



**HELLENIC SOCIETY OF
NON-DESTRUCTIVE TESTING (HSNT)
Member of EFNDT and ICNDT**



**3rd INTERNATIONAL CONFERENCE ON NDT
of the Hellenic Society for NDT (HSNT)**

Non Destructive Testing in Antiquity and in Nowadays



15-17 October 2003, Chania, Crete-Greece

PRELIMINARY PROGRAMME

Chairman of the Conference: I. N. Prassianakis,
President of HSNT, Assoc. Professor, NTUA

Secretary General of the Conference: G. C. Papanicolaou
Professor, University of Patras

Conference Secretariat: O. Theodorakopoulou
PhD Student, NTUA

Chania 2003

Preliminary Programme

Chairman: I.N.Prassianakis
(NTUA), President of HSNT, Greece

Wednesday 15 October 2003

08:00 - 09:00

Registration

WEDNESDAY 15 OCTOBER 2003
09:00-10:15 (HALL A)

OPENING CEREMONY

Chairmen: I.N. Prassianakis, G.C.Papanicolaou, M. Sfantsikopoulos, G. Grigoriadis.

09:00-09:15
OP.1

Opening: I.N.Prassianakis
President of HSNT, Greece

09:15-09:30
OP.2

Opening Addresses

09:30-09:45
OP.3

J.M.Farley
President of EFNDT, U.K.
"Role and Strategy for EFNDT"

09:45-10:00
OP.4

G. Grigoriadis
Honorary President of HSNT, Greece
*"How the Hellenic Language Fertilized the International
Speech, the Bases of All Sciences, Civilization and Even the
QC-NDT"*

10:00-10:15
OP.5

I.N.Prassianakis
President of HSNT, Greece
"NDT in Antiquity and in Nowadays"

10:15 - 10:30

Coffee-Break

WEDNESDAY 15 OCTOBER 2003

10:30-12:00 (HALL A)

SESSION 1

PLENARY LECTURES

Chairmen: J.N. Farley, A.Vakakis

10:30-11:00

PL.1

Plenary Lecture: G.J.Tsamasphyros¹

G.N.Kanderakis¹, N.Furnarakis¹

Zaira Marioli-Riga²

¹NTUA,Greece, ²Hellenic Aerospace Industry S.A

"Application of Optical Fibers and Sensors for the non-Destructive Detection of Patch Debonding in Composite Repaired Cracked Metallic Specimens"

11:00-11:30

PL.2

Plenary Lecture: T.Gmur, J.Botsis

P.Bonhot, K.Papailiou, K.Obrist, G. Mandanis

Lab.of Appl.Mech.and Rel.Anal., Coll.of Engng., Swiss Federal Institute of Technology, Lausanne, Switzerland

"Stress Analysis and Acoustic Emission Studies on Aluminium Composite Joints Subjected to Bending"

11:30-12:00

PL.3

Plenary Lecture: A.D'Amore¹,

M.Zarrelli², Grassia¹

¹Dept.Aerospace and Mech.Eng. SUN Naples, Italy,

²CIRA, Italy

"Process-Induced Stresses in Polymer Based Composites"

12:00 - 12:15

Coffee-Break

WEDNESDAY 15 OCTOBER 2003

12:15 - 13:45 (HALL A)

SESSION 2

VISUAL AND OPTICAL INSPECTION

Chairmen: Z.P.Marioli-Riga, C.Providakis

12:15-12:45

INV.2

Invited Lecture: Z.P.Marioli-Riga

A.N.Karanika, R.Marini

Hellenic Aerospace Industry

"Evaluation of Non-Destructive Methods Resolution in the Inspection of Corrosion Damages"

12:45-13:00
P.2.1

Nermin Trobradovic,
Everest VIT Company.
"Measurement in Endoscopy"

13:00-13:15
P.2.2

T.Chondros
Univ.of Patras, Greece
"Testing Procedures for Vehicles Transporting Dangerous Goods"

13:15-13:30
P.2.3

Krallis¹, N.G.Orfanoudakis², I.Statharas²
¹Heron, ²TEI Chalkis, Greece
"Selection of the Optimum NDT Methods for Determination of Steam Boiler Remaining Life"

13:30-13:45
P.2.4

N.Maravelaki-Kalaitzaki¹, V.Zafiroopoulos²
D.Anglos², C.Balas³
¹Ministry of Culture, ²FO.R.T.H³, Technical University of Crete, Greece.
"Characterization of Encrustation on Marble Before and After Laser Cleaning with Non-Destructive Techniques"

13:45-15:15

Lunch

WEDNESDAY 15 OCTOBER 2003

15:15-17:00 (HALL A)

SESSION 3

ULTRASONIC METHODS

Chairmen: A.Notea, G.Samoilis

15:15-15:45
INV.3

Invited Lecture: P.Renzel
Agfa NDT GmbH, Krautkrammer
"Thickness Measurement with Ultrasound NDT knowing the Sound Velocity?!"

15:45-16:00
P.3.1

I.Vardoulakis, I.Prassianakis, K.Kourkoulis
NTUA, Greece
"Using Ultrasounds for the Evaluation of Marble Specimens"

16:00-16:15
P.3.2

A.Tzotzolakis, G.Samoilis
Public Power Co.Greece
"Ultrasonic Inspection of Blade Roots in Turbine Discs of Power Generation Units"

16:15-16:30
P.3.3

Koichiro Kawashima, Takeru Okumura, Masami Sato, Ryuji Omote, T.Ito
Nagoya Institute of Technology, Japan
"Detection and Sizing of Closed Surface Fatigue Cracks by Nonlinear Surface Wave Technique"

16:30-16:45
P.3.4

A.Abbas, A.Bettira, A.Mebtouche
CSC, Algeria
"The Evaluation of the Variation of the Coefficients of Elasticity as a Function of the Rate of Retained Austenite in Steel by Using Ultrasonic Methods"

16:45-17:00
P.3.5

Abdel Malek Bouhadjera
NDT Lab, Inst.of Techn., Jijel Univ.,Algeria
"Accurate and Reliable Determination of Second Order Elastic Constants Using a Low-Cost Ultrasonic Apparatus"

WEDNESDAY 15 OCTOBER 2003

17:00-18:00 (HALL C)

POSTER PRESENTATION

Chairmen: M.Farley, A.Anastassopoulos, G.Petridis

POST.1

P.Mazal¹, L.Pazdera²
¹Brno Univ.of Technology, Inst.of Design, Czech.Rep.
²Brno Univ.of Technology, Inst.of Physics, Czech.Rep.
"Acoustic Emission Signal Changes During Fatigue Loading of Ferrous Materials"

POST.2

E.Franceschi, M.C.Gallo, G.Luciano, E.Pedemonte, R.Ponte, E.Princi
Dipart.di Chimica e Chimica Indust., Genova, Italy
"Non-Destructive Investigation on an Ancient Manual of Tincture Techniques: Colour Measurements on Dyed Fabric Samples"

POST.3

Mohamad Pauzi Ismail, Mohamed Hairol Hasmoni, Abd.Nassir Ibrahim
Malaysian Institute of Nuclear Techn., Indust.Tech.Div., Selangor, Malaysia
"Application of Radar in Concrete and Asphalt Inspection"

POST.4

M.P.Morigi, F.Casali, M.Bettuzzi, R.Brancaccio, S.Cornacchia, M.Giordano, A.Pasini, D.Romani
University of Bologna, Italy
"High Resolution X-Ray DR and CT Systems for Applications in the Field of Cultural Heritage"

- POST.5** **A.Bottari, D.De Domenico, F.Giannino, A.Marino, A.Teramo**
University of Messina, Italy
"On a GPR Survey to Characterize the Structural Configuration of a Masonry Building"
- POST.6** **G.Concu, S.Fais**
University of Cagliari, Italy
"In Time Analysis of a Viscous Coupling Agent Effect in Ultrasonic Measurements"
- POST.7** **C.Dybiec, A.Nakoneczny, S.Wlodarczyk**
Institute of Precision Mechanics, Warszawa, Poland
"Practical Application of Eddy Current Method for Estimation of Value and Direction of Stresses"
- POST.8** **A.Anastasopoulos, D.Kouroussis**
ENVIROCOUSTICS S.A., Greece
"Leak Prevention of Above Ground Storage Tanks by Means of Acoustic Emission Testing"
- POST.9** **A.Anastasopoulos, A.Tsimogiannis**
ENVIROCOUSTICS S.A., Greece
"Acoustic Emission Testing of Vessels Operating at High Temperatures"

18:00

Exhibition and Reception Party

THURSDAY 16 OCTOBER 2003

09:00-11:00 (HALL A)

SESSION 4

ACOUSTIC EMISSION

Chairmen: G.Tsamasphyros, A.Vamvakoussis

09:00-09:30
INV.4

Invited Lecture: D.Zacharopoulos¹, D.Karalekas², E.E.Gdoutos¹

¹Democritus University of Thrace, Xanthi, Greece,

²University of Piraeus, Greece.

"Investigation of Damage in Loaded Composite Bridge Substructures Using Acoustic Emission"

09:30-09:45
P.4.1

V.Kapatos¹, S.Lympertos², E.Dermatas¹

¹Univ.of Patras, Greece, ²FORTH-ICE/HT, Patras, Greece

"Estimation of the Best Sensors Position for Minimum Error Location of Acoustic Emission Sources on Spherical Surfaces"

- 09:45-10:00**
P.4.2
K.Bruzelius, D.Mba
Cranfield University, U.K.
"Feasibility Study on the Application of AE to Railtrack Diagnosis"
- 10:00-10:15**
P.4.3
S.C.Kerkyras,
Hellenic Petroleum, Greece
"Pump Condition Monitoring Using Acoustic Emission Techniques"
- 10:15-10:30**
P.4.4
T.Toutountzakis, D.Mba
Cranfield University, U.K.
"Acoustic Emission and Gear Defect Diagnosis"
- 10:30-10:45**
P.4.5
Masahiro Tooma, Naoyuki Kouno, Masahiro Koike, Tetsuya Matsui
Hitachi Ltd., Japan
"A New Ultrasonic Inspection Method Using Crossed Active Focus Scanning for Crack Sizing"
- 10:45-11:00**
P.4.6
Us Katu, Teilsang MT, Kanai Ra
RIT, Sakharale, India
"Acoustic Emission Monitoring of Turning Process"

11:00-11:30

Coffee Break

Thursday 16 October 2003

09:00-10:00

Registration continues

THURSDAY 16 OCTOBER 2003

09:00-10:45 (HALL B)

SESSION 5

MATERIAL CHARACTERIZATION

Chairmen: A.D'Amore, V.Meriakri

09:00-09:30

INV.5

Invited Lecture: E.Siores

H.S.Ku, J.A.R.Ball

Scarbo Technologies and Innovations, Hong-Kong

"Applications of Variable Frequency Microwaves in Non-Destructive Testing"

09:30-09:45

P.5.1

D.E.Mouzakis, H.Zioga, C.Galiotis

University of Patras, Greece

"Non-Destructive Damage Detection and Degradation Assessment of UV-exposed PMMA Panels"

09:45-10:00
P.5.2

D.Papadimitriou¹, N.Esser², W.Richter²
¹NTUA, Greece, ²Technical Univ.of Berlin, Germany
"Application of Optical Spectroscopic Techniques in Characterization of Semiconductors and Semiconductor Devices"

10:00-10:15
P.5.3

R.Pucinotti, R.A.De Lorenzo
Univ.Mediterranea, Regio Calabria, Italy
"Nondestructive in Situ Testing for the Seismic Damageability Assessment of "Ancient" R/C Structures"

10:15-10:30
P.5.4

R.Pucinotti, M.Versaci, R.A.De Lorenzo
Univ.Mediterranea, Regio Calabria, Italy
"A Neuro-Fuzzy Approach to Correlate Probe Penetration Test Results and Compressive Strength of R/C Structures"

10:30-10:45
P.5.5

U.Gafurov
Institute of Nuclear Physics Ulukbek, Uzbekistan
"Modelling of Elastic Modulus and Molecular Structure Interrelationship of an Oriented Crystalline Polymer"

11:00-11:30

Coffee Break

THURSDAY 16 OCTOBER 2003

11:30 - 13:15 (HALL A)

SESSION 6

COMPOSITES AND AEROSPACE

Chairmen: G.C.Papanicolaou, J.Botsis

11:30-12:00
INV.6

Invited Lecture: Rui De Oliveira, Orlando Frazao, Jose Luis Santos, Antonio Torres Marques
Porto University, Portugal
"Damage Monitoring in Composite Materials Using an Optical Fibre Acoustic Emission Sensor"

12:00-12:15
P.6.1

J.M.Buckley¹, R.A.Smith², J.A.Skramstad³
¹Sonatest Plc, England, ²QinetiQ Ltd, Farnborough, England, ³NDT Solutions Inc. England
"Transient Eddy Currents for Aircraft Structure Inspection - An Introduction"

12:15-12:30
P.6.2

C.Kyriazoglou¹, R.D.Adams¹, F.J.Guild¹, B.H.LePage²
¹University of Bristol, England, ²University of Surrey, England

"Development of Vibration Damping for Structural Health Monitoring of Woven Fabric Laminates"

12:30-12:45
P.6.3

**T.H.Loutas, G.Sotiriadis, J.Kalaitzoglou,
V.Kostopoulos,**

University of Patras, Greece

"On the Stiffness Measurements of Ceramic and Carbon Fibers Using Elastic Wave Propagation Techniques. Comparison Against Quasi-Static Tensile Tests"

12:45-13:00
P.6.4

**I.N.Prassianakis, E.Sideridis, V.N.Kytopoulos,
N.I.Prassianakis, V.Papapetrou,**

NTUA, Greece

"Tensile and Non-Destructive Tests for the Evaluation of the In-Plane Properties of Glass-Fibre Reinforced Epoxy Resins"

13:00-13:15
P.6.5

R.Kazys, L.Mazeika, A.Demcenko

Kaunas Univ.of Tech., Lithuania

"The Comparison of Ultrasonic Bulk Wave Techniques for Detection Of Defects in Composites"

13:15-15:00

Lunch

THURSDAY 16 OCTOBER 2003

15:00 - 16:30 (HALL A)

SESSION 7

Artworks and Civil Engineering Applications - I

Chairmen: A.Moropoulou, M.Koulouri

15:00-15:30
INV.7

Invited Lecture: M. M. Sfantsikopoulos

Chr. G. Provatidis

NTUA, Greece

"An Approach for Computational NDT of Archeological Structures"

15:30-15:45
P.7.1

R.Fontana, M.C.Gambino, M.Greco, L.Marras,

M.Materazzi, E.Pampaloni, L.Pezzati

Istituto Nazionale di Ottica Applicata - INOA, Firenze, Italy

"Multispectral UV Fluorescence and Microprofilometry: The Techniques and their Digital Integration"

15:45-16:00
P.7.2

R.Fontana, Maria Chiara Gambino, M.Greco,

L.Marras, M.Materazzi, E.Pampaloni, L.Pezzati

Istituto Nazionale di Ottica Applicata - INOA, Firenze,
Italy

"High - Resolution 3D Survey of Artworks"

16:00-16:15
P.7.3

O.G.Kotiaev², Shigeaki Uchida¹

¹Inst.for Laser Technology, Osaka, Japan, ²Research Institute
for Complex Testing of Opto-Electronic Devices, Bor,
Russia

*"Remote Non-Destructive Inspection of Concrete Structures
with the Use of Photorefractive Interferometry"*

16:15-16:30
P.7.4

N.Maravelaki-Kalaitzaki¹, N.Kallithrakas-Kontos²

¹Ministry of Culture, Chania, Greece, ²Technical University
of Crete, Chania, Greece

*"Surface Analysis in Archaeology and Conservation by
EDXRF"*

16:30-16:45

Coffee Break

THURSDAY 16 OCTOBER 2003

16:45 - 18:15 (HALL A)

SESSION 8

Artworks and Civil Engineering Applications - II

Chairmen: P. Renzel, A. Sideridis

16:45-17:00
P.8.1

**A.Moropoulou¹, A.Bakolas¹, E.Aggelakopoulou¹, T.
Pineli¹, I.Prasianakis²**

¹NTUA, Chem.Eng.Dept.,Greece, ² NTUA School of
Applied Math.&Phys.Sciences, Greece

*"Estimation of Elastic Constants of Stones, Used in Historic
Monuments, Using Ultrasonic Technique and Mechanical
Testing. Correlation of the Mechanical Characteristics to the
Microstructure"*

17:00-17:15
P.8.2

I.Tsamasyrou

University of the Aegean, Greece

*"Evaluation of Cleaning Treatments of the Biodeteriorated
Marble Epigraphs of Olympia-Greece"*

17:15-17:30
P.8.3

**D.Triantis¹, C.Anastasiadis¹, I.Stavrakas¹,
F.Vallianatos²**

¹TEI of Athens, Greece, ² TEI of Crete, Chania, Greece

"Relaxation Process of Stressed Marble ac Conductivity"

17:30-17:45
P.8.4

**G.Karagiannis^{1,2}, Chr.Salpistis³, Y.Chrissoulakis²
and G.Sergiadis¹**

¹Aristotle University of Thessaloniki,
Electr.Eng.Dept.,Greece, ²ORMYLIA, Art Diagnosis Centre,
Greece, ³Aristotle University of Thessaloniki,
Electr.Eng.Dept.,Greece
*"Simulation of the Light Backscatter from the Paint Layers of
Artworks Using Non-Destructive UV/VIS/nIR Spectroscopy
and Signal Processing Theory"*

17:45-18:00
P.8.5

V.V.Meriakri, E.E.Chigrai, M.P.Parkhomenko,
Institute of Radioengineering and Electronics, Russian
Academy of Sciences, Moscow, Russia
*"Millimeter Waves for Non-Destructive Water Content in
Building Materials and Materials for Common Use"*

18:00-18:15
P.8.6

C.P.Providakis, E.M.Kontadaki
Technical University of Crete, Greece
*"Geographical Information System Applied to Monitor and
Analyse Earthquake Induced Building Damages"*

21:00

DINNER
PANORAMA HOTEL
TEL. : 28210-31708, www.panorama-hotel.gr

Friday 17 October 2003

09:00-10:00

Registration continues

FRIDAY 17 OCTOBER 2003

09:00-11:00 (HALL A)

SESSION 9

RADIOGRAPHY-ELECTROMAGNETIC AND IR-METHODS

Chairmen: J. Vardoulakis, C. Charitidis

09:00-09:30
INV.9

**M.Fujishiro¹, R.Taniguchi¹, Y.Tsujii¹, N.Kobayashi²,
M.Mizunuma³, K.Okamoto⁴, J.Sekita⁵, A.Muruyama⁶,
Y.Wakibe⁷, Y.Terada⁸**
¹Izumi-shi, Osaka, Japan, ²Res.Inst.for Advanced
Sci.&Tech.,Osaka, Japan, ³Nippon Inst.of Technol., Saitama,
Japan, ⁴Res.Reactor Inst., Kyoto Univ., Osaka,
Japan, ⁵TESCO Corporation, Tokyo, Japan, ⁶Nippon Junior
College of Welding Structure, Kanagawa, Japan, ⁷Shin-
Nippon NDI Co.Ltd, Fukuoka, Japan, ⁸Tech.Res.Ctr.Hitachi
Shipbuilding Co.Ltd., Osaka, Japan

"Comparative Study on Film-Density Intensifiers for High - Energy Bremsstrahlungs-Intensification Ratio"

09:30-09:45
P.9.1

S.Kouridakis
NTUA, Athens, Greece
"Methods of Detection Buried or Submerged Metallic Objects Using Electromagnetic Fields of Low Frequencies (LF) and Extremely Low Frequencies"

09:45-10:00
P.9.2

Yang Xu¹, Akihiro Tagawa¹, Masashi Ueda¹, Takuya Yamashita¹, Yusuke Oftsuka², Kazunori Osafune², Masahiro Nishikawa²
¹Japan Nuclear Cycle Development Institute, Japan, ²Osaka University, Japan
"Development of SH Wave Electromagnetic Acoustic Transducer (EMAT)"

10:00-10:15
P.9.3

R.Grimberg, A.Savin, R.Steigmann
National Institute of R&D for Technical Physics, Iasi, Romania
"Forward Problem for Eddy Current Inner Transducer With Rotating Magnetic Field; Application to Pressure Tubes from CANDU Nuclear Power Plant"

10:15-10:30
P.9.4

R.Grimberg, A.Savin, R.Steigmann
National Institute of R&D for Technical Physics, Iasi, Romania
"Inverse Problem for Electromagnetic Field Diffraction on Ideal Cracks of Electronic Materials"

10:30-10:45
P.9.5

E.Svab¹, GY.Meszáros¹, Z.Somogyvári¹, M.Balaskó², F.Korosi³
¹Res.Inst.for Solid State Physics, Budapest, Hungary,
²KFKI Atomic Res.Inst., Budapest, Hungary,
³Szent Istvan Univ., Inst.of Env.and Land Manag., Hungary
"Neutron Diffraction and Radiography Study of Hydrated Zr-1%Nb Reactor Fuel Cladding Material"

10:45-11:00
P.9.6

S.Y.Salunkhe, U.S.Katu, R.G.Desawle
R.I.T., Sakharale, India
"Comparative Study of the Effect of Gear Tooth Crack Intensity on Gearbox Vibration - A Time Domain Approach"

11:00-11:15

Coffee Break

FRIDAY 17 OCTOBER 2003

11:15 - 12:45 (HALL A)

SESSION 10

SPECIAL TECHNIQUES - I

Chairmen: C.Spyronoulos, I.Matsas

11:15 -11:45
INV.10

Invited Lecture: A.Moropoulou
N.P.Avdelidis, M.Koui
Chemical Eng.Dert.NTUA, Greece
"IR Thermography for the Assessment & Monitoring of Materials & Structures"

11:45-12:00
P.10.1

O.Theodorakopoulou, J.Anastassopoulou
Chemical Eng.Dert.NTUA, Greece
"ATR-FT-IR Study of DNA Free Radicals Interactions"

12:00-12:15
P.10.2

W.Swidorski, D.Szabra
Military Institute of Armament Technology, Poland
"Investigated Surface Uneven Heating Effect Reduction in Non-Destructive IR Thermography Testing Method"

12:15-12:30
P.10.3

D.Lymeproulos, M.Bibas, G.Stratakos,
I.Karanasiou, N.Uzunoglou
Microwave and Fiber Optics Laboratory, NTUA, Greece
"Detection of Water Leaks in Supply Pipes by Using Microwave Ground Penetrating and Thermography Techniques"

12:30-12:45
P.10.4

K.Kechribaris, F.Maniatis, K.Nikita, N.Uzunoglu
Microwave and Fiber Optics Laboratory, NTUA, Greece
"Progress in Solving the Inverse Scattering-Diffraction Problem in Non-invasive Imaging of Radiation Penetrable Objects"

12:45-13:00

Coffee Break

FRIDAY 17 OCTOBER 2003

13:00-14:00 (HALL A)

SESSION 11

Special Techniques - II

Chairmen: E. Siores, D.K.Yfantis

13:00-13:15
P.11.1

P.Vontobel, E.Lehmann
Paul Scherrer Institute, Villigen, Switzerland
"Neutron Radiography and Tomography for NDE at the Spallation Neutron Source SINQ"

13:15-13:30
P.11.2

D.K.Yfantis¹, N.Vourdas¹, A.D.Yfantis², N.Yfantis¹,
I.Paloumpa², D.Schmeisser²

¹Faculty of Chem.Eng.Dept., NTUA, Greece

²Technical Univ.of Cottbus, Germany

*"Structural Characterization by XPS, PEEM and NEXAFS -
The Case of Conducting Conversion Coatings"*

13:30-13:45

P.11.3

M.Zergoug, S.Lebaili, H.Boudjellel, A.Benchaala

Lab.d'Electronique et d'Electrotechnique, Algerie

*"Microhardness and Impedance Variations in Eddy Current
Testing"*

13:45-14:00

P.11.4

M.Zergoug, A.Haddad, S.Lebaili

Lab.d'Electronique et d'Electrotechnique,Algerie

"Pulsed Eddy Current in Characterisation of Defect"

14:00-16:00

Lunch

FRIDAY 17 OCTOBER 2003

11:15 - 12:45 (HALL B)

SESSION 12

ANALYTICAL METHODS - I

Chairmen: E.Gdoutos, N.Uzunoglou

11:15-11:45

INV.12

Invited Lecture: D.E.Panayotounakos,

NTUA, Greece

*-"Exact Analytic Solutions of Some Nonlinear ODEs in
Mathematical Physics"*

*-"Nonlinear Gas Pressure Diffusion-Exact Analytic
Solutions"*

11:45-12:00

P.12.1

D.I.Bardzokas, G.P.Georgiadis

NTUA, Greece

*"Application of the Complex Potential and Singular Integral
Equations Theories Into Some Problems of Electroelasticity*

for Cracked Bodies Static Problems - Part I

Dynamics Problems - Part II"

12:00-12:15

P.12.2

C.P.Spyropoulos, Z.F.Song, Ch.A.Georgiopoulou

NTUA, Greece

*"Effect of Applied Electric and Magnetic Field on Crack
Growth in Magnetoelastic Materials"*

12:15-12:30

P.12.3

C.P.Spyropoulos, A.C.Spyropoulou, Z.F.Song

NTUA, Greece

*"Analytical Solution of a Plane Crack Under Constant
Thermal Conduction in Piezoceramics"*

12:30-12:45
P.12.4

A.F.Vakakis¹, L.Bergman², I.Georgiou³
¹NTUA, Greece, ²Univ.of Illinois, USA, Dept.of Naval
Arch., NTUA, Greece
*"Order Reduction Techniques for Fault Diagnosis and
Prognosis"*

12:45-13:00

Coffee Break

FRIDAY 17 OCTOBER 2003

13:00-14:00 (HALL B)

SESSION 13

Analytical Methods - II

Chairmen: D.Panayotounakos, D.Zacharopoulos

13:00-13:15
P.13.1

J.Sakellaris, A.Malkogianni, M.Chatzikosta
Aristotle Univ.of Thessaloniki, Greece
*"Mathematical Modeling of Electromagnetic Techniques,
Used in Non-Destructive Testing"*

13:15-13:30
P.13.2

**M.P.Markakis, D.E.Panayotounakos,
M.Papadopoulos**
NTUA, Greece
*"Exact Analytic Solutions of the Unforced Damped Duffing
Nonlinear Oscillator"*

13:30-13:45
P.13.3

**M.P.Markakis, N.D.Panayotounakou,
D.E.Panayiotounakos**
NTUA, Greece
*"Exact Analytic Solutions of the Free Van der Pol Nonlinear
Oscillator"*

13:45-14:00
P.13.4

**A.Sotiropoulou, N.Sotiropoulos,
D.E.Panayotounakos,**
NTUA, Greece
*"Exact Analytic Solutions of the Plastic Spin Equations in
Simple Shear"*

14:00-16:00

Lunch

Friday 17 October 2003

16:00-17:30 (HALL A)

SESSION 14

STANDARDIZATION - CERTIFICATION - ACCREDITATION

Chairmen: B. Kytopolulos, A. Giokas

16:00-16:30
INV.14

**Invited Lecture: A. Notea¹, T. Shwierz-Iosefzon¹,
M. Deutsch²**

¹Quality Assurance & Reliability, Technion - Israel Institute of Technology, Haifa, Israel, ²Physics Dept., Bar-Ilan Univ., Ramat-Gan, Israel

"Redefining Resolution of NDT Tomographic Systems"

16:30-16:45
P.14.1

K. Haritidis,

Application Center - (NDT), Greece.

"The Contribution of NDT Constructions that are in Compliance to the EU Directives"

16:45-17:00
P.14.2

**G.D. Cristodoulou¹,
A. Vamvakoussis², I.N. Prassianakis³**

¹ASNT, Greece, ²KDEP, Greece, ³NTUA, Greece.

"The Personnel Certification Bodies Accreditation Scheme According to the Requirements of The European Technical Standard EN-45013 and its Implementation from the Hellenic Society of NDT in Greece"

17:00-17:15
P.14.3

R. Marini, P. Ranos

Hellenic Aerospace Industry S.A., Greece

"Qualification and Certification of Non-Destructive Testing Personnel in Hellenic Aerospace Industry"

17:15-17:30
P14.4

I.C. Matsas,

ELOT S.A. Greece.

"Quality of Non-Destructive Activities - Standardization, Certification and Accreditation"

17:15-17:45 (HALL A)

CLOSING REMARKS

Chairmen: I.N. Prassianakis, G.C. Papanicolaou, G. Grigoriadis

Saturday 18 October 2003

09:00-18:00

EXCURSION

KNOSSOS = HERAKLION