

PERSONAL INFORMATION



First name and Surname Marius Nicolae BABA

Office address Universității Street, no. 1, Braşov, România, Build C, Room CP10-b



✉ mariusbaba@unitbv.ro

Gender Masculin | **Date of birth** | **Place of birth** Rupea, Jud. Braşov

Nationality Romanian

OCCUPATIONAL FIELD

Academic education and scientific research

PROFESIONAL EXPERIENCE

Period 2023 - present

Occupation or position held Associate Professor Ph.D. Eng.

Name of the employer Faculty of Mechanical Engineering, Transilvania University of Braşov

Main activities and responsibilities

Faculty of Mechanical Engineering, Transilvania University of Braşov

- Teaching lectures, seminars, and laboratories in Strength of Materials I and II for Bachelor's degree programs in Automotive Engineering and Industrial Design, both provided in the English language by Transilvania University of Braşov;
- Teaching lectures and laboratories in Fatigue Life-Based Design of Mechanical Components Under Variable Loading held for the master's degree program Simulation and Testing in Mechanical Engineering provided in the Romanian language by the Faculty of Mechanical Engineering from Transilvania University of Braşov;
- The research focuses on advanced calculation methods in Strength of Materials, structural mechanics of CFRP laminate composites and Additive Manufacturing materials, fatigue, fracture mechanics, and finite element analysis.

Period 2009 - 2022

Occupation or position held Lecturer Ph.D. eng.

Name of the employer Faculty of Mechanical Engineering, Transilvania University of Braşov

Main activities and responsibilities

Faculty of Mechanical Engineering, Transilvania University of Braşov

- Teaching lectures, seminars, and laboratories in Strength of Materials I and II for Bachelor's degree programs in Automotive Engineering and Industrial Design, both provided in the English language by Transilvania University of Braşov;
- Teaching lectures and laboratories in Finite Element Method (master degree program "Advanced wood structures and innovative technologies" provided in the Romanian language by Transilvania University of Braşov);
- Teaching lectures and laboratories in Fatigue Life-Based Design of Mechanical Components Under Variable Loading held for the master's degree program Simulation and Testing in Mechanical Engineering provided in the Romanian language by the Faculty of Mechanical Engineering from Transilvania University of Braşov;
- Research in structural mechanics of CFRP laminate composites and Additive Manufacturing materials, fatigue and fracture mechanics, and finite element analysis.

Period	2013 - 2018
Occupation or position held	Senior structural engineer in the field of aerospace stress analysis and design (in parallel with the position of Lecturer Ph.D. eng. at the Transilvania University of Braşov).
Name of the employer	Consaro Engineering S.R.L Braşov (www.consaro.de)
Main activities and responsibilities	<p>Member of the structural design teams for the following projects:</p> <ul style="list-style-type: none">▪ EnMAP hyperspectral satellite:<ul style="list-style-type: none">- Drafting design▪ Airbus A320-MOD:<ul style="list-style-type: none">- Section 19 Structure Analysis▪ Airbus A320-NEO:<ul style="list-style-type: none">- Section 19 Flight Test Tailbumper Structure Analysis)▪ Airbus A320 Sharklet S19:<ul style="list-style-type: none">- Section 19 Structure Analysis▪ Airbus A350XWB -900/-1000 Door Surrounds:<ul style="list-style-type: none">- FEM Creation and Validation for Fuselage Structures- Door- and Cargo Door Surround for MSN1-MSN40 (4 major modification loops), Sizing and Certification- Bulk Cargo Door Surround strength analysis of Z-Strut bracket at frame C85 for MSN98 – New FEM proposal- Cargo and Passengers Floor Calculation and Reporting- Door- and Cargo Door Surround for MSN 64-98-146-229, Calculation and Reporting- Rear Pressure Bulkhead Sizing and Certification for MSN59-88-98-146-188 Calculation and Reporting▪ Airbus A380 Wings<ul style="list-style-type: none">- Flap Tracks FEM, Calculation and Reporting▪ MT-Ariane 5-ME Launcher Cryogenic Upper Stage<ul style="list-style-type: none">- FEM Creation and nonlinear finite element analysis of LH2 MH dome wall and LOX Collector, Strength analysis, Bolted joints calculation and Reporting▪ MT-Ariane 5-ECA+ Launcher Cryogenic Upper Stage<ul style="list-style-type: none">- U-Ring of LH2 - Tank Structure - Strength Analysis and Reporting▪ Marengo Helicopter Carbon Tail Rotor Drive in Hybrid Technology<ul style="list-style-type: none">- Metal-CFRP Strut Fitting Hand Calculation- Conception and implementation of an Excel parametric tool by using Classical Laminate Theory, Matrix Stiffness and Force methods for structural strength calculation▪ Airbus A400M VTP Rear Fuselage Fairing<ul style="list-style-type: none">- FEM, Calculation and Reporting- Development of Repair Solutions and Structure Repair Manuals▪ Airbus A330-700L (Beluga XL) Main Deck Loading System<ul style="list-style-type: none">- FEM Linear and Nonlinear, Calculation and Reporting (Power Drive Unit and Power Looking Unit)- Fasteners assessment by hand calculation

Period	2003 - 2008
Occupation or position held	Assistant professor eng.
Name of the employer	Faculty of Mechanical Engineering, Transilvania University of Braşov
Main activities and responsibilities	<ul style="list-style-type: none">▪ Teaching seminars and laboratories in Strength of Materials I and II (engineering degree programs provided in Romanian and English language by Transilvania University of Braşov);▪ Research in the Strength and durability of mechanical structures made of isotropic and anisotropic materials.▪ Research in the field of fracture mechanics with applications in the field of strength assessment of laminate composite materials.
Period	2003 - 2006
Occupation or position held	Junior structural engineer in stress analysis and design for civil engineering projects (in parallel with the position of Assistant professor eng. at the Transilvania University of Braşov).
Name of the employer	Internaţional Engineering SRL Braşov
Main activities and responsibilities	<ul style="list-style-type: none">▪ Design and strength calculation of structures following the provisions of the French standards CB71, NV65 and the European standards Eurocode 1, Eurocode 3 and Eurocode 5.▪ Finite element analysis for static and dynamic analysis of resistance structures in bars and plates.▪ The conception, calculation, and design of the areas of joint/fittings wood-to-wood or wood-to-metal. The analysis with finite elements for the static and dynamic analysis of the resistance structures of bars and plates.▪ 3D graphic modeling and 2D drafting for the execution of the overall, detailed, or cutting plans.
Period	2000 - 2003
Occupation or position held	Laboratory preparator eng.
Name of the employer	Faculty of Mechanical Engineering, Transilvania University of Braşov
Main activities and responsibilities	<ul style="list-style-type: none">▪ Assisting the lectures in Strength of Materials I and II (engineering degree programs provided in Romanian and English language by Transilvania University of Braşov);▪ Teaching laboratories in Strength of Materials I and II (engineering degree programs provided in Romanian and English language by Transilvania University of Braşov);▪ Research in the Strength and durability of mechanical structures made of isotropic and anisotropic materials.▪ Research in the field of fracture mechanics with applications in the field of strength assessment of laminate composite materials.

EDUCATION

- Period 2004 – 2010

Title of qualification awarded Ph.D. in the fundamental domain of ENGINEERING SCIENCES with specialization in" Mechanical Engineering"; the following the branch of Strength of materials, and the Theory of elasticity.

Faculty of Mechanical Engineering, Transilvania University of Braşov

Title of the thesis:" Interlaminar fracture of lignocellulosic composite materials", Scientific coordinator Prof. univ. Ph.D., Emeritus, Honoris Causa Ioan CURTU
- Period 1998 – 1999

Title of qualification awarded In-depth dissertation studies

Faculty of Wood Engineering, Transilvania University of Braşov
- Period 1993 – 1998

Title of qualification awarded Bachelor's degree in Engineering

Faculty of Wood Engineering, Transilvania University of Braşov

INTERNAȚIONAL MOBILITIES

- Period 2003 (1 month)

Scholarship CEEPUS at Budapest University Technical and Economics (Hungary)
- Period 2003 (1 month)

Scholarship CEEPUS at the Slovak University of Technology in Bratislava (Slovakia)
- Period 2007 – 2008 (15 months)

Scholarship ICCE-Union Camere in Mechanical engineering at Politecnico di Milano (Italia).
- Period 2019 (1 week)

Teaching mobility Erasmus at University of West Attica, Piraeus (Greece)
- Period 2022 (1 week)

Teaching mobility Erasmus at University of West Attica, Piraeus (Greece)

PERSONAL COMPETENCES

Mother tongue Romanian language

OTHER LANGUAGES

Self-assessment European level (*)	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Oral speech	-
English language	B2	B2	B2	B2	B2
Certificate of Language Proficiency for English obtained from the Center for Modern Languages (www.cilm.ro) of Transilvania University of Brasov					
Italian language	B2	B2	A2	A2	A2
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(*) Common European Framework of Reference for Languages

Social skills and competencies	<p>Good communication skills acquired through my experience as a senior structural engineer at the company Consaro Engineering SRL.</p> <p>Good communication skills acquired over the years for the support of lectures / trainings.</p>
Organizational skills and competencies	<p>Leadership acquired within the company Consaro Engineering SRL by coordinating part of the projects developed in the Braşov office: Airbus A350XWB -900/-1000 PAX-Cargo-Bulk Cargo Door Surround, Rocket Ariane 5 (Launcher Cryogenic Upper Stage), Airbus, A400M (VTP Rear Fuselage Fairing Airplane), Airbus A330-700L (Beluga XL) (Main Deck Loading System Airplane).</p>
Technical skills and competencies	<p>A very good theoretical and practical knowledge of the methods of static strength calculation and fatigue/durability assessment of mechanical structures.</p>
Computer skills and competencies	<p>Advanced knowledge of M.S. Office tools: Word, Excel. Microsoft Office™</p> <p>Advanced knowledge of CAD software: AutoCAD, TopSolid, Catia V.5, Autodesk Inventor.</p> <p>Advanced knowledge of CAE software: Abaqus, MSC Natran / Patran, Altair Hypermesh, Siemens NX and Simcenter 3D.</p>

SCIENTIFIC
PUBLICATIONS/RESEARCH
CONTRACTS

-
1. Published books as first author or coauthor
- 1.1 **Marius Nicolae Baba**, Elemente de mecanica ruperilor interlaminare cu aplicații în studiul integrității structurale a compozitelor lignocelulozice stratificate, Editura Universității Transilvania din Braşov, 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 Braşov, 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 Braşov, 2018, ISBN 978-606-19-1084-7
 - 1.4 **Marius Nicolae Baba**, Synopsis of Lectures in Strength of Materials for Undergraduates - Part 2, Editura Universității Transilvania din Braşov, Resursa electronică, 2019, ISBN 978-606-19-1160-8
 - 1.5 **Marius Nicolae Baba**, Proiectarea pe baza duratei de viață la solicitări variabile – Notițe de curs. Vol. 1, Resursa electronică, Editura Universității Transilvania din Braşov, 2018, ISBN 978-606-19-1086-1
 - 1.6 Ioan CURTU, Vasile CIOFOAIA, **Marius Baba**, Camelia CERBU, Angela REPANOVICI, Rezistența materialelor Probleme IV, Editura Infomarket, Braşov, 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. Scientific articles published
in journals or conference
volumes indexed WoS (last 10
years)

2.1 **Baba, M. N.** (2024). A recursive trapezoid-based algorithm designed to compute the strength- and stiffness-related geometric properties of beams with polygonal cross-sections. *Mechanics Based Design of Structures and Machines*, 1–25.

<https://doi.org/10.1080/15397734.2024.2353324>

2.2 **Baba, M. N.**, Voinea, G. D., Lucaci, M. E. Three-Point Bending Response of Nylon 12 Obtained by Fused Filament Fabrication (FFF) Versus Selective Laser Sintering (SLS). *Arch. Metall. Mater.* 68 (2023), 4, 1439–1446.

https://www.imim.pl/files/archiwum/Vol4_2023/25.pdf

2.3 **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).

<https://doi.org/10.1007/s12206-022-2102-6>

2.4 **Baba M. N.**, Flatwise to Upright Build Orientations under Three-Point Bending Test of Nylon 12 (PA12) Additively Manufactured by SLS. *Polymers*. 2022; 14(5):1026.

<https://doi.org/10.3390/polym14051026>

2.5 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.

<https://doi.org/10.3390/f13071045>

2.6 **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.

https://doi.org/10.1007/978-3-030-93817-8_6

2.7 **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. <https://doi.org/10.1016/j.promfg.2020.03.015>

2.8 **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.

<https://iopscience.iop.org/article/10.1088/1757-899X/659/1/012011/meta>

2.9 **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.

<https://iopscience.iop.org/article/10.1088/1757-899X/572/1/012050/meta>

2.10 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.

<https://iopscience.iop.org/article/10.1088/1757-899X/572/1/012117/meta>

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. <https://joam.inoe.ro/articles/irradiation-influence-on-a-new-hybrid-hemp-bio-composite/>

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.

<https://doi.org/10.1155/2014/829426>

3. Scientific articles presented at conferences or published in conference volumes with reviewers or nonindexed journals ([last10 years](#))

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, Brașov, 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 Engineering" - COMEC 2013, Transilvania University of Brasov, Romania 24-25 October 2013 Proceedings COMEC 2013, DERC Publishing House, Tewksbury (Boston), Massachusetts, USA

4. Research contracts as the main coordinator

4.1 National CNCSIS Project, TD Programme: Cercetari privind comportarea la rupere a unor materiale compozite lignocelulozice (in eng. Interlaminar fracture mechanics of lignocellulosic laminate composites), period: 2007- 2009, founded by CNCSIS, UEFISCDI Contract No. TD_93 (Grant value: 26240 RON, 24 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Research internship organizing activities according to the research plan;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

4.2 National CNCSIS Project, TD Programme: Fenomene microstructurale în mecanica ruperii compozitelor lignocelulozice din structurile de mobilier și construcții din lemn (in eng. Microstructural phenomena in fracture mechanics of lignocellulosic composites), period: 2005, founded by CNCSIS, UEFISCDI Contract No. TD_292 (Grant value: 30000 RON, 12 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Research internship organizing activities according to the research plan;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

5. Research contracts as a team member

5.1 National Project PN-II-PCE, IDEI-programme, Modelarea și simularea comportării la factori mecanici și de mediu agresiv a materialelor compozite întărite cu textile (in eng. Modeling and simulation of the behavior of composite materials reinforced with textiles to mechanical and aggressive environmental factors), Project coordinator: Prof. dr. eng. Vasile Ciofoaia, period: 2007 – 2010, founded by CNCSIS, UEFISCDI Contract No.: IDEI, cod 191/2007, from 01.10.2007 (48 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

5.2 National Project PN-II-PCE, IDEI-programme, Comportamentul post-impact al compozitelor laminate armate cu fibre din carbon și sticlă utilizate în industrie (in eng. Post-impact behavior of carbon and glass fiber reinforced laminated composites used in

industry), Project coordinator: Lecturer dr. eng. Florin Dogaru, period: 2007 - 2010, founded by CNCIS, UEFISCDI, Contract No.: IDEI 187/110 from 1.10.2007 (24 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

5.3 CEEX 49/2006 Project, Sistem de management prin procedee neinvazive a caracteristicilor fizico-mecanice, a fiabilitatii se degradarii materialelor compozite, tehnologii "embedded" pentru monitorizare in timpul exploatarei; aplicatii la compozite lignocelulozice, structuri usoare din materiale composite, composite nanocelulozice – RoLight (in eng. Management system through non-invasive procedures of physical-mechanical characteristics, reliability and degradation of composite materials, "embedded" technologies for monitoring during exploitation; with applications to lignocellulosic composites, light structures from composite materials, and nano cellulosic composites), Project coordinator: Prof. univ. dr. eng. Ioan CURTU (36 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

5.4 CEEX Cod 211/2006 Project, Sistem inovativ de panouri sandwich - compozit tip mogapan cu miez fagure pentru preluarea si absorbtia zgomotului din traficul urban si extraurban – ELMOSTPRO (in eng. Innovative system of sandwich panels - mogapan type composite with honeycomb core for taking over and absorbing noise from urban and extraurban traffic), Project coordinator: Prof. univ. dr. eng. Ioan CURTU (36 months).

Main activities and responsibilities:

- Info activities, documentation, fundamental and applied research according to the topic addressed;
- Dissemination, transfer, and promotion of research results within national and international scientific events;
- Financial resource management activities and preparation of post-calculation budgets and scientific reports corresponding to the reporting phases.

6. Technical expertise contracts

6.1 Member of the technical expertise team working on "Bending and shear nails testing of OSB panels according to Japanese standards (JAS)" concluded between Transilvania University of Braşov și KRONOSPAN SA, Braşov (2012).

Main activities and responsibilities:

- Carrying out three-point bending tests of OSB panels and shear tests of joints with OSB metal nails/solid wood, according to Japanese JAS standards.

Awards Silver medal (as coauthor) at the 13th edition of the European Exhibition of Creativity and Innovation (Euroinvent 2021), Iași, România with the project "Lightweight disassemblable utility trailer made of 3D-printed parts".

Date: 30.10.2024

Associate Professor Dr. eng. Marius Nicolae BABA

