

# Sunday, April 1, 2007

16:00 – 20:00 Registration & Welcome drink

# Monday, April 2, 2007

9:00 - 10:00	<p style="text-align: center;"><b>Welcome and opening ceremony</b>          German society for NDT: H.-J. Maier          Conference chairmen: G. Busse and D. Van Hemelrijck</p> <p style="text-align: center;"><b>Key-note lecture</b>  <b>Damage characterization and real-time health monitoring of aerospace structures based on ultrasonic microscopy and nonlinear acoustics</b>  <b>Theodore E. Matikas</b>  <i>Department of Materials Science and Engineering, University of Ioannina, Greece</i></p>	
10:00 - 10:30	<p><b>Coffee break</b></p>	
	<p><b>Session I a: Ultrasound I</b>  <b>(Chairman : R.D. Adams)</b></p>	<p><b>Session I b: Thermal methods</b>  <b>(Chairman : D. Van Hemelrijck)</b></p>
10:30 - 10:55	<p style="text-align: center;"><b>Advanced transducer development for long range ultrasonic inspection system</b>          Alex Haig, Tat-Hean Gan and Peter Mudge  <i>TWI Ltd, Long Range Ultrasonic Section, Cambridge, UK</i></p>	<p style="text-align: center;"><b>A fast and robust method for determining thermal diffusivity images in complex geometries</b>          G. Mayer, G. Hendorfer, G. Zauner and F. Puchberger and T. Noemaier  <i>Upper Austrian University of Applied Sciences, Wels, Austria</i></p>
10:55 - 11:20	<p style="text-align: center;"><b>Using acoustic methods to assess residual strength of FRP composites after constant and variable amplitude fatigue loading</b>          T. Assimakopoulou and T.P. Philippidis  <i>Dept. of Mechanical Engineering &amp; Aeronautics, University of Patras, Greece</i></p>	<p style="text-align: center;"><b>Deep level photo-thermal spectroscopy</b>          Andreas Mandelis and Jun Xia  <i>Center for Advanced Diffusion-Wave Technologies (CADIFT), Dep. of Mech. and Industrial Eng., University of Toronto, Canada</i></p>
11:20 – 11:45	<p style="text-align: center;"><b>New opportunities in acoustic NDT using frequency conversion by nonlinear defects</b>          Klaus Pfeleiderer, Igor Solodov, and Gerd Busse  <i>Institute for Polymer Technology, Department of Nondestructive Testing (IKT-ZfP), Stuttgart University, Stuttgart, Germany</i></p>	<p style="text-align: center;"><b>Thermal characterization of composite materials by grating IR thermography</b>          Georgios Kalogiannakis<sup>1,2</sup>, Danny Van Hemelrijck, H. Zhang, J. Ravi, S.S. Longuemart, and C. Glorieux  <sup>1</sup>Lab Acoustics &amp; Thermal Physics, KULeuven, Belgium  <sup>2</sup>Dept. Mech. of Mat. and Const., Vrije Universiteit Brussel, Belgium</p>

11:45 - 12:10	<p><b>Using ultrasonic wave propagation in concrete for nondestructive testing of RC structures</b>  Abid A. Shah<sup>1</sup> and Y. Ribakov<sup>2</sup>  <i>Dept. of Mechanical and Environmental Informatics, Tokyo Institute of Technology, Japan</i>  <i>Dept. of Civil Engineering, College of Judea and Samaria, Israel</i></p>	<p><b>Active thermography on safety-relevant fiber reinforced structures for aerospace and automotive applications</b>  Martin Hauf<sup>1</sup> and Alexander Dillenz<sup>2</sup>,  <sup>1</sup><i>Eurocopter Deutschland GmbH</i>; <sup>2</sup><i>EDEVIS, GmbH, Stuttgart, Germany</i></p>
12:10 - 12:35	<p><b>Monitoring of damage accumulation in cyclic loaded C/C woven composites using the acousto-ultrasonics approach</b>  T.H. Loutas<sup>1,2</sup>, G. Sotiriades<sup>1</sup>, and V. Kostopoulos<sup>1,2</sup>  <sup>1</sup><i>Dept. of Mech. Eng. and Aeronautics, University of Patras, Greece</i>  <sup>2</sup><i>Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High Temperature Processes, Patras, Greece</i></p>	<p><b>Ultrasound Sweep Thermography (UST) as a new method of non-destructive testing</b>  C. Spiessberger, A. Gleiter, and G. Busse  <i>Institute for Polymer Technology, Department of Nondestructive Testing (IKT-ZfP), Stuttgart University, Stuttgart, Germany</i></p>
12:35 – 13:00		
13:00 – 14:30	<b>Lunch</b>	
	<b>Session I c: Special applications (Chairman : J. Degrieck)</b>	<b>Session I d: NDT of civil engineering structures (Chairman : G. Kalogiannakis)</b>
14:30 – 14:55	<p><b>The effect of defects on the strength of adhesively-bonded joints and its significance for NDT</b>  R.D. Adams and E.F. Karachalios  <i>Department of Mechanical Engineering, University of Bristol, UK</i></p>	<p><b>Damage characterization of deteriorated concrete structures by stress wave methods</b>  Dimitrios G. Aggelis and Tomoki Shiotani  <i>Tobishima Corporation, Research Institute of Technology, Chiba, Japan</i></p>
14:55 – 15:20	<p><b>Comparison of different X-ray computed tomography techniques for the quantitative characterisation of the 3D microstructure of pear fruit tissue</b>  P. Verboven, G. Kerckhofs, P. Cloetens, H. Mebatsion, M. Wevers, B. Nicolaï  <i>Dept. BIOSYST-MeBioS, KULeuven, Leuven, Belgium</i></p>	<p><b>Robotic multinspection system for evaluation of integrity in energized lines of high-voltage transmission</b>  Edmundo Acioli  <i>BB&amp;E Engineering &amp; Consulting, Brazil</i></p>
15:20 – 15:45	<b>Coffee break</b>	
16:00	<b>Welcome cocktail party</b>	

## Tuesday, April 3, 2007

9:00 – 9:35	<b>Key-note lecture</b> <b>NDE of micro structured materials by X-ray diffraction and refraction topography</b> <b>M. P. Hentschel</b> , K.-W. Harbich, A. Lange, J. Schors and O. Wald <i>Bundesanstalt für Materialforschung und –prüfung (BAM), Berlin, Germany</i>	
9:35 – 10:00	<b>Coffee break</b>	
	<b>Session II a: Ultrasound II</b> <b>(Chairman : T. Matikas)</b>	<b>Session II b: Radiography and tomographic methods</b> <b>(Chairman : A. Mandelis)</b>
10:00 - 10:25	<b>On some aspects of acoustic diagnostics of unconsolidated granular media</b> C. Inserra <sup>1</sup> , V. Tournat <sup>1</sup> , V. Aleshin <sup>1</sup> , V. Gusev <sup>2</sup> , and B. Catagnède <sup>1</sup> <i><sup>1</sup>Laboratoire d'Acoustique de l'Université du Maine, France.</i> <i><sup>2</sup>Lab. de Phys. de l'État Condensé, Université du Maine, France</i>	<b>Non-destructive residual stress analysis with neutrons</b> J. Repper <sup>1</sup> , R. Schneider <sup>2</sup> , and M. Hofmann <sup>1</sup> <i><sup>1</sup>FRM II, TU München, Garching, Germany</i> <i><sup>2</sup>BENSC, Hahn-Meitner Institut, Berlin, Germany</i>
10:25 - 10:50	<b>Non-destructive testing of fuel tanks using long-range ultrasonics</b> L. Mažeika, R. Kažys, R. Raišutis, A. Demčenko, R. Šlīteris, and C.Cantore <i>Ultrasound Institute, Kaunas University of Technology, Lithuania</i>	<b>Synchrotron-refraction-computed-tomography for NDT and characterisation of lightweight composite materials</b> B.R. Müller <sup>1</sup> , A. Lange <sup>1</sup> , M. Harwardt <sup>1</sup> , M.P. Hentschel <sup>1</sup> , B. Illerhaus <sup>1</sup> , J. Goebbels <sup>1</sup> , J. Bamberg <sup>2</sup> , and F. Heutling <sup>2</sup> <i><sup>1</sup>Federal Institute for Materials Research and testing (BAM), Berlin, Germany</i> <i><sup>2</sup>MTU Aero Engines, Munich, Germany</i>
10:50 - 11:15	<b>Guided acoustic modes for testing surface layers of unconsolidated granular media</b> P. Leclaire <sup>1</sup> , V. Tournat <sup>2</sup> , O. Dazel <sup>2</sup> , V. Aleshin <sup>2</sup> , J.-F. Allard <sup>2</sup> , W. Lauriks <sup>1</sup> , V. Gusev <sup>3</sup> <i><sup>1</sup>Lab. Akoestiek en Thermische Fysica, Departement Natuurkunde, Katholieke Universiteit Leuven, Leuven, Belgium</i> <i><sup>2</sup>Laboratoire d'Acoustique, <sup>3</sup>Laboratoire de Physique de l'État Condensé, Université du Maine, Le Mans Cedex, France</i>	<b>Non-destructive testing with terahertz radiation: applications in the field of polymer fabrication and food production</b> C. Jördens, F. Rutz, S. Wietzke and M. Koch <i>Technische Universität Braunschweig, Institut für Hochfrequenztechnik, Braunschweig, Germany</i>
11:15 - 11:40	<b>Thin layers characterization by low frequency ultrasonic transmission</b> Ravi Mittal <sup>1</sup> , Guillermo Rus Carlborg <sup>2</sup> <i><sup>1</sup>Dept. Mechanical Engineering, Indian School of Mines, Dhanbad, India</i> <i><sup>2</sup>Dept. Structural Mechanics, University of Granada, Spain</i>	<b>Direct iterative reconstruction of computed tomography trajectories (DIRECTT)</b> Axel Lange, Manfred P. Hentschel, and Joerg Schors <i>Federal Institute for Materials Research and Testing (BAM), Berlin, Germany</i>
11:40 - 12:05	<b>Inspections of wooden and concrete poles using ultrasound</b> R. Gonçalves <sup>1</sup> , S. Herrera <sup>2</sup> , A. Bartholomeu <sup>3</sup> , and Souza Jr., R. S. <sup>3</sup> <i>UNICAMP<sup>1</sup>, CPFL Paulista<sup>2</sup>, MOLISE Engenharia e Graziano Magalhães, P.S., UNICAMP<sup>3</sup>, Brazil</i>	<b>Characterisation of automotive parts by a novel multi-scan tomography system</b> M. Simon <sup>1</sup> , I. Tiseanu <sup>1</sup> , C. Sauerwein <sup>1</sup> , M. Sindel <sup>2</sup> , and M. Schmücker <sup>2</sup> <i><sup>1</sup>Hans Wälischmiller GmbH, Meersburg, Germany</i> <i><sup>2</sup>AUDI AG, Qualitätssicherung, Neckarsulm, Germany</i>

12:05 - 12:30		<p><b>NDT with optical coherence tomography: a novel tool for material characterisation</b></p> <p>D. Stifter<sup>1*</sup>, K. Wiesauer<sup>1</sup>, M. Wurm<sup>1</sup>, M. Pircher<sup>2</sup>, E. Götzinger<sup>2</sup>, R. Engelke<sup>3</sup>, G. Ahrens<sup>3</sup>, G. Grützner<sup>3</sup> and C. K. Hitzemberger<sup>2</sup></p> <p><sup>1</sup> Upper Austrian Research GmbH, Linz, Austria,  <sup>2</sup> Centre of Biomedical Engineering and Physics, Medical University of Vienna, Austria  <sup>3</sup> Micro resist technology GmbH, Berlin, Germany</p>
12:30 - 14:00	<b>Lunch</b>	
	<b>Session II c: Electro-magnetic techniques I (Chairman : G. Mook)</b>	<b>Session II d: Special techniques (Chairman : H.-J. Maier)</b>
14:00 – 14:25	<p><b>Defect detection using a non-contact electric potential drop method for multilayer carbon composite materials.</b></p> <p>P. Stiffell, R.J. Prance, W. Gebrial, C.J. Harland, H. Prance and C. Antrobus  Center for Physical Electronics &amp; Quantum Technolog,  University of Sussex, U.K.</p>	<p><b>Identification of the hardening behaviour and the yield locus by inverse modelling</b></p> <p>S. Cooreman<sup>1,3</sup>, D. Lecompte<sup>2,3</sup>, H. Sol<sup>3</sup>, D. Debruyne<sup>1</sup> and S. Coppieters<sup>1,3</sup></p> <p><sup>1</sup> Technical University KaHo Sint-Lieven, Dept. Mech Eng., Ghent  <sup>2</sup> Royal Military Academy, Dept. Materials and Constructions, Brussels  <sup>3</sup> Vrije Universiteit Brussel, Dept. Mechanics of Materials and Constructions, Brussels, Belgium</p>
14:25-14:50	<p><b>Lift-off and edge effects in micromagnetic testing of heat-treated C45 steel</b></p> <p>J. Grum and P. Žerovnik  Faculty of Mech. Engineering, University of Ljubljana, Slovenia</p>	<p><b>Ultrasound and eddy current data fusion for evaluation of carbon-epoxy composites delaminations</b></p> <p>R. Grimberg, R. Steigmann, S. Leitoiu, A. Andreescu, and A. Savin  Nondestructive Testing Dept. National Institute of R&amp;D for Technical Physics, Iasi, Romania</p>
14:50-15:15	<p><b>An electromagnetic non-invasive examination technique of Björk-Shiley convexo-concave prosthetic heart valve: degradation modeling and periodic clinical controls optimization using Markov model</b></p> <p>Raimond Grimberg<sup>1</sup>, Shiu C.Chan<sup>2</sup>, Adriana Savin<sup>1</sup>, Rozina Steigmann<sup>1</sup>, Florina Pinte<sup>3</sup>, Lalita Udpa<sup>2</sup>, Satish S. Udpa<sup>2</sup></p> <p><sup>1</sup> Nondestructive Testing Department, National Institute of R&amp;D for Technical Physics, Iasi, Romania  <sup>2</sup> Department of Electrical and Computer Engineering, College of Eng. Michigan State University, East Lansing, USA  <sup>3</sup> Catheterization and Interventional Cardiology Department Army Center for Cardiovascular Diseases, Buchares, ,Romania</p>	<p><b>Fused sensor scanning system for non-destructive testing of metal matrix composites</b></p> <p>Vishal Shinde, Thomas Valatka, Jeff Donahue, Dr. Didem Ozevin, Valery F. Godínez-Azcuaga, and Richard Finlayson  Physical Acoustics Corporation, New Jersey, USA</p>

15:15-15:40	<p><b>Electrical resistance measurement on carbon fibre-reinforced thermoplastics with rivets as electrodes</b>  I. De Baere, W. Van Paepegem &amp; J. Degrieck  <i>Ghent University, Faculty of Engineering, Dept. of Mechanical Construction and Production, Ghent, Belgium</i></p>	<p><b>Structural health monitoring in civil engineering – applications using wireless sensor networks</b>  Christian U. Grosse and Markus Krueger  <i>Institute of Construction Materials, IWB, Universität Stuttgart, Germany</i></p>
15:40 – 16:10	<b>Coffee break</b>	
	<b>Session II d: Electro-magnetic techniques II (Chairman : J. Grum)</b>	<b>Session II e: Optical techniques (Chairman : C. Glorieux)</b>
16:10 - 16:35	<p><b>Subsurface imaging using moving electromagnetic field and surface acoustic waves</b>  Gerhard Mook, Fritz Michel, and Jouri Simonin  <i>Otto-von-Guericke-Universität, Magdeburg, Germany</i></p>	<p><b>Crack sizing using laser vibrometer measurements of surface acoustic waves</b>  Roberto Longo, Steve Vanlanduit, and Patrick Guillaume  <i>Dept. of Mechanical Engineering, Vrije Universiteit Brussel (VUB), Brussels, Belgium</i></p>
16:35 - 17:00	<p><b>A fuzzy logic aided eddy-current inspection computational tool for heat exchanger tubes</b>  L.A. N. M. Lopez, D.K. Sun Ting, and B. R. Upadhyaya  <i>The Univ. Center of FEI, Mech. Eng. Department , São Bernardo do Campo, Brazil</i></p>	<p><b>Non-destructive evaluation of composite structures using an innovative Bragg sensor</b>  Geert Luyckx, Wim De Waele, Joris Degrieck, Wim Van Paepegem, and Sephan Vandamme  <i>Ghent university, Faculty of Engineering, Dept of Mechanical Construction and Production, Ghent, Belgium</i></p>
17:00 - 17:25		<p><b>New opportunities and applications of lockin-speckle-interferometry in non-destructive testing of polymers</b>  P. Menner, H. Gerhard, and G. Busse  <i>Institute for Polymer Technology, Department of Nondestructive Testing (IKT-ZfP), Stuttgart University, Stuttgart, Germany</i></p>
17:25 - 17:50		<p><b>Investigation of fatigue cracks in airplane components using digital image correlation</b>  S. Vanlanduit, J. Vanherzeele, R. Longo, and Guillaume  <i>Dept. of Mechanical Engineering, Vrije Universiteit Brussel (VUB), Brussels, Belgium</i></p>
19:00	<b>Conference dinner</b>	

## Wednesday, April 4, 2007

9:30 – 10:05	<b>Key-note lecture</b> <b>Use of state of the art parametric arrays for low frequency measurements in sound absorbing porous materials</b> <b>B. Castagnede</b> , A. Moussatov, D. Lafarge, and V. Turnat <i>Lab. D'Acoustique de l'Université du Maine, Le Mans</i>	
10:05 – 10:30	<b>Coffee break</b>	
10:30–12:30	<b>Poster session</b>	
	<b>Session III a: Ultrasound III</b> <b>(Chairman : S. Vanlanduit)</b>	<b>Session III b: Acoustic emission</b> <b>(Chairman : A. Anastasopoulos)</b>
14:00 - 14:25	<b>Laser ultrasonics for non-contact materials characterization of fiber reinforced materials</b> P. Burgholzer <sup>a</sup> , C. Hofer <sup>a</sup> , B. Reitingner <sup>a</sup> , A. Mohammed <sup>b</sup> , H.P. Degischer <sup>b</sup> , D. Loidl <sup>c</sup> , P. Schulz <sup>d</sup> , R. Nuster <sup>e</sup> , G. Paltauf <sup>e</sup> <sup>a</sup> <i>Department of Sensors, Upper Austrian Research, Linz, Austria</i> <sup>b</sup> <i>Vienna University of Technology, Austria</i> <sup>c</sup> <i>University of Vienna, Austria</i> <sup>d</sup> <i>Austrian Research Centers, LKR, Austria</i> <sup>e</sup> <i>Karl-Franzens-University, Graz, Austria</i>	<b>Damage monitoring of composite materials based on a parameter-less self organized map trained with wavelet decomposed AE signals</b> Georgios Kalogiannakis <sup>1,2</sup> and Danny Van Hemelrijck <sup>2</sup> <sup>1</sup> <i>Lab Acoustics &amp; Thermal Physics, KULeuven, Belgium</i> <sup>2</sup> <i>Dept. Mech. of Mat. and Constr., Vrije Universiteit Brussel, Belgium</i>
14:25 - 14:50	<b>Investigation of mode conversion in ultrasonic air-coupled non-destructive testing of aerospace components</b> R. Kazys, A. Demcenko, L. Mazeika, R. Sliteris, and E. Zukauskas <i>Ultrasound Institute, Kaunas University of Technology, Lithuania</i>	<b>Risk assessment of tunnels by quantitative acoustic emission non-destructive method</b> G. Muravin, L. Lezvinsky, and B. Muravin <i>Margan Physical Diagnostics Ltd., Israel</i>
14:50 - 15:15	<b>Air-coupled ultrasonic pitch-catch method for material inspection</b> E. Blomme, D. Bulcaen, F. Declercq, J. Deveugele and P. Lust <i>KATHO dept. VHTI, Association KULeuven, Kortrijk, Belgium</i>	<b>Quantitative acoustic emission non-destructive inspection methods and its application to risk assessment high energy piping fossil, nuclear and chemical plants</b> G. Muravin, L. Lezvinsky, and B. Muravin <i>Margan Physical Diagnostics Ltd., Israel</i>
15:15 – 15:45	<b>Closing of the conference</b>	
15:45 – 16:15	<b>Coffee</b>	

**Poster presentations**  
**4th International Conference**  
**Emerging Technologies in Non-Destructive Testing**  
**(ETNDT 4)**

Geert Luyckx, Wim De Waele, Joris Degrieck, Wim Van Paepegem <i>Ghent University, Belgium</i>	<b>Monitoring of a curved beam test structure using Bragg sensors and acoustic emission</b>
G. Muravin, L. Lezvinisky, B. Muravin <i>Margan Physical Diagnostics Ltd., Israel</i>	<b>Risk assessment of structures after fire and other extreme influences</b>
T.H. Loutas <sup>1,2</sup> , J. Kalaitzoglou <sup>1,2</sup> , G. Sotiriades <sup>1</sup> , V. Kostopoulos <sup>1,2</sup> <sup>1</sup> <i>Dept. of Mech. Eng. and Aeronautics, University of Patras</i> <sup>2</sup> <i>Foundation of Research and Technology Hellas, Institute of Chemical Engineering and High Temperature Processes, Patras, Greece</i>	<b>Diagnosis of artificial gear defects on single stage gearbox using acoustic emission and vibration recordings</b>
Daniel Döring, Igor Solodov and Gerd Busse <i>Institute for Polymer Technology – Nondestructive Testing (IKT-ZfP), Stuttgart Univ., Stuttgart, Germany</i>	<b>Non-contact single-sided access NDT based on mode conversion of air-coupled ultrasound</b>
C-H. Wang, A. Mandelis and J. A. Garcia <i>Centre for Diffusion Wave Technologies (CADIFT), Mechanical Engineering Department, Toronto Ontario, Canada</i>	<b>Non-contact case depth monitoring of industrial hardened parts using laser infrared photothermal radiometry</b>
Jaafar Abdullah, Glam Hadzir Patai Mohamad, Mohd Arif Hamzah, Mohd Soyapi Mohd Yusof, Mohd Fitri Abdul Rahman and F. Ismail <i>Malaysian Institute for Nuclear Technology Research (MINT), KAJANG, Malaysia</i>	<b>Portable computed tomographic system for in-situ inspection of industrial pipelines</b>
R. Grimberg <sup>1</sup> , A. Savin <sup>1</sup> , R. Steigmann <sup>1</sup> , A. Bruma <sup>3</sup> , L. Udpa <sup>2</sup> , S.S. Udpa <sup>2</sup> <sup>1</sup> <i>Nondestructive Testing Department National Institute of R&amp;D for Technical Physics, Iasi, Romania,</i> <sup>2</sup> <i>Department of Electrical and Computer Engineering, College of Engineering, Michigan State University, East Lansing, USA</i> <sup>3</sup> <i>Faculty of Physics, A.I. Cuza University, Iasi, Romania</i>	<b>Inverse problem for the EC transducer with rotating magnetic field; application to pressure tubes inspection for PHWR nuclear power plant</b>
L. Mazeika, R. Kazys, O. Tumsys and C. Gartside <sup>1)</sup> <i>Ultrasound Institute, Kaunas Univ. of Tech., Lithuania,</i> <sup>1)</sup> <i>Ultrasonic Sciences Ltd (USL), Aldershot, Hants/UK</i>	<b>Improvement of performance of scanning acoustic microscope for on-line inspection of electronic components</b>
Chao-Ching Hsu <sup>1</sup> , Jian-Hong Wu <sup>1,2</sup> , Der-Her Lee <sup>1,2</sup> Chun-Yang Chang <sup>1</sup> <sup>1</sup> <i>Dept. Civil Engineering, National Cheng Kung University, Tainan, Taiwan</i> <sup>2</sup> <i>Sustainable Environment Research Center, National Cheng Kung University, Tainan, Taiwan</i>	<b>Investigating the ruins of Fort Zeelandia using ground penetrating radar</b>

<p>I. De Baere, G. Luyckx, W. Van Paepegem &amp; J. Degrieck  <i>Ghent University, Faculty of Engineering, Dep.t of Mechanical Construction and Production, Belgium</i></p> <p>E. Voet &amp; J. Vlekken  <i>FOS&amp;S, Geel, Belgium</i></p>	<p><b>The use of optical fibres for fatigue testing of fibre-reinforced thermoplastics</b></p>
<p>Gerhard Mook, Jouri Simonin  <i>Otto-von-Guericke-Universität Magdeburg, Germany</i></p>	<p><b>EddyCation -  the full digital Eddy current tool for education and innovation</b></p>
<p>Wan Saffiey Wan Abdullah  <i>Agency Nuclear of Malaysia, Kajang, Malaysia</i></p>	<p><b>Illumination direction factor in quantitative shearography NDT analysis</b></p>
<p>S. C. Kerkyras  <i>Inspection Dept. Head, Hellenic Petroleum SA, Greece</i></p>	<p><b>The application of cepstrum and kurtosis analysis as predictive maintenance tools in vibration and acoustic emission signals obtained from reciprocating machinery</b></p>
<p>Vladislav ALESHIN  <i>Laboratoire d'Acoustique, Université du Maine, Le Mans, France</i></p>	<p><b>Constitutive models for solids containing rough cracks: from micro to macro</b></p>

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