



**Transilvania
University
of Brasov**

**FACULTY OF
MECHANICAL ENGINEERING**

IN ASSOCIATION WITH:



**ACADEMY OF TECHNICAL
SCIENCES OF ROMANIA**



**ROMANIAN SOCIETY OF
THEORETICAL AND
APPLIED MECHANICS**



**THE ROMANIAN ACOUSTIC
SOCIETY**

**The 7th International Conference on “Advanced Composite Materials
Engineering” – COMAT 2018**

**The 42th International Conference on “Mechanics of Solids, Acoustics
and Vibrations” – ICMSAV 2018**

**The 2nd International Conference “Experimental Mechanics in
Engineering” – eMECH 2018**

FINAL PROGRAMME



Held in Celebration of Professor Polidor BRATU's 70th's Birthday

Braşov, ROMANIA, 25- 26 October 2018

SCIENTIFIC AND REVIEWERS COMMITTEE

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Co-chairman:

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- Veturia CHIROIU, PhD Eng., Institute of Solid Mechanics of Romanian Academy.
- Daniel CONDURACHE, Prof.Dr.Eng., Technical University of Iasi, ASTR member.
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- Marius CRACIUN, Dr., University Ovidius of Constanţa;
- Ligia MUNTEANU, Dr.Math., Romanian Academy;
- Hans Karl LAERMANN, Prof. Dr. Ing., M.d.h.c.Wuppertal, Germany;
- Catalin PRUNCU, Dr.Eng., Imperial College London;
- Doru Nicolae STĂNESCU, Prof.Dr.Eng., University of Piteşti.

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Thursday, October 25th 2018
8³⁰-9⁰⁰ Registration - Transilvania University, N Building, N I 16
9⁰⁰-9²⁰ Festive opening - Transilvania University, N Building, N I 16
9²⁰ -10⁴⁰ Invited Lectures - Transilvania University, N Building, N I 16
10⁴⁰ -11⁰⁰ Coffee Break
11⁰⁰-13⁰⁰ Technical Session - Transilvania University, N Building, NS1e
11⁰⁰-13⁰⁰ Technical Session - Transilvania University, N Building, NS2
13⁰⁰-15³⁰ Lunch Break
15³⁰-17⁰⁰ Technical Session -Transilvania University, N Building, NS1e
15³⁰-17⁰⁰ Technical Session - Transilvania University, N Building, NS2
17⁰⁰-18³⁰, The Celebration Ceremony of Professor Polidor BRATU's 70th Birthday, NS1e
19⁰⁰ Gala Dinner
Friday, October 26th 2017
9⁰⁰ -10⁰⁰ Invited Lectures - Transilvania University, N Building, NS1e
10⁰⁰-16⁰⁰ Social program

Thursday, October 25th

8.30 – 9.00

Participants welcoming and registration

9.00 – 9.20

Festive opening, N Building, N I 16

9.20- 10.40

Invited Lectures, N Building, N I 16

CHAIRMAN: Carmine PAPPALETTERE
Polidor BRATU

■ Iuliu NEGREAN

NEW APPROACHES ON NOTIONS AND EQUATIONS IN ADVANCED MECHANICS

■ Veturia CHIROIU

ON THE TRAJECTORIES CONTROL OF A HYBRID ROBOTIC SYSTEM

■ Gilbert-Rainer GILLICH

COMPENSATION OF TEMPERATURE EFFECTS FOR FREQUENCY ESTIMATION OF SLENDER STRUCTURES

■ Adrian TĂNĂSESCU

LATEST DEVELOPMENTS IN THE FIELD OF SOUND, VIBRATION, MATERIAL & COMPONENT TESTING EQUIPMENTS, PROVIDED by SPECTROMAS

10.40 – 11.00

Coffee break

11.00 – 13.00

Technical session

SECTION A

N Building, N S 1e

CHAIRMAN: Horațiu TEODORESCU-DRĂGHICESCU

Camelia CERBU

1.	Horațiu Teodorescu-Drăghicescu, S. Neyrinck FINITE ELEMENT ANALYSIS OF DOUBLE-LAP COMPOSITE T-JOINTS
2.	Giorgica Lupchian, Horatiu Teodorescu-Draghicescu FORMING AND STOPPING TORNADOES. LABORATORY EXPERIMENTS
3.	Claudia Cianci, Carmine Pappalettere EVALUATION OF CONTACT FORCES IN BIOMECHANICS: APPLICATION TO ORTHODONTIC ALIGNERS
4.	Horațiu Teodorescu-Draghicescu, Mihai Ulea EXPERIMENTAL TEST OF A NEW COMPOSITE MATERIAL
5.	Camelia Cerbu EQUIVALENT ELASTIC PROPERTIES OF COMPOSITE MATERIALS IN MACROMECHANICS MODELING

SECTION B

N Building, N S 2

CHAIRMAN: Silviu NĂSTAC

Mariana Domnica STANCIU

1.	Silviu Năstac, Carmen Debeleac, Petronela Nechita SIMULATIONS ON NOISE ISOLATION CHARACTERISTICS OF FOAM-FORMED COMPOSITES
2.	Mihai V. Predoi, Latifa Attar, Damien Leduc, Mounsif Ech-Cherif El-Kettani GUIDED SHEAR WAVES ATTENUATION IN BONDED METAL-COMPOSITE STRUCTURES

3.	Marius Pandelea, Luige Vlădăreanu, Mihaiela Iliescu, Radu Ioan Munteanu, Mihai Radulescu INTELLIGENT ADVANCED CONTROL STRATEGIES FOR MOBILE AUTONOMOUS ROBOTS STABILITY THROUGH VERSATILE, INTELLIGENT, PORTABLE VIPRO PLATFORM
4.	Mihaiela Iliescu, Luige Vlădăreanu, Marius Pandelea, D. Marin TESTING MECHANICAL CHARACTERISTICS OF HARDENED LGS PROFILE MATERIAL
5.	Ligia Munteanu, Rodica Ioan, Luciana Majercsik ON THE COMPUTATION AND CONTROL OF A ROBOTIC SURGERY HYBRID SYSTEM

13.00 – 15.30

Lunch Break

15.30 – 17.00

Technical session

SECTION A

N Building, N S 1e

CHAIRMAN: Gilbert-Rainer GILLICH

1.	Nicusor Dragan MODAL CALCULUS OF THE REINFORCED CONCRETE BRIDGES MODELED AS AN ELASTIC BEARED RIGID BODY WITH SYMMETRIES
2.	Nicusor Dragan INSTRUMENTAL ANALYSIS OF THE DAMPED VIBRATION OF THE REINFORCED CONCRETE BRIDGES WITH COMPOSITE NEOPRENE BEARINGS
3.	Ancuța Elena Tiuc, Ovidiu Vasile, Horațiu Vermeșan, Ovidiu Nemeș NEW MULTILAYERED COMPOSITE FOR SOUND ABSORBING APPLICATIONS

4.	Adriana Savin, Mariana Domnica Stanciu, Rozina Steigmann, Nicoleta Iftimie, Paul Doru Barsanescu, Viorel Goanta MONITORING SCALABLE WTB USING COMPLEMENTARY NONDESTRUCTIVE TESTING METHODS
5.	Alexandra Maria Lazar, Mihaela Ioana Baritz STUDIES AND RESEARCH ON HUMAN BEHAVIORAL CHANGES INDUCED BY THE ENVIRONMENT

SECTION B

N Building, N S 2

CHAIRMAN: Ovidiu VASILE

1.	Dan Dumitriu, Marius Ionescu, Daniel Octavian Melinte, Mihai Mărgăritescu STROKE ENHANCEMENT ADAPTER FOR ELECTRIC PARALLEL GRIPPER EQUIPPING A MOBILE X-Y-Z ROBOTIC SYSTEM
2.	Ana Toderita, Sorin Vlase IMPACT OF CARBON FIBER IN PUR INJECTION
3.	Tudor Sireteanu, Ana-Maria Mitu, Gheorghe Ghita ASSESSMENT OF DAMPING EFFICIENCY FOR RAIL VEHICLE SHOCK ABSORBERS BASED ON ACCELERATION MEASUREMENTS
4.	Florin Teodorescu SHEET MOLDING COMPOUNDS. CHOPPED STRANDS REORIENTATION MODELS
5.	Cristian Rugina, Cristina Stirbu ON THE SONOELASTICITY AND SONIFICATION IMAGING THEORIES WITH APPLICATION TO COOPERATIVE SURGICAL ROBOTS

SECTION C

Industrial Applications and Applications in Agricultural Machinery, R Building

CHAIRMAN: Gheorghe BRĂTUCU

1.	Sebastian Blaj Brezeanu THEORETICAL RESEARCHES ON THE THERMO-ENERGY MODERNIZATION AT HOTEL UNITS IN THE BRASOV AREA.
2.	Sebastian Blaj Brezeanu DETERMINATION OF HEAT LOSS THROUGH THE WALLS AT A HOTEL UNIT IN THE BRASOV AREA.
3.	Gheorghe Brătucu RESEARCHES REGARDING THE OPPORTUNITY OF UTILIZATION THE NUMERICAL SIMULATION METHOD LBM TO CALCULUS OF THE MECHANICAL SOLICITATIONS OF GREENHOUSES LOCATED ON THE ROOF OF THE BUILDINGS.
4.	Gheorghe Brătucu PARTICULARITIES OF THE AIRELASTIC INSTABILITY PHENOMENA GENERATED BY VORTICES ON THE GREENHOUSES LOCATED ON THE ROOFS OF THE BUILDINGS
5.	Ion Mărunțelu, Gheorghe Brătucu INFLUENCE OF THE SHAPE OF WORKING ORGANS ON THE QUALITY OF GERMINATING BED PREPARATION PROCESS
6.	Ion Mărunțelu PENETRATION RESISTANCE, A DETERMINANT FACTOR IN THE MECHANICAL PROCESS OF THE SOIL.
7.	Daniel Coșarcă TECHNOLOGICAL VARIANTS PROCESSING SAUSAGE IN MEAT
8.	Daniel Coșarcă CONTRIBUTIONS TO THE STAGE OF FORESEEABLE RELIABILITY EQUIPMENT FOR THE MEAT-FILLED MEMBRANE.
9.	Mădălin Bondoc THEORETICAL CONTRIBUTIONS TO IMPROVING THE PROCESS OF PRESERVING BERRIES BY DRYING BY DEHYDRATION
10.	Mădălin Bondoc RESEARCH ON EXPERIMENTAL DETERMINATION OF SPECIFIC HEAT TO SOME FRESH BERRIES

11.	Adriana Elena Boeriu A HEALTHY APPROACH OF BREADMAKING: SUPERIOR VALORIFICATION OF LACTIC STARTERS
12.	Adriana Elena Boeriu COMFORT FOOD IN CHILDREN'S NUTRITION – BENEFIT OT THREAT?
13.	Ioana Adelina Folea ROLUL ȘI IMPORANȚA RĂCIRII LAPETELUI DUPĂ RECOLTARE
14.	Ioana Adelina Folea SISTEME DE TRANSPORT ALE LAPTELUI CĂTRE UNITĂȚILE DE PROCESARE

17.00 – 18.30

The Celebration Ceremony of Professor Polidor BRATU's 70th Birthday, N Building, N S1e



19.00 – Gala Dinner

**SECTION POSTER/
PAPERS IN CONFERENCE PROCEEDINGS**

1.	Dumitru D. Nicoara THE DAMPED DYNAMIC VIBRATION ABSORBER – A NUMERICAL OPTIMIZATION METHOD
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2.	Mircea Mihălcică, Bela Palfi EXPERIMENTAL SYSTEM FOR THE ANALYSIS OF THE STANDING LONG JUMP
3.	Mircea Mihălcică, Mihai Bîrsa A SIMPLE SYSTEM TO HELP FIND NATURAL TALENTS IN JUVENILE BASKETBALL
4.	Dorian Nedelcu, Gilbert-Rainer Gillich, Vasile Iancu, Cristian-Tatian Mălin STUDY ON THE EFFECT OF A SIMPLE FRICTION PENDULUM RADIUS ON THE RESPONSE OF ISOLATED STRUCTURES
5.	Nicusor Dragan EXPERIMENTAL STUDIES OF NOISE ABSORPTION COEFFICIENT OF THE MATERIALS WITH MACROSCOPIC COMPOSITE STRUCTURE
6.	Nicusor Dragan EXPERIMENTAL STUDIES OF COMPOSITE MATERIALS FOR TECHNOLOGICAL EQUIPMENT NOISE REDUCTION
7.	Marius Ghițescu Dynamic solution by MBS method applied to aircraft control
8.	Carmen Debeleac, Silviu Năstac ASSESSMENTS ON DRAGLINE CABLES OSCILLATIONS
9.	Silviu Năstac, Mariana Domnica Stanciu EXPERIMENTAL MODAL INVESTIGATIONS ON A REDUCED-SCALE WIND TURBINE BLADE
10.	Carmen Debeleac ON EXPERIMENTAL DYNAMICS OF A VARIABLE-MASS OSCILLATORY SYSTEM
11.	Mihaela Ioana Baritz RESEARCHES ON USING ABS COMPOSITE AND SILICONE TO BUILD INSOLES BY 3D PRINTING
12.	Mihaela Ioana Baritz IMAGE PROCESSING USED TO ANALYZE THE LAYERED LENS STRUCTURE
13.	Ionel Serban, Corneliu Druga, N. Elena, Barbu Braun BIOMECHATRONIC DEVICE USED FOR ELBOW JOINT REHABILITATION
14.	Ionel Serban, Corneliu Druga, Ileana Constanța Roșca, T. Jugaru BIOMECHATRONIC DEVICE USED FOR ASSISTING PEOPLE IMMOBILIZED IN BED
15.	Barbu Braun, Ileana Constanta Rosca ASSISTED SIMULATION STATIC AND DYNAMIC BEHAVIOR STANDPOINT FOR SOME ACTIVE ITEMS COMPOSING ADAPTIVE ORTHOPEDIC INSOLES
16.	Barbu Braun, Corneliu Druga, Ionel Serban LOW COST METHOD FOR THERAPEUTIC ROLE PLANTAR INSOLES OBTAINING, USING RECYCLABLE MATERIALS

17.	Mariana Domnica Stanciu, Petrică G. Duță, Iulian Ștefan Urucu, Silviu Năstac., Mircea Mihălcică EXPERIMENTAL ANALYSIS OF THE DYNAMIC BEHAVIOR OF A CAR TRAILER
18.	Mariana Domnica Stanciu, R. Bucur, Horațiu Teodorescu Drăghicescu, Adriana Savin THE INFLUENCE OF THE ROLLING DIRECTION ON THE ELASTIC CHARACTERISTICS OF THE STEEL SAMPLES USED IN THE MOLDING PROCESS
19.	Liviu Coștiuc, Mariana Domnica Stanciu, Vlad Bidu SIMULATION OF THERMAL AND MOISTURE TRANSFER THROUGH A WOODEN COMPOSITE PANEL
20.	Ionel Oprea EVALUAREA COMPORTĂRII SISTEMULUI DE PROTECȚIE LA ȘOCUL FRONTAL AL AUTOMOBILELOR
21.	Adrian Ion Ciocodeiu COMPORTAREA STRUCTURALĂ A PANOURILOR "SANDWICH" CU POLIURETAN LA ACȚIUNEA EXTERIOARĂ A VARIAȚIILOR DE PRESIUNE DIN VÂNT
22.	Ramona Pințoi MODELAREA REOLOGICĂ A COMPORTĂRII BETONULUI PROASPĂT SUB ACȚIUNEA VIBRAȚIILOR TEHNOLOGICE
23.	Mihai Ulea ON ENERGY IN PLASTIC JOINTS OF A TRUSS STRUCTURE
24.	Maria Violeta Guiman A CORRELATION APPROACH BETWEEN THE VERTICAL VELOCITY AT THE END OF TAKE-OFF AND JUMPED DISTANCE
25.	László Péter Kiss, György Szeidl STABILITY OF FGM ARCHES UNDER AN ARBITRARY RADIAL CONCENTRATED LOAD
26.	Ionel Starețu MATHEMATICS BASES FOR MODELING AN ANTHROPOMORPHIC GRIPPER
27.	Daniel Condurache SINGULARITY-FREE EXTRACTION OF A LOGARITHM OF MOTION
28.	Dumitru D. Nicoara PASSIVE CONTROL OF SPINDLE-BEARING SYSTEMS
29.	Maria Luminița Scutaru ADVANCED HYBRID BIO-COMPOSITE REINFORCED WITH NATURAL FIBRES USED IN THE FABRICATION OF LAMINATES
30.	Maria Luminița Scutaru ASPECTS OF DYNAMICAL ANALYSIS OF BIO-MATERIAL COMPOSITES
31.	Caterina Casavola A REVIEW OF EXPERIMENTAL METHODS FOR RESIDUAL STRESS MEASUREMENTS: CLASSICAL PROCEDURES AND MODERN APPROACHES

32.	Silviu NĂSTAC ON FRACTIONAL-ORDER DAMPING WITHIN PASSIVE VIBRATION ISOLATORS
33.	Gilbert-Rainer Gillich, Nicoleta Gillich, Horia Furdui COMPENSATION OF TEMPERATURE EFFECTS FOR FREQUENCY ESTIMATION OF SLENDER STRUCTURES
34.	Veturia Chiroiu, Ciprian Dragne, Antonio Gliozzi ON THE TRAJECTORIES CONTROL OF A HYBRID ROBOTIC SYSTEM
35.	George Ionuț Sava, Dana Luca Motoc THERMAL PROPERTIES PREDICTIONS FOR PLA/HA BIOCOMPOSITES CONDITIONED IN VIVO ENVIRONMENT
36.	Polidor Bratu, Cristina Opriescu, Amaliaârdea, Cătălin Zaharia MODELING BASE INSULATION SYSTEMS WITH EFFECTIVE ANTISEISMIC DEVICES
37.	Polidor Bratu PARAMETRIC ASSESSMENT OF ANTI-SEISMIC DEVICES ACCORDING TO THE NATURE OF KINEMATIC EXCITATION
38.	Oana Tonciu, Cornelia Dobrescu, Adrian Leopa OPTIMAL DYNAMIC REGIMES OF VIBRATION COMPACTION EQUIPMENT
39.	Polidor Bratu, Oana Tonciu, Cornelia Dobrescu, Sergiu Bejan ANALYSIS OF THE DYNAMIC REGIME OF FORCED VIBRATIONS IN THE DYNAMIC COMPACTION PROCESS WITH VIBRATING ROLLERS
40.	Polidor Bratu, Cornelia Dobrescu, Sergiu Bejan, Eugen Brăgușă, Andrei Buraga THE ZENER RHEOLOGICAL VISCOELASTIC MODELLING OF THE DYNAMIC COMPACTION OF THE ECOLOGICALLY STABILIZED SOILS
41.	Chircan Eliza, Dimitriu Ștefan COMPARISON BETWEEN THE MECHANICAL PROPERTIES OF CLASSIC POLYETHYLENE TUBES AND COMPOSITE POLYETHYLENE TUBES
42.	Ioan Enescu, STUDY OF CRACK PROPAGATION IN ORTOTROPIC (COMPOSITE) MATERIALS BY USING THE BOUNDARY ELEMENT METHOD
43.	Cristian Tufisi, Gilbert-Rainer Gillich, Dorian Nedelcu EFFECT OF THE ORIENTATION OF AN OBLIQUE CRACK BRANCHES ON THE BEAM EIGENFREQUENCIES
44.	Ovidiu Condrea, Rares Lucian Chiriac, Anghel Chiru. STUDY REGARDING CYCLIST HEAD INJURY PROBABILITY FOR STANDARDISED IMPACT CONFIGURATIONS USING MULTIBODY SIMULATION

Friday, October 26th

10.00– 16.00

Social program



**Transilvania
University
of Brasov**

**FACULTY OF
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