

PERSONAL INFORMATION


Silviu Butnariu



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POSITION

Researcher

WORK EXPERIENCE

05/10/1992–31/01/2005

Development manager

SC FARTEC SA, Brasov (Romania)

01/02/2005–31/01/2007

Technical Director

SC SIRCUC BRASOV SA, Brasov (Romania)

10/1999–07/2004

Mechanical designer

SC CONCEPT 3T SRL, Brasov (Romania)

01/2007–Present

Researcher, Lecturer, Assoc. Professor PhD

Transilvania University of Brasov, Brasov (Romania)

EDUCATION AND TRAINING

09/1987–07/1992

Engineer, spec. Machine tools

Technical University "Gh. Asachi" Iasi, Iasi (Romania)

EQF level 6

09/1997–07/2004

PhD in Mechanical Engineering

Transilvania University of Brasov, Brasov (Romania)

EQF level 8

04/2007–07/2007

Formateurs: Inginerie de projet automobile

Universite de Technologie de Compiegne, Groupe Renault, Compiegne (France)

Formation de formateurs: Project management, Quality management, Industrial propriety

03/2008–07/2008

Certificate of Completion Psycho-Pedagogy

Transilvania University of Brasov, Brasov (Romania)

Psychology and Pedagogy,

09/2012–10/2012

Certificate of Completion ANSYS

Transilvania University of Brasov, Brasov (Romania)

01/2013–03/2013 **Statement of Accomplishment**

Duke University - coursera.org, online courses

Image and video processing

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B1	B2	B2
	• Linguistic competence certificate (English) – 2006/2008 Transilvania University of Brasov.				
French	B1	B2	B1	B2	B2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Communication skills

Multicultural environment – since 1992 I worked in a wide range of areas, ranging from production activities to the research or international cooperation.

Teamwork - positions they have occupied imposed the existence of good communication skills, teamwork.

Sports - skiing, handball, cycling

Organisational / managerial skills

As Development Department manager, I drove the work of a team of engineers and economists, planned and managed the development budget of a large company. On the other hand, the position of Technical Director implies high on management and organization skills of teamwork.

In recent years I led research teams in projects which are responsible partner and director.

Job-related skills

Competences: Mechanical Engineering, Robotics, Mechatronics, Virtual Reality, Finite Element Method.

Reviewer programme CEEX, PN II, PNCDI III.

Reviewer conferences with proceeding in Springer (MTM, Robotics).

-Member of AGIR (General Association of Romanian Engineers).

-Member of ARoTMM (Romanian Association of Machines and Mechanisms Theory).

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Digital competences - Self-assessment grid

PROJECTS

	Name	Project	Period	Function	Value
1.	Robotic assisted brachytherapy, an innovative approach of inoperable cancers – CHANCE –	PCCA Tip 2; 173/2012	2012 - 2016	Partner responsible	300.000 lei
2.	New Haptic Arm Exoskeletons for Robotics and Automation in Space"- EXORAS	Romanian Space Agency (ROSA) 2012; 13/2012	2012 - 2015	Partner responsible	174.000 lei
3.	Virtual Reality in Product Design and Robotics, VEGA,	FP6 - SSA Project AC; 16565	2005-2008	member	900.000 euro
4.	Realitate Virtuala Pentru Ingineria Produsului - VIRPE Contract 5920/2006	CEEX M2	2006 - 2009	member	386.000 lei
5.	DigitalCities, 0299R	INTEREG IV	2009 - 2012	member	120.000 eur
6.	Biopsia prostatei asistata robotic, o metoda inovativa de mare precizie ROBOCORE	Parteneriate 2013, 247/2014	2013 - 2016	member	300.000 lei
7.	System for diagnosis and therapy of spine diseases SPINE (coordonator UTBv)	Parteneriate 2013; 227/2014	2013 - 2017	Director	1.095.855 lei

PATENTS:

Name	Autors	Nr.
Sistem haptic pentru simularea funcționării mecanismelor articulate și modul de utilizare a acestuia	Butnariu S., Butila E., Talaba D.	RO129033 (A0) — 2013-11-29

BOOKS:

	Name	Autors
1.	Transmisii prin curele sincrone, Ed. Universității Transilvania, 2009, ISBN 978-973-598-495-3	Butnariu S.
2.	Analysis of mechanical structures using finite element method, lecture notes, ISBN 978-606-19-0311-5 (CD), Ed. Universitatii Transilvania din Brasov, 2013.	Butnariu S.
3.	Analiza cu elemente finite. Aplicatii in CATIA, Ed. Universității Transilvania, ISBN 978-973-598-159-4, 2007.	Mogan, Gh., Butnariu, S.,
4.	Organe de mașini. Teorie-Proiectare-Aplicații, Ed. Universității Transilvania din Brașov, ISBN 978-606-19-0069-5 (print), ISBN 978-606-19-0070-1 (CD), 2012.	Mogan, Gh., Butnariu, S., Gruender, W., Kuchar, P.
5.	Organe de mașini. Teorie-Proiectare-Aplicații, editia a II-a, Ed. Universității Transilvania din Brașov, ISBN 978-606-19-0312-2 (CD), 2013.	Mogan, Gh., Butnariu, S.
6.	Analiza cu elemente finite în ingineria mecanică.. Aplicatii practice in ANSYS, Ed. Universității Transilvania, ISBN 978-606-19-0474-7 (print), 2014	Butnariu, S., Mogan, Gh.

BOOKS CHAPITRES:

1	Virtual Planning of Needle Guidance for a Parallel Robot Used in Brachytherapy, Chapter in: New Trends in Medical and Service Robots, Volume 38 of the series Mechanisms and Machine Science, Springer International Publishing, pp 109-120, DOI: 10.1007/978-3-319-23832-6_9 http://link.springer.com/chapter/10.1007%2F978-3-319-23832-6_9	B. Gherman, T. Girbacia, D. Cocorean, C. Vaida, S. Butnariu, N. Plitea, D. Talaba, D. Pîslă
2	Parameter estimation from motion tracking data, Digital Human Modeling. Applications in Health, Safety, Ergonomics and Risk Management: Ergonomics and Health, Lecture Notes in Computer Science Volume 9185, 2015, pp 113-121; http://link.springer.com/chapter/10.1007/978-3-319-21070-4_12 DOI: 10.1007/978-3-319-21070-4_12	C. Antonya, S. Butnariu, H. Beles
3	Optimal Planning of Needle Insertion for Robotic-assisted Prostate Biopsy, Advances in Robot Design and Intelligent Control; Advances in Intelligent Systems and Computing Volume 371, 2016, pp 339-346, Date: 08 Aug 2015; http://link.springer.com/chapter/10.1007/978-3-319-21290-6_34 DOI: 10.1007/978-3-319-21290-6_34; Series ISSN: 2194-5357	D.Pîslă, B. Gherman, F. Girbacia, C. Vaida, S. Butnariu, T. Girbacia, N. Plitea
4	Correction method for spine flexion tracking with markers, http://link.springer.com/chapter/10.1007/978-3-319-30674-2_20 DOI:10.1007/978-3-319-30674-2_20; Print ISBN: 978-3-319-30673-5; Online ISBN: 978-3-319-30674-2	S. Butnariu, C. Antonya
5	Advanced Approaches Using VR Simulations for Teaching Mechanisms, Eucomes 2010, Mechanisms and Machine Science, vol 5, New Trends in Mechanism Science, 2010	S. Butnariu, D. Talaba
6	Strategy for Optimizing the Synchronous Belt Drives Design, SYROM 2009: Proceedings of the 10 th IFTOMM International Symposium on Science of Mechanisms and Machines, 2009 Pages: 495-501 DOI: 10.1007/978-90-481-3522-6_40	S. Butnariu

SCIENTIFICS PAPERS

(selection in medical robots, haptics systems)

	Name	Autors	Year	Journal
1.	A Virtual Reality System for Pre-Planning of Robotic-Assisted Prostate Biopsy	F. Gîrbacia, S. Butnariu, D. Voinea, Tzolea B., Gîrbacia T., Pîslă D.	2015	Applied Mechanics and Materials Vol 772 (2015) pp 585-590, © (2015) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.772.585 http://www.ttp.net/978-3-03835-502-1/11.html
2.	Design of a Scoliosis Monitoring System using Inertial Sensors	D. Voinea, S. Butnariu	2015	Applied Mechanics and Materials Vol 772 (2015) pp 597-602, © (2015) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.772.597 http://www.ttp.net/978-3-03835-502-1/11.html
3.	Design review of CAD models using a nui leap motion sensor	Florin Girbacia, Teodora Girbacia, Silviu Butnariu,	2015	JIDEG, Volume 7 issue 1, June 2015 http://www.sorging.ro/ro/revista/volume-10-special-issue-fascicle-3/design-review-of-cad-models-using-a-nui-leap-motion-sensor
4.	Geometric identification of a four-bar linkage from noisy tracking data	Cs Antonya, S Butnariu, H Beles	2015	Conference paper: The 14th IFToMM World Congress, At Taipei, Taiwan DOI: 10.6567/IFTToMM.14TH.WC.OS2.012 http://www.iftomm2015.tw/IFTToMM2015CD/PapersbyTopic.html
5.	Virtual Planning of Needle Guidance for a Parallel Robot used in Brachytherapy	B. Gherman, T. Girbacia, D. Cocorean, S. Butnariu, N. Plitea, D. Talaba, D. Pîslă	2014	International Workshop and Summer School on Medical and Service Robotics, July 10 – 12 2014, EPFL Lausanne, MESROB 2014 Elvetia
6.	Multi-objective optimization for brachytherapy robotic interventions	F. Gîrbacia, S. Butnariu, D. Talabă, D. Pîslă	2014	6th Győr Symposium and 3rd Hungarian-Polish and Hungarian-Romanian Joint Conference on Computational Intelligence, Gyor 2014, Hungary
7.	Parameter computation of the hand model in virtual grasping	C. Antonya, S. Butnariu, C. Pozna	2014	5 th IEEE Conference on Cognitive Infocommunications, CogInfo 2014, Vietri sul Mare, Italia
8.	An aproach to teaching Machine Tools using	S. Butnariu, F. Gîrbacia, A. B.	2014	International Conference on Virtual Learning, Bucharest, ICVL 2014

	Virtual Reality technologies	Șupială		
9.	Virtual Planning of Needle Trajectories using a Haptic Interface for a Brachytherapy Parallel Robot: an evaluation study	F. Gîrbacia, B. Gherman, S. Butnariu, N. Plitea, D. Talabă and D. Pîslă	2014	22th International Conference on Robotics, ROBOTICS'2014 (October 23th-25th, 2014, Bucharest, Romania)
10.	The command of a virtual industrial robot using a dedicated haptic interface	S.Butnariu, F.Gîrbacia	2013	ModTech 2013, publicat in Advanced Materials Research Vol. 837 (2014) pp 543-548 © (2014) Trans Tech Publications, Switzerland, ISSN: 1662-8985 doi:10.4028/www.scientific.net/AMR.837.543
11.	High Quality 3D Restoration of Photographed Structures using V.R. Technologies	S.Butnariu, F.Gîrbacia	2013	IMM 2013 Hong Kong, publicat in Applied Mechanics and Materials Vol. 464 (2014) pp 391-398 © (2014) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMM.464.391
12.	Methodology for the identification of needles trajectories in robotic brachytherapy procedure using VR technology	S.Butnariu, F.Gîrbacia	2013	Optirob 2013, publicat in Applied Mechanics and Materials Vol. 332 (2013) pp 503-508. © (2013) Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/ AMM.332.503
13.	Development of a natural user interface for intuitive presentations in educational process	S.Butnariu, F.Gîrbacia	2012	Proceedings of 8 th International Scientific Conference eLearning and Software for Education
14.	An innovative approach to teaching mechanism using augmented reality technologies	Gîrbacia, Florin; Butnariu, Silviu	2012	Proceedings of 8 th International Scientific Conference eLearning and Software for Education
15.	An approach for teaching mechanisms using haptic systems	T. Butnaru, F. Gîrbacia, S. Butnariu, A. Beraru, D. Talaba	2011	Proceedings of ICVL 2011 (Print ISSN 1844 - 8933), The 6th International Conference on Virtual Learning
16.	Obstacle avoidance in simulated environment using eye tracking technologies	Antonya, C., Barbuceanu, F., Rusak, Z.; D. Talaba, S. Butnariu	2010	ASME International Design Engineering TECHNical Conferences and Computers and Information in ENGINEering Conference, Proceedings, vol 2, pts A and B Pages: 1581-1590
17.	Advanced Approaches Using VR Simulations for Teaching Mechanisms	S. Butnariu, D. Talaba	2010	Eucomes 2010, Mechanisms and Machine Science, vol 5, New Trends in Mechanism Science, 2010