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Field: Automotive Engineering

PUBLICATIONS LIST

RELEVANT PAPERS

1. Daniela Laura Buruiana, **Adrian Sachelarie**, Claudiu Butnaru and Viorica Ghisman, [Important Contributions to Reducing Nitrogen Oxide Emissions from Internal Combustion Engines](#), Int. J. Environ. Res. Public Health 2021, 18(17), 9075; [doi:10.3390/ijerph18179075](https://doi.org/10.3390/ijerph18179075) <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000694188000001>
2. **Sachelarie, A.**, Gaiginschi, R. *The investigation of pedestrians' accident according the place where they are thrown*, IOP Conference Series: Materials Science and Engineering 2020, 997(1), 012131<https://iopscience.iop.org/issue/1757-899X/997/1>
3. Vranău, A.M., Bujoreanu, C., **Sachelarie, A.**, Caunii, V., *Some considerations on vibrations and noise of automotive HVAC system*, IOP Conference Series: Materials Science and Engineering, 2020, 997(1), 012065 <https://iopscience.iop.org/issue/1757-899X/997/1>
4. E.Rakosi, S.Taif,G. Manolache, **A. Sachelarie**, *Study on a Stratified Charge Spark Ignition Automotive Engine*, CONAT 2016, Springer <https://link.springer.com/conference/conat> , Springer, DOI: [10.1007/978-3-319-45447-4_31](https://doi.org/10.1007/978-3-319-45447-4_31) <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000390821400031>
5. Maftei, Al., Dontu, Al., **Sachelarie, A.**, Budeanu, B., *Method of creating additional parking spaces in the "Tudor Vladimirescu" university campus*, IOP Conf. Series: Materials Science and Engineering,no.147, 17 pag., 08/2016; DOI:[10.1088/1757-899X/147/1/012111](https://doi.org/10.1088/1757-899X/147/1/012111) <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000390720200112>
6. Dontu, Al. Maftei, Al., Barsanescu P.,D., **Sachelarie,A.**, Budeanu, B, *Method of preventing unwanted traffic in the "Tudor Vladimirescu" university campus*, IOP Conf. Series: Materials Science and Engineering ,no.147, 08/2016; 12 pag.,DOI:[10.1088/1757-899X/147/1/012111](https://doi.org/10.1088/1757-899X/147/1/012111) <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000390720200111>
7. V. Caunii, **A. Sachelarie**, *Simulation of the Air Conditioning Curtains with Turbulent Circular Jet Flows Inside the Cabin Vehicle Using ANSYS C* , Proceedings of the European Automotive Congress EAEC-ESFA 2015, Springer, Doi 10.1007/978-3-319-27277-4_33 https://link.springer.com/chapter/10.1007/978-3-319-27276-4_33 <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000434562400006>
8. TI Dumbrava, **A Sachelarie**, Gaiginschi R., - *Composite Indicators of Road Traffic Safety*, Ingineria automobilului, nr.4, 2014, ISSN-1842-4074. (Indexata Web of science-Clarivate analytics) <https://docplayer.net/39962231-Ingineria-automobilului.htm> <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000434562400006>
9. Gaiginschi Lidia, Agape Iulian, **Sachelarie Adrian**, Girbacă Mihai-Alin - „Virtual High Speed Diesel Engine – a Simulated Experiment. Part I: Combustion Dynamics”, Periodical of Applied Mechanics and Materials Vol. 659 in 2014 with the title Advanced Concepts in Mechanical Engineering II, Trans Tech Publications, Switzerland (indexata ISI) https://www.worldcat.org/search?q=Virtual+High+Speed+Diesel+Engine+%E2%80%93+a+Simulated+Experiment.+Part+I%3A+Combustion+Dynamics&qt=results_page
10. Gaiginschi Lidia, Agape Iulian, **Sachelarie Adrian** and Girbacă Mihai-Alin „Virtual High Speed Diesel Engine – a Simulated Experiment. Part II: The Influence of Polytropic Exponent upon Combustion Product Formation”, Periodical of Applied Mechanics and Materials Vol. 659 in 2014 with the title Advanced Concepts in Mechanical Engineering II, Trans Tech Publications, Switzerland (indexata ISI) https://www.worldcat.org/title/virtual-high-speed-diesel-engine-a-simulated-experiment-part-ii-the-influence-of-polytropic-exponent-upon-combustion-product-formation/oclc/5776965943&referer=brief_results
11. Caunii V., **Sachelarie A.**, „Aspects of modelling and optimizing air circulation in a car cabin”,Periodical of Applied Mechanics and Materials Vol. 659 in 2014 with the title Advanced Concepts in Mechanical Engineering II, Trans Tech Publications, Switzerland (indexata ISI): https://www.worldcat.org/title/aspects-of-modeling-and-optimizing-air-circulation-currents-in-a-car-cabin/oclc/8590126172&referer=brief_results
12. Bodor, L., A, Gaiginschi R., **Sachelarie A.**, *Experimental Study of Collision Using Similarity Theory*, Ingineria automobilului, nr 28,2013, ISSN-1842-4074. (Indexata Web of science-Clarivate analytics) http://www.ingineria-automobilului.ro/reviste/Ingineria_28.pdf <https://1610qlvny-https://www.webofscience.com.z.e-nformation.ro/wos/woscc/full-record/WOS:000434555800006>
13. Gaiginschi, L., Agape, I., **Sachelarie, A.**, *The analysis of influence factors on high speed diesel engine emissions based on simulation of combustion effects*, European Automobile Engineers Cooperation - 10th EAEC European Automotive Congress, EAEC 2005, 2005, 2, pp. 792–798, <http://toc.proceedings.com/00238webtoc.pdf>
14. **Sachelarie, A.**, Gaiginschi, L., Gaiginschi, R., *Lean mixtures-a reached purpose using the conversion of a classical internal combustion engine*, European Automobile Engineers Cooperation - 10th EAEC European Automotive Congress, EAEC 2005, 2005, 3, pp. 994–1000, <http://toc.proceedings.com/00238webtoc.pdf>

PhD THESIS

"Cercetări privind mărirea stabilității ciclice la M.A.I. funcționând cu amestecuri foarte sărace!", 2001, Domeniul "Inginerie Mecanică", Universitatea Tehnică „Gheorghe Asachi” din Iași, conducător doctorat: Prof.univ.dr.ing. Zugrăvel M, diploma seria. B nr. 4210/10.04.2001

PATENTS

1. Rakoși, E., **Sachelarie**, A., Marian, E., Polycylindrical engine, Patent RO no. 111298 C1
2. Rakoși, E., **Sachelarie**, A., Marian, E., Rădulescu, I., Fuel dosing mechanism for spark-ignition engines, fueled with gasoline, RO Patent no. 115907
3. Gaiginschi R., **Sachelarie** A., Damian I., Device for inflating automobile tires, RO Patent no. a-2005-00246/2005

BOOKS / BOOK CHAPTERS

1. Lungu, Gh., Tura, Livia, Streit, R., Mihailide, M., Veisa, D., **Sachelarie**, A., Quality Control Tolerances, Chișinău Technical Publishing House, 1994, 476 pp. Rep. Moldova, ISBN 9975-910-03-3.
2. Cantemir, C-G., **Sachelarie**, A., Turbotronica M.A.S. – Conceptual bases of controlled supercharging, Ed. "Gh. Asachi" Iasi, 1999, 246 pages, ISBN 973-8050-14-6.
3. **Sachelarie**, A., Golgoiu, E., Traffic and road security, Venus Publishing House, Iasi, 2002, 232 pg. ISBN 973-8174-61-9.
4. Gaiginschi, R., Drosescu, R., Rakosi, E., **Sachelarie** A., et al. Road traffic safety, vol. I, Bucharest Technical Publishing House, 2004, 707 pages ISBN (10) 973-31-2240-8.
5. Gaiginschi, R., Drosescu, R., Gaiginschi, Lidia, **Sachelarie**, A., s.a., Road traffic safety, vol. II, Bucharest Technical Publishing House, 2006, 786 pages ISBN (10) 973-31-2295-5, ISBN (13) 978-973-31-2295-1.
6. Oprean, M., Burnete, N., **Sachelarie**, A., Cărăușan, H., Bubulete, S., Cioc, I., Balăș, V., Gidali, A., Modern automobile technology, XMEditor, Bucharest 2020 , ISBN 978-606-94798-5-8.
7. Gaiginschi, R., **Sachelarie**, A., Sava, D., I., Road accidents, EdituraTechnopress Iasi, 2021 ISBN 978-606-687-451-9.
8. **Sachelarie**, A., Vehicle systems – laboratory guide, 110 pages, Ed. Tehnpress, 2023, ISBN 978-606-687-516-5.
9. **Sachelarie**, A., Traffic and road safety – laboratory guide, 115 pages, Ed. Tehnpress, 2023, ISBN 978-606-687-515-8.

JOURNAL ARTICLES

1. Rakoși, E., **Sachelarie**, A., Constructive and functional aspects of the engine M - 110 - R8 - A. Student scientific bulletin, I.P. Iasi, 1988, vol. XIII, pp. 186 - 196.
2. Lungu, Gh., Streit, R., Mihailide, M., Veisa, D., **Sachelarie** A., Le montage automatique des composantes électroniques à fils rigides intéressant la construction des machines. Bulletin I.P. Iasi, 1994, Volume XL (XLIV), bundle. 1-4, section V, pages 209 - 216.
3. Lungu, Gh., Streit, R., Mihailide, M., Veisa, D., **Sachelarie** A., Le montage automatique des composantes électroniques à fils élastique. Bulletin I.P. Iasi, 1995, Volume XLI (XLV), fasc. 1-2, section V, pages 53 - 56.
4. Lungu, Gh., Tura, Livia, **Sachelarie** A., Aspects concernant la systematisation et l'establissement d'un projet des moyens pour le contrôle centralisé dans la construction des machines. Bulletin I.P. Iasi, 1995, Volume XLI (XLV), fasc. 3-4, section V, pages 91 - 96.
5. Gaiginschi, R., Rakoși, E., **Sachelarie**, A., Agape - Comșa I., Au sujet d'un moteur à jet de flamme. Bulletin I.P. Iasi, 1996, Volume XLII (XLVI), bundle. 1-2, section V, pages 55 - 61.
6. **Sachelarie**, A., Șăpuleasa, D., Lungu, Gh., Etude sur les transmissions par courroies crantées. Bulletin I.P. Iasi, 1996, Volume XLII (XLVI), bundle. 1-2, section V, page 73 - 80.
7. Rakoși, E., **Sachelarie**, A., Gaiginschi, R., Etude théorique et expérimental concernant les possibilités de suralimentation d'un moteur diesel de petite capacity à chambre de turbulence. Bulletin I.P. Iasi, 1996, Volume XLII (XLVI), bundle. 3-4, section V, pages 83 - 90.
8. **Sachelarie**, A., Dăscălescu, D., S.C., Agape – Comșa, I., Same aspects about the influence of air control devices on fuel evaporating velocity at high temperature in compression ignition engines. Bulletin I.P. Iasi, 1997, Volume XLIII (XLVII), bundle. 3-4, section V, pages 105 - 108.
9. **Sachelarie**, A., Șăpuleasa, D., Lungu, Gh., Des aspects caractéristiques au fonctionnement des transmissions par courrois crantées. Bulletin I.P. Iasi, 1998, Volume XLIV (XLVIII), fasc. 1-2, section V, page 121 - 120.
10. Rakoși, E., Gaiginschi, R., Agape-Comșa, I., **Sachelarie**, A., Procedure for the improvement of spark engines operating by mixture stratification as effect of centrifugal movement. Bulletin I.P. Iasi, 1998, Volume XLIV (XLVIII), fasc. 3-4, section V, pages 97 - 105.
11. Darie, T., **Sachelarie**, A., Considerations about the degradation of lubricant oil in the I.C. engine. Bulletin I.P. Iasi, 1998, Volume XLIV (XLVIII), fasc. 3-4, section V.
12. Dascalescu, S., C., D., **Sachelarie**, A., Damian, I., Receanu, M.; The influence of cooling air flow regulation devices on the initial air temperature, in internal combustion engines , Construction of Machines 2-3, Year 55 - 2003, p.72-74. ISSN 0573-7419.
13. Pintilei, M., **Sachelarie**, A., Hăncioiu, V, Frequency and risk factors of road accidents, Bulletin of the Polytechnic Institute of Iasi, Volume LII (LVI), Fascicula 6 C, Machinery Construction Section, 2006, ISSN 1011 -2855
14. **Sachelarie**, A., Gaiginschi, R., Lean mixtures – a reached purpose using the conversion of a classical internal combustion engine, Ingineria Automobilului, New Series of the Magazine of Automobile Engineers from Romania

- (RIA) 1992-2000, no. February 2, 2007, pp. 5-6, ISSN 1842-4074.
15. Gaiginschi, R., **Sachelarie**, A., Pintilei, M, Font-rear collisions protection equipment device applied to the in column movement of the vehicles, Acta Technica Napocensis, series: applied mathematics and mechanics, 50, vol. iv, 2007, ISSN 121 5872;
 16. Savischi, M., Mănuță, R., Dăscălescu, D., S., C., **Sachelarie**, A., Drosescu, R., Comparative study about fuel consumption during the acceleration process between off road and 4x2 vehicles. Bulletin I.P. Iasi, 2008, Volume LIV (LVIII), fasc. 2, Machine Construction section, page 171-176.
 17. Savischi, M., Mănuță, R., Dăscălescu, D., S., C., **Sachelarie**, A., Drosescu, R., Determination the influence of wheels slipping engine to the fuel consumption. Bulletin I.P. Iasi, 2008, Volume LIV (LVIII), fasc. 2, Machine Construction section.
 18. Savischi, M., Mănuță, R., Dăscălescu, D., S., C., Drosescu, R., **Sachelarie**, A., Variation of the slip angle at different internal tire pressure. Bulletin I.P. Iasi, 2008, Volume LIV (LVIII), fasc. 2, Machine Construction section, page 162-168.
 19. Receanu, M., Dăscălescu, D., S., C., Drosescu, R., **Sachelarie**, A., Possibilities to Measure the Temperatures in a Test Stand with Motor Vehicle which has Cooling Airflow Control, Bulletin of the Iasi Politehnic Institute , Volume LIV (LVIII) Fasc.2, 2008, pg.162-168.
 20. Agape, I., Gaiginschi, Lidia, **Sachelarie**, A., Gaiginschi R., On the determination of the wear intensity of M.A.I. based on the concentration of wear products in the lubricant, Bulletin Of The Polytechnic Institute Of Jassy, Published By The Technical University Iasi, Tome LIV (LVI), Fasc.2/2008, Section Machine Construction.
 21. Agape, I., Gaiginschi, Lidia, **Sachelarie**, A., Rakosi, E., Upon a cylinder liner simple wear model Ovidius University Annals of Mechanical, Industrial and Maritime Engineering, Volume X, Tom I, ISSN-1223-7221 , 2008.
 22. Agape, I., Gaiginschi, Lidia, **Sachelarie**, A., Rakosi, E., Predicting on Global I.C. Engines Wear Process, Ovidius University Annals of Mechanical, Industrial and Maritime Engineering, Volume X, Volume I, ISSN-1223-7221,2008.
 23. **Sachelarie**, A., Some of the achievements of the students of leseni, Ingineria Automobilului, no. 7/June 2008, page 18, New series of the Romanian Automobile Engineers Magazine (RIA), 1992-2000, ISSN Code 1842 – 4074;
 24. **Sachelarie**, A., Ursescu, G., Ciofu, C., Formula Student - TULasi RACING Team, Technical University "Gheorghe Asachi" Iași, Automobile Engineering Magazine, no. 24, April 2013, New Series of Automobile Engineers Magazine from Romania (RIA), 1992-2000, ISSN-1842-4074;
 25. Donțu, A., Maftei, A., **Sachelarie**, A., Road traffic management in the "Tudor Vladimirescu" campus of the "Gheorghe Asachi" Technical University in Iasi, Mișcarea Magazine, ISSN 2068-794X.
 26. Bodor, L., A., Gaiginschi R., **Sachelarie** A., Experimental study of collision using similarity theory, Revista Ingineria automobilului, no 28, September 2013, ISSN-1842-4074.
 27. **Sachelarie**, A., The structure of the current fleet of vehicles in Iași county and the influence on the road infrastructure, Revista Mișcarea, 2018, ISSN 2068-794X.

PAPERS IN INTERNATIONAL CONFERENCES

1. Dăscălescu, D., **Sachelarie**, A., Load characteristics of ARO L - 25 spark ignition engine adapted for injection with methanol. The XVI International Conference Science and Motor Vehicles '97, 19 - 21 May, Belgrade Yugoslavia, vol II, 125 - 127., ISBN 86-80941-19-0.
2. Cantemir, C-G., **Sachelarie**, A., Off-Road hybrid electrical vehicle (HEV). 3rd International Scientific Conference ELEKTRO '99, May 25-26, 1999, Zilina, Slovakia, 80-84, ISBN 80-7100-606-8.
3. Cantemir, C-G., **Sachelarie**, A., Non conventional turbocharger control systems. Automotive Technology for Better Quality of life-Science and Motor Vehicles '99, Belgrade, Yugoslavia, 75-78, ISBN 86-80941-22-0.
4. Cantemir, C-G., **Sachelarie**, A., The method of partial sacrifice to reduce the TURBO – LAG phenomenon. II International Electromechanical Systems Conference "SILMEC '99", Chisinau, October 8-9, 1999, Rep. Moldova, vol. III, 194 – 195 ISBN 9975-944 -30-2.
5. Cantemir, C-G., **Sachelarie**, A., Considerations on electronically assisted power supply of diesel traction engines. II International Electromechanical Systems Conference "SILMEC '99", Chisinau, October 8-9, 1999, Rep. Moldova, vol. III, 196 – 199 ISBN 9975-944 -30-2.
6. Golgotiu, E., **Sachelarie**, A., The specific problems of public transportation in a city of more than 350000 inhabitants located in a transition country in Eastern Europe, Environement and Transport 1 er Colloque Avignon France 2003, ISBN 2-85782- 589-7, pp. 160-165.
7. **Sachelarie**, A., Gaiginschi, Lidia., Gaiginschi, R., Lean Mixtures – A Reached Purpose Using The Conversion Of A Classical Internal Combustion Engine, Beograd 2005 EAEC European Automotive Congress, 30th May – 01st June 2005, ISBN 86- 80941-30-1.
8. Gaiginschi, Lidia, Agape, I., **Sachelarie**, A., The Analysis Of Influence Factors On Emissions For The High Speed Diesel Engines, On The Basis Of Combustion Effects Simulation Beograd 2005 EAEC European Automotive Congress, 30th May – 01st June 2005 , ISBN 86-80941-30-1.
9. **Sachelarie**, A., Dobre, C., Gaiginschi, R., Aspects concerning the influence of the number of the fuel spray upon the effective parameters of a direct injection diesel engine, International Congress- Motor Vehicles & Motors, Automotive industry- The Carrier of Technological Progress, October 2006, Kragujevac, Serbia, ISBN 86-80581-94-1, pp. 1-5
10. **Sachelarie**, A., Gaiginschi, L, Agape, I., The influence of the motorcars lighting system regarding the traffic safety in lower visibility, XXI Science and Motor Vehicles 2007, JUMV International Automotive Conference and Exhibition Automotive Engineering for Improved Safety, April 2007, Belgrade Serbia.
11. Agape, I., Gaiginschi, L, **Sachelarie**, A., A unitary approach of parameters reconstruction, at vehicles impacts with light obstacles, XXI Science and Motor Vehicles 2007, JUMV International Automotive Conference and Exhibition, Automotive Engineering for Improved Safety , April 2007, Belgrade Serbia.

12. **Sachelarie**, A., Gaiginschi, Lidia, Agape, I., Dumbrava, I., The impact of heavy traffic on the deterioration of road infrastructure, Transport: economy, engineering and management, Scientific-practical conference with international participation; Chisinau, Republic of Moldova, October 26-27, 2012, page 20-30, ISBN 978-9975-45-219-9, National Book Chamber, Chisinau Rep. Moldavia
13. Gaiginschi Lidia, Agape, I., **Sachelarie**, A., Gaiginschi, R., Hantoiu, V., Analysis of a conceptual solution to reduce impact energy in front-rear collisions, Transport: economics, engineering and management , the scientific-practical conference with international participation; Chisinau, Republic of Moldova, October 26-27, 2012, pages 31-36, ISBN 978-9975-45-219-9, National Book Chamber, Chisinau Rep. Moldova.
14. Gaiginschi Lidia, Agape, I., **Sachelarie**, A., Gaiginschi, R., Pintilei, M., Girbaci, A., On a design solution for a street intersection with complex traffic, as a roundabout with traffic lights, Transport : economy, engineering and management, scientific-practical conference with international participation; Chisinau, Republic of Moldova, October 26-27, 2012, page 37-51, ISBN 978-9975-45-219-9, National Book Chamber, Chisinau Rep. Moldova.
15. Todiră-Ionut, D., **Sachelarie**, A., Gaiginschi, A., A common definition of road injuries, Bulletin of the State Agrarian University of Moldova, 2013;
16. Gaiginschi, Lidia, Agape, I., **Sachelarie**, A., An analysis upon thermo-mechanical effects of combustion in high speed CI engines, 2nd Central and Eastern European Conference on Thermal Analysis and Calorimetry, Vilnius Lithuania, 2013;
17. Gaiginschi, Lidia, Agape, I., **Sachelarie**, A., Upon the dynamics of combustion product formation in high speed diesel engines, 2nd Central and Eastern European Conference on Thermal Analysis and Calorimetry, Vilnius Lithuania, 2013
18. **Sachelarie**, A., Study on road traffic inside the "Tudor Vladimirescu" University Campus and methods of organizing vehicle parking, Transport: economy, engineering and management, scientific-practical conference with international participation; Chisinau, Republic of Moldova, October 26-26, 2017, (published in the conference volume, ISBN 978-9980-45-327-8).

OTHER PAPERS / RELEVANT ACHIEVEMENTS

1. Zugrăvel, M., Gaiginschi, R., Rakoși, E., **Sachelarie**, A., Movileanu, G., Paşa, D., Agape – Comşa, I., Achievements of the team of the Department of Engines and Road Vehicles in the field of mixture formation at M.A.S. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pages 145 - 155, ISBN 973-9178-37-5.
2. Gaiginschi, R., Rakoși, E., **Sachelarie**, A., Patraș, Lidia, Certain characteristic aspects regarding the increase in cyclic stability in operation of m.a.s. fed with lean mixtures. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pages 170 - 179, ISBN 973-9178-37-5.
3. Popescu, A., **Sachelarie**, A., Horbaniuc, B., Dumitrașcu, Gh., The use of the accumulation of thermal energy improves the cold starting conditions of motor vehicles. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pp. 230 - 235, ISBN 973-9178-37-5.
4. Popescu, A., Horbaniuc, B., **Sachelarie**, A., Dumitrașcu, Gh., Cleaner environment by using a heat battery store to reduce motor vehicle exhaust emissions at cold start. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pages 236 - 235, ISBN 973-9178-37-5.
5. Dascălescu, D., S., C., **Sachelarie**, A., Agape – Comşa, I., The influence of the use of cooling flow regulation devices on the auto-ignition delay period at m.a.c. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pages 278 - 281, ISBN 973-9178-37-5.
6. Dascălescu, D., S., C., **Sachelarie**, A., Agape – Comşa, I., Considerations on the influence of the use of cooling air flow regulation devices on high temperature vaporization in the case of diesel engines. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pages 282 - 284, ISBN 973-9178-37-5.
7. Dăscălescu, D., S., C., **Sachelarie**, A., Agape – Comşa, I., The influence of cooling air flow control devices on the flame core temperature in compression ignition engines. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. I, Ed. Gh. Asachi, pp. 285 - 287, ISBN 973-9178-37-5.
8. Movileanu, G., Gaiginschi, R., Rakoși, E., **Sachelarie**, A., Distributed system for electronic control of gasoline injection and ignition. Romanian thermotechnics, papers presented at the 4th national conference of thermotechnics Iasi - Chisinau May 24-25, 1996, vol. II, Ed. Gh. Asachi, pages 441 - 446, ISBN 973-9178-37-5.
9. Rakoși, E., **Sachelarie**, A., Agape – Comşa, I., Engine for ultra-light aircraft. Turbo '96 international conference, Bucharest July 15-17, 1996, vol I, pages 292 - 296, ISBN 973-0-00274-6.
10. Dăscălescu, D., S., C., **Sachelarie**, A., Agape – Comşa, I., The influence of air cooling control devices on the flame nucleus temperature of compression ignition engines. Proceedings of the Second International Congress of Materials Science and Engineering, Iasi 27 - 31. V. 1997, Bulletin I.P. Iasi, Volume XLII (XLVI), fasc. 1-2, section IX, 1996, pages 131 - 133.
11. Dascălescu, D., S., C., **Sachelarie**, A., Agape – Comşa, I., The influence of air cooling discharge tuning devices on the burning delay period at compression ignition engines. Proceedings of the Second International Congress of Materials Science and Engineering, Iasi 27 - 31. V. 1997, Bulletin I.P. Iasi, Volume XLII (XLVI), fasc. 1-2, section IX, 1996, pages 135 - 137.
12. Gaiginschi, R., Rakoși, E., Movileanu, G., **Sachelarie**, A., Agape – Comşa, I., Certain influences on the

- detonation behavior of the spark ignition engine. XXVIIth session of scientific communications with international participation, Military Technical Academy, Bucharest, November 13 - 14, 1997, Section 6, pages 45 - 50.
13. Rakoši, E., **Sachelarie**, A., Agape-Comşa, I., Possibilities of converting a spark ignition engine to operate with lean mixtures. 6th ESFA International Conference '98, Economy, Safety and Reliability of Motor Vehicles, Bucharest, November 5-6, 1998, vol I., pages 355-362, ISBN 973-9402-45-3.
14. **Sachelarie**, A., Rakosi, E., Roșca, R., The influence of the fractional composition of the injected fuel in a stratified mixture engine. 6th ESFA International Conference '98, Economy, Safety and Reliability of Motor Vehicles, Bucharest, November 5-6, 1998, pp. 363-368, ISBN 973-9402-45-3.
15. Drosescu, R., Gaiginschi, R., Crețu, S., Oancea, N., Sachelarie, A., *Program for computer analysis of the noise produced by internal combustion engines*. 6th ESFA International Conference '98, Economy, Safety and Reliability of Motor Vehicles, Bucharest, November 5-6, 1998, pp. 525-534, ISBN 973-9402-45-3.
16. Roșca, R., Ţeica, G., **Sachelarie**, A., The use of the computer in the investigation of the injection equipment of Diesel engines. 6th ESFA International Conference '98, Economy, Safety and Reliability of Motor Vehicles, Bucharest, November 5-6, 1998, pp. 725-730, ISBN 973-9402-45-3.
17. Drosescu, R., Gaiginschi, R., **Sachelarie**, A., New methods of measuring the speed of internal combustion engines and their application to the study of crankshaft speed fluctuations. 6th ESFA International Conference '98, Economy, Safety and Reliability of Motor Vehicles, Bucharest, November 5-6, 1998, pp. 781-788, ISBN 973-9402-45-3.
18. **Sachelarie**, A., Cantemir, C.-G., Flexibility ratio, possible one of the most significant parameter for a turbocharger engine. The 17th International Conference Science and Motor Vehicles '99, Automotive engineering for better quality of life, June 11, Constanta, A 15, ISBN 973-9385-73-7.
19. Sachelarie, A., Rakoši, E., Agape-Comşa, I., Gaiginschi, R., Some aspects regarding the fractional composition of the fuel jet. 8th International Road Vehicle Conference "CAR 2000" Pitesti, November 16-17, 2000, pp. 33 - 38, ISBN 973-8212-03-0.
20. Rakoši, E., Roșca, R., **Sachelarie**, A., Agape-Comşa, I., Gaiginschi, R., Some aspects regarding tuning the turbocharger with the diesel engine for passenger cars. 8th International Road Vehicle Conference "CAR 2000" Pitesti, November 16-17, 2000, pp. 215 - 222, ISBN 973-8212-03-0.
21. **Sachelarie**, A., Rakoši, E., Roșca, R., Agape-Comşa, I., Modeling of the parameters of the working fluid inside the divided combustion chamber of a stratified mixture engine. The first conference with international participation of the millennium "SMAT 2001: AUTOVEHICLE-SAFETY, COMFORT AND RELIABILITY", Craiova, November 8-09, 2001, vol. III, page 327-334, ISBN 973-8043-25-6.
22. **Sachelarie**, A., Agape-Comşa, I., Technologies and limits in protecting car passengers from accidents. The first conference with international participation of the millennium "SMAT 2001: AUTOVEHICLE-SAFETY, COMFORT AND RELIABILITY", Craiova, November 8-09, 2001, vol. I, page 455-458, ISBN 973-8043-23-4.
23. **Sachelarie**, A., Cantemir, C-G., Considerations for improving the performance of Comprex supercharger systems. The first conference with international participation of the millennium "SMAT 2001: AUTOVEHICLE-SAFETY, COMFORT AND RELIABILITY", Craiova, November 8-09, 2001, vol. III, page 335-338, ISBN 973-8043-25-6.
24. Roșca, R., Rakoši, E., Agape-Comşa, I., **Sachelarie**, A., Research on some characteristics of the fuel injection in the D-115 engine. The first conference with international participation of the millennium "SMAT 2001: AUTOVEHICLE-SAFETY, COMFORT AND RELIABILITY", Craiova, November 8-09, 2001, vol. III, page 319-326, ISBN 973-8043-25-6.
25. Rakosi, E., Rosca, R., Agape-Comsa, I., Gaiginschi, R., **Sachelarie**, A., On methods of improving the performance of spark ignition engines, 29th International Working Session Scientific, Military Technical Academy, Bucharest, November 15-16, 2001, page 107-112
26. **Sachelarie**, A., Patras, Lidia, Gaiginschi, R., Rakosi, E., Rosca, R., Golgoțiu, E., Agape, I., Experimental studies regarding the improvement of energy performances and the reduction of pollution of ARO L25 engines Proceedings of the XII National Conference on Thermotechnics with International Participation, Constanta, November 14-16, 2002.
27. Gaiginschi, R., **Sachelarie**, A., Drosescu, R., *Speed estimation of overtaking vehicles based on sidemarks resulting from lateral collisions*, THE X-TH INTERNATIONAL CONFERENCE OF GROUND VEHICLES, AMMA 2002, CLUJ, ISBN 973-8335-60-4, pag. 293-295.
28. Dascalescu, S., C., D., **Sachelarie**, A., *Îmbunătățirea Performanțelor Motoarelor Cu Ardere Internă Prin Scânteie, Prin Utilizarea Dispozitivelor Mecanice De Obturare Pentru Reglarea Debitului Aerului De Răcire*, THE X-TH INTERNATIONAL CONFERENCE OF GROUND VEHICLES,AMMA 2002,CLUJ, ISBN 973-8335-60-4
29. Gaiginschi, Lidia, Agape, I., **Sachelarie**, A., *Physico –mathematical model for simulating the internal combustion engine cycles* ESFA 2003, The 7-th International Conference , Fuel Economy, Safety and Reliability of Motor Vehicles, Bucureşti, 8-9 mai 2003 Volume 1, p.87-96. ISBN 973-8449-12-X, ISBN 973-8449-10-3.
30. Dascalescu, S., C., D., **Sachelarie**, A., Damian, I., Receanu M., *Reduction fuel consumption possibilities to motor vehicles by use of cooling airflow control devices* ESFA2003, The 7-th International Conference , Fuel Economy, Safety and Reliability of Motor Vehicles. Bucharest May 8-9, 2003, Volume 1, p.81-86. ISBN 973-8449-12-X, ISBN 973-8449-10-3.

31. **Sachelarie, A., Pintilei, M., Considerations concerning the drivers predisposition to road accidents**, The 30-th Internationally Attended Scientific Conference "MODERN TECHNOLOGIES IN THE XXI CENTURY", Academia Tehnica Militara, Bucuresti 6-7 nov. 2003, ISBN 973-640-012-3, pag.144-148.
32. Gaiginschi, R., **Sachelarie, A., Gaiginschi, Lidia, Spark ignition engine with variable compression ratio – possibilities and limits**, First international Conference „Prof. Emil Gaiginschi jubilee” Advanced Concepts in Mechanical Engineering, Technical University „Gh.Asachi” Iasi, 2004
33. Gaiginschi, R., **Sachelarie, A., Gaiginschi, Lidia, Operational And Structural Limitations And Possibilities Of The Engine With Variable Compression Ratio**, CONAT 2004, Brasov, ISBN:973-635-394-X
34. Dascălescu, S., C., D., Dimitriu, L., **Sachelarie, A., Vornicu, Liliana, Damian, I., Receani, M., Method for Thermal Losses By Cooling System Radiator Mesurement At Automotive Vehicles**, CONAT 2004, Brasov, ISBN:973-635-394-X.
35. **Sachelarie, A., Pintilei, M., Gaiginschi ,R., Research Concerning a Method to Determine the Automotives in Motion With a High Level of Headlamp Illumination** , The IX-th International congress "AUTOMOTIVE AND ENVIRONEMENT" CAR 2005 Pitesti, ISBN 973-690-450-4.
36. **Sachelarie, A., Gaiginschi ,R., Dobre, C., Experimental Researches Regarding the Influence of the Numbers of Nozzle Holes Upon Injection Process**, The IX-th International congress "AUTOMOTIVE AND ENVIRONEMENT" CAR 2005 Pitesti, ISBN 973-690-450-4.
35. Drosescu, R., **Sachelarie, A., Gaiginschi ,R., Pintilei, M., The Ccorrection of the Main Parameters, in the Process of Estimaion of the Vehicle Trajectory**, The IX-th International congress "AUTOMOTIVE AND ENVIRONEMENT" CAR 2005 Pitesti, ISBN 973-690-450-4.
36. Drosescu, R., Sachelarie, A., Gaiginschi ,R., Pintilei, M., **Research Concerning a Method to Estimate the Vehicle Trajectory** , The IX-th International congress "AUTOMOTIVE AND ENVIRONEMENT" CAR 2005 Pitesti, ISBN 973-690-450-4
37. Spiridon, S.,C.,D **Sachelarie, A., The Influence of Cooling Air Debit Control Devices on the Lubricant Temperature at Internal Combustion Engines**, The Second International Conference „Advanced Concepts in Mechanical Engineering”, 16-17 june 2006, Buletinul Institutului Politehnic din Iași, Tomul LII (LVI), Fascicula 6 C, Secțiunea Construcții de Mașini, ISSN 1011-2855, pag.19-22
38. Dobre, C., **Sachelarie, A., Experimental Research on the Effective Parameters of a Diesel Engine Running With Different Number of Nozzle Holes Injectors**, The Second International Conference „Advanced Concepts in Mechanical Engineering”, 16-17 june 2006, Buletinul Institutului Politehnic din Iași, Tomul LII (LVI), Fascicula 6 C, Secțiunea Construcții de Mașini, ISSN 1011-2855, pag.23-28
39. Dobre, C., **Sachelarie, A., The Injector Nozzle Hole Design- An Important Factor Influencing the Injection Process in the D.I. Diesel Engine**, The Second International Conference „Advanced Concepts in Mechanical Engineering”, 16-17 june 2006, Buletinul Institutului Politehnic din Iași, Tomul LII (LVI), Fascicula 6 C, Sectiunea Construcții de Mașini, ISSN 1011-2855, pag.29-34
40. Pintilei, M., **Sachelarie, A., Hantoiu, V., The Frequency and the Risck Factors in Road Traffic Accidents**, The Second International Conference „Advanced Concepts in Mechanical Engineering”, 16-17 june 2006, Buletinul Institutului Politehnic din Iași, Tomul LII (LVI), Fascicula 6 C, Sectiunea Construcții de Mașini, ISSN 1011-2855, pag.93-100
41. **Sachelarie, A., Dobre, C., Gaiginschi, R., Drosescu, R., Experimental research concerning the evolution of the diesel fuel spray using injectors with different number of nozzle holes**, The 1st International Conference on Motor Vehicle and Transportation MVT 2006, Timisoara, ISBN (10) 973-638-248-2, (13) 978-973-638-284-0, pag. 143-148.
42. Gaiginschi, Lidia, Agape, I., **Sachelarie, A., Upon an extrapolation method of 3-axle semitrailer brake forces**, The 1st International Conference on Motor Vehicle and Transportation MVT 2006, Timisoara, ISBN (10) 973-638-248-2, (13) 978-973-638-284-0, pag. 63-70.
43. Pintilei, M., Gaiginschi, R., Drosescu, R., Gaiginschi, Lidia, **Sachelarie, A., Possibilities of growing the vehicular flow passing through traffic light signal controlled intersection**, The 1st International Conference on Motor Vehicle and Transportation MVT 2006, Timisoara, ISBN (10) 973-638-248-2, (13) 978-973-638-284-0 pag. 91-96.
44. Dăscălescu, S.,C.,D., Drosescu, R., **Sachelarie, A., Mănuță, R., Savischi, M., Experimental researches regarding the dynamics behaviour of the vehicles with front wheel drive depending on tyre pressure**, TEHNONAV 2008, The 6th edition of the international conference on naval and mechanical engineering "New technologies for future clean mobility and environment", Constanta, 22-24 May 2008.
45. Mănuță, R., Savischi, M., Dăscălescu, S.,C.,D., Drosescu, R., **Sachelarie, A., Variation of slippery angle at different tire pressure**, ACME 2008- Advanced Concepts In Mechanical Engineering, Iasi
46. Dăscălescu, S.,C.,D., Drosescu, R., **Sachelarie, A., Mănuță, R., Savischi, M., Influence of internal tire pressure on the radius of turn at front drive axle motor cars**, SMAT 2008, SECOND INTERNATIONAL CONGRESS, AUTOMOTIVE, SAFETY AND ENVIRONMENT, 23 - 25 October, 2008 – Craiova, Romania.
47. Agape, I., Gaiginschi, Lidia, **Sachelarie, A., Rakosi, E., Upon a cylinder liner simple wear model** Ovidius University Annals of Mechanical, Industrial and Maritime Engineering, Volume X, Tom I, Ovidius University Press ISSN-1223-7221,2008.
48. Agape, I., Gaiginschi, Lidia, **Sachelarie, A., Rakosi, E., Predicting on Global I.C. Engines Wear Process** Ovidius University Annals of Mechanical, Industrial and Maritime Engineering, Volume X, Tom I, Ovidius University Press, ISSN-1223-7221,2008

49. **Sachelarie, A.**, Birsanescu, P., Zarojanu, Gh., *Practices of road authorities an important factor in increasing road safety*, "Highway and Bridge Engineering 2008", International Symposium, Iași, România, December 12, 2008;
50. Gaiginschi R., Drosescu R., **Sachelarie, A.**, Pintilei M., Hăntoiu, V., *Consequences of energy dissipation in rear-end collisions*, ESFA 2009, The 8th International Conference Fuel Economy Safety and Reliability of Motor Vehicles, pg. 123-134 November 12-14, 2009, Bucharest, ISSN: 2067-1083 Ed. Politehnica Press.
51. Receanu, M., Dascalescu, S., C.,D., Pleșu, Gh., **Sachelarie, A.**, § a., *Fuel economy of the car engine using a variation of cooling air flow*, The 4TH International Conference on Advanced Concepts on Mechanical Engineering, Iași, Buletinul Institutului Politehnic din Iași, tomul LVI (LX) Fasc. 4B, Secția Constructii de Mașini, ISSN 1011-2855, 2010
52. Dăscalescu, S.,C.,D., **Sachelarie, A.**, Drosescu, R, Savischi, M., *A study about fuel consumption and slip variations for vehiclea with integral traction compared with single axle traction*, International Congress on Automotive and Transport engineering CONAT 2010, The 11th International Congress, vol 1, pag.75-78, ISSN 2069-0401, Transilvania University Press
53. Gaiginschi, R., **Sachelarie, A.**, Pintilei, M , *Aspects concerning the severity of front-rear collisions*, International Conference of Mechanical Engineering, ICOME – 2010, Craiova, ISBN .978-606-518-878-3, 978-606-518-879-0.
54. Gaiginschi, Lidia, Agape, I., **Sachelarie, A.**, Gaiginschi, R., *A generalization of the deformation coefficient model to determine the velocities of vehicles involved in collision*, The X-th International congress "AUTOMOTIVE AND ENVIRONEMENT" CAR 2011 Pitesti, ISBN 973-690-450-4.
55. Receanu, M., Dascalescu, D., **Sachelarie, A.**, *Optimization of the air flow control for a car engine cooling system*, ACME 2012- Advanced Concepts In Mechanical Engineering, Iasi, 2012. Buletinul Institutului Politehnic din Iași, Tomul LVII (LXI), Fascicula 2, Secțiunea Construcții de Mașini, 2012, ISSN 1011-2855.
56. Agape, I., Gaiginschi, Lidia, **Sachelarie, A.**, Hantoiu, V., *Usage of spline function method for generalization of the deformation coefficient model*, ACME 2012- Advanced Concepts In Mechanical Engineering, Iasi, 2012. Buletinul Institutului Politehnic din Iași, Tomul LVII (LXI), Fascicula 2, Secțiunea Construcții de Mașini, 2012, ISSN 1011-2855.
57. Bodor, L., A, Gaiginschi R., **Sachelarie, A.**, *Study by the collision of two vehicles through the restitution coefficient using similarity theory*, The 10th International Conference Motor Vehicle & Transportation, 7-9, November, 2012 Timișoara, MVT 2012 5020, ISBN:978-973-638-524-7, pag 90;
58. Bodor, L., A, Gaiginschi R., **Sachelarie, A.**, *Study of a particular collision between two vehicles using restitution coefficient*, International Congress Automotive, Motor, Mobility, Ambient, 17-19 October 2013, Cluj Napoca România, U.T. Press, Cluj-Napoca 2013, ISBN 978-973-662-900-6, pag. 46;

Relevant achievements

1. Coordination of the "iARO Camarad Team" student group during 2013-2016, the design and realization in laboratory conditions of a functional prototype of a 4x4 car;
2. Coordination of the group of students, members of the League of Mechanical Students, "LSM Drift Team", during the period 2012-2017, the realization in the laboratory of two prototypes intended for sports competitions of the "drift" type, with basic vehicles from the range BMW (E39 -2400 cm³, 200HP; E46 – 4800 cm³, 450 HP) and, the organization of 4 sports competitions with national participation, under the aegis of "EXPO&BURN".

Data

27.05.2024

Autor

signature

