

## PERSONAL INFORMATION

**Mihaela Buciumeanu**

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## WORK EXPERIENCE

2015 to present

**Full professor with habilitation**

"Dunarea de Jos" University of Galati, Faculty of Engineering, Department of Mechanical Engineering, [www.ugal.ro](http://www.ugal.ro)

- Education and research,

- Tribology, Conveyor Systems in industrial processes, Dental Materials (course), Dental restorative materials (course)

[Higher Education](#)

2013 - 2015

**Associate Professor**

"Dunarea de Jos" University of Galati, Cross-Border Faculty, Department of General Sciences, [www.ugal.ro](http://www.ugal.ro)

- Education and research,

- Design of Industrial Process Equipments, Rheology (course and course applications) (course and course applications)

[Higher Education](#)

2011 - 2013

**Lecturer**

"Dunarea de Jos" University of Galati, Faculty of Engineering, Department of Mechanical Engineering, [www.ugal.ro](http://www.ugal.ro)

- Education and research,

- Machine Elements, Design of Industrial Process Equipments, Corrosion of industrial equipments, Rheology, Conveyor Systems in industrial processes (course and course applications)

[Higher Education](#)

2004 - 2011

**Assistant Professor**

"Dunarea de Jos" University of Galati, Faculty of Engineering, Department of Mechanical Engineering, [www.ugal.ro](http://www.ugal.ro)

- Education and research,

- Machine Elements, Process Modelling and Simulation for food industry, Design of Industrial Process Equipments, Conveyor Systems in industrial processes (course applications)

[Higher Education](#)

2002 - 2004

**Teaching Assistant**

"Dunarea de Jos" University of Galati, Faculty of Engineering, Department of Mechanical Engineering, [www.ugal.ro](http://www.ugal.ro)

Machine Elements, CAD (AutoCAD and MathCAD), Process Modelling and Simulation for food industry (course applications).

[Higher Education](#)

## EDUCATION AND TRAINING

January 2017

**Habilitation in Mechanical Engineering**

"Dunarea de Jos" University of Galati

Tribological behaviour of composites obtained by powder metallurgy

2005-2009

**Ph.D. in Mechanical Engineering**

University of Minho, Guimaraes, Portugal

Prediction of fretting fatigue life



1999-2000 **Master Diploma**  
 Faculty of Food Industry, Aquaculture and Fishing, "Dunarea de Jos" University of Galati  
 Process Modelling and Simulation of Food Industry

1994-1999 **M.S./B.S. Diploma**  
 Faculty of Mechanical Engineering, "Dunarea de Jos" University of Galati  
 Equipments for food industry

Mother tongue Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English language	B2	B2	B2	B2	B2
Portuguese language	B2	B2	B2	B2	A2

Communication skills ▪ Good communication skills gained through my experience as researcher in national and international research teams, and also through my teaching experience.

Digital skills Experienced in:

- Microsoft Office (Excel, Word, PowerPoint).
- AutoCAD, Solid Works, Inventor.
- Internet (surfing and searching).

ADDITIONAL INFORMATION

Publications  
 ISI (Selection)

1. **Buciumeanu, M.**, Bagheri, A., Silva, F.S., Henriques, B., Lasagni, A.F., Shamsaei, N. Tribocorrosion Behavior of NiTi Biomedical Alloy Processed by an Additive Manufacturing Laser Beam Directed Energy Deposition Technique (2022) *Materials*, 15 (2), art. no. 691.
2. Moreira, A., Madeira, S., **Buciumeanu, M.**, Fialho, J., Carvalho, A., Silva, F., Monteiro, F.J., Caramês, J. Design and surface characterization of micropatterned silica coatings for zirconia dental implants (2022) *Journal of the Mechanical Behavior of Biomedical Materials*, 126, art. no. 105060
3. Bunea, M., Bria, V., Silva, F.S., Bîrsan, I.G., **Buciumeanu, M.** Influence of Fiber Orientation and Fillers on Low Velocity Impact Response of the Fabric Reinforced Epoxy Composites (2021) *Applied Composite Materials*, 28 (4), pp. 1277-1290.
4. Madeira, S., Barbosa, A., Moura, C.G., **Buciumeanu, M.**, Silva, F.S., Carvalho, O. Aunps and Agups-functionalized zirconia surfaces by hybrid laser technology for dental implants (2020) *Ceramics International*, 46 (6), pp. 7109-7121.
5. Faria, D., Madeira, S., **Buciumeanu, M.**, Silva, F.S., Carvalho, O. Novel laser textured surface designs for improved zirconia implants performance (2020) *Materials Science and Engineering C*, 108, art. no. 110390
6. Tiainen, L., Abreu, P., **Buciumeanu, M.**, Silva, F., Gasik, M., Serna Guerrero, R., Carvalho, O. Novel laser surface texturing for improved primary stability of titanium implants (2019) *Journal of the Mechanical Behavior of Biomedical Materials*, 98, pp. 26-39.
7. Madeira, S., **Buciumeanu, M.**, Carvalho, O., Silva, F.S. Influence of sintering pressure on the microstructure and tribological properties of low temperature fast sintered hot-pressed Y-TZP (2019) *Ceramics International*, 45 (5), pp. 5883-5893.
8. Bartolomeu, F., **Buciumeanu, M.**, Costa, M.M., Alves, N., Gasik, M., Silva, F.S., Miranda, G. Multi-material Ti6Al4V & PEEK cellular structures produced by Selective Laser Melting and Hot Pressing: A tribocorrosion study targeting orthopedic applications (2019) *Journal of the Mechanical Behavior of Biomedical Materials*, 89, pp. 54-64.
9. Bunea, M., Cîrciumaru, A., **Buciumeanu, M.**, Bîrsan, I.G., Silva, F.S. Low velocity impact response of fabric reinforced hybrid composites with stratified filled epoxy matrix (2019) *Composites Science and Technology*, 169, pp. 242-248.
10. **Buciumeanu, M.**, Bagheri, A., Shamsaei, N., Thompson, S.M., Silva, F.S., Henriques, B. Tribocorrosion behavior of additive manufactured Ti-6Al-4V biomedical alloy (2018) *Tribology International*, 119, pp. 381-388.



11. **Buciumeanu, M.**, Almeida, S., Bartolomeu, F., Costa, M.M., Alves, N., Silva, F.S., Miranda, G. Ti6Al4V cellular structures impregnated with biomedical PEEK - New material design for improved tribological behavior (2018) *Tribology International*, 119, pp. 157-164.
12. Faria, D., Abreu, C.S., **Buciumeanu, M.**, Dourado, N., Carvalho, O., Silva, F.S., Miranda, G. Ti6Al4V laser surface preparation and functionalization using hydroxyapatite for biomedical applications (2018) *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, 106 (4), pp. 1534-1545.
13. **M. Buciumeanu**, A. Araujo, O. Carvalho, G. Miranda, J.C.M. Souza, F.S. Silva, B. Henriques, Study of the tribocorrosion behaviour of Ti6Al4V – HA biocomposites, *Tribology International*, Volume 107, March 2017, Pages 77-84.
14. M. Sampaio, **M. Buciumeanu**, E. Askari, P. Flores, J.C.M. Souza, J.R. Gomes, F.S. Silva, B. Henriques, Effects of poly-ether-ether ketone (PEEK) veneer thickness on the reciprocating friction and wear behavior of PEEK/Ti6Al4V structures in artificial saliva, *Wear*, Volumes 368–369, 15 December 2016, Pages 84-91.
15. **Buciumeanu, M.**, Queiroz, J.R.C., Martinelli, A.E., Silva, F.S., Henriques, B. The effect of surface treatment on the friction and wear behavior of dental Y-TZP ceramic against human enamel (2017) *Tribology International*, 116, pp. 192-198.
16. Júlio C.M. Souza, Ana C. Bentes, Kelly Reis, Sandra Gavinha, **Mihaela Buciumeanu**, Bruno Henriques, Filipe S. Silva, José R. Gomes, Abrasive and sliding wear of resin composites for dental restorations, *Tribology International*, Volume 102, October 2016, Pages 154-160.
17. R.L.P. Santos, **M. Buciumeanu**, F.S. Silva, J.C.M. Souza, R.M. Nascimento, F.V. Motta, O. Carvalho, B. Henriques, Tribological behaviour of glass-ceramics reinforced by Yttria Stabilized Zirconia, *Tribology International*, Volume 102, October 2016, Pages 361-370.
18. G. Miranda, A. Araújo, F. Bartolomeu, **M. Buciumeanu**, O. Carvalho, J.C.M. Souza, F.S. Silva, B. Henriques, Design of Ti6Al4V-HA composites produced by hot pressing for biomedical applications, *Materials & Design*, Volume 108, 15 October 2016, Pages 488-493
19. R.L.P. Santos, **M. Buciumeanu**, F.S. Silva, J.C.M. Souza, R.M. Nascimento, F.V. Motta, B. Henriques, Tribological behavior of zirconia-reinforced glass–ceramic composites in artificial saliva, *Tribology International*, Volume 103, November 2016, Pages 379-387.
20. **M. Buciumeanu**, L. Palaghian, A. S. Miranda, F. S. Silva Fatigue life predictions including the Bauschinger effect, *International Journal of Fatigue* (2010), doi:10.1016/j.ijfatigue.2010.07.012.

#### Books

1. **M. Buciumeanu**, Prediction of fretting fatigue life, LAP Lambert Academic Publishing, 2012, 248 pages, ISBN-10: 3838388798, ISBN-13: 978-3838388793 (in english).
2. **M. Buciumeanu**, Comportarea tribologică a materialelor compozite (Tribological behaviour of composite materials), ISBN 978-606-669-282-3 Editura Zigotto Galați, 2018 (e-book).
4. C. Banu și colectiv (**Buciumeanu M.**), Dicționar explicativ pentru știință și tehnologie - Industrie alimentară, Român/Englez/Francez/Rus, Editura AGIR, Bucuresti, 2006, 1114 pages, ISBN 973-720-079-2.
5. Panțuru D., Palade V., Diaconu N., Bîrsan I.G., **Buciumeanu M.**, Dorin S., Reologia curgerii vâscoase (The Reology of Viscous Flow), Vol. 2, Editura "Evrika" Braila (Evrika Publishing House), 2004, 246 pages, ISBN 973-641-050-1.
6. Diaconu N., Palade V., **Buciumeanu M.**, Bîrsan I.G., Panțuru D., Dorin S., Bazele reologiei (Basics of Reology), Vol. 1. Editura "Evrika" Braila (Evrika Publishing House), 2003, 225 pages, ISBN 973-641-049-8.
7. C. Spânu, **M. Buciumeanu**, D. Panțuru, Variatoare de turație cu curele late, Editura Fundației Universitare "Dunărea de jos" Galați (Educational Publishing Foundation "Dunarea de Jos" of Galați), 2004, 103 pages, ISBN 973-627-131-5.
8. Banu C., Panțuru D., **Buciumeanu M.**, Bîrsan I.G., Dicționar explicativ pentru științe exacte (Glossary for Exact Sciences), Român / Englez / Francez / Rus, Editura Academiei Române (Romanian Academy Publishing House), Bucuresti, 2003.
9. Tomascu L., Panțuru D., **Buciumeanu M.**, Elemente de inginerie mecanică. Îndrumar de proiectare, Editura Fundației Universitare "Dunărea de jos" Galați (Educational Publishing Foundation "Dunarea de Jos" of Galați), 2002, 141 pages, ISBN 973-8352-46-0.
10. Panțuru D., Palade V., **Buciumeanu M.**, Mircea I.: Elemente de inginerie mecanica, vol.I, Editura Fundatiei Universitare "Dunarea de Jos" Galați (Educational Publishing Foundation "Dunarea de Jos" of Galați), 2002, 184 pages, ISBN 973-8352-63-0.



- National and International Projects**
- Doctoral research fellowship award by Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia), Lisboa, Portugal. Reference number: SFRH/BD/19555/2004.
  - Project: "Mechanical, wear and fatigue properties of sintered Nanotube-based functionally graded materials", sponsored by the Foundation for Science and Technology (Fundação para a Ciência e a Tecnologia), Lisboa, Portugal. Principal Researcher: Prof. Dr. Filipe Samuel Correia Pereira da Silva, Reference number PTDC/EME-PME/68664/2006.
  - Development of a new class of nanostructured, polymeric light composites with electrical and magnetical properties fit for aerospace applications" sponsored by CNCSIS, Bucharest, Romania. Responsible contract: Prof. Dr. Gabriel ANDREI, Reference number: COD 514 2006.
  - Andrei L. (responsible contract), Andrei G., Rîpă M., Bîrsan I., Buciumeanu M., Chirița G., Contract number: Cod CNCSIS 448: Project Type A "Synthesis, analysis and manufacturing of new non-standardized gears from polymeric nanocomposites", 2004, beneficiary CNCSIS, Funding: ~25.000 EURO.
  - "Multi-material laser sintering for the production of Functional Graded Structures" Reference number EXCL/EMS-TEC/0460/2012 funded by national funds through FCT/MCES (PIDDAC). Principal Researcher: Prof. Filipe Samuel Correia Pereira da Silva, Reference number EXCL/EMS-TEC/0460/2012 (Funding: € 453,999).
  - „Hybrid Additive Manufacturing for Bio Inspired Components”, funded by European Fund for Regional Development (FEDER) of the Operational Programme for Competitiveness and Internationalization (POCI), Portugal. Director: Prof. Filipe Samuel Correia Pereira da Silva, Reference number: NORTE 01-0145\_FEDER-000018.
  - Contract nr. 14PFE/17.10.2018, Excellence, performance and competitiveness in activities CDI (research, development, innovation) in „Dunărea de Jos” University of Galați–EXPERT (ID 345) , Director: Prof. Gabriela-Elena BAHRIM (Funding: 7.004.913,22 lei).
  - Project ANTREPRENORDOC, in the framework of Human Resources Development Operational Programme 2014-2020, financed from the European Social Fund under the contract number 36355/23.05.2019 HRD OP /380/6/13 – SMIS Code: 123847 Director: Prof. Eugen RUSU (Funding: 7.004.913,22 lei).
  - Project PROINVENT, in the framework of Human Resources Development Operational Programme 2014-2020, financed from the European Social Fund under the contract number 62487/03.06.2022POCU/993/6/13 - Cod SMIS:153299 Director: Prof. Eugen RUSU (Funding: 5,691,841.00 lei).

- Honors and awards**
1. **Certificate of Outstanding Contribution in Reviewing**, Tribology International, ELSEVIER in 2017.
  2. **Certificate of Outstanding Contribution in Reviewing**, Composites Part B, ELSEVIER in 2017.
  3. **Certificate of Outstanding Contribution in Reviewing**, Materials Science and Engineering C, ELSEVIER in 2018.

- Memberships**
- President of Romanian Tribology Association (ART) – Galați branch;
  - Member of Interdisciplinary Research Center in Mechanical Engineering (CCIDIM), "Dunarea de Jos" University of Galati, Galați, Romania.
  - Member of Center for Microelectromechanical Systems, University of Minho, Guimaraes, Portugal.
  - Associate member of Research center for development of thermosetting matrix composites (CCDCOMT), "Dunarea de Jos" University of Galati, Galați, Romania.

**Hirsh index values**

WoS H=25, SCOPUS H=27, Google Scholar H=33

28 August 2024

