



Universitatea
Transilvania
din Braşov

Lista de lucrări

Candidat: Şef lucrări dr. ing. Marius Nicolae BABA

Braşov, 2023

1. Cărți și capitole în cărți, publicate în calitate de prim autor sau coautor

- 1.1 **Marius Nicolae BABA**, Elemente de mecanica ruperilor interlaminare cu aplicații în studiul integrității structurale a compozitelor lignocelulozice stratificate, Editura Universității Transilvania din Brașov, 2022, ISBN 978-606-19-1566-8
- 1.2 **M, N, Baba**, Grovu, M., Păuna, C., Runcianu, C., Proiectarea pe baza duratei de viață - Îndrumar de laborator, Resursa electronică, Reprografia Universității Transilvania din Brașov, 2020
- 1.3 **BABA Marius Nicolae**, BIȚ Cornel Sandi, CERBU Camelia, CURTU Ioan, ITU Călin, ROȘCA Ioan Călin, STANCIU Mariana Domnica, SZÁVA Ioan, SZÁVA Ildikó Renata, VELEA Marian Nicolae, Coordonatori BIȚ Cornel Sandi și CERBU Camelia, Rezistența materialelor - Îndrumar de laborator, Editura Universității Transilvania din Brașov, 2018, ISBN 978-606-19-1084-7
- 1.4 **Marius Nicolae BABA**, Proiectarea pe baza duratei de viață la solicitări variabile – Notițe de curs. Vol. 1, Resursa electronică, Editura Universității Transilvania din Brașov, 2018, ISBN 978-606-19-1086-1
- 1.5 **Marius Nicolae BABA**, Synopsis of Lectures in Strength of Materials for Undergraduates - Part 2, Editura Universității Transilvania din Brașov, Resursa electronică, 2019, ISBN 978-606-19-1160-8
- 1.6 Ioan CURTU, Vasile CIOFOAIA, **Marius BABA**, Camelia CERBU, Angela REPANOVICI, Rezistența materialelor Probleme IV, Editura Infomarket, 2005, ISBN: 973-8204-76-3
- 1.7 **BABA, M.**, BACIU, FI., BĂDESCU, N., CERBU, C., CIOFOAIA, V., CURTU, I., GHIȚĂ, E., HADĂR, A., ILINCIOIU, D., ISPAS, B., MARȘAVINA, L., MOCANU, Șt., ROȘCA, V., SAVA, M., SISAK, I., TRIPA, P., VLĂSCEANU, D., ZICHIL, V., Coordonatori JIGA., G și PASTRAMĂ, Șt. D., Teste grilă de rezistența materialelor, Editura: Tehnica-Info Chișinău, 2004, ISBN: 9975-63-241-8
- 1.8 Biț, C., Cerbu, C., **Baba, M.**, Strength of Materials I, Reprografia Universității Transilvania Brașov, 2002

2. Lucrări indexate în BDI Scopus/Web of Science, publicate în calitate de prim autor sau coautor

- 2.1 **Baba, M.N.**, Itu, C. The influence of dog-bone shaped specimen geometry on tensile test results of fused filament fabricated Nylon 12. J Mech Sci Technol (2022)
- 2.2 **Baba MN.** Flatwise to Upright Build Orientations under Three-Point Bending Test of Nylon 12 (PA12) Additively Manufactured by SLS. Polymers. 2022; 14(5):1026.



- 2.3 Bedeleian, B., Ispas, M., Răcășan, S., & **Baba, M. N.** (2022). Optimization of Wood Particleboard Drilling Operating Parameters by Means of the Artificial Neural Network Modeling Technique and Response Surface Methodology. *Forests*, 13(7), 1045.
- 2.4 **Baba, M. N.**, & Dogaru, F. (2021, October). Low-Velocity Transverse Impact Investigations of CFRP Composite Laminated Plates-Simplified Static Simulations Versus Dynamic Experimental Tests. In *International Conference Interdisciplinarity in Engineering* (pp. 56-63). Springer, Cham.
- 2.5 **Baba, M. N.**, Dogaru, F., & Guiman, M. V. (2020). Low velocity impact response of laminate rectangular plates made of carbon fiber reinforced plastics. *Procedia Manufacturing*, 46, 95-102.
- 2.6 **Baba, M. N.** (2019, October). Delamination assessment of composite curved angles using simplified FEA models build-up by 2-D layered shell elements. In *IOP Conference Series: Materials Science and Engineering*, 2019, 659(1), 012011.
- 2.7 **Baba, M. N.**, Ulea, M., Roșca, I. C., Mihălcică, M., & Scutaru, M. L. (2019, July). Investigation of mode II interlaminar fracture toughness of lignocellulosic laminated specimens—an experimental and numerical approach. In *IOP Conference Series: Materials Science and Engineering*, 2019, 572(1), 012050.
- 2.8 Ulea, M., & **Baba, M. N.** (2019, July). Finite element analysis of mode-I interlaminar fracture of lignocellulosic laminate specimens by virtual crack closure technique. In *IOP Conference Series: Materials Science and Engineering*, 2019, 572(1), 012117.
- 2.9 Scutaru, M. L., & **Baba, M.** (2014). Investigation of the mechanical properties of hybrid carbon-hemp laminated composites used as thermal insulation for different industrial applications. *Advances in Mechanical Engineering*, 6, 829426.
- 2.10 Scutaru, M. L., **Baba, M.**, & Baritz, M. I. (2014). Irradiation influence on a new hybrid hemp bio-composite. *Journal of Optoelectronics and Advanced Materials*, 2014, 16(7-8), pp. 887–891
- 2.11 Scutaru, M. L., **Baba, M.**, & Baritz, M. I. (2014). Irradiation influence on a new hybrid hemp bio-composite. *Journal of Optoelectronics and Advanced Materials*, 2014, 16(7-8), pp. 887–891
- 2.12 Scutaru, M. L., & **Baba, M.** (2014). Investigation of the mechanical properties of hybrid carbon-hemp laminated composites used as thermal insulation for different industrial applications. *Advances in Mechanical Engineering*, 6, 829426
- 2.13 **Baba, M. N.**, Dogaru, F., Curtu, I., Dinu, G., & Bayer, M. (2010). Experimental Determination of Interlaminar Fracture Toughness of Wood Laminated Composite Specimens under DCB Test. *Materiale Plastice*, 47(4), 527-531
- 2.14 Dates, Rodica Nicoleta; Terciu, Ovidiu; **Baba, Marius**; Stan, Gianina Ileana; Curtu, Ioan., Behaviour of



Bolted Wood Joints to Traction tests, Annals of DAAAM for 2009 & Proceedings of the 20th International DAAAM Symposium "Intelligent Manufacturing & Automation: Focus on Theory, Practice and Education" 25-28th November 2009, ISI Proceedings, ISSN 1726-9679, ISBN 978-3-901509-70-4, pg.1785-1786

2.15 Dogaru Florin, **Baba Marius**, The Response Analysis of the CFRP Laminated Plates Due to Low Velocity Impact, The 19th International DAAAM Symposium "Intelligent Manufacturing & Automation: Focus on Next Generation of Intelligent Systems and Solutions", 22-25th October 2008, Trnava, Slovakia, ISSN 1726-9679

3. **Lucrări publicate în calitate de primautor sau co autor în reviste sau volume de conferințe cu referenți (neindexate)**

3.1 **Baba, Marius, Nicolae**, Voinea, Gheorghe-Daniel, Lucaci, Maria-Elisabeta (2022) Three-point bending response of Nylon 12 obtained by Fused Filament Fabrication (FFF) versus Selective Laser Sintering (SLS), International Conference on Innovative Research - ICIR EUROINVENT 2022, May 26th to 27th, Iași, România

3.2 **Baba, M. N.**, Itu, C., The influence of dog-bone shaped specimen geometry on tensile test results of fused filament fabricated PA12, 2nd Workshop on Structural Integrity of Additively Manufactured Materials - SIAMM22 Brno, 4th-5th February 2022 & Online

3.3 **Baba, M. N.**, Polymeric 3D printouts as bimodular materials with emphasis on the analytical modeling of their flexural behavior, 3rd Workshop on Structural Reliability and Design of Additively Manufactured Materials - RdAMM22, Belgrade, 4th-6th October 2022 & Online


3.4 **Baba, Marius, Nicolae.**, Paraschiv, Aurel, Andrei., Fatigue life evaluation of an additively manufactured SAE 316L steel shaft under rotational bending: FEA versus DIN 743, 1st Workshop on Structural Integrity of Additively Manufactured Materials SIAMM21, Polytechnic University of Timisoara (UPT) Timisoara, Romania, 25th-26th February 2021 & online

3.5 **Baba, M, N.**, Dogaru, F., Low-Velocity Transverse Impact Investigations of CFRP Composite Laminated Plates - Simplified Static Simulations versus Dynamic Experimental Tests, 15th International Conference Interdisciplinarity in Engineering (INTER-ENG 2021), 7-8 October 2021, Faculty of Engineering and Information Technology at the "George Emil Palade", University of Medicine, Pharmacy, Sciences and Technology of Târgu Mureș, România

3.6 **Baba, Marius Nicolae**, O analiză de ansamblu a metodelor actuale de proiectare pe baza duratei de viață la solicitări variabile, Buletinul AGIR, An XXVI, nr.1/2021 CREATIVITATE. INVENTICĂ. ROBOTICĂ.



- 3.7 **Baba Marius Nicolae**, A shorthand strength analysis in Simcenter 3D to predict the first-ply failure test loads in case of four-point bending laminate coupons, COMAT 2020 & eMECH 2020, Braşov, România, 29-31 October 2020
- 3.8 **Baba Marius Nicolae**, Josza Levente, Christos Potamitis, On the eigenvalue torsional buckling by finite element analysis of CFRP composite shafts subjected to torque with an imposed transversal displacement, ICMS 2019 & COMEC 2019, Braşov, România, 21-22 November 2019
- 3.9 **Baba, M. N.**, Ulea, M., Roşca, I. C., Mihălcică, M., & Scutaru, M. L., Investigation of mode II interlaminar fracture toughness of lignocellulosic laminated specimens - an experimental and numerical approach, International Conference on Innovative Research - ICIR EUROINVENT 2019, 16 - 17 May 2019, Iaşi, România
- 3.10 Ulea, M., & **Baba, M. N.**, Finite element analysis of mode-I interlaminar fracture of lignocellulosic laminate specimens by virtual crack closure technique, International Conference on Innovative Research - ICIR EUROINVENT 2019, 16–17 May 2019, Iaşi, România
- 3.11 **Baba, M. N.**, Delamination assessment of composite curved angles using simplified FEA models build-up by 2-D layered shell elements, 9th International Scientific Conference - IRMES 2019, Research and Development of Mechanical Elements and System, 5-7 September, Kragujevac, Serbia
- 3.12 **Baba, M. N.**, Dogaru, F., & Guiman, M. V., Low velocity impact response of laminate rectangular plates made of carbon fiber reinforced plastics. The 15th International Conference Interdisciplinarity in Engineering, (INTER-ENG 2019), 3-4 October 2019, Târgu Mureş, România
- 3.13 **Baba, Marius, Nicolae.**, Finite element study on the stress state across the thickness of a curved laminate, 35th Danubia Adria Symposium on Advances in Experimental Mechanics, September 25-28, 2018, Sinaia, România
- 3.14 Scutaru, M, L., **Baba M.**, Optimization of a sandwich structure for the insulation of prefabricated wooden house, The 5th International Conference "Advanced Composite Materials Engineering" – COMAT 2014, Transilvania University of Brasov, Romania 16-17 October 2014 Proceedings COMAT 2014, DERC Publishing House, Tewksbury (Boston), Massachusetts, USA
- 3.15 Scutaru, M, L., **Baba M.**, Mechanical behaviour of hemo-based composite subjected to impact test, The 5th International Conference "Computational Mechanics and Virtual Engineering" - COMEC 2013, Transilvania University of Brasov, Romania 24-25 October 2013 Proceedings COMEC 2013, DERC Publishing House, Tewksbury (Boston), Massachusetts, USA
- 3.16 Scutaru, M, L., **Baba M.**, Timar, J., Flexural rigidity evaluation of composite sandwich panel of carbon-hemp, The 5th International Computational "Computational Mechanics and Virtual



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Proceedings COMEC 2013, DERC Publishing House, Tewksbury (Boston), Massachusetts, USA

- 3.17 **Baba, M. N.** Assessing the Mode I Interlaminar Fracture Toughness of Wood Laminated Specimens - An Experimental Approach, PRO LIGNO Journal Vol. 7 N° 3, in September 2011 ONLINE ISSN 2069-7430 ISSN-L 1841-4737, Publisher: Editura Universitatii TRANSILVANIA Brasov, The online version is available at www.proligno.ro, PRO LIGNO is quoted in 2011 as a CNCSIS B+ journal (code 746) and indexed by the international databases DOAJ, CABI, and EBSCO Academic Search Complete.
- 3.18 Curtu, I., Stanciu, M, **Baba, M.**, The numerical modeling of the acoustic plates on the guitar structures, Annals of the University of Petroșani, Mechanical Engineering, 10 (2008), 41-46, 2008
- 3.19 Curtu, I., **Baba, M.**, Stanciu, M, On the numerical evaluation of the mixed-mode delamination toughness for lignocellulosic composites, Annals of the University of Petroșani, Mechanical Engineering, 10 (2008), 41-46, 2008
- 3.20 Dogaru, F., **Baba, M.**, Analytical Study of the CFPR Laminated Plates Subjected to low Velocity Impact, 2nd International Conference "Advanced Composite Materials Engineering", COMAT 2008, 9-11 October 2008, Brașov, România
- 3.21 Curtu, I., Stanciu, M. D., **Baba, M.**, The Numerical Modeling of the Acoustic Plates on the Guitar Structures, In Zbornik naukvihnapati HTY, HPI, Conf. Bîsoki tehnologii masino (High Technologies on Machine Building), Institutul Politehnic din Harkov, Nr. 1/2008, p. 294-299, Harkov, Ukraina
- 3.22 Curtu, I., **Baba, M.**, Stanciu, M. D., On the numerical evaluation of the mixed mode delamination toughness for lignocelulosic composites, In Zbornik naukvihnapati HTY, HPI, Conf. Bîsoki tehnologii masino (High Technologies on Machine Building), Institutul Politehnic din Harkov, Nr. 1/2008, p. 287-293, Harkov, Ukraina
- 3.23 **Baba, M.**, Itu, C., Dogaru, F., Micromechanics aspects about the prediction of elastic properties for a lignocellulosic composite lamina, "International Conference on Materials Science and Engineering "BRAMAT 2007"., 22 - 24 February 2007, Brasov, Romania, ISSN 1223 - 9631, Bulletin of the Transilvania University of Brasov, BRAMAT 2007 - Vol. 1, p. 179-184, 2007
- 3.24 Dogaru, F., **Baba, M.**, Itu, C., Low velocity impact tests of laminate CFRP composite plates, "International Conference on Materials Science and Engineering "BRAMAT 2007"., 22 - 24 February 2007, Brasov, Romania, ISSN 1223 - 9631, Bulletin of the Transilvania University of Brasov, BRAMAT 2007 - Vol. 1, p.279-282, 2007
- 3.25 Itu, C., Dogaru, F., **Baba, M.**, Dynamic con-rod analysis for different type of materials based on virtual simulation, "International Conference on Materials Science and Engineering "BRAMAT



2007"., 22 – 24 February 2007, Brasov, Romania, ISSN 1223 – 9631, Bulletin of the Transilvania University of Brasov, BRAMAT 2007 - Vol. 1, p. 325-330, 2007

- 3.26 Curtu, I., Stanciu, M, D, **Baba, M.**, Aspects regarding to the influence of the anizotropy on the statically modelling of the guitar, The 2nd International Conference Computational Mechanics and Virtual Engineering COMEC 2007, 11-13 October 2007, Braşov, România
- 3.27 Stanciu, M., Curtu, I., Ciofoaia, V., **Baba, M.**, Functional and construction particularities of the ships furniture, 10th International Research/Expert Conference "Trends in the Development of Machinery and Associated Technology" TMT 2006, Barcelona-Lloret de Mar, Spain, 11-15 September, 2006
- 3.28 **Baba Marius**, Curtu Ioan, On the theoretical estimation of the stress and stiffness for wood strand composites, VIth International Symposium "Composite Wood Materials", 21 – 2 june 2006, ISBN 80 – 228 –1169 – 6, Zvolen, Slovakia
- 3.29 **Baba Marius**, Curtu Ioan, A theoretical approach for determining the stress and stiffness of wood strands composites, International Conference "Advanced Composite Materials Engineering" Comat 2006, 19 – 22 october 2006, ISBN 976 – 635 –821 – 8, ISBN 978 – 973 –635 – 821 – 0, Brasov, Romania

Data

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Semnătura

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