Listă lucrări Tufișı Cristian

a) Lista celor maximum 10 lucrări considerate de candidat a fi cele mai relevantepentru domeniul disciplinelor postului pentru care candidează, care sunt incluse în format electronic în dosar şi care se pot regăsi şi în celelalte categorii de lucrări;

1. N. Gillich, **C. Tufișı**, C. Săcărea, C.V. Rusu, G.-R. Gillich, Z.-I. Praisach, and M. Ardeljan, "*Beam Damage Assessment Using Natural Frequency Shift and Machine Learning*," Sensors, 2022, Vol. 22, pp. 2-23, 1118. https://doi.org/10.3390/s22031118.
2. A.-T. Aman, **C. Tufișı**, G.-R. Gillich, and T. Mănescu, "*Damage detection in variable temperature conditions using artificial intelligence*," Vibroengineering Procedia, Vol. 51, pp. 186–192, Oct. 2023, https://doi.org/10.21595/vp.2023.23679.
3. D. Onchiș, G.-R. Gillich, E. Hogea, and **C. Tufișı**, "*Neuro-symbolic model for cantilever beams damage detection*," Computers in Industry, 2023, pp. 1-13, https://doi.org/10.48550/arXiv.2305.03063.
4. **C. Tufișı**, Z.-I. Praisach, G.-R. Gillich, A.I. Bichescu, and T.-L. Heler, "*Forward Fall Detection Using Inertial Data and Machine Learning*," Appl. Sci., 2024, 14, pp. 1-27, 10552. https://doi.org/10.3390/app142210552.
5. A.-T. Aman, **C. Tufișı**, T. Mănescu, and G.-R. Gillich, "*Identification of the Segments with Changed Density in Inhomogeneous Beams*," in Acoustics and Vibration of Mechanical Structures—AVMS-2023, vol. 302, Springer Proceedings in Physics, Springer, Cham, 2024, pp 327–334, https://doi.org/10.1007/978-3-031-48087-4_34.
6. A.-T. Aman, **C. Tufișı**, C.O. Hamat, and G.-R. Gillich, "*Assessment of Weak Segments in Cantilever Beams Using an Artificial Neural Network*," in Acoustics and Vibration of Mechanical Structures—AVMS-2023, vol. 302, Springer Proceedings in Physics, Springer, Cham, 2024, pp. 283–292, https://doi.org/10.1007/978-3-031-48087-4_30.
7. **C. Tufișı**, G.-R. Gillich, D. Lupu, and A.-T. Aman, "*Detection of weak joints and damages for beams using machine learning*," Vibroengineering Procedia, Vol. 46, pp. 8–13, Nov. 2022, pp. 8-13, https://doi.org/10.21595/vp.2022.22923.
8. M.-V. Pop, **C. Tufișı**, and G.-R. Gillich, "*Determining the position of two cracks in a cantilever beam using artificial neural networks*," Vibroengineering Procedia, Vol. 46, pp. 14–20, Nov. 2022, pp.14-20, https://doi.org/10.21595/vp.2022.22928.
9. **C. Tufișı**, C.V. Rusu, N. Gillich, M.V. Pop, C.O. Hamat, C. Săcărea, and G.-R. Gillich, "*Determining the Severity of Open and Closed Cracks Using the Strain Energy Loss and the Hill-Climbing Method*," Appl. Sci., 2022, 12, 7231. https://doi.org/10.3390/app12147231.
10. **C. Tufișı**, N. Gillich, M. Ardeljan, R.L. Păun, and G.-R. Gillich, "*A cost function to assess cracks in simply supported beams with artificial intelligence*," Romanian Journal of Acoustics and Vibration, Vol. 18, No. 1, pp. 46–52, 2021.

b) Teza de doctorat

Detection of branched cracks in beam-like structures

c) Brevete de invenţie şi alte titluri de proprietate industrial

NA

d) Cărţi şi capitole în cărţi

1. Product design techniques using Solidworks, Cristian Tufişi, Cornel Haţiegan. - Timişoara : Eurostampa, 2023, ISBN 978-606-32-1374-8.
2. Detection of branched cracks in beam-like structures, Cristian Tufişi. - Cluj-Napoca: Presa Universitară Clujeană, 2024, ISBN 978-606-37-2334-6.
3. Dinamica structurilor : vibraţii transversale la grinzi simple : modelul Euler-Bernoulli, Zeno-Iosif Praisach, Cristian Tufişi, Timişoara : Eurostampa, 2023, ISBN 978-606-32-1373-1.

e) Articole/studii in extenso, publicate în reviste din fluxul ştiinţific internaţional principal

1. C.V. Rusu, G.-R. Gillich, **C. Tufisi**, N. Gillich, T.H. Bui, C. Ionut, *A Stacked Neural Network Model for Damage Localization.* Sensors 2024, *24*, 7019. https://doi.org/10.3390/s24217019.
2. G.-D. Burtea, E.-V. Gillich, **C. TufișI**, L. Tudor, *Estimation of the Frequency of Very Short Signals by Involving Artificial Neural Networks.* Romanian Journal of Acoustics and Vibration 2023, *20*(2), 157–161.
3. D. Ilca, T. Mănescu, **C. TufișI**, *Crimping Tool Wear and Tear Analysis.* Studia Universitatis Babeș-Bolyai Engineering 2023, *68*(Special Issue), 55–65.
4. P.-T. Stan, Z.-I. Praisach, G.-R. Gillich, T. Mănescu, **C. TufișI**, *The strain energy in loosening the clamped end of a beam (Part I).* Studia Universitatis Babeș-Bolyai Engineering 2023, 47–60, November.
5. I. Harea, Z.-I. Praisach, G.-R. Gillich, **C. TufișI**, *Dynamic behavior of a clamped circular plate and strain energy representation (Part II).* Studia Universitatis Babeș-Bolyai Engineering 2023, 89–100, November.
6. N. Manu, Z.-I. Praisach, G.-R. Gillich, **C. TufișI**, *Dynamic behavior of a clamped circular plate and strain energy representation (Part I).* Studia Universitatis Babeș-Bolyai Engineering 2023, 75–88, November.
7. G.-R. Gillich, V.C. Rusu, **C. TufișI**, N. Gillich, C. Ionuț, *Testing the Accuracy of Machine Learning-Based Crack Localization Methods Using Damage Localization Coefficients.* Romanian Journal of Acoustics and Vibration 2023, *20*(1), 59–66, August.
8. P.-T. Stan, Z.-I. Praisach, G.-R. Gillich, T. Mănescu, **C. TufișI**, *The strain energy in loosening the clamped end of a beam (Part I).* Studia Universitatis Babeș-Bolyai Engineering 2023, *68*(1), 47–60, January.

9. **C. Tufișı**, A.A. Minda, D.-G. Burtea, G.-R. Gillich, *Frequency estimation using spectral techniques with the support of a deep learning method.* Romanian Journal of Acoustics and Vibration 2022, *19*(1), 49–55, June.
10. G.-R. Gillich, N.M.M. Maia, M.A. Wahab, **C. Tufisi**, Z.-I. Korka, N. Gillich, M.V. Pop, *Damage Detection on a Beam with Multiple Cracks: A Simplified Method Based on Relative Frequency Shifts.* Sensors 2021, *21*, 5215. https://doi.org/10.3390/s21155215.
11. G.-R. Gillich, **C. Tufisi**, D. Nedelcu, Z.-I. Praisach, C.O. Hamat, *A new concept regarding the modeling of steel cantilever beams with branched cracks: A case study.* European Workshop on Structural Health Monitoring: Special Collection of 2020 Papers-Volume 2, Springer International Publishing 2021, 207–216.
12. N. Gillich, **C. Tufisi**, O. Vasile, G.R. Gillich, *Statistical method for damage severity and frequency drop estimation for a cracked beam using static test data.* Romanian Journal of Acoustics and Vibration 2019, *16*(1), 47–51.
13. **C. Tufisi**, G.R. Gillich, C.O. Hamat, N. Gillich, Z.I. Praisach, *Numerical Study of the Stiffness Degradation Caused by Branched Cracks and its Influence on the Natural Frequency Drop.* Romanian Journal of Acoustics and Vibration 2018, *15*(1), 53–57.
14. G.R. Gillich, **C. Tufisi**, D. Lupu, C.O. Hamat, *Assessing the accuracy of a new model for T-shaped cracks.* Romanian Journal of Acoustics and Vibration 2019, *16*(2), 119–124.

f) Publicaţii in extenso, apărute în lucrări ale principalelor conferinţe internaţionale de specialitate

1. I. Dacian, M. Tiberiu, and **C. Tufișı**, “Reliability analysis of cable crimping terminals with different applicator tools,” *Vibroengineering Procedia*, Vol. 56, pp. 157–162, Oct. 2024, https://doi.org/10.21595/vp.2024.24507.
2. F. Dragomir, T. Manescu, and **C. Tufișı**, “Influence of Copper-Iron (CuFe) and Copper-Tin (CuSN) alloys over mechanical strength properties in crimping process,” *Vibroengineering Procedia*, Vol. 56, pp. 163–168, Oct. 2024, https://doi.org/10.21595/vp.2024.24508.
3. F. Dragomir, T. Mănescu, G.-R. Gillich, Z.-I. Korka, and **C. Tufișı**, “Influence of vibration and environmental factors on a crimped assembly resistivity,” *Vibroengineering Procedia*, Vol. 51, pp. 173–178, Oct. 2023, JVE International Ltd.
4. D. Ilca, T. Manescu, G.-R. Gillich, Z.-I. Praisach, and **C. Tufișı**, “Determination of proper parameters for ultrasonic welding of copper plate with copper wire strands,” *Vibroengineering Procedia*, Vol. 51, pp. 167–172, Oct. 2023, https://doi.org/10.21595/vp.2023.23680.
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6. A.-T. Aman, **C. Tufișı**, and G.-R. Gillich, “Machine learning method for crack classification using natural frequencies,” *COMEC 2023*, Transilvania University Press of Brașov, pp. 7–13, Oct. 2023. http://hdl.handle.net/123456789/2659.

7. A.-T. Aman, Z.-I. Praisach, and **C. TufișI**, “Design and evaluation of a tuned mass damper for vibration control in guided column-spring systems,” *Annals of 'Constantin Brancusi' University of Targu-Jiu. Engineering Series*, Oct. 2023, pp. 25–29.
8. Gillich, G.-R., **C. TufișI**, V.C. Rusu, (2024). “Estimating Confidence in Damage Position Predictions Made Involving ANN,” in: Rui, X., Liu, C. (eds) *Proceedings of the 2nd International Conference on Mechanical System Dynamics. ICMSD 2023*. Lecture Notes in Mechanical Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-99-8048-2_103.
9. A.-T. Aman, **C. TufișI**, G.-R. Gillich, and Z.-I. Praisach, “Detection of transverse cracks in steel beams using damage location coefficients and artificial neural networks,” *Vibroengineering Procedia*, Vol. 50, pp. 42–48, Sep. 2023, https://doi.org/10.21595/vp.2023.23432.
10. A.-T. Aman, **C. TufișI**, and G.-R. Gillich, “Damage detection in simply supported beams using machine learning,” *Studia Universitatis Babeș-Bolyai Engineering*, pp. 7–15, Nov. 2022.
11. A.-T. Aman, Z.-I. Praisach, G.-R. Gillich, and **C. TufișI**, “Determining the position and severity of a transverse crack in composite structures using machine learning,” *COMAT 2022*, Transilvania University Press of Brașov, pp. 9–15, Oct. 2022. http://hdl.handle.net/123456789/2633.
12. Z.-I. Praisach, A.-T. Aman, **C. TufișI**, and Z.-I. Korka, “Determination of the position and magnitude of the force acting on a composite sandwich panel using artificial intelligence,” *COMAT 2022*, Transilvania University Press of Brașov, pp. 114–121, Oct. 2022. http://scholar.google.ro/.
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14. D.G. Burtea, **C. TufișI**, G.-R. Gillich, and C.-S. Constantin, “Frequency estimation using an artificial neural network and the discrete Fourier transform,” *Annals of 'Constantin Brâncuși' University of Târgu-Jiu. Engineering Series*, No. 4, Oct. 2022.
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16. D. Lupu, **C. TufișI**, G.-R. Gillich, and M. Ardeljan, “Detection of transversal cracks in prismatic cantilever beams with weak clamping using machine learning,” *Analecta Technica Szegedinensia*, Vol. 16, No. 1, pp. 122–128, Aug. 2022.
17. D.G. Burtea, N. Gillich, **C. TufișI**, and G.-R. Gillich, “Improving the accuracy of the Jacobsen algorithm to correctly estimate the frequency of short signals,” *Annals of 'Constantin Brâncuși' University of Târgu-Jiu. Engineering Series*, No. 1, Jan. 2022.
18. A. Minda, D.G. Burtea, G.-R. Gillich, **C. TufișI**, N. Gillich, and Z.-I. Praisach, “Accurate frequency estimation using DFT and artificial neural networks,” *EUSIPCO 2022*, Belgrade, pp. 1551–1555, 2022, EUSIPCO.

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20. A.-T. Aman, **C. TufișI**, and G.-R. Gillich, "**Damage detection in simply supported beams using machine learning**," *Studia Universitatis Babeș-Bolyai Engineering*, pp. 7–15, Nov. 2022.
21. A.-T. Aman, Z.I. Praisach, G.-R. Gillich, and **C. TufișI**, "*Determining the position and severity of a transverse crack in composite structures using machine learning*," *COMAT 2022*, Transilvania University Press of Brașov, pp. 9–15, Oct. 2022. http://hdl.handle.net/123456789/2633
22. Z.I. Praisach, A.T. Aman, **C. TufișI**, and Z.I. Korka, "*Determination of the position and magnitude of the force acting on a composite sandwich panel using artificial intelligence*," *COMAT 2022*, Transilvania University Press of Brașov, pp. 114–121, Oct. 2022. http://scholar.google.ro/
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24. D.G. Burtea, **C. TufișI**, G.-R. Gillich, and C.-S. Constantin, "*Frequency estimation using an artificial neural network and the discrete Fourier transform*," *Annals of 'Constantin Brâncuși' University of Târgu-Jiu. Engineering Series*, No. 4, Oct. 2022.
25. V.M. Pop, **C. TufișI**, G.-R. Gillich, and D.G. Burtea, "*Evaluating the severity of transverse cracks in beam-like structures by using an energy loss method*," *Analecta Technica Szegedinensia*, Vol. 16, No. 1, pp. 42–49, Aug. 2022.
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28. A. Minda, D.G. Burtea, G.-R. Gillich, **C. TufișI**, N. Gillich, and Z.-I. Praisach, "*Accurate frequency estimation using DFT and artificial neural networks*," *EUSIPCO 2022*, Belgrade, pp. 1551–1555, 2022, EUSIPCO.
29. Z.-I. Praisach, G.-R. Gillich, and **C. TufișI**, "*A relation for calculating the eigenvalues for a continuous three-span beam with clamped-hinged ends*," *COMEC 2021*, Transilvania University Press of Brașov, pp. 66–71**,** Oct. 2021. http://hdl.handle.net/123456789/2574
30. **C. TufișI**, G.-R. Gillich, D. Lupu, and V.M. Pop, "*Testing the mathematical relation for deriving the patterns of a transversal crack in cantilever beams*," *COMEC 2021*, Transilvania University Press of Brașov, pp. 100–105, Oct. 2021. http://scholar.google.ro/
31. T. Mănescu, **C. TufișI**, and G.-R. Gillich, "*Defects occurring in the rolling stock of the cylindrical rollers type and their remedy*," *Annals of 'Constantin Brâncuși' University of Târgu-Jiu. Engineering Series*, No. 4, pp. 13–20, Oct. 2021.
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34. **C. Tufișı**, V.-C. Rusu, and G.-R. Gillich, "*Locating transverse cracks in prismatic beams using random forest method and the frequency drop*," *Romanian Journal of Acoustics and Vibration*, Vol. 18, No. 2, pp. 119–125**,** 2021.
35. **C. Tufisi**, G.R. Gillich, C.I. Barbinta, C.O. Hamat, "A new predictive model to estimate the frequencies for beams with branched cracks," *IOP Conference Series: Materials Science and Engineering*, Vol. 997, Art. 012063, 2020. https://doi.org/10.1088/1757-899X/997/1/012063
36. G.R. Gillich, **C. Tufisi**, D. Nedelcu, "Appraising the accuracy of a novel model for L-shaped cracks," *COMEC 2019*, Vol. I, pp. 133–139, 43rd International Conference on Mechanics of Solids, 21–22 November 2019, Brasov, Romania.
37. **C. Tufisi**, G.R. Gillich, D. Nedelcu, "Effect of the orientation of an oblique crack branch on the beam eigenfrequencies," *COMAT 2018*, pp. 97–102, 1st International Conference on Circuits, ICMSAV 2018 & COMAT 2018 & eMECH 2018, 25–26 October 2018, Brasov, Romania.
38. **C. Tufisi**, G.R. Gillich, C.I. Barbinta, C.O. Hamat, "A new predictive model to estimate the frequencies for beams with branched cracks," *IOP Conference Series: Materials Science and Engineering*, Vol. 997, Art. 012063, 2020.
39. G.R. Gillich, **C. Tufisi**, M. Abdel Wahab, C.O. Hamat, "Crack Assessment on the Use of Severity-Adjusted Modal Curvatures of the Healthy Beam," *Springer Proceedings in Physics*, Vol. 251, pp. 499–504, 2021.
40. **C. Tufisi**, G.R. Gillich, O. Vasile, Z.I. Korka, C.O. Hamat, "Identification of Delamination in Multilayered Composites," *IOP Conference Series: Materials Science and Engineering*, Vol. 416, Art. 012045, 7th International Conference on Advanced Materials and Structures – AMS 2018, 28–31 March 2018, Timisoara, Romania.
41. G.R. Gillich, **C. Tufisi**, Z.I. Korka, C.O. Hamat, N. Gillich, "Automatic detection of L and T shaped cracks in semifinished casting products," *IOP Conference Series: Materials Science and Engineering*, Vol. 393, Art. 012016, The 10th International Symposium Machine and Industrial Design in Mechanical Engineering (KOD 2018), 6–8 June 2018, Novi Sad, Serbia.
42. **C. Tufisi**, G.R. Gillich, C.O. Hamat, N. Gillich, D. Nedelcu, "Exact solution for the severity of transverse cracks in prismatic beams," *Journal of Physics: Conference Series*, Vol. 1426, Art. 012023, International Conference on Applied Sciences, 9–11 May 2019, Hunedoara, Romania.
43. G.R. Gillich, A.T. Aman, M. Abdel Wahab, **C. Tufisi**, "Detection of Multiple Cracks Using an Energy Method Applied to the Concept of Equivalent Healthy Beam," *Lecture Notes in Mechanical Engineering*, pp. 63–78, 13th International Conference on Damage Assessment of Structures, 9–10 July 2019, Porto, Portugal.
44. **C. Tufisi**, G.R. Gillich, C.O. Hamat, T. Manescu, "Study Regarding the Effect of Crack Branching on the Eigenfrequencies of Beams," *Lecture Notes in Mechanical Engineering*, pp. 79–91, 13th International Conference on Damage Assessment of Structures, 9–10 July 2019, Porto, Portugal.

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47. **C. Tufisi**, G.R. Gillich, A.T. Aman, "The effect of a crack near the fixed end on the natural frequencies of a cantilever beam," *Vibroengineering Procedia*, Vol. 23, pp. 37–42, 37th International JVE Conference, 25–26 April 2019, Bratislava, Slovakia.
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49. **C. Tufisi**, G.R. Gillich, "A numerical study regarding the influence of the longitudinal extent of a T-shaped crack on the eigenfrequency decrease of cantilever beams," *Journal of Engineering Studies and Research*, Vol. 24, No. 4, pp. 50–55, 2018.