CURRICULUM VITAE EUROPASS



PERSONAL INFORMATION

Name and surname	**BÎRLEANU V. CORINA** **PhD Supervisor in Mechanical Engineering, Technical University of Cluj-Napoca (UTCN), Romania**
Phone/Fax	0264 202787
E-mail	Corina.Birleanu@omt.utcluj.ro

CURRENT PROFESSION/OCCUPATION

Data	**2020 - present**
Work place	Department of Mechanical Systems Engineering; Faculty of Industrial Engineering, Robotics and Production Management, Technical University of Cluj-Napoca
Occupation or post held	**University Professor, Head of Tribology Laboratory, coordinator / responsible of the Machine Elements and Tribology group**,
Main activity	Management, teaching and research activities
PhD supervisor	Yes
Domain	Mechanical Engineering since 2010
Date of employment in UTCN as a teaching staff member	1992

PROFESSIONAL EXPERIENCE

Period	**2020.09 - 2024.08**
Position or post held	**University Professor, Dean of the Faculty of Industrial Engineering, Robotics and Production Management**
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandumului Street, RO-400114, Cluj-Napoca
Main activity	Management, teaching and research activities
Type of activity	Education and research
Period	**2020.02 - 2020.09**
Position or post held	**University Professor, Director** of the Department of Mechanical Systems Engineering, ERASMUS Coordinator of the Faculty of Mechanical Engineering
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandumului Street, RO-400114, Cluj-Napoca
Main activity	Management, teaching and research activities
Type of activity	Education and research
Period	**2016 - 2020**
Position or post held	**University professor, Vice Dean of Internationalization - Faculty of Manufacturing Engineering and ERASMUS coordinator of the faculty**
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandumului Street, RO-400114, Cluj-Napoca
Main activity	Management, teaching and research activities
Type of activity	Education and research

Period	**2012 - 2016**
Position or post held	**University Professor, Chancellor of the University Senate**
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandumului Street, RO-400114, Cluj-Napoca
Main activity	Management, teaching and research activities
Type of activity	Education and research
Period	**2007 - prezent**
Position or post held	Professor, Department of Mechanical Systems Engineering
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandum Street, RO-400114, Cluj-Napoca
Main activity	Teaching and research activities
Type of activity	Education and research

Period	**2001 - 2007**
Position or post held	Associate Professor, Department of Machine Elements and Tribology
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandum Street, RO-400114, Cluj-Napoca
Main activity	Teaching and research activities
Type of activity	Education and research

Period	**1997 - 2001**
Position or post held	Senior Lecturer, Department of Machine Elements and Tribology
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandum Street, RO-400114, Cluj-Napoca
Main activity	Teaching and research activities
Type of activity	Education and research

Period	**1992 - 1997**
Position or post held	Assistant Professor, Department of Machine Elements and Tribology
Name and address of employer	Technical University of Cluj-Napoca, 28 Memorandum Street, RO-400114, Cluj-Napoca
Main activity	Teaching and research activities
Type of activity	Education and research

Period	**1986 - 1992**
Position or post held	Design engineer (with 2 years internship at IMUAS - Baia-Mare)
Name and address of employer	Design and Research Institute C.C.S.I.T MIU Bucharest, Cluj-Napoca branch
Main activity	Design and research activities
Type of activity	Prototype design

EDUCATION AND QUALIFICATION STUDIES

Year	**1986**
Name and type of organization	Polytechnic Institute of Cluj-Napoca, Faculty of Mechanics
Title obtained	Mechanical Engineer
Specialization	Machine Building Technology
Year	**1992 - 1998**
Name and type of organization	Technical University of Cluj-Napoca, 28 Memorandum Street, RO-400114, Cluj-Napoca
Title obtained	Doctor of Science
Specialization	Research in Tribology and Mechanical Engineering, Theoretical and experimental research regarding the behavior of advanced ceramic tribosystems of alumina subjected to contact pressures.
Year	**1994**
Name and type of organization	Institut fur Werkzeugmaschinen und Fertigungstechnik, TechnischenUniversitat

	„Carolo Wilhelmina" zu Braunschweig, Germania
Title obtained	Visiting researcher
Specialization	Modern methods for superfinishing advanced ceramic materials
Year	**1996**
Name and type of organization	Institut fur Werkzeugmaschinen und Fertigungstechnik, TechnischenUniversitat „ Carolo Wilhelmina" zu Braunschweig, Germania
Title obtained	Visiting researcher
Specialization	Tribology of advanced ceramics
Year	**2000**
Name and type of organization	Company BBL Equipment BV Olanda,
Title obtained	Visiting researcher
Specialization	Tribological Behaviour of Advanced Ceramics Material
Year	**2003**
Name and type of organization	Charles University, Faculty of Mathematics and Physics, Praha, Czech Republic
Title obtained	Ceepus Programm
Specialization	Mathematical modeling
Year	**2004**
Name and type of organization	OMEPS Italia
Title obtained	Visiting researcher
Specialization	Tribology of advanced ceramics
Year	**2005**
Name and type of organization	Technical University of Cluj-Napoca
Title obtained	Postgraduate diploma series E no. 00002809 /12.09.2005
Specialization	Graduation certificate in the postgraduate speciality: Use of Computer in Design Technology and Constructive
Year	**2007**
Name and type of organization	OMEPS Italy
Title obtained	Visiting researcher
Specialization	Design and research activities
Year	**2016**
Name and type of organization	National Institute for Research and Development in Micro technology Bucharest, ITM
Title obtained	Training
Specialization	From Sensors to Smart Sensing
Year	**2017**
Name and type of organization	Schaefer Southeast Europe
Title obtained	Training
Specialization	Secrets of the Atomic Force Microscope
Year	**2017**
Name and type of organization	Technical University of Cluj-Napoca
Title obtained	Training
Specialization	English as Medium of Instruction for Teaching Staff
Year	**2023**
Name and type of organization	University of Stuttgart
Title obtained	Visiting Professor
Specialization	University management and research activities
Year	**2024**
Name and type of organization	University of Salerno
Title obtained	Visiting Professor ,
Specialization	Tribology and Industry
Year	**2024**
Name and type of organization	University of Applied Science, Graz, Austria
Title obtained	Visiting Professor
Specialization	Academic management and research activities

Year	**2024**
Name and type of organization	Oxigen Agency, Bucharest, Romania
Title obtained	Training
Specialization	Academic Skills for Enhancing Success

TEACHING ACTIVITY
PROFESSIONAL EXPERIENCE

COURSES	**STUDY PROGRAMME**	**Year**
Machine Elements I; Machine Elements I;	Bachelor: Machine Building Technology Romanian and English teaching line, Industrial Design	II
Machine Elements II; Machine Elements II;	Bachelor: Machine Building Technology Romanian and English teaching line, Industrial Design	III
Engineering and Management of Technical Systems (IMST)	Master: Technical Project Management	I
Tribomechanical behavior of materials	Master: Digital Manufacturing	

SCIENTIFIC ACTIVITY

RESEARCH AREAS

I. TRIBOLOGY AND NANOSYSTEMS

1. Robust design of vibration microsensors (MEMS)
2. Theoretical and practical aspects of tribomechanical behaviour of materials at the macro-micro-nano scale.
3. Theoretical and practical aspects of the tribology of advanced alumina (Al2O3) ceramic sliding bearings.
4. Mathematical modelling of fundamental tribological processes
5. Theoretical and experimental investigation of the behaviour of ceramic tribosystems under contact stresses
6. Tribomechanical characterization of composite materials

II. MACHINE COMPONENTS AND MECHANICAL TRANSMISSIONS

PERSONAL SKILLS AND COMPETENCES

Mother tongue: Romanian

Other languages: English

Self-assessment European level (*) Language

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
English									
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user

(*)Common European Framework of Reference for Languages

Social skills and competences: Team skills, communicative, supportive, honest, honest, fair, responsible, dynamic, empathic,
Coordination of scientific research at the tribology research laboratory, skills acquired through the coordination of national/international research projects, coordination of doctoral, post-doctoral work

Organisational skills and competences: Good manager and organizer, skills in education and research, commitment to problem solving, ability to meet deadlines, ability to synthesize,

Technical skills and competences: Skill in modeling micro and nano mechanical systems, tenacity in performing many

experimental tests
Writing many scientific papers in ISI and BDI journals, research projects
Participation in numerous international conferences
Organization and coordination of international conferences and workshops

Computer skills and competences

Skills in 2D/3D numerical modeling, MS Office, Matlab, Matlab, MathCAD, AutoCAD, Corel DRAW, etc. easily adapting to new technologies (software).

Driving licence

category B since 1991

Other skills and competences

Coordinator of the Machine Organs and Tribology group - 2011 - present
Head of the Tribology Laboratory
Member of the University Senate
Member of the Human Resources Management Commission of the UTCN Senate
Member of the Faculty Council
Head of the Management and Internal Communication Commission of the Faculty Council
Member of the undergraduate committees
Member of the PhD Committees
Member of doctoral student tutoring committees;
Member in committees/reviewer of ISI indexed international journals/conferences.
Member in committees/reviewer of international journals/conferences indexed BDI
Member of the Industrial and Mechanical Engineering Consortium - UPB Bucharest
Organizer and member of scientific committees and organizing committees for international scientific events (SNOM XIX - 1999, MTM 2004, MTM 2017, SNOM XXVII - 2007, ADEMS 2007, 2009, 2011, 2013 ICMSAV XXXVI, XXXVIII, SNOM 2012, 2013, 2014, 2015, 2016. 2019, ROTRIB 2017, ROTRIB 2019, ROTRIB 2024, 5th International Tribology Symposium of IFToMM 2024, etc)
Member of the scientific committee International Exploratory Workshop - Nanomechanics and nanotribology for reliability design of micro-and nano systems, project PN-II-ID-ID-WE-2012-2012-4-063/2012 nr.81 / 26.09.2012
Founding member of MINAS (MicroNanoSystems) laboratory
Member of professional associations AGIR, ART, ARoTMM, ROAMET, etc.
President of ART Cluj-Napoca branch.
Vice-President of ROAMET Romania
Chairman and Co-Chairman: ADEMS 2011, ADEMS 2013, ICMSAV XXXVI – 2012, ROTRIB 2019 etc
Visiting Professor, HAMK University Finland, Stuttgart University Germany, Salerno University Italy, University of Applied Science, Graz Austria etc.

Special awards

Best paper award, 39th International Semiconductor Conference, CAS 2016
Diploma of excellence and gold medal with special mention, Proinvent 2017

Best application paper award, International Conference on Manipulation, Automation and Robotics at small scale, October 2023, Abu-Dhabi UAE, https://marss-conference.org/awards/best-paper-awards/best-application-paper-award/
Awarding Research Results - Articles - UEFISCDI ISI Articles Competition, Red and yellow area, every year for the last 10 years.

PUBLICATIONS (217)

Total number of books, book chapters, monographs: 25

Relevant publications:

1. Haragâş S., Pop D., Bîrleanu C., Pustan M., Buiga O., Crişan H., Popa C., Crăciun Ş. **(2024)** - Mecanisme şurub-piuliţă, Ed. UTPress, 2024

2. Crişan H., Crişan O., Bîrleanu C., Pustan M. **(2024)** - Testarea sistemelor filtrante actuale şi dezvoltarea unei soluţii ecoinovative cu scopul creşterii calităţii apei potabile, Ed. UTPress,

3. Haragâş S., Pop D., Bîrleanu C., Pustan M., Buiga O., Crişan H., Popa C. **(2023)** - One-Stage Gear Reducers, Ed. UTPress, 2023

4. Haragâş S., Pop D., Bîrleanu C., Pustan M., Buiga O., Crişan H., Popa C. **(2023)** - Reductoare cu o treaptă, Ed. UTPress, 2023

5. Birleanu C., Pustan M., Cosma C., Cioaza M., Popa F. **(2022)** Case Study: Wear Behavior of Different Seal Materials under Dry-Lubricated Conditions, Industrial Tribology, CRC Press, eBook ISBN9781003243205

6. Birleanu C., Haragas S., Pustan M., Buiga O., Crisan H., Popa C., Craciun S., Serdean F.

(2021) –Organe de Masini si Mecanisme, Lucrari de laborator, UTPRESS, Cluj-Napoca, ISBN 978-606-737-503-9

7. Birleanu C., Pustan M., Belcin O., Crisan H. **(2020)** - Organe de Masini,, Culegere de probleme rezolvate si propuse, partea I, UTPRESS, Cluj-Napoca, ISBN 978-606-737-484-1

8. Pustan M., Dudescu C., Birleanu C., Rusu F. **(2017)** Nanocharacterization of the Mechanical and Tribological Behavior of MEMS Micromembranes, Book chapter in Nanomechanics, book edited by Intech, ISBN 978-953-51-3182-3, Print ISBN 978-953-51-3181-6, Published: 2017 under CC BY 3.0 license.

9. Belcin O, Birleanu C., Pustan M. **(2015)** Machine Elements. Structural Elements in Design; Ed. Rispoprint 2015, 585 pp, Cluj-Napoca.

10. Pustan M., Birleanu C., Dudescu, C., Golinval J.-C. **(2014)** Dynamical behavior of smart mems in industrial applications, Book chapter in Smart sensors and MEMS: Intelligent devices and microsystems for industrial applications, Woodhead Publishing Series in Electronic and Optical Materials No. 51, ISBN 0 85709 502 1.

Total number of scientific papers published: (over 200 indexed papers - more than 95 ISI indexed papers in WOS Thomson-Reuters,

80 in journals and conference proceedings indexed in International Databases (Scopus, IEEEXplore, Elsevier Science Direct, etc.),

22 - in refereed journals and conference proceedings;

Excerpts (relevant publications in ISI journals)

1. Birleanu, C., Udroiu, R., Cioaza, M., Bere, P., & Pustan, M. **(2025).** Tribomechanical Analysis and Performance Optimization of Sustainable Basalt Fiber Polymer Composites for Engineering Applications. Technologies, 13(6), 249

2. Birleanu, C., Udroiu, R., Cioaza, M., Bere, P., & Pustan, M. **(2025).** Tribomechanical Analysis and Performance Optimization of Sustainable Basalt Fiber Polymer Composites for Engineering Applications. Technologies, 13(6), 249

3. Birleanu, C., Pustan, M., Cioaza, M., Bere, P., Contiu, G., Dudescu, M. C., & Filip, D. **(2024).** Tribo-Mechanical Investigation of Glass Fiber Reinforced Polymer Composites under Dry Conditions. Polymers, 15(12), 2733.

4. Birleanu, C., Cioaza, M., Serdean, F., Pustan, M., Bere, P., & Contiu, G. **(2023).** Tribological Investigation of Glass Fiber Reinforced Polymer Composites against 52100 Chrome Alloy Steel Based on ELECTRE Decision-Making Method. Polymers, 16(1), 62.

5. Crişan O., Crişan H., Bîrleanu C, Pustan M., Şerdean F. **(2023)** - Microscopic Characterization of Residual Particles From Filtered Drinking Water and Determination of Statistical Indicators Regarding Identified Deposits, Frontiers in Earth Science, 11, 1196513.

6. Birleanu, C., Pustan, M., Pop, G., Cioaza, M., Popa, F., Lazarescu, L., & Contiu, G. **(2022).** Experimental Investigation of the Tribological Behaviors of Carbon Fiber Reinforced Polymer Composites under Boundary Lubrication. Polymers, 14(18), 3716.

7. Cristea A., Pustan M., Bîrleanu C., Dudescu C., Floare C., Tripon A., Banciu H. **(2021)** - Mechanical Evaluation of Solvent Casted Poly (3-hydroxybutyrate) Films Derived from the Storage Polyesters Produced by Halomonas elongata DSM 2581T, Journal of Polymers and the Environment, Springer

8. Crişan O., Bîrleanu C, Crişan H., Pustan M., Merie M., Şerdean F. **(2021)** - Eco-Innovation Analyses in the Management of Drinking Water Provided by the Main Suppliers in Romania, International Journal of Environmental Research and Public Health, Vol. 18. Issue 12, pp. 6232.

9. 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; https://doi.org/10.3390/math8071124

10. Crisan OA., Pustan M., Birleanu C., Tiuc A., Sur O., Crisan H.G., Serdean F., Flamind L., Rusu T. **(2020)** Qualitative analysis of filters for the mechanical nanofiltration of household drinking water, STUDIA UBB CHEMIA, LXV, 1, 2020 (p. 253-266), DOI:10.24193/subbchem.2020.1.20

11. Birleanu C., Pustan M., Merie V., Crisan H.G. **(2019)** Effect of film thickness on the tribo-mechanical properties of chrome-gold thin films, Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information, 20/2, 174-183.

12. Baracu A., Muller R., Voicu R., Tibeica C., Dinescu A., Pustan M., Birleanu C, **(2019)**

Microfabrication and experimental characterization of an Out-of-Plane MEMS switch, Romanian Journal for Information Science and Technology (ROMJIST), vol 22(2).

13. Birleanu C., Pustan M., Rusu F., Dudescu C., Muller R., Baracu A. **(2018)** Relative humidity influence on adhesion effect in MEMS flexible application, Journal Microsystem Technologies, Micro- and Nanosystems Information Storage and Processing Systems, ISSN: 0946-7076 (Print) 1432-1858 (Online)

14. Pustan M., Dudescu C., Birleanu C. **(2017)** Nanocharacterization of the Adhesion Effect and Bending Stiffness in Optical MEMS; Journal of Applied Surface Science; doi.org/10.1016/j.apsusc. 2016.12.021

15. Pustan M., Chiorean R., Birleanu C., Dudescu C., Muller R., Baracu A., Voicu R. **(2017)** Reliability design of thermally actuated MEMS switches based on V-shape beams, Microsystem Technologies; vol. 23, nr. 9, ISSN: 0946-7076, DOI: 10.1007/s00542-015-2789-8, pp. 3863-3871.

16. Birleanu C., Pustan M., Müller R., Dudescu C., Merie V., Voicu R., Baracu A. **(2016)** Experimental investigation by atomic force microscopy on mechanical and tribological properties of thin films, International Journal of Materials Research, 107 (2016) 5, pp. 429 – 438.

17. Pustan M., Dudescu C., Birleanu C. **(2015)** The effect of sensing area position on the mechanical response of mass-detecting cantilever sensor, Microsystems Technologies, Volume 21, Issue 9, 28 April 2015, Pages 1827-1834.

18. Pustan M., Dudescu C., Birleanu C. **(2015)** Nanomechanical and nanotribological characterizationof a MEMS micromembrane supported by two folded hinges, Analog Integrated Circuits and Signal Processing, ISSN: 0925-1030 (Print) 1573-1979 (Online), Volume 82, Issue 3, 2015, Pages 627-635, DOI 10.1007/s10470-014-0482-y

19. Voicu R., Pustan M., Birleanu C., Baracu A., Muller R. **(2015)** Mechanical and tribological properties of thin films under changes of temperature conditions, Surface and Coatings Technology, doi:10.1016/j.surfcoat.2015.01.026 (in press)

20. Rusu F., Pustan M., Birleanu C., Muller R., Voicu R., Baracu A. **(2015)** Analysis of the surface effects on adhesion in MEMS structures, J. Applied Surface Science, September 2015 (In Press), doi:10.1016/j.apsusc.2015.09.052

21. Birleanu C., Pustan M. **(2015)** Analysis of the adhesion effect in RF-MEMS switches using atomic force microscope, Analog Integrated Circuits and Signal Processing, ISSN: 0925-1030 (Print) 1573-1979 (Online), Volume 82, Issue 3, 2015, Pages 571-581, DOI 10.1007/s10470-014-0481-z

Papers published at international and national conferences

(excerpt relevant papers)

1. Cioaza M., Birleanu C, Pustan M., Bere P. **(2024)** - Evaluation the tribological properties of different Fiber Reinforced Polymers", 5th International Tribology Symposium of IFToMM, 6-8 mai 2024, Salerno, Italy, Proceedings of ITS-IFToMM 2024. ITS-IFToMM 2024. Mechanisms and Machine Science, vol 160. Springer, Cham. https://doi.org/10.1007/978-3-031-62616-6_9

2. Pustan M., Birleanu C., Cioaza M., Pop F. **(2024)** - Nanotribological Characterization of Dental Restorative Materials, The 15th International Conference of Tribology, ROTRIB 202, Bucuresti

3. Voicu R., Tibeica C., Pustan M., Birleanu C. **(2023)** – Study of two microgrippers with integrated piezoresistive force/displacement sensors, International Conference on Manipulation, Automation and Robotics at small scale, 09-13 October 2023, Abu-Dhabi UAE, https://marss-conference.org/awards/best-paper-awards/best-application-paper-award/

4. Voicu R., Tibeica C., Pustan M., Birleanu C., Muller R. **(2021)** - A Polymeric SU-8 Micro-Twezer with In-Plane Double Action Based on Chevron Actuators, 2021 21st International Conference on Solid-State Sensors, Actuators and Microsystems (Transducers), IEEE

5. Birleanu C., Pustan M., Cosma C., Merie V., Dranda O. **(2020)** Tribological behaviour of sealing materials, The 14th International Conference on Tribology, ROTRIB 2019, IOP conference series: materials science and engineering, Vol. 724, No. 1, IOP Publishing

6. Pustan M., Birleanu C., Merie V., Garabagiu S., Marconi D., Barbu-Tudoran L., Voicu R. **(2019)** Thermal effect on mechanical properties of titanium oxide thin films for thermoelectric applications, Symposium on Design, Test, Integration and Packaging of MEMS/MOEMS, DTIP 2019 – Editor IEEE

7. Birleanu C., Pustan M., Merie V., Pop M.S. **(2018)** Temperature Effect on Tribo-Mechanical Properties of Dental Materials, 6th International Conference on Advancements of Medicine and Health Care through Technology; 17–20 October 2018, Cluj-Napoca, Romania, pp. 321-327, Editor Springer, Singapore

8. Birleanu C., Pustan M., Dudescu C., Merie V. **(2017)** Analysis of the bending stiffness and adhesion effect in RF-MEMS structures, IOP Conference Series: Materials Science and Engineering, 13th Conference on Tribology, Galati, Romania, ISBN: 1757-899X, vol 174, pp. 1-12.

9. Birleanu C, Pustan M., Voicu R., Serdean F., Merie V. **(2017)** Humidity influence on the adhesion of SU-8 polymer from MEMS applications, MATEC Web Conference, Volume 137, 2017, Modern Technologies in Manufacturing (MTeM 2017 – AMaTUC, doi.org/10.1051/matecconf/201713708002.

PROJECTS, RESEARCH CONTRACTS
(22 - MEMBER OR PROJECT MANAGER)

Relevant projects

1. Proiect: Master in Green and Smart Tribology, GSTrib, Action - GSTrib - 101241089 - GAP-101241089 - ERASMUS-EDU-2025-EMJM-DESIGN, 2025-2026, https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/myarea/projects) (Responsabil UTCN)

2. Programul de Cooperare Europeana CA23155 - A PAN-EUROPEAN NETWORK OF OCEAN TRIBOLOGY (OTC), 2024-2028 (membru). https://www.cost.eu/actions/CA23155/#tabs+Name:Working%20Groups%20and%20Membership

3. POCU/993/6/13/153437 (2022-2023) - Proiect Rețea de excelență în cercetare și inovare aplicativă pentru programele de studii doctorale și postdoctorale InoHubDoc– coordonator activitati partener 1 – UTCN (tutore pentru 6 doctoranzi si 1 postdoc).

4. Project STAR 2017-2019 - Materiale cu performanță înaltă pentru generația următoare de generatoare termoelectrice spațiale (MatSpaceTEG), – team member, and senior researcher.

5. Project: PN-II-RU-TE-2014-4-1271 / 2015-2017 - Advanced design of micro membranes with multiple degrees of freedom for optical MEMS applications (multiDOF) – team member, senior researcher.

6. Project – ERA.NET nr. 22 / 2016 – 2018 - Microgrippers as end-effectors with integrated sensors for microrobotic applications (ROBOGRIP) –senior researcher.

7. Project - PN-III-P2-2.1-PED-2016-1727, PED 33 / 2017-2019 - Manufacture of a MEMS switch with robust metallic contact (ROMEC), team member, senior researcher.

8. Project: PN-II-RU-TE-2011-3-0106 / 2011-2013 - Nanomechanical and nanotribological characterizations for reliability design of MEMS resonators – team member, senior researcher

9. Project – ERA.NET- 2012 – 2015 - Modelare 3D pentru proiectarea robustica a microsenzorilor de vibratie (3SMVIB) - team member, senior researcher

10. Project STAR 2012-2015 - Reliability design of RF-MEMS switches for space applications, The Research, Development and Innovation Space Technology and Advanced Research – STAR, – team member, senior researcher

11. Project STAR 2013-2016 - Tribomechanical Characterization of MEMS Materials for Space Applications under harsh environments, Development and Innovation Space Technology and Advanced Research – STAR, – project manager.

12. Project nr. 37/2009 - Studies and research on advanced ceramic materials testing at the macro scale and nano tribological - project manager

13. Project nr.24 / 2008 - CNCSIS 1569 (2008), Tribological design (Tribodesignul) advanced ceramic media with cracks subject to contact pressure - project manager,

14. Project nr. 71-048 / 2007 - 2010, Innovative technologies for obtaining composite materials with tailored properties of sliding bearings for the automotive industry, - responsible TUCN.

Summary: Experienced professor and PhD supervisor in Mechanical Engineering with over 30 years in academia, 95+ ISI-indexed papers (Q1/Q2), and leadership roles in international research projects (Erasmus+, COST, STAR, etc). Specialized in tribology, micro/nanosystems, and composite materials.

06.11.2025, Cluj-Napoca

Prof. Dr. Eng. Corina BÎRLEANU

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