

## PERSONAL INFORMATION

**Adrian Ovidiu ȘOICA**✉ e-mail address a.soica@unitbv.roPOSITION  
IOSUD UTBVPhD Coordinator  
Doctoral studies field: Automotive Engineering  
Since 2016EXPERTISE FIELD AND  
RESEARCH INTEREST AREAS

Vehicle Safety, Vehicle Dynamics, Accident reconstruction, Vehicle Design

October 2014-present

**Professor**

Transilvania University of Brasov, www.unitbv.ro

▪ vehicle dynamics, vehicle safety

October 2016 - September 2014

**Assoc Professor**

Transilvania University of Brasov, www.unitbv.ro

Vehicle dynamics, Vehicle body and safety, CAD

October 2003 – September 2006

**Lecturer**

Transilvania University of Brasov, www.unitbv.ro

Computer bases, Vehicle dynamics, Vehicle body and safety, CAD

October 2000 – September 2003

**Assistant Professor**

Transilvania University of Brasov, www.unitbv.ro

Computer bases, Vehicle dynamics, CAD, Numerical Methods

February 1998 – September 2000

**Engineer**

Transilvania University of Brasov, www.unitbv.ro

Computer bases, Vehicle dynamics

March 2019

**Internship**

DSD Dr. Steffan Datentechnik Ges.m.b.H, Linz, Austria

Accident Reconstruction, Crashtests and Crash Facilities

Mach2008

**Internship**

DSD Dr. Steffan Datentechnik Ges.m.b.H, Linz, Austria

Accident Reconstruction, Crashtests and Crash Facilities

2006

**Internship**

INA SCHAEFFLER BRASOV SRL

CAD Course PRO/Engineer

April 1998 – June 1998

**Internship**

E.N.S.A.M. Paris – France

Programme TEMPUS Watermost

**WORK EXPERIENCE**

- 1997 **Internship**  
 Technical visits at Mercedes Benz, M.T.U. and Z.F., Germany  
 Bourse DAAD
  
- 1999-2002 **PhD Degree**  
 Transilvania University of Brasov, www.unitbv.ro  
 ▪ Thesis title - Research into the modelling of vehicle-pedestrian impact
- 1998-1999 **Postgraduate degree**  
 Transilvania University of Brasov, www.unitbv.ro  
 ▪ Vehicle and environment
- 1997-1998 **Postgraduate degree**  
 Transilvania University of Brasov, www.unitbv.ro  
 ▪ Optimization techniques of the human being-vehicle-road system
- 1992-1997 **Mechanical Engineer**  
 Transilvania University of Brasov, www.unitbv.ro  
 ▪ Automotive Engineering

Replace with EQF  
(or other) level if  
relevant

**EDUCATION AND TRAINING**

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	A2	A2	B2
Replace with name of language certificate. Enter level if known.					
French	B2	B2	B1	B1	B2
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 ▪ Sociable, familiar with coordinating and working in teams, stress-resistant, involved and resolute when fulfilling various tasks.

**PERSONAL SKILLS**

Organisational / managerial skills

- Analytical and logical thinking;
- Coordinator of Job Title List for the Department of Motor Vehicles and Transportation;
- Coordinator of the study programme Automotive Engineer, with the following responsibilities:
  - Elaborating the curriculum of the study programme;
  - Drawing up the documentation for periodic evaluation by the Romanian Agency for Quality Assurance in Higher Education (ARACIS), full member of the European Association for Quality Assurance in Higher Education (ENQA);
  - Maintaining relationships, communicating with students and members of the academic staff.
- Participation in national funding competitions for research and development programmes: CNCSIS A, CNCSIS AT, PNCD-II IDEI, PN-II-PT-PCCA-PARTENERIATE;
- Manager of research projects: CNCSIS A 1999-2002, CNCSIS AT 2004-2005, PNCD-II IDEI 2007-2010;
- Vice-dean of the Faculty of Mechanical Engineering, with responsibilities regarding the scientific research within the faculty, coordination of the faculty computing system, maintenance and improvement of the faculty's external relationships;
- Member in PhD evaluation commissions according to Orders emitted by the Rector of "TRANSILVANIA" University of Braşov

Job-related skills

- Design and construction of teaching and research test benches;
- Development of testing procedures in the field of car accident reconstruction <http://www.unitbv.ro/Default.aspx?alias=www.unitbv.ro/asr&>;
- Member in PhD examination commissions;
- Member evaluator in ARACIS (Romanian Agency for Quality Assurance in Higher Education)

Computer skills

- Ms Office, Autocad, ProEngineer, CREO, MathCAD, Matlab-Simulink

Other skills

- Drive licence B

ADDITIONAL INFORMATION

Proiecte

- 2/169/2004 " Studiul teoretic si experimental al accidentelor de circulatie de tipul autoturism pieton". – faza I - Stadiul actual al cercetarilor privind impactul autoturism pieton, – director
- 5/169/2005 " Studiul teoretic si experimental al accidentelor de circulatie de tipul autoturism pieton". – faza a II a - Cercetări experimentale privind impactul autoturism pieton, – director.
- Proiect de cercetare finanţat de Ministerul Educaţiei Naţionale, nr. 240 din 01/07/2014 (P-INI-PT-PCCA-2013-4-2023) – Responsabil faza a III a. **NAVIEYES** - <http://navieyes.unitbv.ro/>

Evenimente

- CONAT 2016 International Congress of Automotive and Transport Engineering
- CONAT 2010 International Congress of Automotive and Transport Engineering
- CONAT 2004 International Congress of Automotive and Transport Engineering

Recenzor

- Recenzor pentru jurnalele:
- Proceedings of the Institution of Mechanical Engineers, Part D, Journal of Automobile Engineering
  - International Journal of Automotive technology

Afilieri

Membru SIAR (Societatea Inginerilor de Automobile din România) Perioada  
 Membru Society of Automotive Engineering  
 EVU - Europäische Vereinigung für Unfallforschung und Unfallanalyse e.V.  
 IPIMEA-Institutul de Perfectionare in Ingineria Mecanica si Electrica a Autovehiculelor

Indici Hirsch (conform Google Scholar)  
 (Conform Scopus)  
 (Conform ISI)

h-index 11 7  
 i10-index 11 8  
 HScopus 8  
 HISI 7

## ANNEXES

## Research papers

1. Huminic, A., Huminic, G., Soica, A., Study of aerodynamics for a simplified car model with the underbody shaped as a Venturi nozzle, *International Journal Vehicle Design*, Vol. 58, No. 1, 2012, pp 15-32. <http://www.inderscience.com/info/inarticle.php?artid=45927>
2. Soica, A., Radu, N. Gh., The Influence Of Triggers Geometry Upon The Stiffness Of Cylindrical Thin Walled Tubes, *Central European Journal of Engineering*, June 2014, Volume 4, Issue 2, pp 101-109, Springer. [http://download.springer.com/static/pdf/117/art%253A10.2478%252Fs13531-013-0125-6.pdf?auth66=1426657770\\_45a3578b35f766f4d6ca1e922633c634&ext=.pdf](http://download.springer.com/static/pdf/117/art%253A10.2478%252Fs13531-013-0125-6.pdf?auth66=1426657770_45a3578b35f766f4d6ca1e922633c634&ext=.pdf)
3. Soica, A., Budala, A., Monescu, V., Sommer, S., Owczarzak, W., Method of estimating the rolling resistance coefficient of vehicle tyre using the roller dynamometer revista: *Proc IMechE Part D: J Automobile Engineering*, ISSN: 0954-4070, 2020, SJR-0.67 fi:1.275, <https://journals.sagepub.com/eprint/JQYYDAJXB4QNBWERTWYV/full>
4. Soica, A., Budala, A., Comanescu, I.S., Tyres influence on vehicle fuel economy, *ACME 2020, 9th International Conference on Advanced Concepts in Mechanical Engineering - ACME*, June 04-05, 2020, Iasi.
5. Benea, B and Soica, A, The Contact Phase in Vehicle-Pedestrian Accident Reconstruction, Aug 2023, *Applied Sciences* basel, 13(16). <https://www.webofscience.com/wos/woscc/full-record/WOS:001057646500001>
6. Stanescu, RC; Leahu, CI and Soica, A, Aspects Regarding the Modelling and Optimization of the Transesterification Process through Temperature Control of the Chemical Reactor, Mar 2023, *Energies*, 16(6), <https://www.webofscience.com/wos/woscc/full-record/WOS:000955499400001>
7. Voinea, GD; Gîrbacia, F; Postelnicu, CC; Duguleana, M; Antonya, C; Soica, A; Stanescu, RC, Study of Social Presence While Interacting in Metaverse with an Augmented Avatar during Autonomous Driving, Nov 2022 *Applied Sciences* basel, 12(22), <https://www.webofscience.com/wos/woscc/full-record/WOS:000887042000001>
8. Száva, I; Vlase, S; Scutaru, ML; Asztalos, Z; Gálfi, BP; Soica, A; Soica, S, Dimensional Methods Used in the Additive Manufacturing Process, Sep 2023, *Polymers*, 15(18), <https://www.webofscience.com/wos/woscc/full-record/WOS:001074528000001>
9. Soica, A. Force in Cable of Pretensioner Tube—A Possibility of Car Accident Reconstruction. *Appl. Sci.* 2024, 14, 3087. <https://doi.org/10.3390/app14073087>, <https://www.webofscience.com/wos/woscc/full-record/WOS:001201205200001>
10. Soica, A.; Gheorghe, C. Tire–Road Interaction: A Comprehensive Review of Friction Mechanisms, Influencing Factors, and Future Challenges. *Machines* 2025, 13, 1005. <https://doi.org/10.3390/machines13111005>
11. Soica, A.; Gheorghe, C. A Review of Seatbelt Technologies and Their Role in Vehicle Safety. *Appl. Sci.* 2025, 15, 5303. <https://doi.org/10.3390/app15105303>
12. Carmen Gheorghe, Adrian Soica, Revolutionizing Urban Mobility: A Systematic Review of AI, IoT, and Predictive Analytics in Adaptive Traffic Control Systems for Road Networks, *Electronics*, issn:2079-9292, 2025, fi:2.11 <https://www.webofscience.com/wos/woscc/full-record/WOS:001431681200001>
13. Stanescu, RC; Soica, A; Leahu, CI; Influence of Biodiesel from Used Cooking Oil and Sunflower Oil on Engine Efficiency and Emission Profiles, *Energies* issn:1996-1073, 2025, fi:3.2 <https://www.webofscience.com/wos/woscc/full-record/WOS:001418531200001>
14. Adrian Soica, Stelian Tarulescu, Ramiarana Elie, Rasoma Rahantavololona Vonimanitra Juliana, Randriambanona Herizo, Mihaela Popa, The Impact of Road Transport on the Level of CO2 in Urban Areas *JurnalBDI:CONAT 2024 International Congress of Automotive and Transport Engineering* link:[https://link.springer.com/chapter/10.1007/978-3-031-77631-1\\_7](https://link.springer.com/chapter/10.1007/978-3-031-77631-1_7) DOI:10.1007/978-3-031-77631-1\_7 [https://link.springer.com/chapter/10.1007/978-3-031-77631-1\\_7](https://link.springer.com/chapter/10.1007/978-3-031-77631-1_7)

**LIST OF RELEVANT PUBLICATIONS /RESEARCH (Books selection)**

1. Pereş, GH., Florea, D., Cofaru, C., Şoica, A., Managementul traficului rutier, curs, Braşov 1998, ISBN 973 – 9852 – 7 – 4.
2. Chiru, A., Anca, H.R., Cofaru, C., Kuchar, p., Şoica, A., Ispas, N., Materiale compozite, plastomeri, elastomeri şi adezivi, curs, Editura Universităţii Transilvania, Braşov, 1999, ISBN 973 –98512 – 4 – X.
3. Florea, D., Cofaru, C., Şoica, A., Managementul traficului rutier, curs, Braşov 2000, Editura Universităţii Transilvania din Braşov, ISBN 973 – 9474 – 55 – 1.
4. Câmpian, O., Câmpian, V., Şoica, A., Cunoaşterea generală a automobilelor, Suport curs, Braşov 2002.
5. Şoica, A., Chiru, A., Ispas, N., Huminic, A., Caroserii şi sisteme pentru siguranţă pasivă, Curs, Braşov 2002.
6. Şoica, A., Târulescu. S., Năstăsoiu, M., Repararea autovehiculelor, Suport curs pentru specializarea Automobile – IFR, Braşov, 2004.
7. Năstăsoiu, M., Ispas, N., Şoica, A., Motoare pentru automobile II, Suport curs pentru specializarea Automobile – IFR, 2004.
8. Ispas, N., Năstăsoiu, M., Şoica, A., Bazele utilizării calculatoarelor II, Suport curs, Braşov 2003.
9. Câmpian, V.O., Şoica, A., Încercarea şi omologarea autovehiculelor, Editura Universităţii Transilvania din Braşov, ISBN 973 – 735 – 306 – 0 Braşov, 2004
10. Şoica, A., Chiru, A., Ispas, N., Huminic, A., Caroserii şi sisteme pentru siguranţă pasivă I, Editura Universităţii Transilvania din Braşov, Braşov 2005, ISBN 973 – 635 – 460 – 1.
11. Şoica, A., Caroserii şi sisteme pentru siguranţa pasiva II, Editura Universităţii Transilvania din Braşov, Braşov 2008, ISBN 978 – 973 – 598 – 354 – 3.
12. Şoica, A., Siguran  ta pasivă a autovehiculelor, Editura Universităţii Transilvania din Braşov, Braşov 2010, ISBN 97-8973-598-739-8.
13. Beleş, H., Şoica, A., Siguranţa activă şi pasivă a autovehiculelor, Editura Universităţii din Oradea, Oradea 2011, ISBN 978-606-10-0651-9.
14. Ispas, N., Şoica, A., Beleş, H., Expertiza si dinamica accidentelor rutiere, Editura Universităţii din Oradea, Oradea 2011, ISBN 978-606-10-0652-6.
15. Şoica, A., Proiectare asistată de calculator, Pro/Engineer - Îndrumar pentru laborator, 2012.
16. Dumitra şcu, D., Benea, B., Şoica, A., Jelenschi, L., Sandu, G., Proiectare asistată de calculator, Editura Universităţii Transilvania din Braşov, Braşov 2013, ISBN 978-606-19-0176-0.
17. Şoica, A., Câmpian O., Covaciu D., Dinamica autovehiculelor - îndrumar de laborator, Braşov 2013, ISBN 978-606-19-0301-6.
18. Şoica, A., Câmpian O., Ciolan Gh., Preda I., Truşcă, D., Elemente de dinamica autovehiculelor, Braşov 2014. ISBN 976-606-19-0346-7.
19. Şoica, A., Cercetari in domeniul sigurantei pasive a autovehiculului, Braşov 2015, ISBN 978-189-0661-1.

20. Șoica, A., Caroserii și sisteme de siguranță pasivă, Brașov 2017, ISBN 97-6806-19-0928-5.
21. Budală, A., Șoica, A., Centuri de siguranță, Îndrumar de laborator și proiect, Brașov 2017, ISBN 9-76806-19-0929-2.