

Europass Curriculum Vitae



First name(s) / Surname(s) **BERCE PETRU**
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E-mail berce@tcm.utcluj.ro
Nationality Romanian
Place and date of birth Rogoz de Beliu, jud. Arad, 6 februarie 1949
Gender Male

Work experience

Period 1972 – present
Occupation or position held Educational titles:
 - Professor (1992 - present)
 - Associate professor (1990 - 1992)
 - Lecturer (1978 - 1990)
 - Teaching assistant (1972 - 1978)
 Other titles obtained:
 - PhD supervisor in the field of Industrial engineering (1997 - present)
 Managerial experience:
 - Dean of the Faculty of Machine Building (2004 - 2012)
 - Vice-rector – responsible with the research activities and international relations (1996 - 2004)
 - Head of TCM Department (1996)
 - Member of the TUC-N Senate (1996 - 2012)
 - Member of the Machine Building Faculty Consile (1996 - 2012)
 - Member of the National Scientific Research Consile Național from Romania (1998 - 2006)
 - Member of the Industrial Engineering Comission CNATCU (2000 - present)

Main activities and responsibilities Professor
Name and address of employer Technical University of Cluj-Napoca, str. Memorandului nr28.
Type of business or activity sector Rapid prototyping technologies and their applications from the industrial field to medicine

Education and training

Period 1964-1967- Theoretical High School from Ineu, Arad
 1967-1972- Mechanical faculty, Politechnical Institute from Cluj-Napoca
 1975-1981- PhD student in the field of Manufacturing Engineering - TCM
 1981- Sustaining of the PhD thesis entitled Research on the optimization of turning cutting process, from the dynamical and energetical point of view

Title of qualification awarded | PhD in the field of Industrial engineering
 Main disciplines / professional competences obtained | Manufacturing technologies in the field of Machine Building
 Name and type of organisation providing education and training | Technical University of Cluj-Napoca
 The national and international level classification | ISCED 6

Period | 1967 - 1972

Qualification / obtained diplom | Diplom of Mechanical engineering
 Main disciplines / professional competences obtained | Rapid Prototyping Manufacturing Technologies
 Name and type of organisation providing education and training | Polytechnical Institute of Cluj-Napoca, Mechanical Faculty
 The national and international level classification | ISCED 5

Specializations and qualification skills: february-april 1994 and may-june 2000- University of Nottingham - in the field of Rapid Prototyping manufacturing technologies

Personal skills and competences

Mother tongue(s) | **Romanian**

Other language(s)

Self-assessment
European level (*)
 English
 French

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Listening		Exprimare scrisă	
B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user	B2	Independent user
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 spirit
- Excellent communication capacity
- Good empathy ability
- Capacity of quickly adapting to the environment condition that is continuously changing

Organisational skills and competences

Leadership – supervisor of different accademical structures (vicerector, dean, head of department)
 Coordonator and manager of more than 50 academical research contracts and contracts developed in cooperation with the economical partners (5 international grants and 22 national contracts)
 High experience as project manager.

Technical skills and competences

Researcher with experience and international recognition in the field of Machine Building

- Competences in the field of Rapid Prototyping manufacturing technologies and other different Innovative Rapid manufacturing technologies
- Industrial applications of Rapid Prototyping Technologies (within the Industrial to medical field)
- PhD supervisor from 1997 – with 22 PhD thesis finalized until prezent
- Member within CNATCU comissions
- Elaboration of 14 scientific books, as main author or co-author and more than 150 scientific articles communicated and/or published, from which 28 where published in journals and proceedings that are ISI indexed, 6 patents

Computer skills and competences

Abilities in programming and using different computer programs, such as: Microsoft Office, AutoCad, SolidWorks, Magics

Other aptitudes and skills

Hobbies: Art, Sport, Tourism

Driving licence

B category

Additional information

Publications:

Author/Co-author of more than 150 scientific articles communicated and published within different international and national scientific prestigious conferences, journals or events

Research grants (selection)

Grants gained by national competition:

1. BCUM National Centre of Rapid Prototyping (1998-2000) – 425.000 USD, Director.
2. Ultrasonic grinding broach –Invent program (2001- 2003) – 42.000 EUR, Director.
3. Experimental research regarding the using of RP technologies for the manufacturing of customized medical implants, A-type, (2002-2004) – 20.000 EUR, Director.
4. Innovative Manufacturing Network –CEEX grant type (2005-2007) – 420.000 EUR, Director.
5. Virtual regional centre for preparation and technological transfer of modern design and manufacturing methods within the industrial field, PHARE program (2002-2003), 76.000 EUR, Director.
6. Research integrated platform for innovative manufacturing preparation: Factory of the future (2005-2007), 1.500.000 EUR, Director.
7. New biocompatible materials for customized medical implants made by using SLS and SLM technologies (PCCE), (2010-2013), 2.000.000 EUR, Director.

Grants gained by international competition:

1. National Pilot Centre for Continuing Education in Rapid Prototyping. TEMPUS, Program JEP 12490/1997, 253.000 EUR, Coordinator.
2. The Project for the Establishment of the Center for Innovative Manufacturing, financed by KOICA (Korea International Cooperation Agency), 325.000 USD, 2005, Director.
3. FP6 Program – Optical 3D Metrology – Automated in-line Metrology for Quality Assurance in the Manufacturing Industry, contract nr. 32721, 62.000 EUR, 2006-2008, Local coordinator
4. Adm-ERA- Reinforcing Additive Manufacturing research cooperation between the Central Metallurgical Research and Development Institute from Cairo and European Research Area, UTCN funded - 72.106 EUR, 2011-2013, Member
5. AMaTUC – Boosting the scientific excellence and innovation capacity in additive manufacturing of the Technical University of Cluj-Napoca, HORIZON 2020 – twinning, 2016-2018, Member

International and national prizes

Prizes

- Romanian academy prize, 1991;
- Excellence in Ministry of Education and Research prize, 2000;
- General association of engineers from Romania (AGIR) prize, 2000;
- 3 gold medal obtained at the International Salon of Patent from Geneva.

International recognition

- Dr.H.C.of the Technical University of Kosice ;
- Honorary professor of Miskolc University and Keskemet University (Hungary);
- Member of DAAAM International Scientific Committee from Wien.
- Member of the International Scientific Committee - microCAD Conference, Miskolc, Hungary.

National recognition

- Dr.H.C. of Dunarea de Jos University from Galati;
- Honorary professor of Transilvania University of Braşov and Polytechnical University of Timişoara;
- President of Manufacturing Engineering University Association;
- Editor of Academic Journal of Manufacturing Engineering journal

Patents

1. Patent no. RO85321/15.03.1988 entitled "Device of vibro-rolling cylindrical external surfaces"
2. Patent no. RO115609-B/ 25.05.2006 entitled "Ultrasonic grinding broach"
3. Patent no. RO120391-B1 / 30.08.2006 entitled " Ultrasonic grinding electrical broach "
4. Patent no. RO120623-B1 / 30.10.2006 entitled " Ultrasonic grinding electrical broach with magnetical bearings"
5. Patent no. 201100104/07.02.2011 entitled Procedure and device for producing tubular bending parts with variable section from composite polymeric materials armed with different type of fibres
6. Patent no. 201200540/18.07.2012 entitled Procedure and device for producing plates made from composite polymeric materials armed with different type of fibres

Scientific books (selection)

1. **Petru Berce**, et. al. Medical applications of Additive Manufacturing technologies, Romanian Academy Publishing House, Bucharest, 2015
2. **Petru Berce**, et.al., Additive Manufacturing Technologies and their applications, Academy Publishing House, Bucharest, 2014.
3. **Petru Berce**, Bâlc, N., Ancău, M., et.al, (2000), Rapid Prototyping Manufacturing Technologies , Technical Publishing House, Bucharest, ISBN 973-31-1503-7.
4. Ivan, N.V., **Petru Berce**, Drăgoi, M.V., Oancea, G., Ivan, M.C., Bâlc, N., Lancea, C., et.al., (2004), CAD/CAPP/CAM systems – Theory and practice, Technical Publishing House, Bucharest, ISBN 973-31-1530-4
5. Bâlc, N., Gyenge, Cs., **Petru Berce**, (2006) Design for competitive manufacturing – Theory, applications and case studies, Alma Mater Publishing House, Cluj-Napoca, 321 p., ISBN (10) 973-7898-31-1.

Scientific articles (representative) (ISI/BDI)

1. Leordean, Dan; Dudescu, Cristian; Marcu, Teodora; **P. Berce** et al Customized implants with specific properties, made by selective laser melting RAPID PROTOTYPING JOURNAL Volume: 21 Issue: 1 Pages: 98-104 Published: 2015
2. Leordean, Dan; Radu, S. A.; Fratila, D.;**P. Berce**. Studies on design of customized orthopedic endoprostheses of titanium alloy manufactured by SLM INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY Volume: 79 Issue: 5-8 Pages: 905-920 Published: JUL 2015
3. Brie, Ioana-Carmen; Soritau, Olga; Dirzu, Noemi; **P. Berce** et al. Comparative in vitro study regarding the biocompatibility of titanium-base composites infiltrated with hydroxyapatite or silicitanate JOURNAL OF BIOLOGICAL ENGINEERING Volume: 8 Article Number: 14 Published: JUN 19 2014
4. Todea, M.; Vanea, E.; Bran, S.,**P. Berce**; et al XPS analysis of aluminosilicate microspheres bioactivity tested in vitro APPLIED SURFACE SCIENCE Volume: 270 Pages: 777-783 Published: APR 1 2013
5. M. Todea, B. Frentiu, R.F.V. Turcu, **Petru. Berce**, S.Simon, "Surface Structure Changes on Aluminosilicate Microspheres at the Interface With Simulated Body Fluid", Corrosion Science 54 (1), pp. 299-306 (2012) ,
6. T. Marcu, M. Todea, I. Gligor, **Petru Berce**, C., Popa, "Effect of Surface Conditioning on the Flowability of Ti6Al7Nb Powder for Selective Laser Melting Applications", Journal of Applied Surface Science
7. Paul Bere, **Petru Berce**, Phenomenological fracture model for biaxial fibre reinforced composite, - Composites Part B: Engineering An International Journal, Vol. 43B , Issue 5, (2012), ISSN 1359-8368, p. 2237 – 2243
8. I. Gligor, T. Marcu, O. Soritau, M. Todea, **Petru Berce**, C. Popa, Porous c.p. Titanium for Endosseous Implants Obtained Using Dextrin Space Holder, Journal of Biomedical Materials
9. T. Marcu, M. Todea, L. Maines, D. Leordean, **Petru Berce**, C. Popa, „Characterization Of Titanium Based Materials For Endosseous Applications Obtained By Selective Laser Melting”, Powder Metallurgy
10. **Petru Berce**, Păcurar, Răzvan, Bâlc, N, Virtual engineering for rapid product development, Engineering mechanics, structures, engineering geology” – WSEAS-EMSEG 2008 (ISI), pp. 195-200, ISSN 1790-2769
11. Paul Bere, **Petru Berce**, Ovidiu Nemeş, Nicolae Cordoş, Adrian Popescu, Emanuela Cociş, Research regarding mechanical characteristics of carbon/epoxy composite tubes Academic Journal of Manufacturing Engineering – AJME, Vol. 9 Issue 4/2011, Issn 1583-7904

12. **Petru Berce**, N. Balc, Păcurar Răzvan, Active elements tools made by selective laser sintering, Proceedings of the 8th ESAFORM Conference on Material Forming, , vol.2, Cluj-Napoca, Romania, 27th-29th April 2005, pp 715-718, ISBN: 973-27-1175-2
- 13.. Bâlc, N., **Petru Berce**, Păcurar, Răzvan, Active Elements Tools Made by Selective Laser Sintering, Society of Manufacturing Engineers, Rapid Prototyping Journal – Third Quarter 2006, Vol. 12, nr. 3 / 2006, pag. 1-7, SUA, (<http://www.sme.org/cgi-bin/get-item.pl?TP06PUB43&2&SME>)

Cluj-Napoca 10.10.2017

Prof. Dr. Eng. Petru Berce