

ROMANIAN ACADEMY
Department of Technical Sciences

ACADEMY OF TECHNICAL SCIENCES

**COMMISSION OF ACOUSTICS
OF ROMANIAN ACADEMY**



**THE ANNUAL SYMPOSIUM
OF THE INSTITUTE OF SOLID MECHANICS
SISOM 2010
and
SESSION OF THE COMMISSION OF ACOUSTICS**

Bucharest, May 27-28, 2010

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Session 1 – System dynamics and continuum mechanics

(1D) Polidor BRATU

Dispersion of the absorbed energy of the vibratory systems with variable discrete parameters

(2D) Gheorghe MORARU

Problems about wedging cracks by rigid inclusions

(3D) Viorel SERBAN, Tudor SIRETEANU, Marian ANDRONE, Ana - Maria MITU

The effect of structural degradation on the seismic behavior of structures

(4D) Nicolae POP

Numerical algorithms for contact problems with friction

(5D) Corina S. DRAPACA, Anthony J. PALOCAREN

A Novel Mechanical Model for Tumors' Classification

(6D) Ileana TOMA

An abstract pattern for some dynamical models

(7D) Nicolae CONSTANTIN, Ștefan SOROHAN, Mircea GĂVAN, Viorel ANGHEL, Sorin OPRIȘAN

Study on Disbond Detection of Composite Repair Patches

(8D) Viorel ANGHEL, Nicolae CONSTANTIN, Andreea BORÎTU, Mircea GĂVAN, Ștefan SOROHAN

Applications of infrared thermography in NDE of sandwich composite structures

(9D) Gilbert-Rainer GILLICH, Doina FRUNZĂVERDE, Zeno-Iosif PRAISACH, Daniela Elena BÎRDEANU

Failure Analysis Using Vibration Measurements

(10D) Tudor SIRETEANU, Gheorghe GHITA, Viorel SERBAN

On the dynamic response of structures with base imposed displacements

(11D) Gabriel-Petru ANTON, Mihai PAVAL, Fabien SOREL

Finite Element Model Updating of an Engine in the Automotive Industry

(12D) Dinu BRATOSIN

Resonances of the nonlinear oscillating systems

- (13D) Liviu MARIN
Numerical boundary reconstruction in two-dimensional functionally graded materials.
- (14D) Ligia MUNTEANU
On the Damping Properties of the Auxetic External Elements
- (15D) Carmen BUCUR, Anca RUS, Ionuț D. MOISE, Mircea V. BUCUR
Checking of a Reinforced Concrete Structure Dual System for Progressive Collapse
- (16D) Gabriel ANGHELACHE, Raluca MOISESCU
Investigation of tyre-road contact patch stresses based on acceleration measurements
- (17D) Marin SANDU, Adriana SANDU
Strain Gauge Force Sensors with Multiple Measuring Ranges
- (18D) Veturia CHIROIU
On the Lagrange inverse problem

(19D) Adrian Ioan NICULESCU

The squat and body clearance at suspension using VZN and standard dampers

(20D) Dan DUMITRIU, Cornel SECARA

Dynamics of a planar 3-DOF manipulator

(21D) Carmen E. EISINGER BORCIA

On the computer-aided design of the valve train system modeled as branched system

(22D) Marcel MIGDALOVICI, Tudor SIRETEANU, Emil Matei VIDEA

Simultaneous influence of viscous, hysteretic and dry-friction internal damping of the cable

(23D) Florin FRUNZULICĂ, Alexandru DUMITRACHE, Marius STOIA-DJESKA

Mesh-free method for fluid-structure interaction problems

(24D) T. SIRETEANU, M. GIUCLEA, O. SOLOMON

Practical methods for equivalent linearization of hysteretic experimental loops

- (25D) Horia PAVEN, Sandor POPOVICS
Thermorheodynamical characterization of standard linear viscoelastic solid model in stress-controlled Conditions I. Direct primary quantities
- (26D) Horia PAVEN, Sandor POPOVICS
Thermorheodynamical characterization of standard linear viscoelastic solid model in stress-controlled conditions II. Derivate primary quantities
- (27D) Vlad-Grigore LASCU, Svetlana COJOCARU, Tudor SIRETEANU, Grigore SECRIERU,
Boris RYBAKIN, Alexandru GAL
A New Method for Solving Engineering Problems: TRIZ theory
- (28D) Eugen CORDUNEANU, Adina RUSU
Determination for the equivalent damping constant of an ensemble of elastic springs
- (29D) Daniel BALDOVIN, Tudor SIRETEANU, Ana-Maria MITU
Method of reducing environmental noise by using rubber panels
- (30D) Amalia ȚÎRDEA, Cristina OPRÎȚESCU, Mihai Ilie TOADER
Studies on the reducing vibrations transmissibility using different isolation systems

- (31D) Silviu NASTAC, Carmen DEBELEAC
On dynamics of double pendulum with visco-elastic linkages
- (32D) Daniel Constantin COMEAGA, Cristian Gabriel ALIONTE
Modern dynamic analysis methods based on laser vibrometry applied to mini and microstructures
- (33D) Ovidiu ȘANDRU, Luige VLĂDĂREANU, Ion ȘANDRU, Paul ȘCHIOPU, Alexandra ȘANDRU
Radar invisible medium
- (34D) Alexandra ȘANDRU
Application of chiral metamaterials
- (35D) Emil Matei VIDEA, Tudor SIRETEANU, Marcel MIGDALOVICI
Hydrostatic servo – actuator for airplanes. Part I. Overview on the subject
- (36D) Cornel BALAS, Viorica BOGDANESCU
Vibration control using the variable stiffness
- (37D) Margarit BAUBEC
A case of nonlinear deformation of circular plates

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Session 2 – Robotics, mechatronics, biomechanics, wear investigations of materials

(1R) Daniel-Octavian MELINTE , Ionel-Alexandru GAL , Luige VLADAREANU
The improvement of walking robots stability with variable dimensions

(2R) Alexandru I. GAL, Octavian D. MELINTE, Luige VLADAREANU
Modular walking robots control for circular movement around its own axis

(3R) Ion STROE, Stefan STAICU
Calculus of joint forces in open mechanical systems using energetic methods

(4R) Valeria MOSNEGUTU, Veturia CHIROIU, Rodica IOAN
A new model for the synovial fluid in the knee joint

(5R) Vilhelm ITU, Iosif DUMITRESCU, Mihai-Carmelo RIDZI, Adrian VULC
Application of forces reduction in the calculation of technological mechanical loads transmitted to the tower of a winding engine through extraction Pulley Bearings

(6R) Tiberiu Stefan MANESCU, Mihaela Dorica STROIA
The relevance of vibro-mechanic diagnosis systems for industrial machines

(7R) Liliana-Laura BĂDIȚĂ, Lucian CĂPITANU

The current status of investigations regarding level of heat produced in total hip prostheses

(8R) Tudor SIRETEANU, Vlad-Grigore LAȘCU, Constantin CHIRIȚĂ, Viorel ȘERBAN

Some Results of Research on Anti-seismic Protection Devices

(9R) Aron IAROVICI, Justin ONIȘORU

Noisy Ceramic - on - Ceramic Hips. Overview on the Squeaking Phenomenon

(10R) Alexandru VLADDEANU, Gabriela VLADDEANU

The optimizing of the bucket trajectory at the quarry hydraulic excavators

(11R) Doina MARIN

A model for electromechanical feed drive system

(12R) Ovidiu ANTONESCU, Paun ANTONESCU

Didactic robot control with interactive operation soft (RIOS)

(13R) Ovidiu ANTONESCU, Paun ANTONESCU
Modeling of a didactic robot using CATIA

(14R) Gabriela TONȚ, Luige VLĂDĂREANU, Mihai Stelian MUNTEANU, Dan George TONȚ
Optimal Task Assignment for Dynamic Fault-Tolerant Walking Robots

(15R) Gabriel-Arin MIHALCEA
Tribological effects of deterministic surface structure in the metal forming process

(16R) Gabriel-Arin MIHALCEA
Impact of the surface structure on the tribological properties of cylinder liner on piston ring contact

(17R) Constantin ȚIGĂNEȘTEANU, Ivan ILIUC
Physical processes involved in impact wear between two bodies

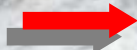
(18R) Lucian CAPITANU, Dumitru-Catalin BURSUC
A studies synthesis regarding the total hip prosthesis motion and pressure exertion

(19R) Ion ION, Luige VLADAREANU, Cornel DINU, Aurelian VASILE
Design and realization of a new MERO modular walking robot

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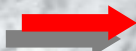
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Session 3 – Technical Acoustics

(1A) Dan IORDACHE, Piere Paulo DELSANTO, Viorica IORDACHE

The advanced acoustic devices are complex implications on the numerical simulations

(2A) Florin BABARADA

Mosfet modeling the second order effects induced by parallel drain field

(3A) Dorian NEDELICU

Voice Commands of a 2D Graph

(4A) Nihan GUREL, Sevtap YILMAZ-DEMIRKALE, Mine ASCIGIL-DINCER, Ufuk ULUSAN

Evaluation of the Acoustical Performance of Elementary Schools: An Example of an Elementary School in Istanbul

(5A) Diana MILITARU, Inge GAVAT

Towards automatic speech understanding with semicontinuous HMMS using PROTOLOGOS

- (6A) Tiberius ZAHARIA, Svetlana SEGARCEANU, Marius COTESCU, Inge GAVAT, Alexandru SPATARU
Binary reduction method for reference templates used in dtw algorithm for speech recognition in mobile applications
- (7A) Svetlana SEGARCEANU, Tiberius ZAHARIA, Inge GAVAT, Constantin RADOI
Speaker verification based on a two-factors scheme
- (8A) Marius COTESCU, Inge GAVAT
Influence of the aperiodicity factor in speech synthesis
- (9A) Ovidiu RADU, Valerica ROSCA, Simona CIUREA, Adrian RADULESCU
Comparative analysis 2009-2010 of a sound speed-depth profile in Romanian littoral zone
- (10A) Mihaela PICU, Silviu NASTAC
A study on vibration propagation through alluvial soils of the Danube Meadow
- (11A) Adina IONESCU, Silviu IONESCU, Nicolae ENESCU
Unattended monitoring of aircraft noise in the vicinity of airports: description and assessment

- (12A) Polidor BRATU, Aurelia MIHALCEA, Ovidiu VASILE,
Experimental evaluation method intended for anti-seismic neoprene isolators, according to SR EN 15129.
- (13A) Barbu PLOSCEANU, Andrei CRĂIFĂLEANU, Ovidiu VASILE
The efficiency calculus for mechanical transmissions with cycles
- (14A) Ana PICU
A study on the vibrations' effects of mobile phone on human behavior using Stevens' Power Law
- (15A) Ionel IORGA, Anca ANTONOV, Octavian IORGA
Noise Reduction - a Requirement of the New European Directive on Machine - a Start for Competitively
- (16A) Sorina ILIUTA (MOSTEANU), Toma ZAPLAIC, Mihai ZAPLAIC
The overpass Basarab – Implications on noise
- (17A) Silviu IONESCU, Adina IONESCU, Nicolae ENESCU, Ioan MAGHETI
Noise estimations versus experiments regarding Helmholtz Resonators

(18A) Gheorghe BARAN, Ioan MAGHETI, Carmen Anca SAFTA, Mariana SAVU
Possibilities of acoustical assessment of the vortex in Francis turbine

(19A) Gabriel OPREA
Catacaustic surfaces in architectural acoustics

(20A) Nicolae ZEMTEV
Buckling of a Vertical Liquid Storage Tank During a Strong Earthquake

(21A) Mihai BRATU, Ioan ROPOTA
Noise attenuation using panels made of polymer composite materials

(22A) Daniel Marius MIHAI, Cristi BADEA
Alternative Method for Estimating the Railway Track Quality by Rolling Noise Measurements Performance

(23A) Luminita VOICULESCU, Craita CARP-CIOCARDIA
Helmholtz's equations in acoustics

(24A) Talida Mirona CIRLIORU

The assessment of noise pollution and its effects on human health of an laboratory installation equipped with a Pelton turbine

(25A) Daniel Marius MIHAI

Establishing an Interdependence between Track Geometry Defects and Sound Pressure Level Recorded Onboard the Track Geometry Measuring Car

(26A) Mariana SAVU, Cristi BADEA, Mihnea MAGHETI, Alina GHICA

Control of low frequency noise

(27A) Daniel Constantin COMEAGA, Cristian Gabriel ALIONTE, George TACHE,
Bogdan LAZAROVICI, Cristina BALTA

Analysis of the influence of tram embankment and vehicle type on the acoustic emission

(28A) Ovidiu VASILE, Nicolae ENESCU

Noise reduction in industrial installations using a silencer

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Session 4 – Ultraacoustics

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- (2U) Gheorghe AMZA, Simon MORANGA
Contributions to the modeling system used ultraacoustic dimensional processing
- (3U) Ionel Gabriel CHIRCULESCU, Dan DOBROTĂ, Oana CHIVU
Researches regarding the internal rectification in ultrasonic field of the pieces realised from quality carbon steel
- (4U) Ionel Gabriel CHIRCULESCU, Dan DOBROTĂ, Oana CHIVU
Researches regarding circularity deviation at honing processing in ultrasonic field of the pieces made from grey cast iron
- (5U) Cristian RUGINA
2D numerical simulation of Lamb waves propagation
- (6U) Anca STEFAN, George BALAN
The microbiology of the raw water treated by air-jet ultrasound generator

(8U) Dan DOBROTĂ, Gheorghe AMZA

Studies and researches on cutting waste rubber using ultrasonic energy

(9U) Gheorghe AMZA, Veronica ACHIM

Contribution to the finite element modeling of an ultrasonic welding process a wires

(10U) Gheorghe AMZA, Mihai ARSENE, Delicia ARSENE, Claudia BORDA, Marinela MARINESCU,
Larisa BUTU

Basic measurement parameters of acoustic field generated platforms / equipment / systems, air, surface and underwater

(11U) Dan NITOI, Gheorghe AMZA, Mihai BĂLĂCEANU, Zoia APOSTOLESCU

Ultrasonic welding between aluminum and glass fibre

(12U) Marinela MARINESCU, Claudia BORDA, Larisa BUTU, Delicia ARSENE

Research of an experimental technique of ultrasonic transfer characteristics of bonded piezoelectric transducers

- (13U) Constantin RADU, Gheorghe AMZA
Research regarding the finite element modeling of an ultrasonic horn used in a cutting process
- (14U) Gabriel GARLEANU, Delia GARLEANU, Constantin DUMITRASCU, Cornelia LUCHIAN
Some considerations on hardfacing load parts using stelit for valve used in thermal power plants
- (15U) Robert BENDIC, Gheorghe AMZA, Adrian MILICĂ
Utilization of ultrasound in measurement of the elastic deformation of intelligent compozite
- (16U) Gheorghe AMZA, Mihai ARSENE, Delicia ARSENE, Claudia BORDA, Marinela MARINESCU, Larisa BUTU
Sound speed depth - profile characteristics at the Black Sea - Romanian coast line
- (17U) Gheorghe AMZA, Simona VINTILA (MIHAIL)
Contributions regarding corrosion and erosion monitoring of pipes by ultrasonic guided wave method
- (18U) Gheorghe AMZA, Adrian MILICĂ, Robert BENDIC
Contributions on the use of ultrasonic remaking process of printing plates
- (19U) Grigore Liviu ODOBESCU
The variation of ultra-acoustic system efficiency in function of acoustic charge

(20U) Oana CHIVU, Gheorghe AMZA, Gabriel CHIRCULESCU
Materials uses in producer of active elements from ultrasonics engines

(21U) Oana CHIVU, Gabriel CHIRCULESCU
The modeling of an ultrasonic engine with three degrees of freedom

(22U) GHEORGHE AMZA, GABRIEL TASCA
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