


PERSONAL INFORMATION Daniela Mariana BARBU

 University Transilvania of Brasov

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 [State personal website\(s\)](#)

 [Replace with type of IM service](#) Replace with messaging account(s)

Sex Female | Date of birth 06/01/1969 | Nationality Romanian

POSITION WITHIN THE PROJECT Researcher and designer of the fine mechanics parts of the system**WORK EXPERIENCE**

Dates	October 1 st , 2011 - present
Occupation or position held	Associate Professor
Main activities and responsibilities	Academic activities: Numerical Methods, Techniques and Equipments in Optometry, Geometrical Optics, Biomechanics, Medical Engineering, Prosthetics and Orthotics. Research activities: Biomechanics, Medical Engineering, Optometry, Mechatronics. Management activities: students tutoring, undergraduate diploma/master dissertation papers advising, monitoring and coordinating.
Name and address of employer	“Transilvania” University of Brasov, Faculty of Product Design and Environment, Product Design, Mechatronics and Environment Department, 1 Colina Universitatii Street, building G, 500068, Brasov, Romania.
Type of business or sector	Academic education
Dates	March 1 st , 2003 - October 1 st , 2011
Occupation or position held	Associate professor
Main activities and responsibilities	Academic activities: Numerical Methods, Techniques and Equipments in Optometry, Geometrical Optics, Biomechanics, Medical Engineering, Prosthetics and Orthotics. Research activities: Biomechanics, Medical Engineering, Optometry, Mechatronics. Management activities: students tutoring, undergraduate diploma/master dissertation papers advising, monitoring and coordinating.
Name and address of employer	“Transilvania” University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics Department, 29 Eroilor Av., 500036, Brasov, Romania.
Type of business or sector	Academic education
Dates	March 1 st , 2000 - March 1 st , 2003
Occupation or position held	Lecturer
Main activities and responsibilities	Academic activities: Precision Mechanics and Mechatronics, Techniques and Optical Equipments, Biomechanics, Medical Engineering, Prosthetics and Orthotics, Numerical Methods. Research activities: Biomechanics, Medical Engineering, Optometry, Mechatronics. Management activities: students tutoring, undergraduate diploma/master dissertation papers advising, monitoring and coordinating.
Name and address of employer	“Transilvania” University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics Department, 29 Eroilor Av., 500036, Brasov, Romania.
Type of business or sector	Academic education

Dates March 1st, 1996 - March 1st, 2000
 Occupation or position held Assistant professor
 Main activities and responsibilities Academic activities: Precision Mechanics and Mechatronics, Techniques and Optical Equipments, Biomechanics, Medical Engineering, Prosthetics and Orthotics, Numerical Methods.
 Research activities: Biomechanics, Medical Engineering, Optometry, Mechatronics.
 Management activities: students tutoring, undergraduate diploma/master dissertation papers advising, monitoring and coordinating.
 Name and address of employer "Transilvania" University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics Department, 29 Eroilor Av., 500036, Brasov, Romania.
 Type of business or sector Academic education

Dates October 1st, 1992 - March 1st, 1994
 Occupation or position held Associate Teacher
 Main activities and responsibilities Applications in Precision Mechanics and Mechatronics, Techniques and Optical Equipments.
 Name and address of employer "Transilvania" University of Brasov, Faculty of Mechanical Engineering, Precision Mechanics Department, 29 Eroilor Av., 500036, Brasov, Romania.
 Type of business or sector Academic education

EDUCATION AND TRAINING

Dates 1993-2003
 Title of qualification awarded PhD in the field of Mechanical Engineering
 Principal subjects/occupational skills covered Thesis title: *Analysis and modeling of the visual function*. Ph.D. Father: Prof.univ.dr.ing Sergiu Chiriacescu
 Name and type of organisation providing education and training "Transilvania" University of Brasov

Dates 1992
 Title of qualification awarded Intensive specialization course on computers
 Principal subjects/occupational skills covered Computer Basics, Databases, Editing.
 Name and type of organisation providing education and training Chamber of Commerce and Industry Brasov

Dates 1987- 1992
 Title of qualification awarded Degree diploma in engineering / specialization: Mechanical Engineering / Precision Mechanics
 Principal subjects/occupational skills covered Mechanical engineering, precision engineering, apparatus in measurement and control, optical equipments, precision technologies.
 Name and type of organisation providing education and training University of Brasov, Faculty of Mechanical Engineering

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English Language	B2	B2	B2	B2	B2
Replace with name of language certificate. Enter level if known.					
French Language	B1	B1	B1	B1	B1
Replace with name of language certificate. Enter level if known.					

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

- Communication skills** Good communication skills gained through experience over 20 years in university teaching and coordinating as a director of three research grants obtained through national competition (2000-2011) and participate in several other activities of many research projects.
Communication skills and competences concerning the knowledge transmission and continuing education gained through experience in the teaching activities within the "Transilvania" University of Brasov, since 1992.
Good ability to adapt multicultural environments.
- Organisational / managerial skills** Good knowledge of research activities by coordinating several projects and preparation of papers presented at international conferences or published in prestigious journals.
Develop skills related to teaching, the preparation of the work necessary to work with students (lectures, laboratories), and the coordination of several works by the end of study in each academic year.
- Job-related skills** Advance optical methods for measurements and control;
Techniques and equipments in Precision Mechanics, Medical Engineering and Optometry;
New methods and techniques in Precision Mechanics

Digital competence

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Independent user	Independent user	Independent user	Independent user

Levels: Basic user - Independent user - Proficient user

[Digital competences - Self-assessment grid](#)

Replace with name of ICT-certificate(s)

- Good command of office suite (word processor, spread sheet, presentation software)
- Good knowledge of modeling and numerical simulation software (MathCad, Matlab + Simulink, Mathematica, Ansys); statistical data processing; good knowledge of Microsoft Office tools.

Fellowships

- September 2015
Bogazici University, Istanbul, Turkey - Institute of Biomedical Engineering;
Collaboration for research in the fields of biomechanics and medical engineering.
Opening of new Erasmus+ bilateral agreements with prestigious institutions in Europe.
- September 2014
Bogazici University, Istanbul, Turkey - Institute of Biomedical Engineering;
Collaboration for research in the fields of biomechanics and medical engineering.
Opening of new Erasmus bilateral agreements with prestigious institutions in Europe.
- September 2014
Aydin University, Istanbul, Turkey;
Collaboration for research in the fields of optometry and medical engineering.
Opening of new Erasmus bilateral agreements with prestigious institutions in Europe.
- September 2013
Universitat Politècnica de Catalunya (UPC), Barcelona, Spain;
Facultat d'Òptica i Optometria de Terrassa;
Collaboration for research in the fields of optometry and medical engineering.
Opening of new Erasmus bilateral agreements with prestigious institutions in Europe.
- May-June 2001
Institut National des Sciences Appliquées (INSA) de Lyon; LaMCoS: Laboratoire de Mécanique des Contacts et des Structures
Teaching mobility - Occupational skills in Biomechanics
- March – august 1999
Institut National des Sciences Appliquées (INSA) de Lyon; LaMCoS: Laboratoire de Mécanique des Contacts et des Structures
Doctoral mobility - Occupational skills in Biomechanics and Eye Contact Lens

Driving licence B

ADDITIONAL INFORMATION

Publications	Books and chapters: 2 chapters in international publisher; 8 books in national publishers, 1 textbook;
Presentations	Articles in journals: 4 ISI indexed; 23 BDI indexed; 12 B+ indexed; 4 B indexed.
Projects	Papers published in the proceedings of national or international conferences: 14 ISI indexed; 23 BDI indexed; 10 in proceedings of international conferences with reviewers; 58 in proceedings of national or international conferences.
Conferences	Research projects and grants: 5 national grants as director / partner responsible; 12 national grants as a team member; 2 contracts with national beneficiary of the economic environment - as a team member.
Seminars	1 patent.
Honours and awards	Evaluator UEFISCDI – since 2005.
Memberships	Chairman or invited speaker at some scientific conferences (selected):
References	The 4th WSEAS International Conference on APPLIED and THEORETICAL ECHANICS (MECHANICS'08), Cairo, Egypt, December 29-31, 2008;
Citations	3rd IC-SCCE International Conference "From Scientific Computing to Computational Engineering", Athens, Greece, 9-12 July, 2008 Chairman at section "Human and Structural Health Monitoring";
Courses	DAAAM INTERNATIONAL SYMPOSIUM, "Intelligent Manufacturing & Automation: Theory, Practice & Education" 25-28 November 2009, Vienna, Austria;
Certifications	The 3 rd International Conference on "Computational Mechanics and Virtual Engineering" COMEC 2009, 29-30 October 2009, Brasov, Romania.
	Professional associations affiliation:
	<ul style="list-style-type: none">▪ BENA (Balkan Environmental Association);▪ WSEAS (World Scientific Engineering Academy and Society);▪ AGIR (General Association of Engineers in Romania);▪ SROMECA (Romanian Association for Mechatronics);▪ SRR (Robotics Society of Romania);▪ AMFOR (Association of Precision Mechanics and Optics in Romania);▪ ARoTMM (Science Romanian Association of Machinery and Mechanisms);▪ Romanian Entrepreneurs in Optics and Optometry.

ANNEXES

1. BOOKS (selected)

- Lache, S.; **Barbu, D.M.**; Luculescu, M.C.; Barbu, I. *Modele și sisteme avansate pentru protecția organismului uman la vibrații și prevenirea bolilor profesionale*, Editura Universității Transilvania Brașov, 2009, ISBN 978-973-598-379-6, 153 pagini.
- Lache, S.; **Barbu, D.M.**; Luculescu, M.C.; Popovici, B.; Necula, R.; Secară, E. *Boli profesionale datorate influenței vibrațiilor asupra organismului uman*, Editura Universității Transilvania din Brașov, 2008, ISBN 978-973-598-205-8, 140 pagini.
- **Barbu, D.M.** *Tehnologii de montaj și adaptare ochelari*, Editura Universității „Transilvania” din Brașov, 2003; ISBN 973-635-131-9; 150 pagini.
- **Barbu, D.M.** *Analiza și modelarea funcției vizuale*, Editura Universității „Transilvania” din Brașov, 2003; ISBN 973-635-130-0; 218 pagini.
- Olariu, V.; Roșca, I.; Radu, Gh.; Baritz, M.; **Barbu, D.** *Biomecanica. Bazele biomecanicii*, Editura Macarie, Colecția „Universitaria” Târgoviște, 1998, ISBN 973-9372-01-5; 209 pagini.
- Olariu, V.; Talpoși, A.; Macovei, M.; Cîrîc, D. (**Barbu, D.**) *Mecanica - Dinamica*, Editura Bravox, Brașov, 1995; ISBN 973-95054-1-5; 412 pagini.
- Olariu, V.; Talpoși, A.; Macovei, M.; Cîrîc, D. (**Barbu, D.**) *Mecanica – Cinematica*, Editura Bravox, Brașov, 1994; ISBN 973-95054-9-0; 267 pagini.
- Olariu, V.; Talpoși, A.; Macovei, M.; Cîrîc, D. (**Barbu, D.**) *Mecanica – Statica*, Editura Tipocart Brașovia, Brașov, 1994; ISBN 973-96352-5-3; 295 pagini.

Chapters in international books:

- Baritz, M., Cotoros, D., **Barbu, D.**, *Sustainable Energy in the Built Environment - Steps Towards nZEB - Use of Thermo-Vision for Early Detection of Heat Losses, Inside and Outside Buildings with Mixed Heating*, Editura Springer, 2014, ISBN 978-3-319-09706-0 978-3-319-09707-7.
- Baritz, M., Cotoros, D., **Barbu, D.**, *Sustainable Energy in the Built Environment - Steps Towards nZEB - Criteria Analysis for Optimal Choice of Efficient Energy Use in Residential Buildings*, Editura Springer, 2014, ISBN 978-3-319-09706-0 978-3-319-09707-7.

2. PAPERS (selected)

Articles in ISI journals:

- **Barbu, D.M.**; Barbu, I. *Dynamical Model for an Original Mechatronical Rehabilitation System*, Recent Advances in Applied Mathematics, 2009, ISBN 978-960-474-138-0; pp. 23-26.
- **Barbu, D.M.**; Barbu, I. *Considerations Concerning Mechatronical Systems for Medical Rehabilitation*, Recent Advances in Applied and Theoretical Mechanics, 2008, ISBN 978-960-474-046-8; ISSN 1790-2769, pp. 112-117;

- **Barbu, D.M.;** Barbu, I. *Human Behaviour in a Vibrational Medium. Experimental Considerations*, Journal of Environmental Protection and Ecology (J.E.P.E.), vol. 9, no. 3, 2008; ISSN 1311-5065; pp. 574-582.
- **Barbu, D.M.;** Lache, S.; Barbu, I. *The Numerical Analyze of the Human Behavior in a Vibrational Medium*, WSEAS TRANSACTIONS on SYSTEMS, Issue 4, Volume 7, April 2008, ISSN 1109-2777, pp. 404-414;
- **Barbu, D.M.;** Lache, S.; Barbu, I. *Considerations about Human Behavior in a Vibrational Medium*, Topics in Advanced Theoretical and Applied Mechanics, 2007, ISBN 978-960-6766-19-0, ISSN 1790-2769, pp. 100-105;

Articles in ISI proceedings:

- **Barbu, D.M.;** Dumitriu, A.; Lache, S.; Barbu, I. *An Overview about Modern Rehabilitation Techniques for Locomotor System*, Annals of DAAAM for 2009 & Proceedings of DAAAM International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; vol. 20; ISBN 978-3-901509-70-4; pp. 1195-1196.
- **Barbu, D.M.;** Dumitriu, A.; Lache, S.; Barbu, I., Druga, C. *A Proposed Orthotic Model for Locomotor Rehabilitation*, Annals of DAAAM for 2009 & Proceedings of DAAAM International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; vol. 20; ISBN 978-3-901509-70-4; pp. 1197-1198.
- Dumitriu, A.; **Barbu, D.M.** *Use of Inertial Sensors in Lower-Limb Rehabilitation Device*, Annals of DAAAM for 2009 & Proceedings of DAAAM International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; vol. 20; ISBN 978-3-901509-70-4; pp. 1209-1210.
- Lache, S.; Luculescu, M., **Barbu D.** *A low-cost solution for controlling human body vibrations*, Annals of DAAAM for 2009 & Proceedings of Daaam International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; vol. 20; ISBN 978-3-901509-70-4; pp. 725-726.
- Barbu, I.; **Barbu, D.M.**, Lache, S. *Some Models of Virtual Prototypes Device for Leg Orthoses*, Annals of DAAAM for 2009 & Proceedings of Daaam International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; ISBN 978-3-901509-70-4; vol. 20; pp. 1189-1190.
- Druga, C.; **Barbu, D.;** Serban, I.; Radu, C. *Rapid Prototyping Technology Used for Manufacturing of an Adapted Medical Implant Prototype*, Annals of DAAAM for 2009 & Proceedings of Daaam International Symposium, "Intelligent Manufacturing & Automation: Theory, Practice & Education", 25-28 November 2009, Vienna, Austria; ISBN 978-3-901509-70-4; vol. 20; pp. 1487-1488.
- **Barbu, D.M.;** Barbu, I. *Dynamical Model for an Original Mechatronical Rehabilitation System*, The 8th WSEAS International Conference on System Science and Simulation in Engineering, Genova, Italy, October 17-19, 2009 – paper 626-273; Publ. In Proceedings of The 14th WSEAS International Conference On Applied Mathematics (MATH '09); ISBN 978-960-474-138-0; pp. 23-27.
- **Barbu, D.M.;** Barbu, I. *Considerations Concerning Mechatronical Systems for Medical Rehabilitation*, Proceedings of The 4th WSEAS International Conference on Applied and Theoretical Mechanics (MECHANICS'08), Cairo, Egypt, December 29-31, 2008; ISBN 978-960-474-046-8; ISSN 1790-2769; pp. 112-117.
- **Barbu, D.M.;** Lache, S.; Barbu, I. *Considerations about Human Behavior in a Vibrational Medium*, Proceedings of the 3rd WSEAS International Conference on Applied and Theoretical Mechanics (MECHANICS 07), Puerto De La Cruz, Tenerife, Canary Islands, Spain, December 14-16, 2007; ISBN 978-960-6766-19-0, ISSN 1790-2769, pp. 100-105.
- **Barbu, D.M.** *Numerical Methods used in Analyses of the Human Behaviour in a Vibrational Medium*, Annals of DAAAM for 2007 & Proceedings of the The 18th International DAAAM Symposium „Intelligent Manufacturing & Automantion: Focus on Creativity, Responsibility and Ethics of Engineers”, 24-27 october 2007, Zadar, Croatia; ISBN 3-901509-58-5, ISSN 1726-9679; pp. 055-056.
- **Barbu, D.M.;** Barbu, I. *Experimental Methods used in Analyses of the Human Behavior in a Vibrational Medium*, Annals of DAAAM for 2007 & Proceedings of The 18th International DAAAM Symposium „Intelligent Manufacturing & Automantion: Focus on Creativity, Responsibility and Ethics of Engineers”, 24-27 october 2007, Zadar, Croatia; ISBN 3-901509-58-5, ISSN 1726-9679; pp. 057-058.
- **Barbu, D.M.;** Barbu I. *New Optical Technologies in Optometry*, Proceedings of The 4th International Conference RoEduNet Romania „Education/Training and Information/Communication Technologies – ROEDUNET '05”, 20-22 mai 2005, Tg. Mureş; ISBN 973-7794-26-5; pp. 76-80.
- Barbu, I., **Barbu D.M.** *New CAD/CAM/CAE Technologies in Mechanical Engineering*, Proceedings of The 4th International Conference RoEduNet Romania „Education/Training and Information/Communication Technologies – ROEDUNET '05”, 20-22 mai 2005, Tg. Mureş, ISBN 973-7794-26-5; pp. 81-86.
- **Barbu, D.M.;** Barbu I.; Luculescu M. *Modelling and Control of Eye-Movement*, Annals of DAAAM for 2003 and Proceedings of The 14th International DAAAM Symposium "Intelligent manufacturing & Automation: Focus on Reconstruction and Development", 22-25 oct. 2003, Sarajevo, Bosnia and Herzegovina; ISSN 1726-9679; pp. 029-030.

3. GRANTS AND CONTRACT AS PROJECT COORDINATOR

- *Contributions to analysis and visual modeling tool to prosthetics and orthotics, Phase I. Analysis, modeling and simulation tool to visual prosthetics and orthotics - Theoretical research base*, AT 2003, Contract 33253/25.06.2003, Theme 1, Code 423;
- *Contributions to analysis and visual modeling tool to prosthetics and orthotics, Phase II. Experimental research for the analysis, modeling and simulation tool to visual prosthetics and orthotics*, AT 2004, Contract 33369/29.06.2004, Theme 4, Code 423;
- *Analysis, modeling and simulation of human body behavior in an environment polluted by shocks and vibrations implications for ocular prosthesis and orthotics, Phase I. Analysis, modeling and simulation of the human body in an environment polluted by shocks and vibrations implications for ocular prosthetics and orthotics - Theoretical research base*, AT 2005, Contract 27684/14.03.2005, Theme 1, Code 133;
- *Analysis, modeling and simulation of human body behavior in an environment polluted by shocks and vibrations implications for ocular prosthesis and orthotics, Phase II. Experimental research body to achieve behavior analysis in an environment polluted by shocks and vibrations implications for ocular prosthesis and orthotics*, AT 2006, Contract A1/GR106/19.07.2006, Theme 1, Code 133;
- *Contributions to the analysis, modeling and simulation of mechatronic systems for modern medical rehabilitation*, PNII ID–PCE 2007-2010, ID_147, Contract 327/1.10.2007