

Personal information

Laura Mariana Babici



Nationality Romanian

Native language Romanian

Work experience

May 2005 -present Romanian Railway Authority - Romanian Railway Notified Body- Rolling Stock Laboratory

Test engineer in the mechanical field.

Test coordinator for determining the wheel/rail roughness

Test coordinator for assessing the level of noise (standard and research procedures)

May 1998 - May 2005 Engineer Ministry of Transport - Regional Railways Iasi

Railways division engineer

Publications, conferences

Journals

- L. M. Babici, A. Tudor, J. Romeu, Stick-slip phenomena and acoustic emission in the Hertzian linear contact, Multidisciplinary Digital Publishing Institute, Applied sciences (Basel), 22/09/2022, 12, 19, article 9527, 1 - 16, 2076-3417
- L. M. Babici, A. Tudor, J. Romeu, M. Stoica, Fractal evaluation aspects in characterising the roughness of a driving wheel from a locomotive, Institute of Physics (IOP), IOP Conference Series: Materials Science and Engineering, 01/01/2020, 724, 1, 1757-8981
- L. M. Babici, A. Tudor, J. Romeu, M. Stoica, Fractal rigidity of the wheel-rail contact, Institute of Physics (IOP), IOP conference series: materials science and engineering, 25/12/2020, 997, 012002:1 - 012002:12, 1757-899X
- L. M. Babici, A. Tudor, Some aspects regarding the roughness of the railway surface and rolling noise at locomotives, Institute of Physics (IOP), IOP conference series: materials science and engineering, 26/06/2019, 514, 012010:1 - 012010:14, 1757-899X
- I. Sebeşan, L. M. Babici, and D. Floroiu, Experimental measurements of composite materials from the bearing structure of railway vehicles, 20th Innovative Manufacturing Engineering and Energy Conference (IManEE 2016) IOP Publishing IOP Conf. Series: Materials Science and Engineering 161 (2016) 012064 doi:10.1088/1757-899X/161/1/012064
- L. M. Babici, Experimental measurements of composite materials from the bearing structure of railway vehicles, Institute of Physics (IOP), IOP Conference Series: Materials Science and Engineering, 11/2016, 161, article 012064, 1757-8981

Manuscript under review

- L. M. Babici, J. Romeu and A. Tudor, Fractal - based modelling of rail roughness, Acoustical and Mechanical Engineering Laboratory (LEAM), Politècnica de Catalunya (UPC)

International Conferences

- L. M. Babici, A. Tudor, and J. Romeu, Fractal based modelling of rail roughness, WCAM 2023 The 9th Annual Congress World of Advanced Materials, May 2023, Japan
- L. M. Babici, A. Tudor, J. Romeu, Acoustic emission at the wheel-rail contact with micro-slip and stick-slip, International Congress and Exposition on Noise Control Engineering, Glasgow, United Kingdom (2022)
- L. M. Babici, Acoustic emission in stick-slip phenomena of wheel-rail contact for variable velocity, IWRN13 Conference (13th International Workshop on Railway Noise), Leuven, Belgium (2019)
- L. M. Babici, A. Tudor, J. Romeu, M. Stoica, Fractal evaluation aspects in characterising the roughness of a driving wheel from a locomotive, International Conference on Tribology ROTRIB, Gluj-Napoca, Romania (2020)
- I. Sebeşan, L. M. Babici, and D. Floroiu, Experimental measurements of composite materials from the bearing structure of railway vehicles, 20th Innovative Manufacturing Engineering and Energy Conference (IManEE 2016) IOP Publishing IOP Conf. Series: Materials Science and Engineering 161 (2016) 012064 doi:10.1088/1757-899X/161/1/012064

- L. M. Babici, A. Tudor, PRASIC'18, Some aspects regarding the roughness of the railway surface and rolling noise at locomotives, 10th Product Design, Robotics, Advanced Mechanical& Mechatronic Systems and Innovation Conference, 2018, Brasov, Romania, in IOP Conference Series: Materials Science and Engineering, vol. 517, 2019
- I. Sebeşan, D. Floroiu, L. M. Babici, Considerations regarding the suspension of railway vehicles with rubber springs.
- I. Sebeşan, D. Floroiu, L. M. Babici, Conference on Advances in Mechanical Engineering (ICAME), 10-13 May 2016, Istanbul, Turkey
- I. Sebeşan, L. M. Babici, D. Floroiu, Theoretical considerations and experimental determinations regarding the use of composite materials in the construction of railway vehicles, European Advanced Materials Congress 2016, EAMC, August, Stockholm, Sweden

Symposiums

- L. M. Babici, I. Sebeşan, A. Tudor, Parametrul fractal in caracterul microgeometriei şinei (The fractal parameter in the character of rail microgeometry), Railway Rolling Material Symposium, November 2018
- I. Sebeşan, L. M. Babici, Zgomotul aerodinamic în transportul feroviar (The aerodynamic noise in railway transport), Railway Rolling Material Symposium, November 2017
- I. Sebeşan, L. M. Babici, Încercări fizico-mecanice asupra garniturilor canelate și inelare din cauciuc utilizate la aparatul de frână pneumatică (Physical-mechanical tests regarding the grooves and rubber rings in the operation of the pneumatic brake device), Railway Rolling Material Symposium, November

Education

- 2019 - 2020** **Municipal school "La Lliar" (Terrassa, Spain),**
Spanish course, B1 level
- June 2018 – June 2020** **Universitat Politècnica de Catalunya (Barcelona, Spain)**
Erasmus+ Traineeship
- March – June 2017** **NewRail Centre for Railway Research (Newcastle upon Tyne, United Kingdom)**
NLP International Foundation, BUCURESTI
- November 2017 – Present** **POLITEHNICA University of Bucharest, (Bucharest, Romania)**
Department of Machine Elements and Tribology, in co-tutoring with
Politecnica de Catalunya University, (Barcelona, Spain)
Acoustical and Mechanical Engineering Laboratory (LEAM)
PhD student
- 2015 – 2017** **The Polytechnic University of Bucharest, Faculty of Transport (Bucharest, Romania)**
Master's Degree in Interaction phenomena, Vehicle rolling track
- November 2015** **National Standardisation Body – ASRO, (Bucharest, Romania)**
Certificate for certifying compliance according to the standards
SR EN ISO / CEI 17065:2013, SR EN ISO / CEI 17067:2014, SR EN ISO / CEI 17007:2010
- October – November 2015** **Absolute School, (Bucharest, Romania)**
Europass certificate supplement- Graduation certificate
English Level 5 (B2)
- May 2014** **Fiatest, (Bucharest, Romania)**
Computer Tools. Practical Applications
Measurement Uncertainty Evaluation in Testing Laboratories
- September – October 2013** **Absolute School, (Bucharest, Romania)**
Europass certificate supplement- Graduation certificate
Specialist in 'Safety and Health Protection on the Job'
- September – October 2008** **Romanian Accreditation Association – RENAR**
National Accreditation Body (Bucharest, Romania)
Training in Internal Audits for Laboratories

November – December 1999 National Company of Romanian Railways - Training Centre, (Bucharest, Romania)
 Training Graduation Certificate in Specialised French Vocabulary
 for Management, Marketing, Commerce, Offers and International Relations

September – November 1999 National Company of Romanian Railways - Training Centre, (Bucharest, Romania)
 French language training course Advanced level

1992 – 1997 Technical University Gheorghe Asachi, (Iasi, Romania)
 Bachelor's Degree in Hydrotechnical Engineering

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	B1	B2	B1	B1	B1
Spanish	B2	B2	B1	B1	B2

Communication skills Good communication skills exercised mainly as team leader /coordinator, manifesting conflict management abilities and assertive communication skills; proficient in presenting complex information clearly and concisely; Experienced in coordinating and facilitating team meetings.

Managerial skills Experienced in leading and developing multidisciplinary teams; Skilled in developing effective strategies and managing budgets; Experienced in monitoring team performance and implementing constructive feedback; Strong competencies in planning and organising projects with strict deadlines.

Computer skills Proficient in Microsoft Office Suite (Word, Excel, PowerPoint, Outlook).
 Skilled in using Mathcad, SPSS, MathType, Coreldraw, Snipping Tool and HTML.
 Intermediate experience with Matlab

Driving Licence B (2003)