

PERSONAL INFORMATION

Corneliu COFARU ccomel@unitbv.roPOSITION
IOSUD UTBV

Professor, PhD Coordinator
Doctoral studies field: Mechanical Engineering
Since 1999

EXPERTISE FIELD AND
RESEARCH INTEREST AREAS

- Internal combustion engine processes;
- Internal combustion engine new systems development;
- New technical solution for automotive pollutants reduction;
- New technical solution for automotive for automotive propulsion;
- New materials use in automotive design;
- Development of improving of road traffic management.

WORK EXPERIENCE

1997-2019

ProfessorTRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

- Internal combustion engine processes (English);
- Internal combustion engine calculus and construction (English);
- Environment legislation and engineering;
- Environment protection and automotive parts recycling (Master course);
- Chemical pollution generated by motor vehicle and road traffic - evaluation and control.(Master course);

1992 - 1997.

Business or sector Academic**Associate professor**TRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

1984 - 1992

LecturerTRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

1978 - 1997

Assistant professorTRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

1975 - 1979

Engineer

ISCE Autoexportimport Brasov

Technical and commercial Offers, Technical documentations, Commercial negotiations, Commercial contracts.

EDUCATION AND TRAINING

1981-1991

PhD DiplomaTRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

Internal combustion engine processes; Internal combustion engine calculus and construction; Engine supercharging Experimental research of internal combustion engines.

1970-1975

Diplomat Engineer DiplomaTRANSILVANIA University of Braşov, 29, Eroilor Blvd r, RO-500036 Brasov, Romania <http://unitbv.ro>

Mechanical Engineering Faculty

Automobile and Tractors Specialization

Knowledge and concepts use, theories and descriptive and evaluative models for solutions explications and interpretations: Algebra, Mathematical analysis, Analytical geometry, Special mathematics, Physics, Chemistry, Descriptive geometry, Technical design, Study materials, Materials technologies.

Use of engineering methods and principals: Mechanics, Material strengths, Thermodynamic and thermal machines, Hydrodynamics, Mechanisms, Machines organs, Electronics, Electrothechnics.

*Specific designs:*Automotive engines, Automobiles, Tractors, Electric and electronic equipments, Terrotechnics...

Communication French language

1976-1980

Economist

The Bucharest University of economic Studies (Academia de Studii Economice Bucuresti – ASE)

Trade Faculty (Facultatea de Comerț)

International Economic Relations Specialization

*General economics concepts using:*Algebra, Mathematical statistics, Computer programming, General economic, International business accounting activities. *Use of Laws concepts:* Basic of laws, Commercial Laws, International Laws

*Realization of descriptive and evaluative economic models for solutions explications and interpretations:*Marketing, International trade techniques, Tourism. International transports, Management.

Communication French language, English language.

oct 1988 – feb 1989

Diploma

Thermal Engines Specialization

Politechnic Institut of Bucharest (The Politechnica University of Bucharest)

Mechanical Faculty

Internal Combustion engine researches

Alternative fuels

dec 2006- nov. 2007

Certificate

:Interactive Methods for Teaching-Learning Evaluation Process Specialization

Transilvania University of Braşov, 29, Bd.Eroilor, RO-500036 Braşov

Application of interactive methods, problem based learning and project based learning to engineering programs.

PERSONAL SKILLS

Mother tongue(s)

Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	B2
French	C1	C1	C1	C1	B2
Italian	B2	B2	B2	B2	A2

Communication skills

Replace with your communication skills. Specify in what context they were acquired. Example:

- good communication skills gained through my experience as manager

Organisational / managerial skills

2017 – prez – Member of National Council of Titles, Diplomas and Certificates (C.N.A.T.D.C.U), Commission aerospace engineering, automotive and transport.
 2016 – prez -.Member of Transilvania University of Brasov Senate.;
 1992 – 2015 – Member of Faculty of Mechanical Engineering Professors Council.
 2008-2012 – Vice-Dean of Mechanical Engineering Faculty
 1999-2000 – Head of the Department of Motor vehicles and Engines
 1996-1999 – Deputy Head of Department of Motor vehicles and Engines
 1992-1996 – Scretar scientific of Department of Motor vehicles and Engines
 1994-2016 – Member of the Board of SIAR
 Vice President of Radu Mardarescu Foundation;
 1998- 2010 – Team leader Society of Automotive Engineers (SAE – SUA);
 IPIMEA Director – Institut of imprvement in the Automotive Mechanical and Electrical Engineering
 Director of the Center for training in the Energy Transportation Environment "COMPLETE".
 Scientific Events Organization

- (1980, 1985, 1988, 1993, 1996, 2000,2004, 2010, 2016); Congresses CONAT
- Member of the Scientific Committees of the Congress CAR-Pitesti
 Coordinator of international projects
- Contractor of Tempus project: *CONEET – COM*nuing Education in Engineering and Technology - S_JEP 11563-96;(1996-1999) (15 institutions from EU and RO)
- Contractor Tempus project: *EuRoCEP – European Romanian Courses for Environmental Protection* – IB_JEP 14395-99.(1999-2002) (33 institutions from EU and RO)
- Director of Leonardo da Vinci pilot project COMPLETE - New Strategies of Competence Aquisition for Lifelong Learning in Energy – Transport – Environment Engineering.RO/B/F/PP-175016(2004-2007)(9 institutions from EU and RO)

Job-related skills

Replace with any job-related skills not listed elsewhere. Specify in what context they were acquired.
 Example:

- good command of quality control processes (currently responsible for quality audit)

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER	INDEPENDENT USER

Replace with name of ICT-certificates

- good command of office suite (word processor, spread sheet, presentation software)
- good command of photo editing software gained as an amateur photographer

Other skills

- Artistic photography, tourism

ADDITIONAL INFORMATION



Publications	Books: 28 books (national and international publishers): <ul style="list-style-type: none">○ Books or chepters of books (international publishing house): 4○ Books or chepters of books national publishing house): 15○ Teaching manuals and monographs: 9○ Book editor in national publishing: 8 Papers/Article and conference presentations: Article and scietific papers published: <ul style="list-style-type: none">○ Papers in scentific journals and conference proceedings ISI Thomson Reuters, patents: 26:○ Papers in scentific journals and conference proceedings indexed in International databases (Scopus, FISITA, Springer Link, Google Academic); 215○ Papers in scentific journals and conference proceedings: 90○ Plenary presentation of an international scientific congres/conferences: 5○ Plenary presentation of an international scientific congress in Romania: 1○ Patents: 5
Presentations Conferences Seminars	1979-2018 – Participation in 90 national and international scientific events, of which 31 abroad.
Projects	Participation in teams of 55 research contracts (9 as director), of which: <ul style="list-style-type: none">○ 3 grants obtined through international competition (director)○ 3 grants obtined through national competition (director)○ 3 grants obtined through international competition (team member)○ 11 grants obtined through national competition (team member)○ 3 reserch contracts concluded with industrial enterprises (director)○ 32 reserch contracts concluded with industrial enterprises (team member)
Memberships	SIAR (1990-2019), ACER – Electromagnetic compatibility Association Romania, Society of Automotive Engineers (S.A.E.International); 1997 -2008, Professor „Radu Mardarascu” Foundation, TEMPUS Association for Continuing Education
Citations	22 Thomson Reuters, 28 Scopus.162 Google Academic
H Indexis	HISI-1; h Scopus=3; HGS= 6

ANNEXES

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LIST OF RELEVANT PUBLICATIONS /RESEARCH (selection)

1. Radu, Al ; **Cofaru,C**; Tolea, B; Popescu, M . Development of a new recline mechanism in order to reduce the "whiplash" effect using a virtual model_PROCEEDINGS OF THE INSTITUTION OF MECHANICAL ENGINEERS PART D-JOURNAL OF AUTOMOBILE ENGINEERING, Volume : 232, Issue: 12, pp: 1701-1712, , DOI: 10.1177/0954407017731988 ,Published: OCT 2018, WOS:000445232900012 ISSN: 0954-4070 (IF = 1,414)
2. Radu Al. I.; **Cofaru,C**; Tolea,B. Mathematical Model Validated by a Crash Test for Studying the Occupant's Kinematics and Dynamics in a Cars' Frontal Collision . INTERNATIONAL JOURNAL OF AUTOMOTIVE TECHNOLOGY,Volume: 18, Issue: 6, pp 1017-1025, , DOI: 10.1007/s12239-017-0099-0 Published: DEC 2017, WOS:000407333700008 ISSN: 1229-9138 (IF = 1,264)
3. **Cofaru,C**. Research on cylinder processes of gasoline homogenous charge compression ignition (HCCI) engine.In: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING - MOBILITY ENGINEERING AND ENVIRONMENT (CAR2017), Book Group Author(s):IOP Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 252, Article Number: UNSP 012070 DOI: 10.1088/1757-899X/252/1/012070, Published: 2017 WOS:000419817200070, ISSN:1757-8981
4. Ispas, N., **Cofaru,C**.,Aleonte,M. Injection system used into SI engines for complete combustion and reduction of exhaust emissions in the case of alcohol and petrol alcohol mixtures feed. In: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING - MOBILITY ENGINEERING AND ENVIRONMENT (CAR2017), Book Group Author(s):IOP Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 252, Article Number: UNSP 012080 DOI: 10.1088/1757-899X/252/1/012080, Published: 2017 WOS:000419817200080, ISSN:1757-8981
5. Radu, Al, **Cofaru,C**., Tolea, B Popescu, M Study regarding seat's rigidity during rear end collisions using a MADYMO occupant model. In: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING - MOBILITY ENGINEERING AND ENVIRONMENT (CAR2017), Book Group Author(s):IOP,Book Series: IOP Conference Series-Materials Science and Engineering, Volume: 252, Article Number: UNSP 012004 DOI: 10.1088/1757-899X/252/1/012004, Published: 2017 WOS: 000419817200004, ISSN:1757-8981
6. **Cofaru,C**. Research on Gasoline Homogenous Charge Compression Ignition (HCCI) Engine. In: CONAT 2016: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING pp: 357-370 DOI: 10.1007/978-3-319-45447-4_40, Published: 2017ISBN:978-3-319-45447-4. WOS:000390821400040.
7. Radu, Al, **Cofaru,C**., Tolea, B.,Trusca,D., Beles,H. Research Regarding Occupant's Movement in the Case of Frontal Collision Using High-Speed Video Recording. In: CONAT 2016: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING pp: 790-797 DOI: 10.1007/978-3-319-45447-4_86, Published: 2017ISBN:978-3-319-45447-4. WOS: 000390821400086.
8. Radu, Al, **Cofaru,C**., Tolea, B.,Trusca,D.,Toganel,G. Research Regarding the Influence of Vehicle's Safety Restraint Systems on Its Occupants in Case of Rear-End Collision. In: CONAT 2016: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERINGpp: 798-804. DOI: 10.1007/978-3-319-45447-4_87, Published: 2017ISBN:978-3-319-45447-4. WOS: 000390821400087
9. Drosu,A., **Cofaru,C**. Estimating the Costs Caused by Road Traffic Accidents in Romania, In: CONAT 2016: INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT ENGINEERING pp: 889-898 DOI: 10.1007/978-3-319-45447-4_98, Published: 2017, ISBN:978-3-319-45447-4. WOS: 000390821400098.
10. Timar,J., **Cofaru,C**. Stanciu,MD.,Curtu,I.,Florea,D.,Covaciu,D., Rheological Behaviour of Copolymer Stamylan P108 MF used in Bumper Structure from Automotive Industry In: MATERIALE PLASTICE Volume: 50, Issue: 3, pp: 183-187, Published: SEP 2013, ISSN: 0025-5289, WOS:000324783500008 (IF = 1,248)

11. Timar,J., Stanciu,MD., **Cofaru,C.**,Curtu,I.,Florea,D.,Covaciu,D., Advanced Method used to Measure Noise Levels of Industrial Areas with Potential in Military Applications.In: 16TH INTERNATIONAL CONFERENCE THE KNOWLEDGE-BASED ORGANIZATION: APPLIED TECHNICAL SCIENCES AND ADVANCED MILITARY TECHNOLOGIES, CONFERENCE PROCEEDINGS 3 Book Series: Knowledge Based Organization International Conference, pp: 525-530. Published: 2010, ISSN: 1843-6722, WOS:000297596200091.
12. **Cofaru,C.** Strategies of Urban Pollution Diminishing by Controlling Emissions of Automotive Engines. In: LATEST TRENDS ON URBAN PLANNING AND TRANSPORTATION Book Series: International Conference on Urban Planning and Transportation-Proceedings pp: 76-81, Published: 2010. ISSN: 1792-4286. WOS:000301093100014
13. Florea,D.,**Cofaru,C.**, Covaciu,D., Timar.J. Data Acquisition Methods for Estimate the Noise Generated by the Road Traffic. In: LATEST TRENDS ON URBAN PLANNING AND TRANSPORTATION Book Series: International Conference on Urban Planning and Transportation-Proceedings.pp: 82-85 Published: 2010. ISSN: 1792-4286. WOS:000301093100015
14. Covaciu,D.,**Cofaru,C.**, Florea,D., Timar.J. Aspects Regarding the Road Traffic Noise and Its Effect on the Population. In: LATEST TRENDS ON URBAN PLANNING AND TRANSPORTATION Book Series: International Conference on Urban Planning and Transportation-Proceedings.pp: 86-91 Published: 2010. ISSN: 1792-4286. WOS: 000301093100016
- 15.Tarulescu,S.,**Cofaru,C.** The Methodology of Chemical Pollutants Approximation Model In: LATEST TRENDS ON URBAN PLANNING AND TRANSPORTATION Book Series: International Conference on Urban Planning and Transportation-Proceedings.pp: 96-101. Published: 2010. ISSN: 1792-4286. WOS: 000301093100018
16. **Cofaru,C.**, Timar.J., Florea,D., Covaciu,D. Study Regarding the Simulation of Urban Traffic Noise in Brasov City. In: PROCEEDINGS OF THE 2ND INTERNATIONAL CONFERENCE ON ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING: ADVANCES IN ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING. Book Series: Mathematics and Computers in Science and Engineering. Pages: 154-157. Published: 2009. ISSN: 1792-4308. WOS:000272960100023
17. Timar.J., Florea,D., **Cofaru,C.**, Covaciu,D. Main Influences in Modelling and Simulation of Urban Traffic Flows In: PROCEEDINGS OF THE 2ND INTERNATIONAL CONFERENCE ON ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING: ADVANCES IN ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING. Book Series: Mathematics and Computers in Science and Engineering. Pages: 213-217. Published: 2009. ISSN: 1792-4308. WOS: 000272960100036
18. **Cofaru,C.**, Tarulescu,S. Study Regarding Air Pollution Produced by Vehicles and a Prediction Model of Chemical Pollutants In: PROCEEDINGS OF THE 2ND INTERNATIONAL CONFERENCE ON ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING: ADVANCES IN ENVIRONMENTAL AND GEOLOGICAL SCIENCE AND ENGINEERING. Book Series: Mathematics and Computers in Science and Engineering. Pages: 218-223. Published: 2009. ISSN: 1792-4308. WOS: 000272960100037
19. **Cofaru,C.**, Ispas,N.,Effects of Re-designing of Two-Stroke Engine Fuelled with Gasoline - Ethanol Blend on GHG and Pollutant Emissions. Proceedings of 4th International Congress of Automotive and Transport Engineering (AMMA2018). Springer. Pp567-576 Print ISBN978-3-319-94408-1. Online ISBN978-3-319-94409-8 link:https://link.springer.com/chapter/10.1007/978-3-319-94409-8_66
20. Drosu,A., **Cofaru,C.** Explanatory Models of the Weather Factors' Influence on Road Traffic Accidents Produced in Romania in Different Road's Features. Proceedings of 4th International Congress of Automotive and Transport Engineering (AMMA2018). Springer. Pp791-799 Print ISBN978-3-319-94408-1. Online ISBN978-3-319-94409-8. link:https://link.springer.com/chapter/10.1007/978-3-319-94409-8_92

PhD theses:

1. Research on using layers of high-performance friction on the engine mechanisms friction joints. PhD Student: eng. Serban Ioan RADU, 1999 - 2003
2. Research to optimize motor vehicle and rail transport in Moldavia. PhD Student: eng. RUSNAC, 1998 - 2003
3. Research on optimizing road traffic in the Chisinaru municipality. PhD Student: eng. Gheorghe CĂRĂRUȘ. 1998 – 2003.
4. Influence of the operating conditions and the organization of road traffic on emission from motor vehicles. PhD Student: eng. Stelian TÎĂRULESCU. 2003 – 2008.
5. Contributions to research and establishing the methodology for implementation of performance management in the maintenance activity for trucks. PhD Student: eng. Ioan Mircea MĂNESCU. 2003 – 2009
6. Studies and researches regarding the optimization of urban traffic flows. PhD Student: eng. Janos TIMAR. 2006 – 2010.
7. Researches on using advanced fuel air mixture systems and by supplying with alcohols and their derivatives and alcohols, derivatives and gasoline's mixtures for Spark Ignition Engines. PhD Student: eng. Mihai ALEONTE. 2008 – 2011
8. Research on using of advanced combustion systems by using homogeneous mixtures/partial homogeneous mixtures in compression-ignition engines. PhD Student: eng. Radu COSGAREA. 2008 – 2011.
9. Research of the rotational movement of the combustion engines valves. PhD Student: eng. Liviu JELENSCHI. 2009 – 2012
10. Research of the transverse vibrations of a roller finger follower with hydraulic lash adjuster. PhD Student: eng. Gabriel SANDU. 2009 – 2012.
11. Studies and research on the assessment of the consequences of the traffic accidents on car occupants. PhD Student: eng. RADU Alexandru Ionut. 2014 – 2018