





PERSONAL INFORMATION

**Csaba Antonya**

 17, B.P.Hasdeu, 500413 Brasov (Romania)
 (+40)-268-312999  (+40)-723-186353
 antonya@unitbv.ro, csaba.antonya@gmail.com

Sex Male | Date of birth 20/01/1971 | Nationality Romanian

WORK EXPERIENCE

- 2007–Present **Full Professor at the Faculty of Mechanical Engineering, Transilvania University of Brasov**
Transilvania University of Brasov
29 Eroilor, 500036 Brasov (Romania)
Teaching activities in Mechanisms, Multi-body dynamics, Simulations in automotive engineering, Autonomous Vehicles (in Romanian and English). Research activities in Mechanical Simulations, Virtual Reality, Haptics, Human Computer Interaction.
Business or sector Education and research
- 2004–2007 **Associate Professor at the Department of Product Design and Robotics, Transilvania University of Brasov**
Transilvania University of Brasov
29 Eroilor, 500036 Brasov (Romania)
Teaching activities in Robotics and Virtual Reality (Simulation techniques, Vision, Virtual prototyping). Research activities in Robotics, Virtual Reality, Visualization, Haptics, Human Computer Interaction
Business or sector Education and research
- 1996–2004 **Lecturer at the Department of Product Design and Robotics, Transilvania University of Brasov**
Transilvania University of Brasov
- 1995–1996 **Research and development engineer**
Tractor Proiect S.A., Brasov
Business or sector Research and development

EDUCATION AND TRAINING

- 1996–2002 **PhD**
Transilvania University of Brasov, Brasov
Research in Mechanical Engineering. PhD Thesis title: Dynamic transmissibility of car suspension mechanisms
- 1995–1996 **Master Degree**
Transilvania University of Brasov
Specialization: Mechanical power transmission systems.

1990–1995 **Engineer Degree**
 Transilvania University of Brasov
 Faculty of Mechanical Engineering, Specialisation: Automotive Engineering

PERSONAL SKILLS

Mother tongue(s) Hungarian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Romanian	C2	C2	C2	C2	C2
English	C1	C1	C1	C1	C1
French	B1	B2	B1	B1	A2

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 Honesty, correctness, responsibility

Organisational / managerial skills Ability in Kinematic and dynamic modelling of mechanical systems, CAD, Virtual reality, Robotics. Participation in many international conferences.

Digital competence Matlab/Simulink, MSC Adams, C++, Catia, Solidwoks, AutoCAD, MS Office

Other skills Specialisation:
 Oct.-Nov. 1998, University of Gent, Belgium
 Dec. 1999, Hochschule Bremen, Germany
 February. and December. 2000 training in ADAMS (at Mechanical Dynamics Inc., Praga) and FlexTest (MTS System, Berlin).
 May – June 2001, Technical University of Budapest, Hungary,
 May 2002, University of Metz, France,
 May – June 2004, Delft University of Technology, The Netherlands
 Oct – Nov. 2005, Universidad La Coruna, Spain

ADDITIONAL INFORMATION

Scientific activity (entire career)

Published books: 3

Published papers in journals, national and international conferences and congresses: over 100

National and international research grants: 22

Research project coordinator: 3

Reviewer of papers in many journals, national and international conferences

Member in the scientific committees of international conferences (EngOpt2012, InECCE 2011)

Industrial tutorial presentation at TMCE 2008

PhD. supervisor: 5 PhD students, 3 graduates.

Relevant research projects

International Research projects

A Configurable Virtual Reality System for Multi-Purpose Industrial Manufacturing Applications, Project IRMA, FP5: IRMA - NAS GRD3-2001-61804, Febr. 2002 – Febr. 2004, Position: Technical Director

Advanced Computer Aided Design of Ecological Products Tehnologies Integrating Green Energy Sources, Project ADEPT, GMA1-2002-72098, Nov. 2002 – Nov. 2005, Position: Member

Network of Excellence on Virtual Reality and Virtual Environments Applications for Future Workspaces, Network of excellence INTUITION, IST 507248-2/2004, Sept. 2004 – Sept. 2008, Position: Member

Virtual Reality in Product Design and Robotics - Project VEGA, WP 6, Project nr. 16565, May 2005 – May 2008, Position: Member of the Management Committee

ARTreat: Multi-level patient-specific artery and atherogenesis model for outcome prediction, decision support treatment, and virtual hand-on training, FP7-224297, 2008-2013, Position: Technical Supervisor, CSB.

eHERITAGE: Expanding the Research and Innovation Capacity in Cultural Heritage Virtual Reality Applications, H2020-TWINN-2015, Position: Member.

National Research projects

Real time simulation of multibody systems with rigid and flexible elements, 2007, CNCSIS A, Code 937, May 2007 – Nov. 2008, Position: Director

Virtual reality interface for linkage simulation using multibody theory - Project type AT, Code CNCSIS 170, January 2004 – Nov. 2005, Position: Director

INCOGNITO: Cognitive interaction of human - virtual environment for engineering applications, CNCSIS Exploratory research projects IDEI, nr. 608, 2008-2011, Position: Director

IREAL - Haptic interface for virtual prototyping in immersive environment CNCSIS Exploratory research projects IDEI 132/2007, 2007-2010, Position: Member

SPINE - System for diagnosis and therapy of diseases of the spine. PN-II-PT-PCCA-2013-4-1596, 2014-2017, Position: Member.

EXORAS - New haptic arm exoskeletons for robotics and automation in space, Romanian Spatial Agency (ROSA) - STAR 2012, ID 113, 2012-2016, Position: Member.

CHANCE - Robotic assisted brachytherapy, an innovative approach of inoperable cancers, PN-II-PT-PCCA-2011-3.2-0414, 2012-2015, Position: Member.

ROBOCORE - Robotic assisted prostate biopsy, a high precision innovative method, PN-II-PT-PCCA-2013, 2014-2017, Position: Member.

Relevant publications

1. Boboc, R.G., Dumitru, A.I., Antonya, Cs.: Point-and-Command Paradigm for Interaction with Assistive Robots, International Journal of Advanced Robotic Systems, 2015, 12:75, pp. 1-13, ISSN 1729-8806, DOI: 10.5772/60582 (IF 0.526).
2. Antonya, Cs., Butnariu, S., Beles, H.: Parameter Estimation from Motion Tracking Data, Springer Lecture Notes in Computer Science, 2015 Digital Human Modeling. Applications in Health, Safety, Ergonomics and Risk Management: Ergonomics and Health, Springer Lecture Notes in Computer Science Volume 9185, 2015, pp. 113-121, DOI: 10.1007/978-3-319-21070-4_12, ISBN 978-3-319-21069-8.
3. Antonya, Cs., Butnariu, S., Beles, H.: Geometric Identification of a Four-Bar Linkage from Noisy Tracking Data, Proceeding of The 14th IFToMM World Congress, Taipei, Taiwan, October 25-30, 2015, DOI Number: 10.6567/IFToMM.14TH.WC.OS2.012, ISBN 978-986-04-6098-8
4. Antonya, Cs., Butnariu, S., Pozna, C.: Parameter computation of the hand model in virtual grasping, CogInfoCom 2014, 5th IEEE International Conference on Cognitive Infocommunications, November 5-7, 2014, Vietri sul Mare, Italy, pp. 173-177, ISBN 978-1-4799-7280-7, DOI: 10.1109/CogInfoCom.2014.7020440.
5. Talaba, D., Antonya, Cs.: Virtual prototyping of mechanical systems with tool mediated haptic feedback, Engineering with Computers, 30(4), pp. 569-582. DOI: 10.1007/s00366-012-0301-y, ISSN 0177-0667, 2014 (IF 1.451).
6. Antonya, Cs.: Force Feedback in String based Haptic Systems, Procedia Computer Science,

Volume 25, 2013, pp. 90-97, ISSN 1877-0509, DOI: 10.1016/j.procs.2013.11.011.

7. Antonya, Cs.: Hybrid dynamic model for haptic systems with planar mechanisms, 6th IEEE Conference on Robotics, Automation and Mechatronics (RAM) Manila, Philippines, 2013, pp. 174 - 178, DOI: 10.1109/RAM.2013.6758579, ISSN: 2158-2181, ISBN: 978-1-4799-1198-1.

8. Antonya, Cs.: Accuracy of Gaze Point Estimation in Immersive 3D Interaction Interface Based on Eye Tracking, IEEE 12th International Conference on Control, Automation, Robotics & Vision, Guangzhou, China, 5-7th December 2012 (ICARCV 2012), pp. 1125-1129, ISBN 978-1-4673-1872-3, 2012, DOI: 10.1109/ICARCV.2012.6485315

9. Antonya, Cs., Bărbuceanu, F. G., Rusák, Z.: Path generation in virtual reality environment based on gaze analysis, IEEE Catalog number: CFP11AFR-CDR, ISBN: 978-1-61284-991-1, ISSN 2153-0025, pp. 1-4, IEEE Africon, 2011 - Livingstone, Zambia, DOI: 10.1109/AFRCON.2011.6072169

10. Antonya, Cs.: INCOGNITO: Cognitive interaction between human and virtual environment for engineering applications, (2011) 2nd International Conference on Cognitive Infocommunications, CogInfoCom 2011; Budapest; 7 - 9 July 2011; Code 86513, ISBN: 978-145771806-9, art. no. 5999488

11. Antonya, Cs., Talabă, D.: Design Evaluation and Modification in a Virtual Environment. Journal of Virtual Reality, vol. 11, nr. 4, October, 2007, pp. 275-285, Springer London, ISSN 13594338 (Print) 14349957 (Online), DOI 10.1007/s1005500700746 (IF 0.729)

I hereby certify that the above statements are true.



Date 26.05.2016

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