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<td>Development of Control Methods by Acoustic Emission in Composite Materials Tubes, Part I. C. Hervé, M. Cherfaoui, and J. Roget (Cetim, France); M. Truchon (SneaP, France); and X. DuFour (SBPI, France)</td>
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<td>A Procedure for Acceptance Testing of FRP Balsa Wood Core Pressure Vessels. P. Ouellette, S. V. Hoa, and L. Li (Concordia University, Canada)</td>
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<td>Acoustic Emission Technology for the Development of Composite Materials in Automobile Industry. N. Sato (Toyota, Japan)</td>
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83 16:30 Sources for Thermally Induced Acoustic Emission. S. Nyström and P. A. Gradin (Swedish Plastics and Rubber Institute, Sweden)

84 17:00 Distinguishing Acoustic Emission Generated by Actual Damage Progression from Non-Relevant AE in Graphite Epoxy Composites. A. Mittelman and I. Roman (The Hebrew University of Jerusalem, Israel)

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92 17:30 An Attempt to Analyse Laminate Failure Mechanisms by Acoustic Emission. D. Perreux, D. Varchon, and C. Oytana (Laboratoire de Mécanique Appliquée, France)

97 17:45 Study by Acoustic Emission of Damage Development in Carbon Fibre Reinforced Composites. C. Martin, J. M. Dartyge, and E. Morel (Institut National de Recherche Chimique Appliquée, France)

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119 9:40 Acoustic Emission Analysis of GFR Thermoplastic Composites. R. Teti (University of Naples, Italy) and K. Bastioli and G. Romano (Instituto G. Donegani, Italy)

129 10:00 Environmental Effects on Advanced Fibre Hybrid Composites—an Acoustic Emission Study. R. Gopalan, H. N. Sudheendra, and M. R. Madhava (National Aeronautical Laboratory, India) and B. Dattaguru (Indian Institute of Science, India)

137 10:20 An Acoustic Emission Monitoring of Bending Tests on a Hygrothermal Aged PA66 Matrix/Glass Fibre Composite. C. Allie and D. Valentin (Centre des Materiaux, France)

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184 14:50 Delayed Acoustic Emission: A Rheological Approach. N. Rochat, R. Fougeres, and P. Fleischmann (INSA, France)

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207 16:30 Standard Test to Quantify the Knee in the AE vs. Load Curve as a Material Parameter for Composites. J. R. Mitchell (Physical Acoustics Corp., U. S. A.)

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240 9:25 Acoustic Emission Signal Classification of Graphite/Polyphenylene Sulfide Composite Subjected to Mode II Fracture. S. V. Hoa and I. C. Smith (Concordia University, Canada)

250 9:50 Statistical Analysis of Acoustic Emission Signals Associated with Fatigue Damage in CFRP Composites. A. Maslouhi, C. Roy, and D. Proulx (Université de Sherbrooke, Canada); M. Cherfaoui (Centre Technique des Industries Mécaniques, France); and D. G. Zmciik (Canadian Space Agency, Canada)

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286 12:00 Acoustical Detection of Transverse Cracking in a Crossply Composite. M. R. Gorman and S. M. Ziola (Naval Postgraduate School, U. S. A.) and J. L. Koury (Air Force Astronautics Laboratory, U. S. A.)

298 12:30 Energy Distribution Analysis of Acoustic Emission Signals from the Tensile Testing of CFRP. O. Y. Kwon and D. J. Yoon (Korea Standards Research Institute, Korea)

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313 15:00 Acoustic Emission: A Microinvestigation Technique for Interface Mechanisms in Fibre Composites. D. Rouby (INSÁ de Lyon, France)

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"Relations between Acoustic Emission and Rheological Behavior"
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115 Amplitude Distribution Modelling and Ultimate Strength Prediction of ASTM D-3039 Graphite/Epoxy Tensile Specimens
   J. Walker, E. Hill, Embry-Riddle Aeronautical University, USA

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X. Xian, Chinese Academy of Sciences, China; F. Shin, Hong Kong Polytechnic, China
Friday, July 31, 1992

Session 1—Signal Analysis

Theory of Transient Elastic Wave Propagation in a Plate and its Application to Acoustic Emission
N. Hsu, D. Eitzen, National Institute of Standards and Technology, USA

387 Propagation Studies of AE-Sounds in Woven Carbon-Fiber/Epoxy, Aramid Fiber/Epoxy, and Glass Fiber Mat/Epoxy
B. Melve, STATOIL, Norway; M. Hval, SINTEF, Norway

395 Plate Wave Acoustic Emission Composite Materials
M. Gorman, Naval Postgraduate School, USA

401 Determination of the Elastic Properties of Composite Materials Using Simulated AE Signals
W. Sachse, M. Veidt, L. Niu, Cornell University, USA

Session 2—Signal Analysis—Literature Review

411 Acoustic Emission Source Location in Thin Plates Using Cross-Correlation
S. Ziola, M. Gorman, Naval Postgraduate School, USA

418 Propagation of Flexural Mode AE Signals in Gr/Ep Composite Plates
W. Prosser, NASA Langley Research Center, USA; M. Gorman, Naval Postgraduate School, USA

428 Inverse Analysis in the Two-Dimensional PMMA Model with a Slit
M. Ohtsu, M. Shigeishi, Kumamoto University, Japan

436 An Examination of Acoustic Emission Evaluation Criteria for Aerospace Type Fiber/Polymer Composites
M. Hamstad, University of Denver, USA

Symposium Organizing Committee

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Keynote Speakers:
Prof. T. Kishi, Japan
Dr. Pierre Fleischmann, France

Paper Committee:
D. Smith - USA
S. Hoa - Canada
M. Ohtsu - Japan
T. Fowler - USA
T. Crump - USA
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L. Golaski - Poland
J. Lee - Korea
R. Waeber - Germany
J. Lenain - France
K. Ono - United States
T. Kishi - Japan
TUESDAY, JULY 11, 1995

Session 1 - Material Studies

13  8.45 High Sensor Density Acoustic Emission Monitoring of Graphite/Epoy Pressure Vessels
    K.S. Downs, Lockheed Martin; M.A. Hamstad, University of Denver; USA
23  9.15 Acoustic Analysis of Delamination Propagation in CFRP Cross-Ply Laminates under Static and Cyclic Loadings
    F. Lachaude, L. Michel, B. Lorrain, and R. Barriol, Ecole Nationale Supérieure d'Ingénieurs de Constructions
    Aéronautiques; France
33  9.45 Acoustic Emission to Monitor Crack Accumulation in Cross-Ply CFRP in Conditions of Mechanical Loading or
    Thermal Cycling
    J.-P. Favre and C. Raud, Onera Dept. of Materials; France

10.15 Refreshment Break

Session 2 - Material Studies

43  10.30 Multiple Cracking in Composite Laminates Characterised by Acoustic Emission, Microstructure and
    Mechanical Response
    S. Andersen and H. Lilholt, Riso National Laboratory; Denmark
51  11.00 AE and AU Monitoring of Degradation in Composites Due to High Temperature Exposure and Mechanical
    Loading
    S. Béland, Institute for Aerospace Research; A. Maslouhi and H. Saadoui, Université de Moncton; C. Roy,
    Université de Sherbrooke; Canada
    R. Ganesan and S.V. Hoa, Concordia University; Canada
71  12.00 Acoustic Emission Characteristics of GFRP Composites as a Function of the Interface Quality and Its Aging
    P. Krawczakand J. Pabiot, Ecole des Mines de Douai; France

12.30 Lunch Break

Session 3 - Material Studies

81  13.30 Acoustic Emission and Residual Strength in Fatigue Loaded Notched Carbon/Epoxy Composites
    A. Henriksson and J.C. Thesken, FFA; Sweden
91  14.00 Discrimination of AE Phenomena in Composite Testing
    R. Nordstrom and A.J. Brunner, EMPA Swiss Federal Laboratories for Materials Testing and Research; Switzerland
101 14.30 Two Parameter Description of the AE-Rate Behavior of Glass-Fibre Reinforced Epoxy and Polyester under
     Static Tensile Loading
     A.J. Brunner, R. Nordstrom, and P. Flüeler, EMPA Swiss Federal Laboratories for Materials Testing and Research; Switzerland

15.00 Refreshment Break

Session 4 - Material Studies

111 15.15 On Use of Piezoelectric Polymers as Wideband Acoustic Emission Displacement Sensors for Composites
     M. Hamstad, University of Denver; USA
121 16.30 Mechanical Properties and Acoustic Emission of AI-Fe Matrix Composites
     I. Roman and F. Zeides, The Hebrew University of Jerusalem; Israel; G. Staniek, M. Peters and W.A. Kaysser, DLR;
     Germany
WEDNESDAY, JULY 12, 1995

Keynote address “Acoustic Emission as an Aid for Investigating the Deformation and Fracture Mechanisms of Paper”
Prof. T. Yamauchi, Faculty of Agriculture, Kyoto University; Japan

Session 1 - Material Studies

9.00 The Influence of Polymers on Paper Strength Investigated by the Use of Acoustic Emission Monitoring
S. Forsberg and P.A. Gradin, SCA Research; Sweden

9.15 Investigation of Damage Development in Paper Using Acoustic Emission Monitoring
P.A. Gradin and S. Nyström, SISY; Sweden

9.30 Effect of Temperature on Fracture of Spruce in Compression Using Acoustic Emissions
J.E. Berg and P.A. Gradin, Mid Sweden University; Sweden

10.00 The Deterioration of Foamglas® under Compression Studied With the Acoustic Emission Technique
M. Wevers, D. Tsamtsakis, P. DeMeester, and E. Uria, University of Leuven; H. Strauven, Pittsburgh Corning Europe; Belgium

10.30 Refreshment Break

Session 2 - Material Studies

10.45 Acoustic Emission Behavior of Experimental Dental Resin Composite Containing Spherically Shaped Filler Particles
K.-H. Kim, J.H. Park, Kyungpook National University; M.Y. Choi, Korea Research Institute of Standard and Science; Korea; T. Kishi, The University of Tokyo; Japan

11.15 Acoustic Emission Analysis of Laminate Failure Mechanisms with Reference to Failure Criteria
L. Golaski, Kielce University of Technology; Poland; K. Ono; University of California; USA

11.45 Acoustic Emission from Composite Laminates With Simple Damage Characteristics
R. Joffe, J. Varna, and L.A. Berglund, Luleå University of Technology; Sweden

12.15 Lunch Break

Session 3 - Material Studies

13.15 Results of the Acoustic Emission Monitoring of Pre-Cure Contaminated Carbon Fibre Composite Material Tested Using the Interlaminar Shear Test
S.E. Mason, G.M. Hall, and K.L Watson, University of Portsmouth; UK

13.45 AE Pattern Recognition Analysis of the Fracture of Glass Fibre Composites Exposed to Hot-Wet Conditions
K. Ono, Q. Huange, and J.-Y. Wu, University of California; USA

14.15 Acoustic Emission as a Predictor of Delamination Criticality
J.C. Thesken and A. Henriksson, FFA; Sweden

14.45 Acoustic Emission as a Non-Destructive Testing Technique to Follow Up Damage Evolution in SiC Particle Reinforced Aluminum Matrix Composite
M. Wevers, A. Niklas, M. Surgeon, L. Froyen, and L. Delay, University of Leuven; Belgium

15.15 Refreshment Break

Session 4 - Material Studies

15.30 AE monitoring in Fatigue Tests on Al₂O₃ Reinforced Aluminium Alloy
A. Aiello, C. Caneva, and F. Stivali, University of Rome “La Sapienza;” C. Santulli, CCR-Euratom; Italy

16.00 Fracture Mechanism Analysis of SiC/SiC Composites in ILSS Test by AE Spherical Radiation Pattern Method
Y.T. Lee, S.T. Kim, and T.S. Lee, Yeungnam University; M. Shiwa, JAPEC Research Center; T. Kishi, The University of Tokyo; Korea

16.30 Acoustic Emission Study of Micro-Failure Mechanisms of Dual Basalt Filaments Reinforced Epoxy Composites (DFC)
J.-M. Park, Gyeongsang National University; J.-H. Lee, Pusan National University; Korea
THURSDAY, JULY 13, 1995

253 8.30 Keynote address “Acoustic Emission Testing Trials Onboard Offshore Platforms”
  B. Melve, Statoil; Norway

Session 1 - Structural Integrity

262 9.00 Acoustic Emission Testing of a Fullscale Fighter Aircraft
  M. Knuuttila and D. Lindahl, Saab Military Aircraft; Sweden
263 9.30 Revisions to the CARP Recommended Practice for Tanks and Vessels
  T. Fowler, The University of Texas at Austin; USA
273 10.00 Techniques for Using Acoustic Emission to Produce Smart Tanks for Natural Gas Vehicles
  J.R. Mitchell, Physical Acoustics Corp.; N. Newhouse, Brunswick Composites; USA
  10.30 Refreshment Break

Session 2 - Structural Integrity

289 10.45 Localization of Acoustic Emission at Fracture Fibre Composites
  V.S. Krivobodrov, Research Centre “Composite;” Russia
293 11.15 Fracture Mechanisms of FRPC by Means of AE Monitoring (Effects of Nozzle Diameter and Screw Design)
  M. Suzuki, S. Kida, and M. Wakamatsu, Kanazawa Institute of Technology; Japan
302 11.45 AE Monitoring During Cure Cycle of Metal/Metal (2024 T3 Alloy) Adhesive Joints for Quality Assessment
  C. Santulli and G. Solomos, Emea, CEC Joint Research Centre; A. Calabro, CIRA; C. Caneva, University of Rome;
  L.D. Antonio, ALENIA; Italy
  12.15 Lunch Break (Advisory Committee Meeting)

Session 3 - Concrete Applications

312 14.00 Use of Acoustic Emission to Study Fatigue Damage of Concrete
  B. Redjel, University of Annaba; Algeria
322 14.30 Effects of Silica Fume Additions on Mechanical Performances of Concrete Composites - Investigations by AE
  and gas permeability
  R. Pérami, F. Bosc, and W. Prince, Université Paul Sabatier de Toulouse; France
  15.00 Refreshment Break

Session 4 - Concrete Applications

332 15.45 AE Generating Behavior under Concrete Placement and Application to Process Control
  M. Ohtsu, Kumamoto University; Y. Murakami, Hazama Corp.; S. Yuyama, Nippon Physical Acoustics Ltd.; Japan
340 16.15 Synthetic Fibre Reinforced Cement Composites A Study of Fracture Processes by the AE Method
  I. Rudzinski and L. Golaski, Kielce University of Technology; Poland
FRIDAY, JULY 14, 1995

Session 1 - Structural Integrity

349  8.30 Differences in Generation and Detection of Acoustic Emission Based on a Large Number of AE Sensors on Graphite/Epoxy Pressure Vessels
      K.S. Downs, Lockheed Martin; M.A. Hamstad, University of Denver; USA

359  9.00 Acoustic Emission Measurements for Verification of Failure Computations in Stiffened Composite Panels
      I.C. Skrna-Jakl and F.G. Rammerstorfer, Vienna University of Technology; E.K. Tschegg, Inst. of Lightweight Structures; Austria

369  9.30 Damage Accumulation and Acoustic Emission During Creep in Pressurized Glass Fibre Reinforced Epoxy Pipes
      R. Anderssen, P. Nygård, and B. Melve, C.G. Gustafson, Norwegian Institute of Technology; Norway

379  10.00 Acoustic Emission from Defects in Adhesive Tubular Joints in Glass Fibre Epoxy Pipes
      B. Moursund, Norsk Hydro; B. Melve, Statoil; Norway

10.30 Refreshment Break

Session 2 - Concrete Applications

385  10.45 On the Application of the Acoustic Emission Method for the Prognosis of Hard Concrete at Early Ages
      E.G. Nesvijski, Protecs International Co.; USA

393  11.15 Inspection, Diagnosis, Monitoring of Reinforced Concrete Structures and Construction by the Acoustic Emission Method
      G. Muravin and L. Lezvinsky, MPD; Israel

403  11.45 SIGMa Analysis of Fracture Process Zone in Notched Concrete Beams
      M. Shigeishi and M. Ohtsu, Kumamoto University; S. Yuyama, Nippon Physical Acoustics Ltd.; Japan

12.15 Summary and Concluding Remarks
AECM–6 Symposium Program

MONDAY, 1 JUNE 1998
EDUCATIONAL SEMINAR
Introduction to Acoustic Emission in Composite Materials
A one-day educational seminar that will provide background information for those new to the field of acoustic emission from composites, and will summarize existing codes and standards.
Chair: Raymond Tobin, Acoustic Emission Inspection

8:30 a.m. Introduction to Acoustic Emission
S. Ternowchek, Physical Acoustics
9:15 a.m. Introduction to Composite Materials
R. Crawford, Crawford Troy Fiberglass

10 a.m. Refreshment Break

10:15 a.m. Codes and Standards
T. Fowler, University of Texas at Austin
11 a.m. Speaker TBA
11:45 a.m. Acoustic Emission Testing of Furan RTP
R. Tobin, Acoustic Emission Inspection, J. Fisher, FMC

12:30 p.m. Lunch Break (on your own)

1:30 p.m. New Concepts for Acoustic Emission Detection and Measurement in Crack Growth in Noisy Environments
H. Dunegan, Dunegan Engineering Consultants
2:15 p.m. Speaker TBA
3 p.m. Refreshment Break
3:15 p.m. Field Test Case Studies
J. Bustillos, Dow Chemical
4:45 p.m. Acoustic Emission Inspection of Composite Pressure Vessels in the Aerospace Industry
M. Hamstad, University of Denver

TUESDAY, 2 JUNE 1998
CARP CODES AND PROCEDURES
Chair: Stanley Botten, Independent Testing Lab

8:15 a.m. Opening Address
S. Botten, Independent Testing Lab
8:30 a.m. John Teti Plenary Lecture: Acoustic Emission: A Mature NDT Technology with Worldwide Applications and Standards
S. Vahaviolos, Physical Acoustics Corporation
9:10 a.m. Acoustic Emission Testing of Carbon Fiber Composite Offshore Drilling Risers
C. Barnes, G. Ramirez, University of Texas at Austin
9:35 a.m. Acoustic Emission Testing of ASME Section X FRP Pressure Vessels
M. Droge, Dupont

10 a.m. Refreshment Break
10:15 a.m. Recommended Practice for Acoustic Emission Evaluation of FRP Tanks and Pressure Vessels
T. Fowler, University of Texas at Austin
10:40 a.m. Summary of Work in Progress: Source Location on Fiber Reinforced Composites
Y. Promboon, University of Texas at Austin
10:55 a.m. Recommended Procedure for Determination of Design Strain Limit in FRP Specimens
P. Ziehl, T. Fowler, University of Texas at Austin
11:20 a.m. Acoustic Emission for Cyclic Damage on FRP Pipes Fabricated Following RTP-1 Methods and Specifications
G. Ramirez, University of Texas at Austin
11:45 a.m.  Standard Test Method for Acoustic Emission Examination of FRP Fan Blades ........................... 39
T. Crump, DuPont

12:10-1:40 p.m.  Lunch Break (on your own)
                  International Advisory Committee Lunch (by invitation only)

RESEARCH AND DEVELOPMENT IN COMPOSITE TESTING
Chair: Thomas Crump, DuPont

1:40 p.m.  Acoustic Emission Source Simulation for Integrity Evaluation of UD-GRFP’s with Different
Filter/Matrix Interfacial Quality ................................................................. 48
K. Ono, University of California at Los Angeles

2:05 p.m.  Acoustic Emission Signature Analysis of Composite Materials
C. Barnes, University of Texas at Austin

2:30 p.m.  Wave Form Analysis of Acoustic Emission During Pressurization of FRP Composites
I. Baran, J. Schmidt, Foundry Research Institute (Poland); L. Golaski, Kielce Technical University
(Poland); K. Ono, University of California at Los Angeles

2:55 p.m.  Evaluation of Crack Propagation in C/C Composites by Acoustic Emission Source Analysis
J. Koo, University of Tokyo (Japan)

3:20 p.m.  Refreshment Break

3:40 p.m.  Use of Acoustic Emission to Evaluate Source Location and Impact Damage Severity in Composite
Pipes
G. Ramirez, Y. Promboon, M. Engelhardt, University of Texas at Austin

4:30-6:30 p.m.  Tabletop Exhibits
7-9 p.m.  Riverbarge Dinner Cruise (optional-see registration form)

WEDNESDAY, 3 JUNE 1998
APPLICATIONS OF CARP TESTING
Chair: Phil Cole, Physical Acoustics Ltd. (United Kingdom)

8:30 a.m.  Keynote Speaker: Waveform Analysis of Acoustic Emission in Composites......................... 61
William Prosser, NASA Langley Research Center

9:15 a.m.  Neural Network Burst Pressure Prediction in Fiberglass/Epoxy Pressure Vessels Using Acoustic
Emission ........................................................................................................ 71
E. Hill, Embry-Riddle Aeronautical University; M. Fisher, Lockheed Martin

9:40 a.m.  Acoustic Emission Testing – A Composite Tank Manufacturer’s Experiences ..................... 82
J. Richter, Tankinetics

10:05 a.m.  Refreshment Break

10:25 a.m.  Design and Acoustic Emission Testing of FRP Equipment ................................................. 87
C. Garza, Dow Chemical

10:50 a.m.  Acoustic Emission Evaluation of Field Tests on FRP Materials Using the Three Way System .... 97
S. Botten, Independent Testing Lab

11:15 a.m.  Acoustic Emission of Large Scale Composite Aerospace Structures ............................. 108
P. Cole, Physical Acoustics Ltd (United Kingdom)

11:40  Proof Testing of an FRP Pipe Joint
M. Peacock, Matrix Inspection & Engineering

12:05-1:35 p.m.  Lunch Break (on your own)

ACOUSTIC EMISSION DEVELOPMENT IN APPLICATIONS
Chair: Martin Peacock, Matrix Inspection & Engineering

1:35 p.m.  Acoustic Emission Monitoring During Thermal Cycling of Metal Matrix Composites
C. Caneva, University of Rome (Italy)
2:00 p.m.  Investigation of Plastic Deformation and Fracture of Porous Metals on the Basis of Acoustic Emission Method
V. Polyakov, A. Egorav, I. Svistun, S. Shapovalov, Altay State University (Russia)

2:25 p.m.  Fracture Mode Classification in Locally Loaded Cross-Ply CFRP Coupons using Wavelet Transform
Y. Mizutani, K. Nagashima, M. Takemoto, Aoyama Gakuin University (Japan); K. Ono, University of California at Los Angeles

2:50 p.m.  Acoustic Emission Signature Analysis in 4-D Image
E. Nesvijski, Universidade de Santa Maria (Brazil)

3:15 p.m.  Refreshment Break

3:40 p.m.  Acoustic Emission Testing of RTP-1 Demonstration Vessel
E. Temowchek, Physical Acoustics

4:05-4:30 p.m.  Acoustic Emission Testing of GRP Composites Progressively Damaged by Fatigue and Environmental Exposure
J. Hale, G. Kotsikos, University of Newcastle upon Tyne (United Kingdom)

4:30 p.m.  Institute of Texan Cultures Symposium Awards Banquet (optional-see registration form)

THURSDAY, 4 JUNE 1998
ACOUSTIC EMISSION IN CONCRETE APPLICATIONS
Chair: Stanley Botten, Independent Testing Lab

8:30 a.m.  Keynote Speaker: Quantitative Evaluation of Crack and Damage in Concrete by Acoustic Emission
M. Ohtsu, Kumamoto University (Japan)

9:10 a.m.  Acoustic Emission Application for Diagnosis of Deteriorated Concrete of Harbor Structures
A. Ishibashi, K. Matsuyama, Nippon Koei Ltd (Japan)

9:35 a.m.  Acoustic Emission Application for Detecting Steel Corrosion in Reinforced Concrete
P. Berkowitz, A. Unal, T. Fowler, J. Jirsa, University of Texas

10 a.m.  Crack Extension in Concrete by SiGMA
M. Munwam, M. Ohtsu, Kumamoto University (Japan)

10:25 a.m.  Refreshment Break

10:45 a.m.  Acoustic Emission Characteristics of Full-Scale Concrete-Piles Under Bending and Shear Load
T. Shiotani, Tobishima (Japan)

11:10 a.m.  Bedrock Observation by Captured Acoustic Emission
T. Shiotani, Tobishima (Japan); K. Monma, Public Works Research Institute (Japan)

11:35 a.m.  Acoustic Emission Monitoring of Reinforced Concrete Structures
C. Barnes, University of Texas at Austin

Noon-1:30 p.m.  Lunch Break (on your own)

1:30 p.m.  Acoustic Emission Monitoring of Prestressed Concrete Girders
T. Fowler, University of Texas at Austin; L. Yepez, Universidad Catolica de Guayaquil (Ecuador)

1:55 p.m.  Evaluation Criteria for Acoustic Emission Examination of Reinforced Concrete Structures
M. Ohtsu, Kumamoto University (Japan); S. Yuyama, Nippon Physical Acoustics (Japan); T. Kishi, The University of Tokyo (Japan)

2:20 p.m.  Acoustic Emission Testing of Furan RTP
R. Tobin, Acoustic Emission Inspection

2:45 p.m.  Property Evaluation of Thermal-Sprayed Metallic Coatings for Acoustic Emission Analysis
A. Ishida, M. Takemoto, Aoyama Gakuin University (Japan); K. Ono, University of California at Los Angeles

3:10 p.m.  Sources of Acoustic Emissions in Heterogeneous Materials and Cracking Processes
W. Prince, R. Perami, Universite P Sabatier de Toulouse (France)

3:35 p.m.  Refreshment Break

3:55-4:30 p.m.  Panel Session: Discussion on CARP subjects

6:30-7:30 p.m.  After-Hours Tour of the Alamo (one ticket included in registration fee, advance registration required)