

PERSONAL INFORMATION

Radu - Gabriel VELICU rvelicu@unitbv.roPLACE OF WORK
POSITION - IOSUD UNITBV

Transilvania University of Braşov
PhD Coordinator – Mechanical Engineering
Since 2017

EXPERTISE FIELD AND
RESEARCH INTEREST
AREAS

- Tribology (measurements of friction and wear on mechanical systems)
- Chain transmissions (friction models, forces, measurements of friction)
- Gears (calculus models and optimization)
- Planetary gears (Kinematic analysis and synthesis, calculus models, efficiency)
- Tracking systems for PV platforms (embodiment calculus, loading cases)

WORK EXPERIENCE

Period 1990-present
Position LabAssistant (1990), Asistant (1993), Lecturer (1996), Senior Lecturer (2000), Professor (2003)
Main responsibility Teaching and research in mechanical engineering
Employer Transilvania University of Braşov, Bd. Eroilor 29, 500036 Braşov
Field Education, University

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EDUCATION AND TRAINING

Period 2002
Qualification Certificate of attending
Field Applied informatics in engineering
Provider Transilvania University of Braşov, Bd. Eroilor 29, 500036 Braşov
Level Post university

Period 1995
Qualification Certificate of attending
Field Introduction to MSC/Patran, MSC/Nastran Basic Dynamic
Provider Transilvania University of Braşov, Bd. Eroilor 29, 500036 Braşov
Level Post university

Period 1993-1999
Qualification PhD diploma
Field Mechanical engineering – Research on planetary transmissions
Provider Transilvania University of Braşov, Bd. Eroilor 29, 500036 Braşov
Level PhD

Period 1985-1990
Qualification Bachelor
Field Mechanical Engineering - Automobiles
Provider Transilvania University of Braşov, Bd. Eroilor 29, 500036 Braşov
Level University

PERSONAL SKILLS

Mother tongue Romanian

Other language

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Listening	Reading
English	B2	B2	B2	B2	B2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Organisational / managerial skills

- Management of research projects
- Management of research teams and laboratory

Digital skills

- User of modelling software (CATIA),
- User of FEM nalyse software(CATIA, NASTRAN/PATRAN),
- User of communication software (MS Office), Internet, e-mail.

ADDITIONAL INFORMATION

Publications Aproximativ 200 lucrări științifice
 Presentations 80
 Projects 27
 Conferences 80
 Seminars 15
 H Indexes WoS – 2; Scopus - 4; Google Scholar - 8

ANEXE

LIST OF RELEVANT PUBLICATIONS /RESEARCH (selection)

1. **Velicu, R.**, Papuc, R., Gavrilă, C.C., Popa, S. Experimental study on guide friction contribution in global power loss of a tooth chain transmission IOP Publishing IOP Conf. Series: Materials Science and Engineering 174, 2017, DOI: 10.1088/1757-899X/174/1/012051, <http://iopscience.iop.org/article/10.1088/1757-899X/174/1/012051/pdf>
2. Saulescu, R., **Velicu, R.**, Lăteş, M. Geometric modelling of the contact point between the bushing and sprocket in chain drives IOP Publishing IOP Conf. Series: Materials Science and Engineering 174, 2017, DOI:10.1088/1757-899X/174/1/012049, <http://iopscience.iop.org/article/10.1088/1757-899X/174/1/012049/pdf>
3. Papuc, R., **Velicu, R.**, Brands, C., Schlerege, F. Influence of Speed and Geometry on Guide Friction Contribution in Global Power Loss of a Silent Chain Drive CONAT2016, Ed. Universitatii Transilvania din Brasov, <http://aspekt.unitbv.ro/jspui/bitstream/123456789/2054/1/14.pdf>
4. **Velicu, R.**, Saulescu, R., Jurj, L. Contact point of bush-sprocket tooth depending on pitch differences of bush chain transmissions. 7th International Conference on Advanced Concepts in Mechanical Engineering IOP Publishing IOP Conf. Series: Materials Science and Engineering 147, 2016, DOI: 10.1088/1757-899X/147/1/012039 <http://iopscience.iop.org/article/10.1088/1757-899X/147/1/012039/pdf>
5. **Velicu, R.**, Bobancu, S., Popa, S. Geometry and kinematics of the plate on disk contact type influencing friction measurements on UMT tribometer. 7th International Conference on Advanced Concepts in Mechanical Engineering IOP Publishing IOP Conf. Series: Materials Science and Engineering 147, 2016, DOI:10.1088/1757-899X/147/1/012042 <http://iopscience.iop.org/article/10.1088/1757-899X/147/1/012042/pdf>
6. Lăteş, M., **Velicu, R.**, Papuc, R. Sliding friction study of the oscillating translational motion for steel on PA66 and PA46 type materials. 7th International Conference on Advanced Concepts in Mechanical Engineering IOP Publishing IOP Conf. Series: Materials Science and Engineering 147, 2016, DOI: 10.1088/1757-899X/147/1/012038 <http://iopscience.iop.org/article/10.1088/1757-899X/147/1/012038/pdf>
7. **Velicu, R.**, Lăteş, M. Time depending friction in bearing mountings, Revista: Applied Mechanics and Materials, vol. 823, Current Solutions in Mechanical Engineering (ICOME 2015), Trans Tech Publications Ltd. Switzerland, p. 79-84, ISSN:1662-7482, 2016 www.scientific.net/AMM.823.79
8. **Velicu, R.**, Popa, S. Experimental study of bearing boxes friction depending on load speed and oil temperature, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXV, (XV) Oradea, 2016, p. 5-8, ISSN 1583-0691(e) DOI: 10.15660/AUOFMTE.2016-1.3220 <http://imtuoradea.ro/auo.fmte/files-2016-v1/Radu%20Velicu%20-%20EXPERIMENTAL%20STUDY%20OF%20BEARING%20BOXES%20FRICTION%20DEPENDING%20ON%20LOAD%20SPEED%20AND%20OIL%20TEMPERATURE.pdf>
9. **Velicu, R.**, Jurj, L. Short plane bearings lubrication applied on chain joints, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXV, (XV) Oradea, 2016, p. 19-22, ISSN 1583-0691(e) DOI: 10.15660/AUOFMTE.2016-1.3221 <http://imtuoradea.ro/auo.fmte/files-2016-v1/Radu%20Velicu%20-%20SHORT%20PLANE%20BEARINGS%20LUBRICATION%20APPLIED%20ON%20CHAIN%20JOINTS.pdf>
10. **Velicu, R.**, Butuc, B., Moldovean, G. Load Cases Evaluation for a Gear Based Azimuthal Photovoltaic Tracker under Wind and Weight Action, Renewable Energy vol. II, 1st Edition, p. 134-149, Cambridge Scholars Publishing, ISBN: 978-1-4438-8803-5 https://books.google.ro/books?id=bS75DAAAQBAJ&pg=PA135&lpg=PA135&dq=Load+Cases+Evaluation+for+a+Gear+Based+Azimuthal+Photovoltaic+Tracker&source=bl&ots=KcC1Aeo19H&sig=rSsDRrRkHfVYFIdQ6pYssmy_y8&hl=en&sa=X&ved=0ahUKEwi2y6OOyNrRAhVJQJoKHCsNDe0Q6AEIHzAA#v=onepage&q&f=false
11. **Velicu, R.**, Lăteş, M. On the Measurement Procedure for Testing Friction in Bearing Mountings, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXIV, (XIV) Oradea, 2015, p. 53-58, ISSN 1583-0691(e) DOI: 10.15660/AUOFMTE.2015-1.3137 <http://imtuoradea.ro/auo.fmte/files-2015-v1/Radu%20VELICU%20-%20ON%20THE%20MEASUREMENT%20PROCEDURE%20FOR%20TESTING%20FRICTION%20IN%20BEARING%20BOXES.pdf>
12. Papuc, R., **Velicu, R.**, Lăteş, M. Guide-Chain Contact Pressure Tribological Analysis, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXIV, (XIV) Oradea, 2015, p. 169-174, ISSN 1583-0691(e) <http://imtuoradea.ro/auo.fmte/files-2015-v1/Radu%20PAPUC%20-%20GUIDE-CHAIN%20CONTACT%20PRESSURE%20TRIBOLOGICAL%20ANALYSIS.pdf>

13. Papuc, R., **Velicu, R.**, Lateş, M., Jaliu, C. Geometrico-Static Modeling and Simulation of the Contact between Chain and Guide of a Reference Transmission Revista: Applied Mechanics and Materials, 658 ISSN:1662-7482, pp. 111-116, 2014 <http://www.scientific.net/AMM.658.111>
14. Todi-Eftimie A., **Velicu, R.**, Brands, C., Schlerege, F., Lates, M. T. Friction in bearings of parallel axes transmission Revista: Applied Mechanics and Materials 658, ISSN:1662-7482, pp. 371-374, 2014 <http://www.scientific.net/AMM.658.371>
15. **Velicu, R.**, Lateş, M. Wind load cases in the design of the platform of an azimuthal tracker Revista: Annals Of The Oradea University. Fascicle Of Management And Technological Engineering;1583–0691(e) ISSN:2285-3278, 2014 <http://www.imtuoradea.ro/auo.fmte/files-2014-v1/Velicu%20Radu-WIND%20LOAD%20CASES%20IN%20THE%20DESIGN%20OF%20THE%20PLATFORM%20OF%20AN%20AZIMUTHAL%20TRACKER.pdf>
16. **Velicu, R.** Coaxial speed multipliers for wind turbines. Revista: Annals Of The Oradea University. Fascicle Of Management And Technological Engineering; p. 440-442, ISSN: 1583–0691(e) 2013 <http://imtuoradea.ro/auo.fmte/files-2013-v1/Velicu%20Radu%201.pdf>
17. **Velicu, R.**, Lates, M.T., Papuc, R. Friction test ball on flat during running-in period on UMT tribometer In Annals of the Oradea University 2012, Fascicle of Management and Technological Engineering, vol XI(XXI) 2012, nr. 1, p. 2.142-2.147, ISSN 1583–0691(e) <http://imtuoradea.ro/auo.fmte/files-2012-v1/MECANICA/Velicu%20Radu%20L2.pdf>
18. **Velicu, R.**, Vişa, I., Moldovean, G., Butuc, B. Profile Shift Coefficients and Thickness Modification Coefficients for Straight Bevel Gears under Static Tooth Root Stress used on PV Tracking Systems. 13th World Congress in Mechanism and Machine Science (IFTOMM), Guanajuato, México, 19-25 June, 2011, ISBN 978-607-441-131-7 <http://www.diciva.ugto.mx/directorio/iftomm/Articles%20in%20Final%20Form/A9-411.pdf>
19. **Velicu, R.**, Moldovean, G., Lates, M., Gavrilă, C. The experience of Transilvania University of Braşov in the design of PV tracking systems revista: TEHNOLOGIA INOVATIVĂ – Revista „Construcţia de maşini” nr. 2/2011, p. 28-34 ISSN: 0573–7419, 2011 <http://www.ictcm.ro/journal/journal/Electronic%20form%20TI%202011.pdf>
20. **Velicu, R.**, Moldovean, G., Scaletchi, I., Butuc, B. Wind loads on an azimuthal photovoltaic platform. Experimental study. International Conference on Renewable Energies and Power Quality (ICREPQ'10), 2010 ISSN:2172-038X <http://www.icrepq.com/icrepq'10/347-Velicu.pdf>