

PERSONAL INFORMATION

Rusu (married Şerdean) Maria Florina

	[Redacted]
	[Redacted]
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JOB APPLIED FOR POSITION

Associate professor / Position 16 / Department of Mechanical Systems Engineering, Technical University of Cluj-Napoca

WORK EXPERIENCE

2015-present Lecturer

Technical University of Cluj-Napoca, Romania
Faculty of Machine Building,
Department of Mechanical Systems Engineering
▪ Subjects: Mechanics I, II; Computer Programming I, II

2012-present Research Assistant

MiNaS Laboratory
Technical University of Cluj-Napoca, Romania
Faculty of Machine Building,
Department of Mechanical Systems Engineering

2013-2015 Assistant Professor

Technical University of Cluj-Napoca, Romania
Faculty of Machine Building,
Department of Mechanical Systems Engineering
▪ Subjects: Mechanics I, II; Computer Programming I, II

2011-2014 Mathematics Teacher

Theoretical Christian HighSchool "Pro Deo"
Str. Alexandru Vaida Voievod nr. 55A, Cluj-Napoca, jud. Cluj, România

EDUCATION AND TRAINING

2011-2014 **PhD in Industrial Engineering**
Technical University of Cluj-Napoca, Romania
Domain: Industrial Engineering
Title: Optimizations under uncertainty with applications in rolling bearing industry

2008-2011 **Bachelor's Degree in Economics**
Babes-Bolyai University, Cluj-Napoca, Romania

Faculty of Economics and Business Administration
 Specialization: Accounting and Management Informatics

- Accounting
- Management Informatics
- Mathematics applied in Economics
- Statistics
- Marketing
- Finances

2008-2010 **Master's Degree in Data Bases**

Babes-Bolyai University, Cluj-Napoca, Romania
 Faculty of Mathematics and Computer Science

- Databases
- Integrated Communications Networks
- Distributed Systems
- Computer Networking
- Web programming

2005-2008 **Bachelor's Degree in Mathematics**

Babes-Bolyai University, Cluj-Napoca, Romania
 Faculty of Mathematics and Computer Science

- Mathematics
- Assembly programming
- Computer programming

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	C1	C1	B2
French	B1	B1	B1	A2	A2

Communication skills • good communication skills gained through my experience as a teacher, assistant professor and lecturer

Organizational / managerial skills • I coordinated a team of volunteers from a humanitarian foundation while helping some children in need
 • I coordinated the development of an E-learning Platform while studying to obtain a Bachelor's Degree
 • I have submitted proposals for research projects and I was the project director of an internal project within TUCN

Job-related skills • identification of learning styles and their implications upon teaching-learning-evaluation strategies
 • implementation of teaching-learning plans centered on the student
 • abilities of writing scientific articles
 • abilities of writing research project proposals

Computer skills • Programming in MATLAB, C++, C#, .NET, Java
 • Good Microsoft Office™ and database knowledge
 • Web design (Html, Css, XML, JavaScript, PHP)

Other skills ▪ Playing the flute

Driving license ▪ B

ADDITIONAL INFORMATION

Honours and awards ▪ Park AFM Scholarship Award – 2018 ([Park AFM Scholarship Awards - Florina Maria ȘERDEAN \(parksystems.com\)](http://parksystems.com))

▪ Best paper from the section award at MTeM 2017 conference

▪ Member of the organizing Committee of the ROTRIB'19 International Conference <https://minas.utcluj.ro/rotrib2019-committees.html>

▪ Reviewer for Sustainability, Technologies, Sensors and Mathematics journals

▪ Topic Editor at Micromachines journal - Q2 [Micromachines \(mdpi.com\)](http://micromachines.mdpi.com)

▪ Guest Editor for the Special Issue "Advances in MEMS: Theory and Applications", Micromachines - Q2 [Micromachines | Special Issue : Advances in MEMS Theory and Applications \(mdpi.com\)](http://micromachines.mdpi.com)

Publications ▪ Published books: 3

▪ Books chapters: 5

▪ Papers indexed WOS and BDI: over 50

▪ Papers published in WOS and BDI journals or presented at international conferences (10 relevant papers):

1. **Rusu F.**, Pustan M., Birleanu C., Muller R., Voicu R., Baracu A., Analysis of the surface effects on adhesion in MEMS structures, Applied Surface Science, 358, 2015, 634-640 [ISI FI 3.15]
2. **Serdean F.**, Pustan M., Dudescu C., Birleanu C., Serdean M. (2020) Analysis of the Thermoelastic Damping Effect in Electrostatically Actuated MEMS Resonators, Mathematics 2020, 8(7), 1124 [ISI FI 2.258]
3. Tudose L., **Rusu F.**, Tudose C., Optimal design under uncertainty of bearing arrangements, Mechanism and Machine Theory, 98, 2016, pp. 164-179 [ISI FI 2.577]
4. Crăciun, I., Popa, D., **Serdean, F.**, Tudose, L., On Approximate Aesthetic Curves. Symmetry 2020, 12, 1394 [ISI FI 2.713]
5. Birleanu C., Pustan M., **Serdean F.**, Merie V., AFM Nanotribomechanical Characterization of Thin Films for MEMS Applications, Micromachines, 2022, 13(1), 23 [ISI FI 2.891]
6. Simion HARAGAS, Ovidiu BUIGA, Claudiu POPA, **Florina RUSU**, Demolding moment calculation for injected parts with internal saw thread, Materiale Plastice, Vol. 53, pp. 378-381, 2016, ISSN 0025-5289 [ISI FI 0.778]
7. Bocanet Vlad I.; Brown Ken; Uukkivi Anne; Soares Filomena; Lopes Ana Paula; Cellmer Anna; Serrat Carles; Feniser Cristina; **Serdean Florina M.**; Safiulina Elena; Kelly Gerald; Cymerman Joanna; Kierkosz Igor; Sushch Volodymyr; Latonina Marina; Labanova Oksana; Bruguera M. Montserrat; Pantazi Chara; Estela M. Rosa, Change in Gap Perception within Current Practices in Assessing Students Learning Mathematics, SUSTAINABILITY, Volume: 13 Issue: 8, Article Number: 4495, 2021 [ISI FI 3.251]

8. Oana-Adriana Crişan, Corina Bîrleanu, Horea-George Crişan, Marius Pustan, Violeta Merie and **Florina Şerdean**, Eco-Innovation Analyses in the Management of Drinking Water Provided by the Main Suppliers in Romania, *Int. J. Environ. Res. Public Health* 2021, 18(12), 6232. [ISI FI 3.39]
9. Crişan O.A., Pustan M. S., Bîrleanu C. J., Tiuc A.E., Sur I., Crişan H.G., **Şerdean M.F.**, Flămînd L., Rusu T., Qualitative analysis of filters for the mechanical nanofiltration of household drinking water, *Studia UBB Chemia*, LXV, 1, 2020 (p. 253-266) [ISI FI 0.447]
10. **Florina Şerdean**, Marius Pustan, Violeta Merie, Corina Bîrleanu, Horea Crişan, Analysis of humidity influence on adhesion and tribological properties of niobium nitride thin films, *IOP Conf. Series: Materials Science and Engineering* 499(1): 012006, 2019, DOI:10.1088/1757-899X/499/1/012006, NANOSTRUC 2018 [ISI Proceedings]

Research projects

- Nanomechanical and nanotribological characterizations for reliability design of MEMS resonators, PN-II-RU-TE-2011-3-0106/2011-2013, project coordinator Prof. PhD. Eng. Pustan Marius, (project member)
- Advanced design of micromembranes with multiple degrees of freedom for optical MEMS applications, PN-II-RU-TE- 2014-4-1271, project coordinator Prof. PhD. Eng. Pustan Marius, (project member)
- Elaborarea și caracterizarea structurală, tribomecanică și optică a unor filme subțiri de nitruri pentru aplicații MEMS, type C.I.5/1.2/2015, project coordinator Assist. PhD. Eng. Merie Violeta, (project member)
- Elaborarea și nano-caracterizarea unor filme subțiri de nitru de niobiu pentru aplicații MEMS (NioMEMS), contract no. 2003/12.07.2017, Technical University of Cluj-Napoca, Romania, code CI2017_CM_1, project coordinator Lect. PhD. Math. Şerdean Maria Florina
- ERASMUS+ project Mathematics on-line learning model in engineering education – EngiMath, 1 November 2018 - 31 August 2021, Lab: Ken Brown's Lab, (project member)
- ROSE Project, Grant nr. 29/SGU/NC/I from 17.10.2017, project coordinator Prof. PhD.Eng. Bacali Laura, (project member)

Conferences

- 16 participations at international conferences