

ROMANIAN ACADEMY



INSTITUTE OF SOLID MECHANICS,
ACADEMY OF TECHNICAL SCIENCES,
COMMISSION OF ACOUSTICS
OF ROMANIAN ACADEMY,
DEPARTMENT OF MECHANICS - UPB

SISOM 2020
and
Symposium of Acoustics

ONLINE

September 17, 2020

<https://www.imsar.ro>

SYMPOSIUM PROGRAM - ONLINE

17 September, 2020; First part; *Invited papers:*

9.00 - 9.20 Polidor BRATU (ASTR, ICECON SA, Institute of Solid Mechanics of the Romanian Academy), *The performance level analysis of anti-seismic fluid dumpers.*

9.20 - 9.40 Tudor SIRETEANU, Ana Maria MITU, Ovidiu SOLOMON, Marius GIUCLEA (Institute of Solid Mechanics of the Romanian Academy, Bucharest, Romania), *Oscillating systems with piecewise linear characteristics. Theory and applications.*

9.40 - 10.00 Luige VLĂDĂREANU, Sergiu Boris CONONOVICI, Victor VLĂDĂREANU, Alexandru GAL, Octavian MELINTE (Institute of Solid Mechanics of the Romanian Academy), *Intelligent Versatile Portable Interfaces for Navigation, Control and Remote Sensing Mobile Robots.*

10.00 - 10.20 Akbar REZAEI¹, Florentin SMARANDACHE² (¹Department of Mathematics, Payame Noor University, Tehran, Iran, ²Department of Mathematics, University of New Mexico, Gallup, USA), *On Neutro –BE-algebras and Anti-BE-algebras.*

10.20 - 10.40 Nicu ORĂȘANU, Andrei CRAIFĂLEANU, Ioan MAGHEȚI (Mechanics Department, University Politehnica from Bucharest), *Study of the acoustic characteristics of coupled resonant systems.*

10.40 - 11.00 Svetlana SEGĂRCEANU^{1,2}, Inge GAVĂȚ², Elena OLTEANU^{1,2} (¹Beia Consult International, ²Department of Applied Electronics and Information Engineering, Politehnica University of Bucharest), *Evaluation of deep learning techniques for acoustic environmental events detection.*

11.00 - 11.20 Ileana Nicoleta POPESCU¹, Ruxandra VIDU², Nicolae POP³ (¹Valahia University of Târgoviște, ²California Solar Energy Collaborative, University of California, Davis, USA, ³ Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Tribological Behavior and Statistical Experimental design of Particulate Reinforced Composites*

11.20 - 11.40 Cătălin Andrei NEAGOE, Tudor SIRETEANU, Ana Maria MITU (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *A non-destructive dynamic analysis method for estimating anisotropic material constants of fiber reinforced polymer profiles.*

11.40 - 12.00 Mariana Cristina STAN, Alexandru Radu STAN (SC SONOBEL SRL), *Acoustical study for reconstruction and modernization of “Nicolae Bălcescu” summer theatre from “Bazilescu” park.*

12.00 - 12.20 Constantin TIGĂNEȘTEANU, Liviu Florin ISVORANU, Stefan Alexandru ILAS (The Tribology Association of Romania, A.G.I.R., ASEVAL, IMSAR), *Stem trunnion taper junction wear with femoral head of a total modular prosthesis.*

12.20 - 12.40 Marius DEACONU, Laurențiu CRISTEA, Nicolae ORĂȘANU, Andreea GRIGUȚĂ (Mechanics Department, University Politehnica from Bucharest), *Automatic and long term aircraft noise monitoring station requirements.*

12.40 - 13.00 Coffee break

17 September, 2020; Second part; *Parallel sessions:*

Technical Acoustics, Speech Technology and Mechanical Modeling

13.00 - 13.20 Svetlana SEGĂRCEANU^{1,2}, Inge GAVĂT² (¹Beia Consult International, ²Department of Applied Electronics and Information Engineering, Politehnica University of Bucharest), *Deep Learning Platform for Natural Language Processing.*

13.20 - 13.40 Veturia CHIROIU, Rodica IOAN, Ligia MUNTEANU, Cristian RUGINĂ (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *On the intrinsic acoustic performances of the noise barriers.*

13.40 - 14.00 Luminița ANGHEL¹, Mariana Cristina STAN², Florin Mirel DELIA¹, Alexandru Radu STAN² (¹Building University of Bucharest, ²SC SONOBEL SRL), *Meteorological factors influence for sound propagation.*

14.00 - 14.20 L. MUNTEANU¹, V. CHIROIU¹, C. BRIȘAN², C. RUGINĂ¹, V. MOȘNEGUȚU¹ (¹Institute of Solid Mechanics of the Romanian Academy, Bucharest, ²Technical University of Cluj-Napoca), *On the shape memory alloys artificial muscles.*

14.20 - 14.40 V. MOȘNEGUȚU, M. IONESCU, D. DUMITRIU, V. CHIROIU (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Active control of lateral balance in ankle-foot complex system.*

14.40 - 15.00 Mircea LUPU (Transilvania University of Brașov), *Absolute Stabilization and Optimal Control for Dynamical Systems of Type Rayleigh-van der Pol. Applications.*

15.00 - 15.20 Cornelia Florentina DOBRESCU (National Institute For Research And Development In Construction, Urban Planning And Sustainable Spatial Development), *Viscoelastic modeling of ecologically stabilized soils for road works vibration compaction process optimization.*

15.20 - 15.40 Daniela BARAN (National Institute for Aerospace Research “Elie Carafoli”, Bucharest), *Some Fluid – Structure Interactions in Aeronautical Domain.*

15.40 - 16.00 N. NEDELICU, V. CHIROIU, L. MUNTEANU, I. GIRIP (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *On the optical nonlinearities in chalcogenide glasses.*

16.00 - 16.20 R. IOAN¹, A. GRIGORE¹, L. MUNTEANU², V. CHIROIU² (Spiru Haret University from Bucharest, ² Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Project COST Action, 2019-2023. Description.*

Robotics, Mechatronics¹ and Work-Shop on Robotics² (9:30-18:30)

¹RA_IMSAR program - online, ²IMSAR Robotics Lab.

13.00 - 13.20 M. MIGDALOVICI¹, Luige VLĂDĂREANU¹, Nicolae POP¹, Victor VLĂDĂREANU¹, Alexandru VLĂDEANU², Daniela BARAN³, Gabriela VLĂDEANU¹ (¹ Institute of Solid Mechanics of the Romanian Academy, Bucharest ²Building University of Bucharest, ³INCAS “Elie Carafoli”, Bucharest), *Optimization of walking robots evolution fulfilling the environment model.*

13.20 - 13.40 Dan N. DUMITRIU, Marius IONESCU, Octavian D. MELINTE, Alexandru I. GAL (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Simplified Contact Between Cylindrical Rigid Finger and Elastic Half – Space Object*

13.40 - 14.00 Alexandru VLĂDEANU¹, Gabriela VLĂDEANU² (¹Building University of Bucharest, ²Institute of Solid Mechanics of the Romanian Academy, Bucharest), *The calculation of the bucket position in function of the hydraulic cylinders lengths.*

14.00 - 14.20 R. IOAN¹, I. GIRIP², L. MUNTEANU², N. NEDELICU², V. MOȘNEGUȚU², V. CHIROIU² (¹ Spiru Haret University, Bucharest, ² Institute of Solid Mechanics of the Romanian Academy, Bucharest), *A model of muscle-tendon function in human walking.*

14.20-14.40 Ana-Maria TRAVEDIU¹, Victor VLĂDĂREANU¹, Luige VLĂDĂREANU¹, V. G. VOICULESCU², V. A. GROSU², A. C. CIOCÎRLAN¹, Eugen NEACȘU³, M V MANOLIU⁴, (¹ Institute of Solid Mechanics of the Romanian Academy, Bucharest, ²Politehnica University of Bucharest, ³Advanced

Technologies Institute, Romania, ⁴ Military Technical Academy), *Anomaly detection algorithms in datasets from smartphones sensors with applications in 5G Digital Era communications.*

14.40-15.00 Vasile PRISĂCARIU¹, Sebastian POP¹, Cătălin CIOACĂ¹, Mircea BOȘCOIANU¹, Luige VLĂDĂREANU², Ana-Maria TRAVEDIU², Alexandra Cătălina CIOCÎRLAN² (¹Air Force Academy,² Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Aspects regarding flight operations and training of UAV operators.*

15.00-15.20 Isabela TODIRIȚE, Corina RADU-FREŢ and Mihaiela ILIESCU, (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Integrated robotics solutions for disabled people.*

15.20-15.40 Mihai RĂDULESCU¹, Victor VLĂDĂREANU¹, Doina MARIN¹, Mircea BOȘCOIANU², Vasile PRISĂCARIU², Radu PARASCHIV¹, (¹ Institute of Solid Mechanics of the Romanian Academy, Bucharest,²Air Force Academy), *Real-time control systems for intelligent mobile robots developed through versatile, intelligent, portable robot platforms.*

15.40-16.00 Alexandra Cătălina CIOCÎRLAN, Luige VLĂDĂREANU, Victor VLĂDĂREANU, Alexandru GAL, Octavian MELINTE, Ana-Maria TRAVEDIU, (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Intelligent control strategies with improved performances for the autonomous mobile robot vectors.*

16.00-16.20 Radu PARASCHIV¹, Victor VLĂDĂREANU¹, Corina Miler BOȘCOIANU¹, Sebastian POP², Cătălin CIOACĂ², Mihai RADULESCU¹, (¹Institute of Solid Mechanics of the Romanian Academy, Bucharest, ²Air Force Academy), *High performance for intelligent control of the Lower-Limb Rehabilitation Robot.*

16.20-16.40 Ionel STARETU, (Transilvania University of Braşov), *Collaborative robots (cobot) - systematization and kinematics.*

16.40-17.00 Dragoş CĂPĂȚINĂ, Doina MARIN and Mihaiela ILIESCU, (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Rheological models of the vibratory road compaction process.*

17.00-17.20 Ciprian DRAGNE (Institute of Solid Mechanics of the Romanian Academy, Bucharest), *Optimization of trajectories in laparoscopic surgery – 3D virtual space.*

² *Workshop with open discussions, experiments, demonstrations, product exhibition, organized by MULTIMOND2 project number PN-III-PI-1.2-PCCDI2017-0637/33PCCDI/01.03.2018, SMOOTH project, H2020-MSCA-RISE-2016-734875/2016-2020, KEYTHROB project PN-III-P3-3.1-PM-RO-CN-2018-0144 / 2 BM / 2018, PNCDI III and “Joint Laboratory of Intelligent Rehabilitation Robot” collaborative research agreement between Romanian Academy by IMSAR, RO and Yanshan University, CN, project KY201501009/2016.*

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