

PERSONAL INFORMATION

Csaba Antonya


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EXPERTISE FIELD AND RESEARCH
INTEREST AREAS

Vehicle dynamics, driving simulators and autonomous vehicles;
Dynamics of mechanical systems, multi-body systems, mechanisms;
1D and 3D simulations;
Simulations, virtual reality, and haptic devices.

WORK EXPERIENCE

- | | |
|-----------|---|
| 2007–... | <p>Professor at the Faculty of Mechanical Engineering, Transilvania University of Brasov
Transilvania University of Brasov
29 Eroilor, 500036 Brasov (Romania)</p> <p><u>www.unitbv.ro</u></p> <p>Teaching activities in Mechanisms, Autonomous vehicles, Simulation and dynamics of mechanical systems
Research activities in autonomous vehicles, vehicle simulators, mechanical systems, virtual reality, visualization, haptics, and human computer interaction</p> <p>Business or sector Education and research</p> |
| 2004–2007 | <p>Associate Professor at the Department of Product Design and Robotics, Transilvania University of Braşov
Transilvania University of Brasov
29 Eroilor, 500036 Brasov (Romania)</p> <p>Teaching activities in Mechanisms, Robotics and Virtual Reality (Simulation techniques, Vision, Virtual prototyping).
Research activities in mechanical systems, robotics, virtual reality, visualization, haptics, human computer interaction</p> <p>Business or sector Education and research</p> |
| 1996–2004 | <p>Lecturer at the Department of Product Design and Robotics, Transilvania University of Brasov
Transilvania University of Brasov</p> |
| 1995–1996 | <p>Research and development engineer
Tractor Proiect S.A., Brasov</p> <p>Business or sector Research and development</p> |
| 2009–2013 | <p>Research and development engineer
Computer Sharing Bucureşti, Bucureşti
10731 Calea Grivitei nr. 6, sector 1, Bucuresti</p> |

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Research activities in the ARTreat: FP7-224297 project

2017 – 2020 [Business or sector](#) Research and development

[Research engineer](#)

Siemens Industry Software România, Brasov

Nine, Bulevardul Gării 13A, Braşov 500227

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Researcher and consultant

2007 – ... [Business or sector](#) Research and development

[Ph.D. Supervisor in Mechanical Engineering](#)

Transilvania University of Brasov, Brasov

4 graduated Ph.D. students, 4 Ph.D. active students

[Business or sector](#) Research and education

EDUCATION AND TRAINING

1996–2002 [PhD Title](#)

Transilvania University of Brasov, Brasov

Research in Mechanical Engineering.

PhD thesis title: Dynamics transfer of the wheel's guiding mechanisms of passenger car

1995–1996 [Master degree](#)

Transilvania University of Brasov

Specialisation: Mechanical systems for power transmission

1990–1995 [Engineer](#)

Transilvania University of Brasov

Faculty of Mechanical Engineering, Specialisation: Automotive Engineering

PERSONAL SKILLS

Main languages Hungarian, Romanian

Foreign languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B1	B1	A2	A2	A2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user

[Common European Framework of Reference for Languages](#)

[Digital skills](#) Matlab / Simulink, MSC Adams, Catia, AutoCAD, MS Office, Solidworks, Simcenter AMESim, Simcenter 3D Motion, Python

[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
Jan 2013, SZTAKI, Institute for Computer Science and Control, Budapest, Hungary
Sept-Oct. 2016, Jožef Stefan Institute, Ljubljana, Slovenia
Nov-Dec. 2019, Siemens Industry Software, Leuven, Belgium
Nov. 2022, Technical University of Munchen, Germany

ADDITIONAL INFORMATION**Scientific activity (entire career)**

Published books: 5

Published papers in journals, national and international conferences, and congresses: over 150

National and international research contracts: over 20

Research project coordinator: 4

Reviewer of papers in many journals, national and international conferences

Member in the scientific committees of international conferences (VIRMAN, EngOpt, InECCE, ICCA, Conat)

Industrial tutorial presentation at TMCE 2008

Teaching at foreign universities: 2002 University of Metz, France, 2009 Scuola Superiore Sant'Anna, Pisa, Italy; 2023 Cadi Ayyad University, Marrakech, Morocco.

Relevant research projects and publications:**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 trening, FP7-224297 – Large-scale Integrating Project(IP), sep. 2009 – aug. 2013, Position: Technical Director of project partner

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
DILSimEV - Driver-In-the-Loop SIMulation for safety-critical testing scenarios of Electric Vehicles, Romanian

Ministry of Education and Research, CCCDI - UEFISCDI, project number PN-III-P2-2.1-PED-2019-4366 (431PED), within PNCDI III - Position: Director

Selection of publications in the last 10 years:

1. Butnariu, S., **Antonya, Cs.** (2015) Correction method for spine flexion tracking with markers. 4th International Workshop on Medical and Service Robot, MESROB 2015, July 8-10, 2015, Nantes, France. New Trends in Medical and Service Robots (pp. 265-275). Springer International Publishing. DOI: 10.1007/978-3-319-30674-2_20, ISBN 978-3-319-30673-5
2. Pozna, C., **Antonya, Cs.** (2015) Using Intelligent Computation for Modeling in Robotics. Congress on Information Technology, Computational and Experimental Physics, CITCEP 2015, December 18-20, 2015, Cracow, Poland.
3. Boboc, R.G., Dumitru, A.I., **Antonya, Cs.** (2015) 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).
4. **Antonya, Cs.**, Butnariu, S., Beles, H. (2015) 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.
5. Tolea, B., **Antonya, Cs.**, Beles, H. (2015) Assessment of the injury severity of the pedestrian lower limbs at the collision with a vehicle, Annals of the Oradea University, Fascicle of Management and Technological Engineering, Volume XXIV (XIV), 2015/1, ISSN 1583 – 0691, pp. 153-156.
6. Groza, D., **Antonya, Cs.** (2015) Dynamically Spring Balanced Slider-Crank Mechanism for Reciprocating Machines, SSRG International Journal of Mechanical Engineering (SSRG-IJME) – volume 2 Issue 6–June 2015, ISSN: 2348 – 8360, pp. 48-52.
7. **Antonya, Cs.**, Butnariu, S., Beles, H. (2015) 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
8. Tolea, B., Trusca, D., **Antonya, Cs.**, Beles, H. The Influence of the Frontal Profile Design of a Vehicle upon the Pedestrian Safety at Low Velocity, Proceedings of the 26th DAAAM International Symposium, pp.1052-1058, B. Katalinic (Ed.), Published by DAAAM International, ISBN 978-3-902734-07-5, ISSN 1726-9679, Vienna, Austria, DOI: 10.2507/26th.daaam.proceedings.148
9. Tolea, B., Trusca, D., **Antonya, Cs.** (2016) Research Regarding Night-Time Pedestrian Visibility, Proceedings of the European Automotive Congress EAEC-ESFA 2015 (ed. Andreescu, C., Clenci, A.), pp. 749-755, DOI: 10.1007/978-3-319-27276-4_70, ISBN 978-3-319-27275-7, Springer International Publishing, 2016.
10. Pozna, C., **Antonya, Cs.** (2016) Issues about autonomous cars, 2016 IEEE 11th International Symposium on Applied Computational Intelligence and Informatics (SACI), pag.13-18. ISBN: 978-1-5090-2380-6 DOI: 10.1109/SACI.2016.7507360.
11. Butnariu, S., Mogan, Gh., **Antonya, Cs.**, Gîrbacia, F.: A new approach to diagnosis and rehabilitation in spine diseases. VRIC 2016, 18th ed. Conference Laval Virtual 23-27 March 2016, ACM. ISBN: 978-1-4503-4180-6 DOI: 10.1145/2927929.2927951
12. **Antonya, Cs.**, Butnariu, S., Gams, M. (2016) Haptic Interface Design for Experiencing Ancient Works. Proceedings of the 19th International Multiconference INFORMATION SOCIETY – IS 2016 Volume F, pag. 16-19. 2016
13. **Antonya, Cs.**, Butnariu, S., Pozna, C. (2016) Real-time representation of the human spine with absolute orientation sensors, The 14th International Conference on Control, Automation, Robotics and Vision, ICARCV 2016, November 13 –15, 2016, Phuket, Thailand, ISBN: 978-1-5090-3549-6, DOI: 10.1109/ICARCV.2016.7838745.
14. Butnariu, S., Nica, S., Mogan, Gh., Mologhianu, G., **Antonya, Cs.** (2016) An algorithm to calculate the spine posture using a tracking mobile device, poster + abstract, Journal of Rehabilitation Medicine, Vol.48, Issue 55, aug. 2016, Abstract for The 10th International Society of Physical Rehabilitation World Congress ISPRM 2016, Kuala Lumpur, 29 May-2 June, 2016. DOI: 10.2340/16501977-2139
15. Tolea, B., Trusca, D.D., **Antonya Cs.**, Radu A.I., Dima D.S. (2016) Research Regarding Pedestrian Visibility During Night-Time Using Photo Processing. In: Chiru A., Ispas N. (eds) CONAT 2016 International Congress of Automotive and Transport Engineering. CONAT 2016. pp 881-888. Springer, Cham. 2016. ISBN 978-3-319-45446-7. DOI: 10.1007/978-3-319-45447-4_97
16. Tavčar, A., **Antonya, Cs.**, Butila, E. V. (2016) Recommender System for Virtual Assistant Supported Museum Tours. Informatica, 40(3), pag. 279-284, 2016. ISSN 0350-5596
17. Tolea, B., Radu, A.I., Beles, H., **Antonya, Cs.**: Influence of the geometric parameters of the vehicle frontal profile on the pedestrian's head accelerations in case of accidents, International Journal of Automotive Technology, Vol.19, No.1, February, 2018, pp. 85–98 pISSN 1229–9138, DOI 10.1007/s12239–018–0009–0

18. Irimia, C., Grovu, M., Husar, C., Fodorean, D., **Antonya, Cs.** (2017) Co-simulation Analysis for an Electric Vehicle Powered by a High-Speed Electrical Machine, 2017 IEEE Vehicle Power and Propulsion Conference (VPPC), 11-14 Dec. 2017, Belfort, France. ISBN: 978-1-5386-1317-7. DOI: 10.1109/VPPC.2017.8331021, ISBN: 978-1-5386-1317-7
19. **Antonya, Cs.** (2017) Path Planning in Urban Area Using Local Features of the Road System, 2nd International Conference on Computational Modeling, Simulation and Applied Mathematics (CMSAM 2017), pp. 556-560, 2017, DEStech Transactions on Computer Science and Engineering. ISBN: 978-1-60595-499-8, ISSN: 2475-8841 DOI: 10.12783/dtcse/cmsam2017/16433.
20. Angi, N., Huminic, A., **Antonya, Cs.** (2018) Flight Control System Design and Analysis of a Light Sport Aircraft with Emphasis on Multibody Dynamics and Aerodynamic Analysis, INCAS Bulletin; Vol. 10, Iss. 2 (2018): 221-229. DOI: 10.13111/2066-8201.2018.10.2.20
21. **Antonya, Cs.** (2017) Capturing Revolute Motion and Revolute Joint Parameters with Optical Tracking. In IOP Conference Series: Materials Science and Engineering (Vol. 281, No. 1, p. 012064). IOP Publishing, 2017. DOI:10.1088/1757-899X/281/1/012064, ISSN: 1757-8981
22. Butnariu S., **Antonya Cs.** (2018) Methodology for Determining the Positions of the Human Spine Vertebrae. In: Doroftei I., Oprisan C., Pislă D., Lovasz E. (eds) New Advances in Mechanism and Machine Science. Mechanisms and Machine Science, vol 57. Springer, Cham, pp 201-210, DOI: 10.1007/978-3-319-79111-1_20, Print ISBN978-3-319-79110-4, Online ISBN978-3-319-79111-1
23. **Antonya Cs.**, Carabulea L., Pauna C. (2018) Predictive Actuation of a Driving Simulator. In: Burnete N., Varga B. (eds) Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018). Proceedings in Automotive Engineering. Springer, Cham, pp 128-135, DOI: 10.1007/978-3-319-94409-8_16, Print ISBN 978-3-319-94408-1, Online ISBN978-3-319-94409-8
24. Butnariu S., Mogan G., **Antonya Cs.** (2018) Using Inertial Sensors in Driver Posture Tracking Systems. In: Burnete N., Varga B. (eds) Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018). Proceedings in Automotive Engineering. Springer, Cham, pp 17-24, DOI: 10.1007/978-3-319-94409-8_2, Print ISBN978-3-319-94408-1, Online ISBN978-3-319-94409-8
25. **Antonya Cs.**, Butnariu S., Pozna C. (2019) Haptic Device with Decoupled Motion for Rehabilitation and Training of the Upper Limb. In: Abraham A., Gandhi N., Pant M. (eds) Innovations in Bio-Inspired Computing and Applications. IBICA 2018. Advances in Intelligent Systems and Computing, vol 939. Springer, Cham, pp 413-422, DOI: 10.1007/978-3-030-16681-6_41, Print ISBN978-3-030-16680-9, Online ISBN978-3-030-16681-6
26. Butnariu S., **Antonya Cs.**, Ursu P. (2019) Medical Recovery System Based on Inertial Sensors. In: Abraham A., Gandhi N., Pant M. (eds) Innovations in Bio-Inspired Computing and Applications. IBICA 2018. Advances in Intelligent Systems and Computing, vol 939. Springer, Cham, pp 395-405, pp 395-405, DOI: 10.1007/978-3-030-16681-6_39, Print ISBN978-3-030-16680-9, Online ISBN978-3-030-16681-6
27. Irimia C., **Antonya Cs.**, Grovu M., Husar C. (2019) Dynamic Analysis of the Stewart Platform for the Motion System of a Driving Simulator. In: Uhl T. (eds) Advances in Mechanism and Machine Science. IFTOMM WC 2019. Mechanisms and Machine Science, vol 73. Springer, Cham, pp 3079-3086, ISBN 978-3-030-20130-2, DOI: 10.1007/978-3-030-20131-9_303
28. **Antonya Cs.**, Irimia C., Grovu M., Husar C., Ruba, M. (2019) Co-Simulation Environment for the Analysis of the Driving Simulator's Actuation, 7th International Conference on Control, Mechatronics and Automation (ICCMA), Delft, Netherlands, 2019, pp. 315-321, doi: 10.1109/ICCMA46720.2019.8988628.
29. Antonya,Cs. (2020), Graphical Tool for Positioning of Triads in Mechanisms, Journal of Physics: Conference Series, Volume 1624 052009, <https://doi.org/10.1088/1742-6596/1624/5/052009>
30. **Antonya Cs.**, Buzdugan I.D. (2020) Multimodal Environment for Studying the Behavior of Autonomous Vehicles in Traffic Situations. In: Auer M.E., Centea D. (eds) Visions and Concepts for Education 4.0. ICBL 2020. Advances in Intelligent Systems and Computing, vol 1314. Springer, Cham, 2020, ISBN978-3-030-67208-9, https://doi.org/10.1007/978-3-030-67209-6_37
31. Boboc, R.G.; Chiriac, R.-L.; **Antonya, Cs.** (2021) How Augmented Reality Could Improve the Student's Attraction to Learn Mechanisms. Electronics 2021, 10, 175. <https://doi.org/10.3390/electronics10020175> (IF: 2.412)
32. Pridie A-C, **Antonya Cs.** (2021) The Theoretical Study of an Interconnected Suspension System for a Formula Student Car. Applied Sciences. 2021; 11(12):5507. <https://doi.org/10.3390/app11125507> (IF:2.474)
33. **Antonya, Cs.**, Boboc, R. (2021). Computational efficiency of multi-body systems dynamic models. Robotica, Volume 39, Issue 12, December 2021, pp. 2333 – 2348. Doi:10.1017/S0263574721000345 (IF:2.406)
34. Boboc, R., **Antonya, Cs.** (2021) Using 3D printing and augmented reality for teaching and learning in mechanical engineering higher education, EDULEARN21 Proceedings, 13th annual International Conference on Education and New Learning Technologies, pp. 879-885, ISBN: 978-84-09-31267-2, ISSN: 2340-1117, 13th International Conference on Education and New Learning Technologies, 5th-6th July, 2021. doi: 10.21125/edulearn.2021.0236

35. Pozna, C. R., **Antonya, Cs.** (2021) Proposal of an Autonomous Vehicle Control Architecture. IEEE 25th International Conference on Intelligent Engineering Systems (INES), 2021, pp. 37-42, doi: 10.1109/INESS2918.2021.9512914.
36. **Antonya Cs.**, Gîrbacia F., Postelnicu C., Voinea D., Butnariu S. (2021) Saliency Detection in a Virtual Driving Environment for Autonomous Vehicle Behavior Improvement. In: De Paolis L.T., Arpaia P., Bourdot P. (eds) Augmented Reality, Virtual Reality, and Computer Graphics. AVR 2021. Lecture Notes in Computer Science, vol 12980. pp 511-518, Springer, Cham. Doi:10.1007/978-3-030-87595-4_37, ISBN978-3-030-87594-7.
37. Pozna C. R., **Antonya Cs.** and Horváth, E. (2021) Case Study on the Tactical Level of an Autonomous Vehicle Control, IEEE 2021 International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 2021, pp. 1-6, doi: 10.1109/ICECCME52200.2021.9590868. ISBN:978-1-6654-1262-9
38. Pozna C. R., **Antonya Cs.** (2021) Interactive Simulation Program for Autonomous Vehicles. The Eurasia Proceedings of Science Technology Engineering and Mathematics. 2021; 16: 26-30. ISSN: 2602-3199, DOI: 10.55549/epstem.1052211
39. Butnariu, S., Gîrbacia, F., **Antonya, Cs.** (2021) "Transfer of Personal Driving Styles to Autonomous Vehicles" The International Conference on Technology, Engineering and Science (ICONTES 2021) Noiembrie 04-07, 2021 în Antalya, Turcia. Eurasia Proceedings of Science, Technology, Engineering & Mathematics (EPSTEM), Volume 16, Pages 69-76, ISSN: 2602-3199 DOI: 10.55549/epstem.1068550
40. Carabulea, L., Pozna, C., Antonya, C., Husar, C. and Băicoianu, A., (2022) The influence of the Advanced Emergency Braking System in critical scenarios for autonomous vehicles. The International SIAR Congress of Automobile and Transport Engineering – „Automotive and Integrated Transport Systems – AITS 2021, Octombrie 28-30, 2021, Chişinău, Republica Moldova. IOP Conference Series: Materials Science and Engineering (Vol. 1220, No. 1, p. 012045). IOP Publishing.
41. Buzdugan, ID., Roşu, IA., **Antonya, Cs.** (2023). Development of a Simulator Tool for Teaching the Autonomous Vehicles Behavior. 19th International Conference on Remote Engineering and Virtual Instrumentation (REV2022) – REV 2022, 28 Februarie - 2 Martie, 2022, Egipt, Cairo. In: Auer, M.E., El-Seoud, S.A., Karam, O.H. (eds) Artificial Intelligence and Online Engineering. REV 2022. Lecture Notes in Networks and Systems, vol 524. Springer, Cham. https://doi.org/10.1007/978-3-031-17091-1_8
42. Voinea, G.D.; Boboc, R.G.; **Antonya, Cs.** (2022) Mixed Reality Tools for Education in The Metaverse. The International Conference on Education and New Developments (END) (END 2022), Iunie 18-20, 2022 în Madeira, Portugalia. Education and New Developments 2022 – Volume 2, Pages 249-251, ISSN 2184-1489, ISSN 2184-044X, ISBN: 978-989-53614-5-8. DOI: 10.36315/2022v2end056
43. Boboc, R.G.; Voinea, G.D.; Buzdugan, I.-D.; **Antonya, Cs.** (2022) Talking on the Phone While Driving: A Literature Review on Driving Simulator Studies. Int. J. Environ. Res. Public Health 2022, 19, 10554. (FI 4,614) <https://doi.org/10.3390/ijerph191710554>
44. Voinea, GD, Gîrbacia, F, Postelnicu, CC, Duguleana, M, Antonya Cs, Soica A, Stănescu, R-C. (2022) Study of Social Presence While Interacting in Metaverse with an Augmented Avatar during Autonomous Driving. Applied Sciences. 2022; 12(22):11804. <https://doi.org/10.3390/app122211804>
45. **Antonya, Cs.**; Butnariu, S. (2022) Preservation of Cultural Heritage Using Virtual Reality Technologies and Haptic Feedback: A Prototype and Case Study on Antique Carpentry Tools. Appl. Sci. 2022, 12, 8002. (FI 2.838) <https://doi.org/10.3390/app12168002>
46. Rosu, I.A; Buzdugan, I.D.; Carabulea, L.; **Antonya, Cs.** (2022) Simulation of a Pedestrian Collision Avoidance Using the Pedestrian Protection System Publicat la 9th International Congress Motor Vehicles and Motors 2022, University of Kragujevac Faculty of Engineering, 13 -14 Octombrie 2022, Kragujevac, Republica Serbia, ISBN 978-86-6335-096-0
47. **Antonya, Cs.**, Husar, C., Butnariu, S., Pozna, C., Băicoianu, A. (2023). Driver-in-the-Loop Simulator of Electric Vehicles. In: Nathanail, E.G., Gavanis, N., Adamos, G. (eds) Smart Energy for Smart Transport. CSUM 2022 pp 135–142. Lecture Notes in Intelligent Transportation and Infrastructure. Springer, Cham. https://doi.org/10.1007/978-3-031-23721-8_11. ISBN 978-3-031-23720-1
48. Voinea G.D., Boboc R.G., Buzdugan I.D., **Antonya Cs.**, Yannis G. (2023) Texting While Driving: A Literature Review on Driving Simulator Studies. International Journal of Environmental Research and Public Health. 2023 Feb 28;20(5):4354.
49. Buzdugan I-D, Butnariu S, Roşu I-A, Pridie A-C, **Antonya Cs.** (2023) Personalized Driving Styles in Safety-Critical Scenarios for Autonomous Vehicles: An Approach Using Driver-in-the-Loop Simulations. Vehicles. 2023; 5(3):1149-1166. (FI. 2.2) <https://doi.org/10.3390/vehicles5030064>
50. Rosu, I.A; Buzdugan, I.D.; Carabulea, L.; **Antonya, Cs.** (2023) Simulation of a Pedestrian Collision Avoidance Using the Pedestrian Protection System. Mobility & Vehicle Mechanics MVM, Vol. 49, No. 2, (2023), pp 13-26, DOI: 10.24874/mvm.2023.49.02.02, ISSN 1450 – 5304.
51. Rosu, I.A; Carabulea, L.; Buzdugan, I.D.; **Antonya, Cs.** (2023) Time-to-collision for the Pedestrian Protection System simulation. Transportation Research Procedia, Volume 74, 2023, Pages 1325-1332 ISSN 2352-1465, <https://doi.org/10.1016/j.trpro.2023.11.278>.

52. Pridie A-C, Buzdugan, I.D., **Antonya Cs.** (2023) "Study on the Impact of Physical Parameters on the Performance of a Vehicle with an Interconnected Suspension System," 2023 IEEE 28th International Conference on Emerging Technologies and Factory Automation (ETFA), Sinaia, Romania, 2023, pp. 1-8, doi: 10.1109/ETFA54631.2023.10275555.
53. Buzdugan, ID., Roşu, IA., Scurt, F.B., **Antonya, Cs.** (2025). Adaptive Decision-Making Framework for Autonomous Vehicles: A Reinforcement Learning Approach to Urban Traffic Safety. In: Chiru, A., Covaciu, D. (eds) CONAT 2024 International Congress of Automotive and Transport Engineering. CONAT 2024. Proceedings in Automotive Engineering. Springer, Cham. https://doi.org/10.1007/978-3-031-77635-9_12
54. Carabulea, L., Pozna, C., **Antonya, Cs.**, Arhip, F., Husar, C. (2025). Autonomous Driving Object Detection Platform. In: Chiru, A., Covaciu, D. (eds) CONAT 2024 International Congress of Automotive and Transport Engineering. CONAT 2024. Proceedings in Automotive Engineering. Springer, Cham. https://doi.org/10.1007/978-3-031-77627-4_27
55. Roşu, IA., Buzdugan, ID., **Antonya, Cs.** (2025). Collision Avoidance System Simulation for Occluded Pedestrian. In: Chiru, A., Covaciu, D. (eds) CONAT 2024 International Congress of Automotive and Transport Engineering. CONAT 2024. Proceedings in Automotive Engineering. Springer, Cham. https://doi.org/10.1007/978-3-031-77635-9_13
56. **Antonya, Cs.**, Butnariu, S., Roşu, I.A. and Buzdugan, I.D., 2024, September. Eco-Driving Strategies in Autonomous and Manual Vehicle Interaction. In Conference on Sustainable Urban Mobility (pp. 129-140). Cham: Springer Nature Switzerland.