, M. NAKAMURA and G. UENO, Kanmeta Engineering Co., Japan

Acoustic Emission Monitoring of Compression-After-Impact Test of CFRP Laminates Damaged by Simulated Lightning Strikes  
Jae-Ha Shin, Oh-Yang Kwon and Seong-Wook Seo, Inha University, Korea

Acoustic Emission Analysis of Fracture of Metallic Glasses  
Alexey LAZAREV and A. Vinogradov Osaka City University, Japan

Lunch  12:15-13:45

Monitoring and Instrumentation  13:45-15:00  Chairperson: Manabu ENOKI
AE Monitoring for Intergranular-Type Stress Corrosion Cracking of Sensitized AISI 304 Steel induced by Polythionic Acid  
Hideo CHO, H. HARIU, and T. MATSUO, Aoyama Gakuin University, Japan

Damage Detection of Graphite Electrode in Lithium Ion Battery by AE  
Takuma MATSUO, M. UCHIDA and H. CHO, Aoyama Gakuin University, Japan

Experimental Study of Sub-Cooled Boiling Flow by AE Method  
Rami CARMI, A. BUSSIBA, G. WEIDENFELD, Y. AHARON, I. ALON and I. HOCHBAUM, NRCN-Israel, Israel

Revealing, Identifying and Assessing “Non-Predictable Flaws” in High Chromium Steels by Quantitative AE Nondestructive Inspection and Photo-Elastic Methods  
G. MURAVIN, Itzik MIZRAHI and N. FRAGE, Margan Physical Diagnostics Ltd., Israel

Fatigue Process Evaluation during Ultrasonic Fatigue Testing analyzed by using Laser Doppler Vibrometer and Continuous AE Waveform Analysis System  
Mitsuharu SHIWA, Y. FURUYA, H. YAMAWAKI, K. ITO and M. ENOKI, National Institute for Materials Science, Japan

Closing Address  15:00-15:15  Prof. Manabu ENOKI, University of Tokyo, Japan

15:30-17:30 The 2nd Meeting of RILEM TC-MCM for RILEM TC members