



Lista lucrări.

A. Lista celor maximum 10 lucrări considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii, care sunt incluse în format electronic în dosar și care se pot regăsi și în celelalte categorii de lucrări prevăzute de prezentul articol.

1. Mihălcică, M.; Vlase, S.; Păun, M. The Use of Structural Symmetries of a U12 Engine in the Vibration Analysis of a Transmission. *Symmetry*, 11, 1296 (2019)
2. Munteanu, M.V.; Mihălcică, M.; Itu, C.; Vlase, S.; Scutaru, M.L. Mechanical design of interaction chamber for the ELIADE array at ELI-NP. *AIP Advances*, 10, 025129 (2020)
3. Mihălcică, M.; Vlase, S. Identifiers for Human Motion Analysis. *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, 60, 2 (2017)
4. Teodorescu-Drăghicesch H.; Vlase. S.; Stanciu, M.D.; Curtu, I.; Mihălcică, M. Advanced Pultruded Glass Fibers-Reinforced Isophthalic Polyester Resin. *Materiale Plastice*, 52, 1 (2015)
5. Vlase, S.; Dănășel, C.; Scutaru, M.L.; Mihălcică, M. Finite Element Analysis of a Two-Dimensional Linear Elastic Systems with a Plane "Rigid Motion". *Romanian Journal of Physics*, 59, 5-6 (2014)
6. Scutaru, M.L.; Mihălcică, M.; Modrea, A.; Purcărea, R.; Scărlătescu, D. An advanced high rigidity thin sandwich composite laminate with COREMAT and dissimilar skins. 11th International Conference Interdisciplinarity in Engineering (INTER-ENG 2017), *Procedia Manufacturing*, 22 (2018)
7. Mihălcică, M.; Munteanu, M.V.; Modrea, A.; Burcă, I. Tracking Kinematic Gait Parameters During the Recovery of Motor Function After Total Knee Arthroplasty.





9th International Conference Interdisciplinarity in Engineering (INTER-ENG 2015),
Procedia Manufacturing, 22 (2016)

8. Vlase, S.; Năstac, C.; Marin, M.; Mihălcică, M. A Method for the Study of the Vibration of Mechanical Bars Systems with Symmetries. *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, 60, 4 (2017)

9. Vlase, S.; Mihălcică, M.; Scutaru, M.L. Determining the Functional Parameters of a Simple Speed Regulator. *Romanian Journal of Acoustics and Vibration*, 16, 1 (2019)

10. Modrea, A.; Vlase, S.; Teodorescu-Drăghicesch H.; Mihălcică, M.; Călin, M.R.; Astalos, C. Properties of advanced new materials used in automotive engineering. *Optoelectronics and Advanced Materials-Rapid Communications*, 7, 5-6 (2013)

B. Teza sau tezele de doctorat

1. Mihălcică, M. Contribuții la identificarea persoanelor prin analiza mișcării, Universitatea Transilvania din Brașov (2011)

C. Brevete de invenție și alte titluri de proprietate industrială

D. Cărți și capitole în cărți

Cărți:

1. M. Mihălcică, MATLAB și programare pentru viitori ingineri (2020), Editura Universității Transilvania din Brașov, ISBN: 978-606-19-1248-3

2. M. Mihălcică, Metode Numerice cu MATLAB pentru ingineri (2020), Editura Universității Transilvania din Brașov, ISBN: 978-606-19-1249-0

3. M. Mihălcică, Metode Numerice în MATLAB, Ghid practic de laborator (2011), Editura Lux Libris, ISBN: 978-973-131-130-2

Capitole în cărți:



4. S.Vlase, S.Lache, H.Theodorescu, M.L.Scutaru, M.Mihalcica, M.V.Munteanu, Probleme de mecanică statică (2015), Editura Universității Transilvania din Brașov, ISBN:978-606-19-0684-0

5. S.Vlase, S.Lache, H.Theodorescu, M.L.Scutaru, M.Mihalcica, M.V.Munteanu, Probleme de mecanică cinematică (2015), Editura Universității Transilvania din Brașov, ISBN:978-606-19-0685-7

6. S.Vlase, S.Lache, H.Theodorescu, M.L.Scutaru, M.Mihalcica, M.V.Munteanu, Probleme de mecanică dinamică (2015), Editura Universității Transilvania din Brașov, ISBN:978-606-19-0686-4

7. I. Burcă, S. Vlase, P.S. Făgăraș, M. Mihălcică, Biomecanica mișcărilor atletice (2013) Editura Universității Transilvania din Brașov, ISBN: 978-606-190-306-1

E. Articole/ studii in extenso, publicate în reviste din fluxul științific internațional principal

1. Mihălcică, M.; Vlase, S.; Păun, M. The Use of Structural Symmetries of a U12 Engine in the Vibration Analysis of a Transmission. *Symmetry*, 11, 1296 (2019)

2. Munteanu, M.V.: Mihălcică, M.; Itu, C.; Vlase, S.; Scutaru, M.L. Mechanical design of interaction chamber for the ELIADE array at ELI-NP. *AIP Advances*, 10, 025129 (2020)

3. Vlase, S.; Mihălcică, M.; Scutaru, M.L. Determining the Functional Parameters of a Simple Speed Regulator. *Romanian Journal of Acoustics and Vibration*, 16, 1 (2019)

4. Vlase, S.; Năstac, C.; Marin, M.; Mihălcică, M. A Method for the Study of the Vibration of Mechanical Bars Systems with Symmetries. *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, 60, 4 (2017)

5. Mihălcică, M.; Vlase, S. Identifiers for Human Motion Analysis. *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, 60, 2 (2017)



6. Teodorescu-Drăghicesch H.; Vlas. S.; Stanciu, M.D.; Curtu, I.; Mihălcică, M. Advanced Pultruded Glass Fibers-Reinforced Isophthalic Polyester Resin. *Materiale Plastice*, 52, 1 (2015)

7. Vlas, S.; Dănăşel, C.; Scutaru, M.L.; Mihălcică, M. Finite Element Analysis of a Two-Dimensional Linear Elastic Systems with a Plane "Rigid Motion". *Romanian Journal of Physics*, 59, 5-6 (2014)

8. Vlas, S.; Purcărea, R.; Teodorescu-Drăghicesch H.; Călin, M.R.; Szava, I.; Mihălcică, M. Behavior of a new Heliopol/Stratimat300 composite laminate. *Optoelectronics and Advanced Materials-Rapid Communications*, 7, 7-8 (2013)

9. Modrea, A.; Vlas, S.; Teodorescu-Drăghicesch H.; Mihălcică, M.; Călin, M.R.; Astalos, C. Properties of advanced new materials used in automotive engineering. *Optoelectronics and Advanced Materials-Rapid Communications*, 7, 5-6 (2013)

10. Niculiţă, C.; Vlas, S.; Bencze, A., Mihălcică, M.; Călin, M.R.; Serbina, L. Optimum stacking in a multi-ply laminate used for the skin of adaptive wings. *Optoelectronics and Advanced Materials-Rapid Communications*, 5, 11 (2011)

F. Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. Itu, C.; Scutaru, M.L.; Modrea, A.; Mihălcică, M. Traction characteristics for the components of a composite sandwich used to build high-rigidity circular plates. 12th International Conference Interdisciplinarity in Engineering (INTER-ENG 2018), *Procedia Manufacturing*, 32 (2019)

2. Scutaru, M.L.; Mihălcică, M.; Modrea, A.; Purcărea, R.; Scărlătescu, D. An advanced high rigidity thin sandwich composite laminate with COREMAT and dissimilar skins. 11th International Conference Interdisciplinarity in Engineering (INTER-ENG 2017), *Procedia Manufacturing*, 22 (2018)

3. Itu, C.; Vlas, S.; Scutaru, M.L.; Pena, C.S., Borza, P.N.; Mihălcică, M. Universal Absorber Applied to NVH in EV's Powertrain, Acoustics and Vibration of Mechanical Structures (AVMS-2017), *Springer Proceedings in Physics*, 198 (2018)



4. Modrea, A.; Gheorghe, V.; Sandu, V.; Teodorescu-Drăghicesch H.; Mihălcică, M.; Scutaru, M.L. Study of a New Composite Material Rt800 Reinforced with Polyte 440-M888 in Endurance Conditions. 9th International Conference Interdisciplinarity in Engineering (INTER-ENG 2015), *Procedia Manufacturing*, 22 (2016).

5. Mihălcică, M.; Munteanu, M.V.; Modrea, A.; Burcă, I. Tracking Kinematic Gait Parameters During the Recovery of Motor Function After Total Knee Arthroplasty. 9th International Conference Interdisciplinarity in Engineering (INTER-ENG 2015), *Procedia Manufacturing*, 22 (2016)

6. Nicoară, D.; Secară, E.; Mihălcică, M. Study of Rotor-Bearing Systems Using Campbell Diagram. Advances in Manufacturing Engineering, Quality and Production Systems (MEQAPS), Vol II, *Mathematics and Computers in Science and Engineering*, (2009)

7. Chiru, A.; Pirna, I.; Căndea, I.; Niculiță, C.; Mihălcică, M.; Bencze, A. Satellite Orbital Instability Generated by the Perturbing Factors. Annals of Daaam for 2009 & Proceedings of the 20th International DAAAM Symposium, *Annals of DAAAM and Proceedings*, 20 (2009)

8. Tofan, M.; Burcă, I.; Mihălcică, M.; Secară, E.; Hisom, R.; Popa, I. Mathematical Models for the Human Body Motions Analysis. Proceedings of the 13th International Conference Modern Technologies, Quality and Innovation: ModTech 2009 - New Face of TMCR, *Proceedings of the International Conference ModTech* (2009)

9. Mihălcică, M.; Nicoară, D.; Niculiță, C.; Căndea, I.; Pirna, I. Elder Monitoring Using Modern Data Transmission Technologies. Proceedings of the 2nd International Conference on Environmental and Geological Science and Engineering: Advances in Environmental and Geological Science and Engineering, *Mathematics and Computers in Science and Engineering* (2009)

G. Alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice



1. Mihălcică, M.; Guiman, V.; Munteanu, V. A Cheap and Portable Motion Analysis System. The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014, (2014)
2. Mihălcică, M.; Guiman, V.; Munteanu, V. Using Motion Analysis Software to Gather Sports Experimental Data. The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014, (2014)
3. Mihălcică, M.; Guiman, V.; Munteanu, V. Using Curve Fitting as a Method to Analyze Motion Analysis Data for Sports. The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014, (2014)
4. Mihălcică, M.; Burcă I. Using Inexpensive Motion Analysis Tools to Analyze the Free Throw in Juvenile Basketball, The 40th International Conference on Mechanics of Solids, Acoustics and Vibrations ICMSAV 2016 and The 6th International Conference on "Advanced Composite Materials Engineering" COMAT 2016 (2016)
5. Mihălcică, M.; Munteanu, V.; Secară, E.; Burcă, I.; Petric, L. Methods for Human Motion Capture and Analysis. The 3rd International Conference "Advanced Composite Materials Engineering" COMAT 2010 (2010)
6. Niculiță, C.; Bencze, A.; Căndea, I.; Borîtu, A.; Mihălcică, M. Preliminary Calculation to Determine Loads and Stresses that Act on the Adaptive Wing Longeron, The 3rd International Conference on Computational Mechanics and Virtual Engineering COMEC 2009 (2009)
7. Mihălcică, M. On Lighting Limitations of Marker Motion Analysis Using Commercial Software Applications, The 6th International Conference on Computational Mechanics and Virtual Engineering COMEC 2015 (2015)
8. Orbok, Z.; Mihălcică, M. The Capture and Analysis of Posture Parameters Related to Sitting on a Chair. The 7th International Conference on Computational Mechanics and Virtual Engineering COMEC 2017 (2017)



9. Mihălcică, M. A Study on the Correlation Between Step Length and the Femur-Tibia Ratio. The 7th International Conference on Computational Mechanics and Virtual Engineering COMEC 2017 (2017)
10. Mihălcică, M.; Munteanu, V. Gathering Motion Data for a Real-Life Gait Analysis System. The 4th International Conference on Computational Mechanics and Virtual Engineering COMEC 2011 (2011)
11. Mihălcică, M. Gait Analysis in Forensics. The 4th International Conference on Computational Mechanics and Virtual Engineering COMEC 2011 (2011)
12. Mihălcică, M. Using Motion Variance as a Parameter for Human Identification in a Gait Analysis System. The 4th International Conference on Computational Mechanics and Virtual Engineering COMEC 2011 (2011)
13. Mihălcică, M.; Burcă, I. Numerical Techniques Suitable for Video Motion Analysis in Sports. Simpozionul Științific cu participare internațională Medicina și Științele Interdisciplinare în Slujba Omului (2016)