

Autorul tezei de abilitare: Conf. Dr. Ing. Mihălcică Mircea

Titlul tezei de abilitare: Contribuții în analiza sistemelor multicorp și a proprietăților materialelor compozite

Domeniul: Inginerie mecanică

LISTA DE LUCRĂRI

LUCRĂRI RELEVANTE

1. **Mihălcică M**, Stanciu MD, Nastac SM, Dinulică F, Nauncef AM, Roșca IC, Savin A. Signature Modes of Old and New Violins with Symmetric Anatomical Wood Structure. Applied Sciences. 2021; 11(23):11297. <https://doi.org/10.3390/app112311297> (FI 2021=2.838)
2. Stanciu MD, **Mihălcică M.** (corresponding author), Dinulică F, Nauncef AM, Purdoi R, Lăcătuș R, Gliga GV. X-ray Imaging and Computed Tomography for the Identification of Geometry and Construction Elements in the Structure of Old Violins. Materials. 2021; 14(20):5926. <https://doi.org/10.3390/ma14205926> (FI 2021=3.748)
3. **Mihălcică M**, Stanciu MD, Vlase S. Frequency Response Evaluation of Guitar Bodies with Different Bracing Systems. Symmetry. 2020; 12(5):795. <https://doi.org/10.3390/sym12050795> (FI 2021=2.94)
4. Munteanu MV, **Mihălcică M.** (corresponding author), Itu C, Vlase S, Scutaru ML. Mechanical design of interaction chamber for the ELIADE array at ELI-NP. AIP Advances. 2020 Feb 1;10(2):025129. <https://doi.org/10.1063/1.5129317> (FI 2021=1.697)
5. **Mihălcică M**, Modrea A, Munteanu V, Burca I. Tracking Kinematic Gait Parameters During the Recovery of Motor Function After Total Knee Arthroplasty. Procedia Technology. 2016 Jan 1;22:670-6. <https://www.sciencedirect.com/science/article/pii/S2212017316001419>
6. **Mihălcică M**, Stanciu MD, Dinulica F, Savin A, Bucur V. The Effect of Resonance Wood Quality on Violins Vibration. In Recent Trends in Wave Mechanics and Vibrations: Proceedings of WMVC 2022 2022 Oct 7 (pp. 873-881). Cham: Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-15758-5_90
7. **Mihălcică M**, Nauncef AM, Gliga VG, Stanciu MD, Nastac SM, Campean M. Correlation Between Dynamic Features of Unvarnished and Varnished New Violins and Their Acoustic Perceptual Evaluation. In Recent Trends in Wave Mechanics and Vibrations: Proceedings of WMVC 2022 2022 Oct 7 (pp. 857-864). Cham: Springer International Publishing https://link.springer.com/chapter/10.1007/978-3-031-15758-5_88
8. Nastac SM, Gliga VG, **Mihălcică M**, Nauncef AM, Dinulica F, Campean M. Correlation between Acoustic Analysis and Psycho-Acoustic Evaluation of Violins. Applied Sciences. 2022; 12(17):8620. <https://doi.org/10.3390/app12178620> (FI 2021=2.838)

9. Modrea A, Vlase S, Teodorescu-Draghicescu H, **Mihălcică M**, Calin MR, Astalos C. Properties of advanced new materials used in automotive engineering. Optoelectronics and Advanced Materials–Rapid Communications. 2013 Jun 12;7(May-June 2013):452-5. <https://oam-rc.inoe.ro/articles/properties-of-advanced-new-materials-used-in-automotive-engineering/fulltext> (FI 2021=0.556)

10. Teodorescu-Draghicescu H, Vlase S, Stanciu MD, Curtu I, **Mihălcică M**. Advanced pultruded glass fibers-reinforced isophthalic polyester resin. Mater. Plast. 2015 Mar 1;52(1):62-4. <https://revmaterialeplastice.ro/pdf/TEODORESCU%20H.pdf%201%2015.pdf> (FI 2021=0.782)

TEZA DE DOCTORAT

1. Contribuții la identificarea persoanelor prin analiza mișcării

BREVETE

Propunere de brevet: A06004/04.10.2022 STAND ȘI METODA DE TESTARE STATICĂ ȘI DINAMICĂ A VIORILOR, authors: Stanciu M.D., Gliga V.Gh., Mihălcică M., Cherdivar A., Năstac S., Câmpean M., Dinulică F.

CĂRȚI / CAPITOLE DE CĂRȚI

1. Stanciu MD (coordonator), **Mihălcică M** (coordonator), ș.a. Dinamica viorii, Ed. Universității Transilvania din Brașov, ISBN: 978–606–19–1517–0202 (2022)

2. **Mihălcică M**, Cristea M. Metode de captură și analiză a datelor în biomecanică, Ed. Universității Transilvania din Brașov, ISBN 978-606-19-1615-3 (2023)

3. Burcă I, Vlase S, Făgăraș PS, **Mihălcică M**. Biomecanica mișcărilor atletice, Ed. Universității Transilvania din Brașov, ISBN: 978–606–19–0306–1 (2013)

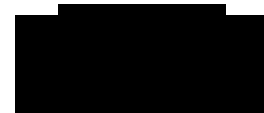
4. **Mihălcică M**. MATLAB și programare pentru viitori ingineri , Ed. Universitatii Transilvania din Brasov ISBN:978-606-19-1248-3 (2020)

5. **Mihălcică M**. Metode numerice cu MATLAB pentru ingineri, Ed Univ. Transilvania din Brasov ISBN: 978-606-19-1249-0 (2020)

6. Vlase S, Lache S, Teodorescu H, Scutaru ML, **Mihălcică M**, Munteanu MV. Probleme de mecanică statică, Ed. Univ. Transilvania din Brasov ISBN: 978-606-19-0684-0 (2015)

7. Vlase S, Lache S, Teodorescu H, Scutaru ML, **Mihălcică M**, Munteanu MV. Probleme de mecanică cinematică, Ed. Univ. Transilvania din Brasov ISBN: 978-606-19-0685-7 (2015)

8. Vlase S, Lache S, Teodorescu H, Scutaru ML, **Mihălcică M**, Munteanu MV. Probleme de mecanică dinamică, Ed. Univ. Transilvania din Brasov ISBN: 978-606-19-0686-4 (2015)



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

ARTICOLE ÎN REVISTE

1. **Mihălcică M,** Stanciu MD, Nastac SM, Dinulică F, Nauncef AM, Roșca IC, Savin A. Signature Modes of Old and New Violins with Symmetric Anatomical Wood Structure. Applied Sciences. 2021; 11(23):11297. <https://doi.org/10.3390/app112311297> (FI 2021=2.838)

2. Stanciu MD, **Mihălcică M.** (corresponding author), Dinulică F, Nauncef AM, Purdoui R, Lăcătuș R, Gliga GV. X-ray Imaging and Computed Tomography for the Identification of Geometry and Construction Elements in the Structure of Old Violins. Materials. 2021; 14(20):5926. <https://doi.org/10.3390/ma14205926> (FI 2021=3.748)

3. **Mihălcică M,** Stanciu MD, Vlase S. Frequency Response Evaluation of Guitar Bodies with Different Bracing Systems. Symmetry. 2020; 12(5):795. <https://doi.org/10.3390/sym12050795> (FI 2021=2.94)

4. Stanciu MD, Roșca IC, **Mihălcică M,** Bucur V. Dynamic response of wooden plates in different stages of guitar manufacturing. Eur. J. Wood Prod. 2022; 80, 997–1013. <https://doi.org/10.1007/s00107-022-01817-3> (FI 2021=2.528)

5. Munteanu MV, **Mihălcică M.** (corresponding author), Itu C, Vlase S, Scutaru ML. Mechanical design of interaction chamber for the ELIADE array at ELI-NP. AIP Advances. 2020 Feb 1;10(2):025129. <https://doi.org/10.1063/1.5129317> (FI 2021=1.697)

6. Nastac SM, Gliga VG, **Mihălcică M,** Nauncef AM, Dinulica F, Campean M. Correlation between Acoustic Analysis and Psycho-Acoustic Evaluation of Violins. Applied Sciences. 2022; 12(17):8620. <https://doi.org/10.3390/app12178620> (FI 2021=2.838)

7. **Mihălcică M,** Vlase S, Păun M. The Use of Structural Symmetries of a U12 Engine in the Vibration Analysis of a Transmission. Symmetry. 2019; 11(10):1296. <https://doi.org/10.3390/sym11101296> (FI 2021=2.94)

8. Teodorescu-Draghicescu H, Vlase S, Stanciu MD, Curtu I, **Mihălcică M.** Advanced pultruded glass fibers-reinforced isophthalic polyester resin. Mater. Plast. 2015 Mar 1;52(1):62-4. <https://revmaterialeplastice.ro/pdf/TEODORESCU%20H.pdf%201%2015.pdf> (FI 2021=0.782)

9. Vlase S, Danasel C, Scutaru ML, **Mihălcică M.** Finite element analysis of a two-dimensional linear elastic systems with a plane "rigid motion". Rom. J. Phys. 2014 Jan 1;59(5-6):476-87. https://rjp.nipne.ro/2014_59_5-6/RomJPhys.59.p476.pdf (FI 2021=1.662)

10. Vlase S, Purcarea R, Teodorescu-Draghicescu H, Calin MR, Szava I, **Mihălcică M.** Behavior of a new Heliopol/Stratimat300 composite laminate. Optoelectronics and Advanced Materials–Rapid Communications. 2013 Jul 1;7(7-8):569-72. <https://oam-rc.inoe.ro/articles/behavior-of-a-new-heliopolstratimat300-composite-laminate/fulltext> (FI 2021=0.556)

11. Niculiță C, Vlase S, Bencze A, **Mihălcică M**, Calin MR, Serbina L. Optimum stacking in a multi-ply laminate used for the skin of adaptive wings. Optoelectronics and Advanced Materials–Rapid Communications. 2011 Nov 23;5(November 2011):1233-6. <https://oam-rc.inoe.ro/articles/optimum-stacking-in-a-multi-ply-laminate-used-for-the-skin-of-adaptive-wings/fulltext> (FI 2021=0.556)
12. Modrea A, Vlase S, Teodorescu-Draghicescu H, **Mihălcică M**, Calin MR, Astalos C. Properties of advanced new materials used in automotive engineering. Optoelectronics and Advanced Materials–Rapid Communications. 2013 Jun 12;7(May-June 2013):452-5. <https://oam-rc.inoe.ro/articles/properties-of-advanced-new-materials-used-in-automotive-engineering/fulltext> (FI 2021=0.556)
13. Vlase S, **Mihălcică M**, Scutaru ML. Determining the Functional Parameters of a Simple Speed Regulator. RJAV 2019; 16, 10-14. <http://www.rjav.sra.ro/index.php/rjav/article/view/90> (FI 2021=0)

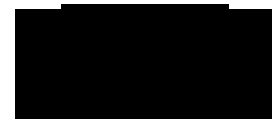
ARTICOLE PUBLICATE IN VOLUME ALE CONFERINTELOR INTERNAȚIONALE

1. **Mihălcică M**, Modrea A, Munteanu V, Burca I. Tracking Kinematic Gait Parameters During the Recovery of Motor Function After Total Knee Arthroplasty. Procedia Technology. 2016 Jan 1;22:670-6. <https://www.sciencedirect.com/science/article/pii/S2212017316001419>
2. **Mihălcică M**, Stanciu MD, Dinulica F, Savin A, Bucur V. The Effect of Resonance Wood Quality on Violins Vibration. In Recent Trends in Wave Mechanics and Vibrations: Proceedings of WMVC 2022 2022 Oct 7 (pp. 873-881). Cham: Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-15758-5_90
3. **Mihălcică M**, Nauncef AM, Gliga VG, Stanciu MD, Nastac SM, Campean M. Correlation Between Dynamic Features of Unvarnished and Varnished New Violins and Their Acoustic Perceptual Evaluation. In Recent Trends in Wave Mechanics and Vibrations: Proceedings of WMVC 2022 2022 Oct 7 (pp. 857-864). Cham: Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-031-15758-5_88
4. **Mihălcică M**, Stanciu MD, Teodorescu HD, Iftimie N. Evaluation Of Viscous-Elastic Properties Of Resonance Maple Wood, ModTEch 2022, International Journal of Modern Manufacturing Technologies Volume 14, Issue 2, Pages 145 – 150, 2022 https://www.ijmmt.ro/vol14no22022/15_Mircea_Mihalcica.pdf
5. **Mihălcică M**, Gliga VG, Campean M, Cretu NC, Nauncef AM, Steigmann R. Psycho-Acoustic Assessment Of Violins With Different Anatomical Features Of Wood, ModTEch 2022, International Journal of Modern Manufacturing Technologies Volume 14, Issue 3, Pages 158 – 163, 2022 https://ijmmt.ro/vol14no32022/23_Mircea_Mihalcica.pdf
6. **Mihălcică M**, Nicoară D, Niculiță C, Cândeia I, Pirnă 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 2009 https://intranet.unitbv.ro/Portals/0/UserFiles/User1122/WSEAS_2_BV2009.pdf

7. Itu C, Scutaru ML, Modrea A, **Mihălcică M**. Traction characteristics for the components of a composite sandwich used to build high-rigidity circular plates. *Procedia Manufacturing*. 2019 Jan 1;32:268-77. <https://www.sciencedirect.com/science/article/pii/S2351978919302483>
8. Scutaru ML, **Mihălcică M**, Modrea A, Purcarea R, Scarlatescu D. An advanced high rigidity thin sandwich composite laminate with COREMAT and dissimilar skins. *Procedia Manufacturing*. 2018 Jan 1;22:35-40. <https://www.sciencedirect.com/science/article/pii/S2351978918303019>
9. Itu C, Vlase S, Scutaru ML, Pena CS, Borza PN, **Mihălcică M**. Universal Absorber Applied to NVH in EV's Powertrain. In *Acoustics and Vibration of Mechanical Structures—AVMS-2017: Proceedings of the 14th AVMS Conference, Timisoara, Romania, May 25–26, 2017* 2018 (pp. 361-366). Springer International Publishing. https://link.springer.com/chapter/10.1007/978-3-319-69823-6_42
10. Modrea A, Gheorghe V, Sandu V, Teodorescu-Draghicescu H, **Mihălcică M**, Scutaru ML. Study of a New Composite Material Rt800 Reinforced with Polyte 440-M888 in Endurance Conditions. *Procedia Technology*. 2016 Jan 1;22:182-6. <https://www.sciencedirect.com/science/article/pii/S2212017316000438>
11. Tofan MC, Burcă I, **Mihălcică M**, Secară E, Hisom R, Popa I. Mathematical models for the human body motions analysis. In *The 13th International Conference Modtech, Modern Technologies, Quality and Innovation, New face of TMCR, Iasi-Chișinau, ISSN (pp. 2066-3919)*. http://www.modtech.tuiasi.ro/2009/publication/T/Tofan_Mihai_A2.pdf
12. Chiru A, Pirna I, Candea I, Niculita C, **Mihălcică M**, Bencze A. Satellite orbital instability generated by the perturbing factors. *Annals of DAAAM & Proceedings*. 2009 Jan 1:1025-7. <https://go.gale.com/ps/i.do?id=GALE%7CA224712704&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=17269679&p=AONE&sw=w&userGroupName=anon%7Eecdbf5f2>
13. Dumitru N, Secară E, **Mihălcică M**. Study of rotor-bearing systems using Campbell diagram. In *Proceedings of the 1st International Conference on Manufacturing Engineering, Quality and Production Systems 2009 (V2)*. https://www.researchgate.net/publication/266298337_Study_of_RotorBearing_Systems_Using_Campbell_Diagram

ALTE LUCRĂRI / REALIZĂRI RELEVANTE

1. **Mihălcică M**, Guiman V, Munteanu V. A cheap and portable motion analysis system. In *The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014 Ed. Comat, Brașov, 2014 (pp. 109-111)*.
2. **Mihălcică M**, Guiman V, Munteanu V. Using curve fitting as a method to analyze motion analysis data for sports. In *The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014 Ed. Comat, Brașov, 2014 (pp. 115-117)*.



3. **Mihălcică M**, Guiman V, Munteanu V. Using motion analysis software to gather sports experimental data. In The 5th International Conference "Advanced Composite Materials Engineering" and The 3rd International Conference "Research & Innovation in Engineering" COMAT 2014 Ed. Comat, Braşov, 2014 (pp. 112-114).
4. **Mihălcică M**, Munteanu MV, Secară E, Burcă I, Petric L. Methods for human motion capture and analysis. In The 3rd International Conference on "Research & Innovation in Engineering "COMAT 2010 (Vol. 3, pp. 164-167).
5. Stanciu MD, Năstac S, **Mihălcică M**, Munteanu MV. Experimental Analysis Of The Dynamic Behavior Of A Car Trailer., COMAT 2018;216-221
6. **Mihălcică M**, Burcă I. Using Inexpensive Motion Analysis Tools To Analyze The Free Throw In Juvenile Basketball, COMAT 2016;39-41
7. **Mihălcică M**, Niculita C, Petric L. Methods of identifying aggressors in armed robberies using their physical dimensions, COMEC 2009; 446-448
8. Vrabie RC, **Mihălcică M**. Analyzing Ski Jumping In An Inexpensive Way, COMAT 2020;257-259
9. Pavilescu R, **Mihălcică M**. An Inexpensive Analysis System Using Digital Image Correlation, COMAT 2020;235-238
10. **Mihălcică M**, Palfi B. Experimental System For The Analysis Of The Standing Long Jump, COMAT 2018;65-68
11. **Mihălcică M**, Bîrsa M. A Simple System To Help Find Natural Talents In Juvenile Basketball, COMAT 2018;69-71
12. **Mihălcică M**. A Study On The Correlation Between Step Length And The Femur-Tibia Ratio, COMEC 2017 vol.I;155-158
13. Orbok Z, **Mihălcică M**. The Capture And Analysis Of Posture Parameters Related To Sitting On A Chair, COMEC 2017 vol.I;152-154
14. Teodorescu-Draghicescu H, Vlase S, Luca Motoc D, **Mihălcică M**. Cte's Polynomial Curves Of A Thin Composite Sandwich, COMEC 2015; 197-201
15. **Mihălcică M**. Using Motion Variance As A Parameter For Human Identification In A Gait Analysis System, COMEC 2011 I;23 – 24

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Semnătura

