



## LISTA LUCRĂRILOR PUBLICATE

### A. TEZE

#### A1. Teza de abilitare

**Todoruț, I.-A.** (2020). *Modelarea, simularea și experimentarea comportamentului dinamic al autovehiculelor în sistemul circulației rutiere*. Domeniul de specialitate: Inginerie mecanică, Universitatea Tehnică din Cluj-Napoca.

#### A2. Teza de doctorat

**Todoruț, I.-A.** (2006). *Cercetări privind utilizarea uleiurilor de floarea soarelui ca și combustibili pentru motoarele Diesel*. Domeniul de specialitate: Inginerie mecanică, Conducător științific: Prof.dr.ing. Bățaș A. Nicolae, Universitatea Tehnică din Cluj-Napoca.

### B. CĂRȚI ȘI CAPITOLE ÎN CĂRȚI

#### B1. Edituri internaționale

1. Barabás, I.; **Todoruț, I.-A.**; Zöldy, M. (2015). *The Potential of Biodiesel–Petrodiesel–Bioethanol Blends as an Alternative Fuel for Compression Ignition Engines*. In: Energy Science and Technology, Volume 3: Oil and Natural Gas, Chapter 21, pp. 577-606, Editors: Umesh Chandra Sharma, Ram Prasad, Sri Sivakumar, Executive Editor: J.N. Govil, Published by: Studium Press LLC, U.S.A., Houston (*Thomson Reuters, Web of Science - Master Book List, Publishers*), ISBN: 978-1-626990-64-7, ISBN: 1-62699-064-6, Series ISBN: 1-62699-061-1, Printed at: Thomson Press (India) Limited.
2. Barabás, I.; **Todoruț, I.-A.** (2011). *Biodiesel Quality, Standards and Properties*. In: Biodiesel-Quality, Emissions and By-Products, Gisela Montero and Margarita Stoytcheva (Ed.), ISBN: 978-953-307-784-0, InTech, Rijeka, DOI: [10.5772/25370](https://doi.org/10.5772/25370), Chapter 1, pp. 3-28, <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000385799400002, Available from: <http://www.intechopen.com/books/biodiesel-quality-emissions-and-by-products/biodiesel-quality-standards-and-properties>.
3. Barabás, I.; **Todoruț, I.-A.** (2011). *Utilization of Biodiesel-Diesel-Ethanol Blends in CI Engine*. In: Biodiesel- Quality, Emissions and By-Products, Gisela Montero and Margarita Stoytcheva (Ed.), ISBN: 978-953-307-784-0, InTech, Rijeka, DOI: [10.5772/27137](https://doi.org/10.5772/27137), Chapter 14, pp. 215-234, <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000385799400015, Available from: <http://www.intechopen.com/books/biodiesel-quality-emissions-and-by-products/utilization-of-biodiesel-diesel-ethanol-blends-in-ci-engine>.

#### B2. Edituri naționale

1. **Todoruț, A.**; Cordoș, N.; Barabás, I. (2021). *Elemente de dinamica autovehiculelor*. Cluj-Napoca, Editura U.T.PRESS, 276 pg. ISBN 978-606-737-521-3.
2. **Todoruț, A.**; Cordoș, N. (2017). *Modele fizico-matematice în dinamica accidentelor de circulație rutieră*. Cluj-Napoca, Editura U.T.PRESS, 148 pg. ISBN 978-606-737-267-0.
3. **Todoruț, I.-A.**; Barabás, I.; Burnete, N. (2012). *Siguranța autovehiculelor și securitatea în transporturi rutiere*. Cluj-Napoca, Editura U.T.PRESS, 360 pg. ISBN 978-973-662-764-4.



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

4. Barabás, I.; **Todoruț, I.-A.** (2010). *Combustibili pentru automobile: testare, utilizare, evaluare*. Cluj-Napoca, Editura U.T.PRESS, 266 pg. ISBN 978-973-662-595-4.
5. **Todoruț, A.** (2008). *Dinamica accidentelor de circulație*. Cluj-Napoca, Editura U.T.PRESS, 204 pg. ISBN 978-973-662-383-7.
6. **Todoruț, A.** (2005). *Bazele dinamicii autovehiculelor. Algoritmi de calcul, teste, aplicații*. Cluj-Napoca, Editura Sincron, 230 pg. ISBN 973-9234-60-7.
7. Cordoș, N.; Burnete, N.; **Todoruț, A.** (2003). *Coliziunea automobilelor*. Cluj-Napoca, Editura TODESCO, 276 pg., ISBN 973-8198-26-7.
8. Burnete, N.; Bățaș, N.; Brânzaș, P.; Naghiu, A.; Filip, N.; Barabás, I.; **Todoruț, A.**; Cordoș, N.N.; Chintoanu, M.; Coman, Virginia; Ábrahám, B.; Ivan, I.; Coldea, C.; Varga, B.; Costea, C.; Borza, E.; Vlad, N. (2004). *Rapița - o provocare pentru fermieri și energeticieni*. Cluj-Napoca, Editura Sincron, 218 pg., ISBN 973-9234-57-7.
9. Cordoș, N.; **Todoruț, A.** (2001). *Dinamica autovehiculelor pe roți. Teste și aplicații*. Cluj-Napoca, Editura TODESCO, 172 pg., ISBN 973-99779-9-5.

**C. ARTICOLE/STUDII PUBLICATE ÎN REVISTE DE SPECIALITATE DE CIRCULAȚIE INTERNAȚIONALĂ RECUNOSCUTE SAU ÎN REVISTE DIN ȚARĂ RECUNOSCUTE DE CĂTRE CNCSIS**

**C1. Articole/studii publicate în reviste de specialitate din țară sau străinătate recunoscute de către CNCSIS**

**C1.1. Reviste Categoria A (cotate ISI)**

1. **Todoruț, A.**; Cordoș, N.; Iclodean, C. (2020). *Replacing Diesel Buses with Electric Buses for Sustainable Public Transportation and Reduction of CO<sub>2</sub> Emissions*. In: Polish Journal of Environmental Studies, PJOES-00732-2019-02, Pol. J. Environ. Stud. 2020;29(5):3339–3351, ISSN: 1230-1485, eISSN: 2083-5906, Acceptance date: 2019-10-08, Online publication date: 2020-03-05, DOI: <https://doi.org/10.15244/pjoes/112899>, <http://www.pjoes.com/Replacing-Diesel-Buses-with-Electric-Buses-nfor-Sustainable-Public-Transportation,112899,0,2.html>, <http://apps.webofknowledge.com> - Web of Science Core Collection - **WOS:000534642300033**.
2. **Todoruț, A.**; Molea, A.; Barabás, I. (2019). *Predicting the Temperature and Composition-Dependent Density and Viscosity of Diesel Fuel–Ethanol Blends*. In: Periodica Polytechnica Chemical Engineering (Period. Polytech. Chem. Eng.), 64(2), pp. 213–220, 2020, ISSN: 1587-3765, Print ISSN: 0324-5853, Received: 29 July 2019, Accepted: 21 October 2019, Published online: 02 December 2019, OnlineFirst: <https://pp.bme.hu/ch/article/view/14757/8560>, (ONLINE) DOI: <https://doi.org/10.3311/PPch.14757>, <http://apps.webofknowledge.com> - Web of Science Core Collection - **WOS:000513892600007**.
3. Iclodean, C.; Cordoș, N.; **Todoruț, A.** (2019). *Analysis of the Electric Bus Autonomy Depending on the Atmospheric Conditions*. In: *Energies* (ENERGA) 2019, Volume 12, Issue 23, 4535; ISSN 1996-1073, <https://doi.org/10.3390/en12234535>, <https://www.mdpi.com/1996-1073/12/23/4535>, <http://apps.webofknowledge.com> - Web of Science Core Collection - **WOS:000514090100133**.
4. Barabás, I.; **Todoruț, I.-A.** (2011). *Predicting the Temperature Dependent Viscosity of Biodiesel – Diesel – Bioethanol Blends*. In: *Energy & Fuels* (ENERG FUEL), 2011, Volume 25, Issue 12, pg. 5767–5774, DOI: [10.1021/ef2007936](https://doi.org/10.1021/ef2007936), ISSN: 0887-0624 (Print Edition), ISSN: 1520-5029 (Web Edition), Publication Date (Web): November 6, 2011, <http://pubs.acs.org/doi/abs/10.1021/ef2007936>, <http://www.scopus.com>, <http://apps.webofknowledge.com> - Web of Science Core Collection - **WOS:000297946500025**.



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

5. Barabás, I.; **Todoruț, A.**; Băldean, D. (2010). *Performance and emission characteristics of an CI engine fueled with diesel-biodiesel-bioethanol blends*. In: Fuel (FUELA) - The Science and Technology of Fuel and Energy, Volume 89, Issue 12, pg. 3827-3832, December 2010, Published by Elsevier Ltd., ISSN 0016-2361, DOI: [10.1016/j.fuel.2010.07.011](https://doi.org/10.1016/j.fuel.2010.07.011), Journal: JFUE, Article Number: 4861, Journal homepage: <https://www.journals.elsevier.com/fuel>, <http://dx.doi.org/10.1016/j.fuel.2010.07.011>, <http://www.sciencedirect.com/science/article/pii/S0016236110003583>, <http://www.scopus.com>, <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000282086200027.

## C1.2. Reviste Categoria B+ (indexate în baze de date internaționale)

1. **Todoruț, A.**; Cordoș, N.; Barabás, I., Duma, Irina, (2021). *Possibilities for Assessing the Pre-Collision and Post-Collision Vehicles Speeds, in the Event of Side Collisions, by the Quantity of Motion Conservation Law*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 64, Issue I, March, 2021, pg. 47-54, Editura U.T.PRESS, ISSN 1221-5872, <https://atna-mam.utcluj.ro/index.php/Acta/article/view/1552/1271>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000694719400005.
2. **Todoruț, A.**; Cordoș, N.; Bălcău, Monica, (2018). *Ways to Evaluate the Transversal Stability Parameters of the Vehicles*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 61, Issue III, September, 2018, pg. 323-332, Editura U.T.PRESS, ISSN 1221-5872, <https://atna-mam.utcluj.ro/index.php/Acta/article/view/1010/937>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000468025900006.
3. **Todoruț, A.**; Cordoș, N.; Bălcău, Monica; Toacă, A., (2018). *Evaluating the Influence of the Parameters that Characterize the Traffic Incidents by Using the Sensitivity Analysis of the Obtained Results*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 61, Issue II, June, 2018, pg. 181-188, Editura U.T.PRESS, ISSN 1221-5872, <https://atna-mam.utcluj.ro/index.php/Acta/article/view/980/926>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000437045000005.
4. Cordoș, N.; **Todoruț, A.**; Burdea, M.D.; Bălcău, Monica (2017). *Comparative study on the dynamic axle loads and on the dynamic wheels loads of different classes cars*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol.60, Issue III, September, 2017, pg. 377-388, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/903>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000416962000007.
5. **Todoruț, A.**; Cordoș, N.; Marian, A.; Bălcău, Monica, (2017). *Evaluation of the Transversal Stability Parameters for the Vehicles with Two Wheels Locate in Parallel, Segway Type*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 60, Issue II, June, 2017, pg. 205-216, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/874>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000416960900007.
6. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica, (2017). *Algorithm for Plotting the Power and Traction Characteristics of the Motor Vehicles*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 60, Issue I, March, 2017, pg. 83-90, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/837>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000416959000013.
7. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica; Miheț, S. (2016). *STUDIES ON THE BRAKING BEHAVIOUR OF THE VEHICLES USING NUMERICAL MODELS AND*



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- COMPUTERIZED SIMULATION. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 59, Issue IV, November, 2016, pg. 369-378, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/805>, <https://journals.indexcopernicus.com/api/file/viewByFileId/125049.pdf>.
8. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Mureșan, R.D.; Bălcău, Monica (2016). *Comparative study on the dynamic behaviour in cornering from different classes of passenger cars, by experimental and simulation methods*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 59, Issue III, September, 2016, pg. 285-296, Editura U.T.PRESS, ISSN 1221-5872, <http://atna-mam.utcluj.ro/index.php/Acta/article/view/790>, <https://journals.indexcopernicus.com/api/file/viewByFileId/125221.pdf>.
  9. Barabás, I.; **Todoruț, A.**; Cordoș, N. (2016). *An artificial neural network approach to estimate the viscosity of biodiesel-diesel-ethanol blends*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 59, Issue III, September, 2016, pg. 245-250, Editura U.T.PRESS, ISSN 1221-5872, <http://atna-mam.utcluj.ro/index.php/Acta/article/view/784>, <https://journals.indexcopernicus.com/api/file/viewByFileId/125113.pdf>.
  10. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica (2016). *Aspects regarding the numerical modeling of traffic incidents between motorcycles and passenger cars*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 59, Issue II, June, 2016, pg. 169-180, Editura U.T.PRESS, ISSN 1221-5872, <http://atna-mam.utcluj.ro/index.php/Acta/article/view/768>, <https://journals.indexcopernicus.com/api/file/viewByFileId/125352.pdf>.
  11. **Todoruț, A.**; Cordoș, N.; Bălcău, Monica; Varga, T.I. (2016). *Aspects regarding the numerical modeling of the traffic accidents with mutual visibility between vehicles*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 59, Issue I, March, 2016, pg. 45-52, Editura U.T.PRESS, ISSN 1221-5872, <http://atna-mam.utcluj.ro/index.php/Acta/article/view/747>, <https://journals.indexcopernicus.com/api/file/viewByFileId/125316.pdf>.
  12. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica (2015). *Aspects regarding the numerical modelling of pedestrian-vehicle accidents when both parties have continuous visibility of each other in traffic*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 58, Issue IV, November, 2015, pg. 537-546, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/27>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/724>.
  13. **Todoruț, A.**; Cordoș, N.; Burdea, M.D.; Bălcău, Monica (2015). *The evaluation of normal load redistribution on the static axles and on the wheels, when the vehicle is in motion*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 58, Issue III, September, 2015, pg. 349-360, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/26>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/695>.
  14. **Todoruț, A.**; Cordoș, N. (2015). *Possibility of an self propelled tractor fuel alternative with diesel and biodiesel based on used sunflower oil*. In: *Agriculture Science and Practice Journal*, Vol 93-94, No. 1-2 (2015), pg. 138-146, AGRICULTURA (JUN 2015), ISSN 1221-5317, Edited by the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania, Published by AcademicPres, <http://journals.usamvcluj.ro/index.php/agricultura/article/view/11263>, Directory of Open Access Journals (DOAJ) - <https://doaj.org/article/0980459f7fc443cc881bd48f1745c0c3>.



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

15. Cordoș, N.; Marinică, M.; **Todoruț, A.**; Bălcău, Monica (2015). *Possibilities of creating an accidentology database*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 58, Issue II, June, 2015, pg. 205-212, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/25>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/542>.
16. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica (2015). *The evaluation of kinematic measures which characterize the vehicle-pedestrian accidents*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 58, Issue I, March, 2015, pg. 31-40, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/24>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/513>.
17. Cordoș, N.; **Todoruț, A.**; Barabás, I.; Bălcău, Monica (2014). *The study of the overtaking process in the situation where from the opposite direction another vehicle is approaching*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 57, Issue IV, November, 2014, pg. 527-536, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/23>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/495>.
18. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Bălcău, Monica (2014). *Possibility of Evaluation the Pre-Collisions Speed and Space Crossing by Vehicle within Process of Braking*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 57, Issue III, September, 2014, pg. 385-392, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/22>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/394>.
19. **Todoruț, A.**; Cordoș, N.; Bălcău, Monica (2014). *Algorithm for Designing the Saw Diagram for Vehicles*. Cluj-Napoca, *Acta Technica Napocensis*, Series: *Applied Mathematics, Mechanics, and Engineering*, Vol. 57, Issue II, June, 2014, pg. 307-312, Editura U.T.PRESS, ISSN 1221-5872, (Journal indexed in: *Index Copernicus International - ICI Journals Master List*; Thomson Reuters - *Web of Science Core Collection - Emerging Sources Citation Index - Master Journal List*), <https://atna-mam.utcluj.ro/index.php/Acta/issue/view/1>, <http://www.atna-mam.utcluj.ro/index.php/Acta/article/view/30>.
20. **Todoruț, A.**; Cordoș, N. (2014). *Researches regarding the construction of the indicated diagram at compression ignition engines with fuel based of used cooking oil in related with diesel*. In: *Agriculture Science and Practice Journal*, Vol 89-90, No. 1-2 (2014), pg. 59-64, AGRICULTURA (JUL 2014), ISSN 1221-5317, Edited by the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania, Published by AcademicPres, <http://journals.usamvcluj.ro/index.php/agricultura/article/view/10233>, Directory of Open Access Journals (DOAJ) - <https://doaj.org/article/fa20ada09b0a439cba79fcf1410eaf68>.

### C1.3. Reviste Categoria B

1. **Todoruț, A.**; Brânzaș, P.; Barabás, I.; Coldea, C. (2007). *The numerical evaluation of diesel engine exhaust gas when fueled by sunflower-based oil compared to diesel fuel*. Cluj-Napoca,



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 50/2007, pg. 63-70, Editura U.T.PRESS, ISSN 1224-9106.
2. **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2006). *Calculus algorithms of the automotive start up capacity parameters*. Cluj-Napoca, Buletinul Științific al U.T.C.-N., *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 49/2006, pg. 25-28, Editura U.T.PRESS, ISSN 1224-9106.
  3. **Todoruț, A.**; Barabás, I.; Coldea, C.; Mariașiu, F. (2005). *Mathematical modeling of the working cycle of the compression ignition engine fueled with sunflower oil comparative with mineral diesel fueling*. Cluj-Napoca, *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 48/2005, pg. 43-52, Editura U.T.PRESS, ISSN 1224-9106.
  4. **Todoruț, A.**; Barabás, I.; Coldea, C.; Mariașiu, F. (2005). *Mathematical modeling of crank mechanism solicitations in the case of compression ignition engines fueled with sunflower oil based fuels comparatively with mineral diesel fuel*. Cluj-Napoca, *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 48/2005, pg. 53-60, Editura U.T.PRESS, ISSN 1224-9106.
  5. **Todoruț, A.**; Burnete, N.; Barabás, I.; Costea, A. (2004). *Mathematical modeling regarding the pedestrian-automobile accidents reconstruction*. Cluj-Napoca, *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 47/2004, pg. 23-30, Editura U.T.PRESS, ISSN 1224-9106.
  6. Cordoș, N.; Burnete, N.; **Todoruț, A.**; Barabás, I.; Szasz, R. (2002). *Modelarea cinematică a coliziunilor autovehiculelor*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca, 10-11 Octombrie. Vol. 2, Motoare pentru autovehicule, Tehnologii de transport, Trafic și securitate rutieră, pg. 297-304. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-62-0), sub egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.
  7. Rus, I.; Brânzaș, P.; Burnete, N.; Barabás, I.; **Todoruț, A.** (2002). *Siguranța pasivă - Necesitate și viitor pentru autoturismele românești*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca, 10-11 Octombrie. Vol. 2, Motoare pentru autovehicule, Tehnologii de transport, Trafic și securitate rutieră, pg. 369-372. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-62-0), sub egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.
  8. Barabás, I.; **Todoruț, A.** (2002). *Frânarea bicicletei în pantă*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca, 10-11 Octombrie. Vol. 1, Autovehicule Rutiere (Automobile, Tractoare), pg. 343-346. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-61-2), sub egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.
  9. Rus, I.; Burnete, N.; **Todoruț, A.**; Chira, D.; Meșter, E. (2002). *Analiza prin metoda elementului finit a axului portfuzetei de la autoturismul Dacia*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca, 10-11 Octombrie. Vol. 1, Autovehicule Rutiere (Automobile, Tractoare), pg. 323-326. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-61-2), sub egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.
  10. Rus, I.; Burnete, N.; Bătagă, N.; Cordoș, N.; **Todoruț, A.**; Barabás, I.; Iosif, C. (2002). *Studii privind posibilitatea funcționării motoarelor cu aprindere prin comprimare cu combustibili obținuți din uleiuri regenerabile*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca 10-11 Octombrie 2002. Vol. 2, Motoare pentru autovehicule, Tehnologii de transport, Trafic și securitate rutieră, pg. 159-166. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-62-0), sub



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.

11. Mariașiu, F.; **Todoruț, A.**; Barabás, I. (2002). *Corelarea defectelor pompelor de injecție cu natura combustibilului utilizat la motoarele cu aprindere prin comprimare*. In: Conferința Națională cu participare Internațională: Autovehiculul, Mediul și Mașina Agricolă - AMMA2002, Cluj-Napoca, 10-11 Octombrie. Vol. 2, Motoare pentru autovehicule, Tehnologii de transport, Trafic și securitate rutieră, pg. 277-280. Cluj-Napoca, Editura U.T.PRESS, ISBN 973-8335-60-4 (ISBN 973-8335-62-0), sub egida *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 45/2002, ISSN 1221-5872.
12. Rus, I.; Cordoș, N.; Burnete, N.; **Todoruț, A.**; Barabás, I. (2001). *Study about car-car collisions*. Cluj-Napoca, *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 44/2001, pg. 67-74, Editura U.T.PRESS, Cluj-Napoca, ISSN 1221-5872.
13. Rus, I.; Cordoș, N.; Burnete, N.; **Todoruț, A.**; Barabás, I. (2001). *Study about man-car collisions*. Cluj-Napoca, *Acta Technica Napocensis*, Section: Machines Construction. Materials, nr. 44/2001, pg. 61-66, Editura U.T.PRESS, Cluj-Napoca, ISSN 1221-5872.

## C1.4. Reviste Categoria C

1. Barabás, I.; Zöldy, M.; **Todoruț, I.-A.** (2016). *Biodízel-gázolaj-bioetanol keverékek fontosabb tulajdonságainak modellezése / Modeling the Key Fuel Properties of Biodiesel-diesel Fuel-bioetanol Blends*. *Műszaki Szemle*, No 67, pp. 10-16, ISSN: 2458-0201, <http://ojs.emt.ro/index.php/msz/article/view/30>, [http://ojs.emt.ro/index.php/msz/article/view/30/MSz67\\_10-16](http://ojs.emt.ro/index.php/msz/article/view/30/MSz67_10-16).
2. Marc, Cristina-Andreea; Băldean, D.; **Todoruț, A.**; Moldovanu, D. (2009). *Comparative study of stopping distances on snow at Dacia Logan and Seat Leon*. Cluj-Napoca, *Acta Technica Napocensis*, Series: Machines Construction. Materials, nr. 52/2009, pg. 41-46, Editura U.T.PRESS, ISSN 1224-9106.
3. Barabás, I.; **Todoruț, A.**; Csibi, V.J. (2009). *Chemical Pollution and Economical Evaluation for Four Types of Biofuel Blends*. In: *Műszaki Szemle, Technica Review*, nr. 45/2009, pg. 3-9, Cluj-Napoca, România, Editor Hungarian Technical Scientific Society of Transylvania, Printing Incitato Kft., ISSN 1454-0746, [http://www.emt.ro/downloads/muszaki\\_szemle/msz45.pdf](http://www.emt.ro/downloads/muszaki_szemle/msz45.pdf).
4. Barabás, I.; **Todoruț, A.**; Csibi, V.J. (2006). *Optimization of Injection Parameters for Biofuel Jet*. In: *Műszaki Szemle, Technica Review*, nr. 36/2006, pg. 8-13, Cluj-Napoca, România, Editor Hungarian Technical Scientific Society of Transylvania, Printing Incitato Kft., ISSN 1454-0746, [http://www.emt.ro/downloads/muszaki\\_szemle/msz36.pdf](http://www.emt.ro/downloads/muszaki_szemle/msz36.pdf).
5. Barabás, I.; Csibi, V.J.; **Todoruț, A.** (2005). *Estimation of Atmospheric Emissions and Energy Consumption from Urban Transport*. In: *Műszaki Szemle, Technica Review*, nr. 32/2005, pg. 9-17, Cluj-Napoca, România, Editor Hungarian Technical Scientific Society of Transylvania, Printing Incitato Kft., ISSN 1454-0746, [http://www.emt.ro/downloads/muszaki\\_szemle/msz32.pdf](http://www.emt.ro/downloads/muszaki_szemle/msz32.pdf).

## C1.5. Reviste Categoria D

1. Barabás, I.; **Todoruț, A.**; Băldean, D. (2010). *Evaluarea calității uleiului de ungere în cazul utilizării amestecurilor de motorină-biodiesel-etanol la alimentarea motoarelor cu aprindere prin compresie*. In: *Ingineria Automobilului - supliment*, ISSN 1842-4074, (Nr. 13/Decembrie-Ianuarie 2010, pg. 11-13) al revistei *Auto Test*, ISSN 1221-2687, (Nr. 151/Decembrie-Ianuarie 2010), [http://www.ingineria-automobilului.ro/reviste/Ingineria\\_13.pdf](http://www.ingineria-automobilului.ro/reviste/Ingineria_13.pdf), <http://www.journals.indexcopernicus.com/Ingineria+Automobilului,p9388,3.html>.



**D. ARTICOLE/STUDII PUBLICATE ÎN VOLUMELE UNOR MANIFESTĂRI ȘTIINȚIFICE (CONGRESE, CONFERINȚE, SIMPOZIOANE) INTERNAȚIONALE RECUNOSCUTE DIN ȚARĂ ȘI DIN STRĂINĂTATE (CU ISSN SAU ISBN)**

**D1. Articole/studii publicate în volume ale unor manifestări științifice internaționale organizate în străinătate și în țară – indexate ISI Proceedings**

1. Cordoș, N.; **Todoruț, A.**; Iclodean, C.; Barabás, I. (2020). *Influence of the Dynamic Vehicle Load on the Power Losses Required to Overcoming the Rolling Resistance*. In: Dumitru, I., Covaciu, D., Racila, L., Rosca, A. (Editors), Proceedings of the 30<sup>th</sup> SIAR International Congress of Automotive and Transport Engineering – “Science and Management of Automotive and Transportation Engineering - 4<sup>th</sup> edition”, 23-25 October, 2019, Craiova, Romania, © Springer Nature Switzerland AG 2020, pp. 195–202, 2020. SMAT 2019, Springer, ISBN 978-3-030-32563-3, ISBN 978-3-030-32564-0 (eBook), [https://doi.org/10.1007/978-3-030-32564-0\\_23](https://doi.org/10.1007/978-3-030-32564-0_23), [https://link.springer.com/content/pdf/10.1007%2F978-3-030-32564-0\\_23.pdf](https://link.springer.com/content/pdf/10.1007%2F978-3-030-32564-0_23.pdf), <https://link.springer.com/book/10.1007/978-3-030-32564-0>, <http://apps.webofknowledge.com - Web of Science Core Collection>, **WOS:000528526600023**.
2. **Todoruț, A.**; Cordoș, N. (2019). *Evaluation of the Vehicle Sideslip Angle According to Different Road Conditions*. In: Burnete N., Varga B. (eds) Proceedings of the 4<sup>th</sup> International Congress of Automotive and Transport Engineering (AMMA 2018), pp. 814-819. AMMA 2018. Proceedings in Automotive Engineering. Springer 2019, DOI: [https://doi.org/10.1007/978-3-319-94409-8\\_95](https://doi.org/10.1007/978-3-319-94409-8_95), First Online: 30 September 2018, Print ISBN 978-3-319-94408-1, Series Print ISSN 2524-7778, Online ISBN 978-3-319-94409-8, Series Online ISSN 2524-7786, [https://link.springer.com/chapter/10.1007/978-3-319-94409-8\\_95](https://link.springer.com/chapter/10.1007/978-3-319-94409-8_95), <https://www.springer.com/us/book/9783319944081>, <http://apps.webofknowledge.com - Web of Science Core Collection>, **WOS:000578264900095**.
3. Cordoș, N.; **Todoruț, A.** (2019). *Influences of the Suspensions Characteristics on the Vehicle Stability*. In: Burnete N., Varga B. (eds) Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018), pp. 808-813. AMMA 2018. Proceedings in Automotive Engineering. Springer, Cham, Copyright information © Springer Nature Switzerland AG 2019, DOI: [https://doi.org/10.1007/978-3-319-94409-8\\_94](https://doi.org/10.1007/978-3-319-94409-8_94), First Online: 30 September 2018, Print ISBN 978-3-319-94408-1, Series Print ISSN 2524-7778, Online ISBN 978-3-319-94409-8, Series Online ISSN 2524-7786, [https://link.springer.com/chapter/10.1007/978-3-319-94409-8\\_94](https://link.springer.com/chapter/10.1007/978-3-319-94409-8_94), <https://www.springer.com/us/book/9783319944081>, <http://apps.webofknowledge.com - Web of Science Core Collection>, **WOS:000578264900094**.
4. I Barabás, **A Todoruț**, N Cordoș, A Molea (2017). *Current challenges in autonomous driving*. IOP Publishing, 2017, IOP Conference Series: Materials Science and Engineering (IOP Conf. Ser.: Mater. Sci. Eng.), Volume 252, 012096, ISSN: 1757-8981, Conference 1, CAR-2017, International Congress of Automotive and Transport Engineering - Mobility Engineering and Environment, Pitesti, Romania, 8-10 November 2017, Editors: Adrian Clenci (University of Pitesti), Ștefan Tabacu (University of Pitesti), DOI:10.1088/1757-899X/252/1/012096, <http://iopscience.iop.org/article/10.1088/1757-899X/252/1/012096/meta;jsessionid=EAD0BD9FCE7D5CED19720AF4DFFCD19E.c2.iopscience.cld.iop.org>, <http://www.scopus.com>, <http://apps.webofknowledge.com - Web of Science Core Collection>, **WOS:000419817200096**.
5. N Cordoș, **A Todoruț**, I Barabás (2017). *Evaluation of the tire pressure influence on the lateral forces that occur between tire and road*. IOP Publishing, 2017, IOP Conference Series: Materials Science and Engineering (IOP Conf. Ser.: Mater. Sci. Eng), Volume 252, 012011, ISSN: 1757-8981, Conference 1, CAR-2017, International Congress of Automotive and Transport Engineering - Mobility Engineering and Environment, Pitesti, Romania, 8-10





## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

November 2017, Editors: Adrian Clenci (University of Pitesti), Ștefan Tabacu (University of Pitesti), DOI:10.1088/1757-899X/252/1/012011, <http://iopscience.iop.org/article/10.1088/1757-899X/252/1/012011/meta;jsessionid=DE1B4ACD284A67A38A3D660D319F68BE.c1.iopscienc.e.cld.iop.org>, <http://www.scopus.com>, <http://apps.webofknowledge.com> - Web of Science Core Collection, WOS:000419817200011.

6. **Todoruț, A.**; Cordoș, N.; Barabás, I.; Mihet, S. (2017). *Evaluation by Experimental Methods of the Parameters that Influence the Behavior of Various Passenger Cars Classes in the Braking Process*. Springer International Publishing Switzerland 2017, A. Chiru and N. Ispas (eds.), CONAT 2016 International Congress of Automotive and Transport Engineering, DOI 10.1007/978-3-319-45447-4\_8, ISBN: 978-3-319-45446-7 (Print), 978-3-319-45447-4 (eBook), pp 75-82, [http://link.springer.com/chapter/10.1007/978-3-319-45447-4\\_8](http://link.springer.com/chapter/10.1007/978-3-319-45447-4_8), <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000390821400008, Conference Proceedings Citation Index- Science.
7. Cordoș, N.; **Todoruț, A.**; Barabás, I.; Mureșan, R.D. (2017). *Evaluation of the Behavior in Cornering for Different Classes of Passenger Cars by Numerical Modeling*. Springer International Publishing Switzerland 2017, A. Chiru and N. Ispas (eds.), CONAT 2016 International Congress of Automotive and Transport Engineering, DOI 10.1007/978-3-319-45447-4\_9, ISBN: 978-3-319-45446-7 (Print), 978-3-319-45447-4 (eBook), pp 83-89, [http://link.springer.com/chapter/10.1007/978-3-319-45447-4\\_9](http://link.springer.com/chapter/10.1007/978-3-319-45447-4_9), <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000390821400009, Conference Proceedings Citation Index- Science.
8. Barabás, I.; **Todoruț, A.**; Cordoș, N. (2017). *Estimation of Boiling Points of Brake Fluids*. Springer International Publishing Switzerland 2017, A. Chiru and N. Ispas (eds.), CONAT 2016 International Congress of Automotive and Transport Engineering, DOI 10.1007/978-3-319-45447-4\_24, ISBN: 978-3-319-45446-7 (Print), 978-3-319-45447-4 (eBook), pp 209-216, [http://link.springer.com/chapter/10.1007/978-3-319-45447-4\\_24](http://link.springer.com/chapter/10.1007/978-3-319-45447-4_24), <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000390821400024, Conference Proceedings Citation Index- Science.
9. Cordoș, N.; **Todoruț, A.**; Barabás, I. (2013). *Exhaust Emissions of a Medium Power Diesel Engine Operated with Biodiesel*. In: Advanced Engineering Forum, Vols. 8-9 (2013), pp. 93-102, DOI:10.4028/www.scientific.net/AEF.8-9.93, Trans Tech Publications, Switzerland, ISSN 2234-991X, <http://www.ttp.net/2234-9898.html>, <http://www.scientific.net/AEF.8-9.93>, <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000323184000012.
10. Barabás, I.; **Todoruț, I.-A.**; Kocsis, L.B.; Băldean, D.L. (2010). *Automated Test Bench for Study of the Fuel Injection Process*. In: The 5<sup>th</sup> International Conference: Robotics 2010, Cluj-Napoca, Romania, 23-25 September. Solid State Phenomena Vols. 166-167/2010, pg. 39-44, ISSN: 1012-0394 (<http://www.ttp.net/1012-0394.html>), ISBN / ISBN-13: 3-908451-88-4 / 978-3-908451-88-4, Phenom Publisher: Trans Tech Publications Ltd, Switzerland, DOI:10.4028/www.scientific.net/SSP.166-167.39, Web of Science - <http://apps.webofknowledge.com> - Web of Science Core Collection - WOS:000289532000005.

## D2. Articole/studii publicate în volume ale unor manifestări științifice internaționale organizate în străinătate și în țară – indexate în baze de date internaționale

1. Duma, Irina; Burnete, N.; **Todoruț, A.** (2022), *A review of road traffic accidents reconstruction methods and their limitations with respect to the national legal frameworks*. The XXXI-st SIAR International Congress of Automotive and Transport Engineering "Automotive and Integrated Transport Systems" (AITS 2021), 28th-30th October 2021, Chisinau, Republic of Moldova, IOP Publishing Ltd, IOP Conf. Ser.: Mater. Sci. Eng., 1220, (2022) 012055, doi:10.1088/1757-



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- 899X/1220/1/012055, <https://iopscience.iop.org/article/10.1088/1757-899X/1220/1/012055>,  
<https://www.proquest.com/docview/2624596481/15A0D5DEE44B43F1PQ/1?accountid=136549>.
2. **Todoruț, I.-A.**; Barabás, I.; Burnete, N.V.; Budișan, T. (2011). *The dynamic loads' evaluation from the crank mechanism of the diesel engine fueled with biodiesel obtained from used sunflower oil*. In: The 10<sup>th</sup> International Automotive Congress "Automotive and Environment" CAR2011, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20111298, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CAR2011/CAR2011-1298*, <https://go.fisita.com/store/papers/CAR2011/CAR2011-1298>.
  3. Barabás, I.; **Todoruț, I.-A.**; Bălcău, Monica (2011). *Fitting biodiesel-diesel-bioethanol blends to CI engines*. In: the 10<sup>th</sup> International Automotive Congress "Automotive and Environment" CAR2011, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20111292, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CAR2011/CAR2011-1292*, <https://go.fisita.com/store/papers/CAR2011/CAR2011-1292>.
  4. Barabás, I.; **Todoruț, A.** (2010). *Chassis Dynamometer and Road Test Performances of Biodiesel-Diesel Fuel-Bioethanol Blend*. In: SAE2010, Powertrains Fuels & Lubricants Meeting, October 25, SAE Technical Paper No. 2010-01-2139. ISSN 0148-7191, DOI: 10.4271/2010-01-2139. Technical Session: Alternative and Advanced Fuels, Session Code: FFL215, <http://papers.sae.org/2010-01-2139/>, <http://www.sae.org/calendar/techsess/182214.pdf>, <http://www.sae.org/technical/papers/2010-01-2139>, <http://subscriptions.sae.org/content/2010-01-2139>, <http://www.scopus.com>.
  5. Barabás, I.; **Todoruț, A.** (2009). *Key Fuel Properties of Biodiesel-diesel fuel-ethanol Blends*. In: SAE2009 International Powertrains, Fuels and Lubricants Meeting, June 15-17, Florence, Italy. Session: Alternative and Advanced Fuels. Paper Identification Number: 09SFL-0256\_2009-01-1810, ISSN 0148-7191, DOI: 10.4271/2009-01-1810. <http://www.sae.org/technical/papers/2009-01-1810>; <http://papers.sae.org/2009-01-1810>, <http://www.scopus.com>.
  6. Barabás, I.; **Todoruț, A.**; Burnete, N. (2009). *Comparative Performance and Emissions Study of a Direct Injection Diesel Engine using Bio-Diesel obtained from used Cooking Oil*. In: The 8<sup>th</sup> International Automotive Congress - ESFA2009, 12-14 November, Bucharest, Romania. Fuel Economy, Safety and Reliability of Motor Vehicles, Volume 1, Published by Politehnica Press, Bucharest, ISSN: 2067-1083, pg. 67-72. Paper Identification Number: E09A106, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: ESFA09/E09A106*, <https://go.fisita.com/store/papers/ESFA09/E09A106>.
  7. **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2007). *Analytical evaluation of the air excess coefficient as function of experimentally measured exhaust gas composition in the D-2402.200 engine using sunflower oil based fuels*. In: International Congress Automotive, Environment and Farm Machinery AMMA2007, Cluj-Napoca 11-13 Octombrie. Paper Identification Number: AMMA-2007615. *Acta Technica Napocensis, Series: Applied Mathematics and Mechanics*, nr. 50/2007, Vol. IV, pg. 439-442, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/id28.htm>, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: AMMA07/AMMA2007615439\_442*, [https://go.fisita.com/store/papers/AMMA07/AMMA2007615439\\_442](https://go.fisita.com/store/papers/AMMA07/AMMA2007615439_442).
  8. Brânzaș, P.; Barabás, I.; **Todoruț, A.** (2007). *Constructive and functional parameter limits of synchronization may interdict engine braking in downslope traffic*. In: 11<sup>th</sup> European Automotive Congress (EAEC2007) "Automobile for the Future", 30 May - 1 June, Budapest, Hungary, Paper Identification Number: PT-P04, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: EAEC-07/PT-P04*, <https://go.fisita.com/store/papers/EAEC-07/PT-P04>.



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

9. Brânzaș, P.; Barabás, I.; **Todoruț, A.** (2007). *First results of the ProSiguR road safety pilot project in Romania*. In: 11<sup>th</sup> European Automotive Congress (EAEC2007) "Automobile for the Future", 30 May - 1 June, Budapest, Hungary, Paper Identification Number: LE01-2, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: EAEC-07/LE01-2*, <https://go.fisita.com/store/papers/EAEC-07/LE01-2>.
10. Barabás, I.; **Todoruț, A.**; Brânzaș, P. (2006). *Road safety performance indicators in Romania*. In: International Congress on Automotives "Motor Vehicles and Transportation MVT2006", from 15-17 November, Timișoara, Romania. ISBN 973-638-284-2; Paper Identification Number: MVT20064003, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: MVT2006/MVT20064003k*, <https://go.fisita.com/store/papers/MVT2006/MVT20064003k>.
11. Mariașiu, F.; **Todoruț, A.**; Barabás, I.; Plaian, Liana (2006). *Increasing active security of heavyduty vehicles using the active security system ESP (Electronic Security Program)*. In: International Congress on Automotives "Motor Vehicles and Transportation MVT2006", from 15-17 November, Timișoara, Romania. ISBN 973-638-284-2; Paper Identification Number: MVT20062011, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: MVT2006/MVT20062011*, <https://go.fisita.com/store/papers/MVT2006/MVT20062011>.
12. **Todoruț, A.**; Barabás, I.; Burnete, N.; Mariașiu, F. (2006). *Chemical pollution evaluation of sunflower oil based biofuels blends*. In: International Congress on Automotives "Motor Vehicles and Transportation MVT2006", from 15-17 November, Timișoara, Romania. ISBN 973-638-284-2; Paper Identification Number: MVT20061033, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: MVT2006/MVT20061033k*, <https://go.fisita.com/store/papers/MVT2006/MVT20061033k>.
13. **Todoruț, A.**; Barabás, I.; Burnete, N.; Mariașiu, F. (2006). *Evaluation of the main parameters of the D2402.000 engine that uses as sunflower oil based biofuels*. In: International Congress on Automotives "Motor Vehicles and Transportation MVT2006", from 15-17 November, Timișoara, Romania. ISBN 973-638-284-2; Paper Identification Number: MVT20061034, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: MVT2006/MVT20061034k*, <https://go.fisita.com/store/papers/MVT2006/MVT20061034k>.
14. Barabás, I.; **Todoruț, A.**; Brânzaș, P.; Mariașiu, F. (2006). *Comparative analysis of the atomization characteristics of biodiesel fuels*. In: International Congress on Automotives "Motor Vehicles and Transportation MVT2006", from 15-17 November, Timisoara, Romania. ISBN 973-638-284-2; Paper Identification Number: MVT20061002k, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: MVT2006/MVT20061002k*, <https://go.fisita.com/store/papers/MVT2006/MVT20061002k>.
15. Barabás, I.; Burnete, N.; **Todoruț, A.**; Coldea, C.; Mariașiu, F. (2005). *Experimentation with fuels based on sun flower oil on diesel engines*. In: the 9<sup>th</sup> International Congress on Automotives "Automotive and Environment" CAR2005, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20051104, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CAR2005\_FISITA/CAR20051104-FinalPaper*, [https://go.fisita.com/store/papers/CAR2005\\_FISITA/CAR20051104-FinalPaper](https://go.fisita.com/store/papers/CAR2005_FISITA/CAR20051104-FinalPaper).
16. Burnete, N.; Filip, N.; Naghiu, Al.; Chintoanu, M.; **Todoruț, A.**; Borza, E.; Coldea, C.; Varga, B.; Costea, A. (2005). *Biofuels-diesel fuel mixtures - alternative fuels for running buses from big cities*. In: the 9<sup>th</sup> International Congress on Automotives "Automotive and Environment" CAR2005, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20051077, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CAR2005\_FISITA/CAR20051077-FinalPaper*, [https://go.fisita.com/store/papers/CAR2005\\_FISITA/CAR20051077-FinalPaper](https://go.fisita.com/store/papers/CAR2005_FISITA/CAR20051077-FinalPaper).



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

17. Burnete, N.; Naghiu, A.; Barabás, I.; **Todoruț, A.**; Teborean, I.; Vlad, N.; Costea, A.; Varga, B. (2005). *Research regarding injection pressure influence on compressed ignited engines running on vegetal oil based fuels performances*. In: the 9<sup>th</sup> International Congress on Automotives "Automotive and Environment" CAR2005, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20051078, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CAR2005\_FISITA/CAR20051078-FinalPaper*, [https://go.fisita.com/store/papers/CAR2005\\_FISITA/CAR20051078-FinalPaper](https://go.fisita.com/store/papers/CAR2005_FISITA/CAR20051078-FinalPaper).
18. Burnete, N.; Barabás, I.; **Todoruț, A.**; Varga, B.O. (2004). *Evaluation of the performance and fuel consumption parameters of the D-118 engine that uses as fuel used oil from food industry*. In: International Automotive Congress, CONAT2004, Brașov, October 20-22, Paper Identification Number: CONAT20042104, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CONAT2004/CONAT20042104-Paper*, <https://go.fisita.com/store/papers/CONAT2004/CONAT20042104-Paper>.
19. **Todoruț, A.**; Burnete, N.; Barabás, I.; Varga, B.O.; Costea, A. (2004). *Research concerning the pollution produced by the diesel engines running on mixture of diesel and biofuels*. In: International Automotive Congress, CONAT2004, Brașov, October 20-22, Paper Identification Number: CONAT20042106, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CONAT2004/CONAT20042106-Paper*, <https://go.fisita.com/store/papers/CONAT2004/CONAT20042106-Paper>.
20. Burnete, N.; Naghiu, A.; Teborean, I.; Filip, N.; **Todoruț, A.**; Barabás, I.; Varga, B.O.; Borza, E.; Coldea, C.; Vlad, N.; Bacu, F. (2004). *Mixes of the diesel fuel with vegetal oil - alternative fuels for the diesel engines*. In: International Automotive Congress, CONAT2004, Brașov, October 20-22, Paper Identification Number: CONAT20042114, in *BDI FISITA (International Federation of Automotive Engineering Societies) - Paper Code: CONAT2004/CONAT20042114-Paper*, <https://go.fisita.com/store/papers/CONAT2004/CONAT20042114-Paper>.
21. Cordoș, N.; Filip, N.; Burnete, N.; **Todoruț, A.**; Holom, F. (2002). *Experimental research regarding automobiles brake capacity*. In: 8TH Mini Conference on Vehicle System Dynamics, Identification and Anomalies, (*Proceedings of VSDIA2002*), pg. 425-431, Faculty of Transportation Engineering, Budapest University of Technology and Economics, Hungary, Budapest, 11-13 November, ISBN 963-420-817-7, <http://www.scopus.com>.

### D3. Articole/studii publicate în volume ale unor manifestări științifice internaționale organizate în străinătate

1. Duma, Irina; Burnete, N.; **Todoruț, A.**; Trușcă, D. (2021), *Determination of pre-collision travel speed in the event of a frontal collision between a vehicle and a fixed obstacle, using video recordings*. XXIX<sup>th</sup> International Scientific Conference on Transport, Road-Building, Agricultural, Hoisting & Hauling and Military Technics and Technologies *trans&MOTAUTO 2021*, 21-24.06.2021, Varna, Bulgaria, Proceedings ISSN 1313-5031 (Print), ISSN 2535-0307 (Online), Year IV, Ussue 1 (8), pp. 35-37, Sofia, Bulgaria 2021, Publisher: Scientific-technical union of mechanical engineering - Industry-4.0, <https://trans-motauto.com/sbornik/2021.pdf>, International Scientific Journals of Scientific Technical Union of Mechanical Engineering "Industry 4.0", *Trans Motauto World*, Vol. 6 (2021), Issue 2, pg(s) 62-64, Transport. Safety and Ecology. Logistics and Management, Print ISSN: 2367-8399, Online ISSN: 2534-8493, 108, Rakovski Str., 1000 Sofia, Bulgaria, <https://stumejournals.com/journals/tm/2021/2/62>.
2. Barabás, I.; **Todoruț, A.** (2011). *Studies on Compatible Fuel Properties of Biodiesel–Diesel Fuel–Bioethanol Blends for Fuel Use in Compression Ignition Engines*. In: The XXV. microCAD - International Scientific Conference, microCAD2011, 31 March – 1 April, University



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- of Miskolc, Hungary. Section A: Environmental and Energy Management, pg. 15-20. Kiadja a Miskolci Egyetem Innovációs és Technológia Transzfer Centruma; Nyomdaszám: ME.Tu-162/2011. ISBN 978-963-661-954-1. <http://www.uni-miskolc.hu/~microcad/a.html>.
3. Barabás, I.; **Todoruț, A.**; Băldean, D.; Suci, F. (2009). *Experimental study on the spray characteristics for diesel fuel and biodiesel-diesel fuel-bioethanol blends*. In: 12<sup>th</sup> EAEC European Automotive Congress, Bratislava, EAEC2009, June 29 to July 1, Bratislava, Slovakia. Published by: Slovak Society of Automotive Engineers Bratislava c/o Sjf STU, Nám. slobody 17, 812 31 Bratislava, Slovak Republic. Edited by: E&CC Intenzíva Ltd, BIZNISUITE, Kutlíkova 17, 851 02 Bratislava. Printed and bound by: AD Team Ltd., Poľná 25/2974, 917 01 Trnava, Slovak Republic, ISBN: 978-80-969243-8-7. Paper Identification Number: E2009-02-009.
  4. Barabás, I.; **Todoruț, A.**; Băldean, D.; Suci, F. (2009). *Key fuel properties of biodiesel-diesel-bioethanol blends which influence the spray process*. In: 12<sup>th</sup> EAEC European Automotive Congress, Bratislava, EAEC2009, June 29 to July 1, Bratislava, Slovakia. Published by: Slovak Society of Automotive Engineers Bratislava c/o Sjf STU, Nám. slobody 17, 812 31 Bratislava, Slovak Republic. Edited by: E&CC Intenzíva Ltd, BIZNISUITE, Kutlíkova 17, 851 02 Bratislava. Printed and bound by: AD Team Ltd., Poľná 25/2974, 917 01 Trnava, Slovak Republic, ISBN: 978-80-969243-8-7. Paper Identification Number: E2009-02-013.
  5. Barabás, I.; **Todoruț, A.**; Burnete, N. (2009). *Possibilities of Recycling used Cooking Oil by Converting to Biofuels for Powering Compression Ignition Engines*. In: The XXIII. microCAD2009 - International Scientific Conference, 19-20 March, University of Miskolc, Hungary. Section B: Waste Processing and Recycling, pg. 1-6. Kiadja a Miskolci Egyetem Innovációs és Technológia Transzfer Centruma; Nyomdaszám: ME.Tu-109/2009. ISBN 978-963-661-866-7 Ö; ISBN 978-963-661-868-1.
  6. Barabás, I.; **Todoruț, A.**; Suci, F.; Baldean, D. (2008). *Viscosity of Biodiesel-Diesel-Bioethanol Blends*. In: microCAD2008 - International Scientific Conference, 20-21 March, University of Miskolc, Hungary. Section C: Non-Conventional Energy Resources-Research and Utilization, pg. 77-82. Kiadja a Miskolci Egyetem Innovációs és Technológia Transzfer Centruma; Nyomdaszám: ME.Tu-174/2008. ISBN 978-963-661-812-4 Ö; ISBN 978-963-661-814-8.
  7. Burnete, N.; Cordoș, N.; Karamusantas, D.; Barabás, I.; **Todoruț, A.**; Mihăescu, M. (2001). *Analiza comparativă prin elemente finite a solicitărilor unui organ al motorului cu ardere internă*. In: Conferința Științifică Internațională TMCR2001, Chișinău, 23-25 mai, Tehnologii Moderne, Calitate, Restructurare, Vol. 1, pg. 446-449, Editare și multiplicare la secția de Redactare a UTM, ISBN 9975-9638-1-1.
  8. Cordoș, N.; Burnete, N.; **Todoruț, A.** (2001). *Evaluarea gradului de etanșare a grupului cilindru-segment-piston de la motoarele cu ardere internă*. In: Conferința Științifică Internațională TMCR2001, Chișinău, 23-25 mai, Tehnologii Moderne, Calitate, Restructurare, Vol. 1, pg. 462-465, Editare și multiplicare la secția de Redactare a UTM, ISBN 9975-9638-1-1.

#### D4. Articole/studii publicate în volume ale unor manifestări științifice internaționale organizate în România

1. Ghereș, M.I.; Fechet-Tutunaru, L.V.; Gáspár, F.; Deac, T.; Burnete, N.; **Todoruț, I.-A.** (2019). *Optimization of Geometric Parameters of Scarifiers to Reduce the Soil – Tool Interaction Forces / Optimizarea parametrilor geometrici ai scarificatoarelor pentru reducerea forțelor de interacțiune sol – sculă*. In: ISB-INMA THE' 2019 International Symposium Agricultural and Mechanical Engineering, Bucharest, 31<sup>st</sup> October - 1<sup>st</sup> November 2019, Volume Symposium 2019, pg. 194-203, ISSN: 2344-4118 - print, ISSN 2537-3773 - online, [http://isbinmateh.inma.ro/pdf/Volume\\_Symposium\\_2019.pdf](http://isbinmateh.inma.ro/pdf/Volume_Symposium_2019.pdf), Indexed in CAB DIRECT, <http://www.cabdirect.org/>, Index Copernicus, <https://www.researchgate.net/publication/>



[337051180\\_Optimization\\_of\\_geometric\\_parameters\\_of\\_scarificators\\_for\\_the\\_reduction\\_of\\_the\\_soil\\_-\\_tool\\_interaction\\_forces.](#)

2. Cordoș, N.; Zsoldics, B.; **Todoruț, A.**; Barabás, I.; Bălcău, Monica (2014). *Evaluation of the parameters that influencing the vehicles equilibrium state of cornering displacement.* In: 3<sup>rd</sup> International Congress Science and Management of Automotive and Transportation Engineering (SMAT2014) 23<sup>rd</sup> - 25<sup>th</sup> of October 2014, Craiova, Romania, Section: Modern Transport Systems and Road Traffic, Paper Identification Number: SMAT 2014-MTSRT41, Proceeding, Tome I, pg. 171-180, Published by Universitaria Craiova, ISBN: 978-606-14-0864-1, 978-606-14-0865-8.
3. **Todoruț, I.-A.**; Barabás, I.; Cordoș, N.; Moldovanu, D.; Bălcău, Monica (2014). *The evaluation of kinematic measures within the process of overtaking motor vehicles.* In: 3<sup>rd</sup> AMMA International Congress "Automotive, Motor, Mobility, Ambient" - AMMA 2013, 17-19 October 2013. Paper Identification Number: AMMA2013\_412, <http://amma2013.utcluj.ro/images/program.pdf>. Published - Acta Technica Napocensis - Scientific Journal of Technical University of Cluj-Napoca, Series Environmental Engineering & Sustainable Development Entrepreneurship (EESDE), Special Edition AMMA 2013, Volume 3, Issue 1, Special Edition (January – March 2014), pg. 29-44, ISSN: 2284-743X; ISSN-L: 2284-743X, U.T.Press Publishing House Cluj-Napoca, <https://imadd.utcluj.ro/acta-technica-napocensis/>, <https://imadd.utcluj.ro/eesde/welcome.html>, [https://imadd.utcluj.ro/eesde/welcome\\_files/Special%20Edition%20AMMA\\_2013\\_1.pdf](https://imadd.utcluj.ro/eesde/welcome_files/Special%20Edition%20AMMA_2013_1.pdf).
4. Bălcău, Monica; Barabás, I.; **Todoruț, A.** (2013). *Particular Cases when Constructing a Sphere.* In: The 5<sup>th</sup> edition of the International Conference on Engineering Graphics and Design, ICEGD Timișoara, 13-15 June 2013. Published - Scientific Bulletin of the "POLITEHNICA" University of Timișoara, Romania, Transactions on Hydrotechnics, ISSN 1224-6042, Tom 58(72), Fascicola 2, pg. 37-40, [www.ct.upt.ro/icegd2013/ICEGD\\_2013.pdf](http://www.ct.upt.ro/icegd2013/ICEGD_2013.pdf).
5. Barabás, I.; **Todoruț, A.**; Kocsis, L.; Ignat, A.D. (2010). *Rapid fuel properties estimation through chemometric modeling of nir spectra.* In: International Congress on Automotive and Transport Engineering, CONAT2010, Brașov, The XI<sup>th</sup> Edition, 27-29 October, Volume III of VI, pg. 153-160, ISSN 2069-0401, Paper Identification Number: CONAT20102032.
6. Barabás, I.; **Todoruț, A.**; Kocsis, L. (2010). *Research on Diesel Fuel-biodiesel-ethanol Blends.* In: 18<sup>th</sup> International Conference in Mechanical Engineering, OGÉT2010 - Presented at the OGÉT plenary session, Baia Mare, April 22-25, pg. 11-16. Print Incitato, Cluj-Napoca, ISSN 2068-1267, [http://oget.emt.ro/emt\\_oget\\_program\\_2010.pdf](http://oget.emt.ro/emt_oget_program_2010.pdf).
7. Barabás, I.; **Todoruț, A.**; Kocsis, L. (2010). *Comparative Road Performance Test Results of Biodiesel-diesel Fuel-ethanol Blends.* In: 18<sup>th</sup> International Conference in Mechanical Engineering, OGÉT2010, Baia Mare, April 22-25, pg. 52-55. Print Incitato, Cluj-Napoca, ISSN 2068-1267, [http://oget.emt.ro/emt\\_oget\\_program\\_2010.pdf](http://oget.emt.ro/emt_oget_program_2010.pdf).
8. Efrim, R.M.; **Todoruț, A.** (coordinator) (2009). *Study about improvement of the driver's protection by redesigning of the steering-wheel's column of the car Dacia Logan.* In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1 - Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 37-42, ISSN 2066-9577.
9. Gavrilaş, C.A.; **Todoruț, A.** (coordinator) (2009). *Study about the reconstruction of the accidents between a car and a motorcycle.* In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 43-48, ISSN 2066-9577.



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

10. Iancu, A.C.; **Todoruț, A.** (coordinator) (2009). *The evaluation of wheeled vehicle cornering parameters through computer simulation*. In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 49-54, ISSN 2066-9577.
11. Mnere, N.; **Todoruț, A.** (coordinator) (2009). *A study on motor vehicle performances by numerical simulation*. In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 59-64, ISSN 2066-9577.
12. Obreja, M.V.; **Todoruț, A.** (coordinator) (2009). *The study on evaluation of energy consumption of vehicles collision*. In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 65-68, ISSN 2066-9577.
13. Pogăcean, A.C.; **Todoruț, A.** (coordinator) (2009). *Study on the stability of vehicles on wheels, through computer simulation*. In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 69-74, ISSN 2066-9577.
14. Polhac, D.; **Todoruț, A.** (coordinator) (2009). *The evaluation of improvement possibilities of braking parameters of vehicles for improving road safety*. In: Acta Mecanica of the Technical University of Cluj-Napoca, Anul I, Nr. 2. The 1<sup>st</sup> International Symposium on Green Energy, ISGE2009, Section 1: Automobile and Environment, Cluj-Napoca, 14 may, Editura U.T.PRESS, pg. 75-78, ISSN 2066-9577.
15. Barabás, I.; **Todoruț, A.** (2008). *Possibilities of using biodiesel-diesel-bioethanol blends as fuel for internal combustion engines*. In: 16th International Conference in Mechanical Engineering, OGÉT2008, Brașov, May 1-4, (Technical Review, Special Issue, pg. 42-45), ISSN 1454-0746.
16. Barabás, I.; **Todoruț, A.** (2007). *Study of biofuel spray images*. In: 15<sup>th</sup> International Conference in Mechanical Engineering, OGÉT2007, Cluj-Napoca, April 26-29, pg. 45-48 (Műszaki Szemle, nr. 38/2007). Printing Incitato Kft., Cluj-Napoca, Kiadja Erdélyi Magyar Műszaki Tudományos Társaság - EMT (Editor Hungarian Technical Scientific Society of Transylvania), ISSN 1454-0746, [http://www.emt.ro/downloads/muszaki\\_szemle/msz38.pdf](http://www.emt.ro/downloads/muszaki_szemle/msz38.pdf).
17. **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2007). *Comparative evaluation of the alternative fueled D-2402.000 diesel engine with sunflower oil based and diesel fuel theoretically and experimentally determined main parameters*. In: International Congress Automotive, Environment and Farm Machinery AMMA2007, Cluj-Napoca 11-13 Octombrie. Paper Identification Number: AMMA-2007523. *Acta Technica Napocensis*, Series: *Applied Mathematics and Mechanics*, nr. 50/2007, Vol. V, pg. 325-328, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/id29.htm>.
18. Barabás, I.; Brânzaș, P.; **Todoruț, A.** (2007). *Researches aiming partial substitution of diesel fuels for diesel engine with biodiesel-diesel-bioethanol mixtures*. In: International Congress Automotive, Environment and Farm Machinery AMMA2007, Cluj-Napoca 11-13 Octombrie. Paper Identification Number: AMMA-2007528. *Acta Technica Napocensis*, Series: *Applied Mathematics and Mechanics*, nr. 50/2007, Vol. V, pg. 349-352, Editura U.T.PRESS, ISSN 1221-5872, <http://www.atna-mam.utcluj.ro/id29.htm>.
19. Barabás, I.; **Todoruț, A.** (2006). *Waste vegetable oil as a diesel fuel*. In: 14<sup>th</sup> International Conference in Mechanical Engineering, OGÉT2006, Tg. Mureș, April 27-30, pg. 42-45. Press



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- Incitato Kft., Cluj-Napoca, Erdélyi Magyar Műszaki Tudományos Társaság, ISBN (10) 973-7840-10-0; ISBN (13) 978-973-7840-10-2.
20. Barabás, I.; **Todoruț, A.** (2006). *Használt étolaj dízelmotorok hajtóanyagaként való hasznosítása.* In: XIV. Nemzetközi Gépész Találkozó, OGÉT2006, április 27-30, Marosvásárhely. ISBN 973-7840-10-0; ISBN 978-973-7840-10-2.
  21. **Todoruț, A.**; Burnete, N.; Barabás, I.; Coldea, C.; Mariașiu, F. (2005). *Aspects regarding numerical calculus of gases exchange for compression ignition engines fueled with sunflower oil based fuels in comparison with mineral fuel.* In: the 9<sup>th</sup> International Congress on Automotives "Automotive and Environment" CAR2005, from 2<sup>th</sup> to 4<sup>th</sup> of November, Pitesti, Romania, Paper Identification Number: CAR20051081.
  22. Burnete, N.; Bațaș, N.; Căzilă Aurica, Filip, N.; **Todoruț, A.**; Coldea, C. (2001). *Influences on the oil escapes above the first piston ring in the case of the spark ignition engines.* In: Prima conferință internațională SMAT2001, Craiova 08-09 Noiembrie, Autovehiculul, Siguranță, Confort și Fiabilitate. Vol. III, Motoare pentru autovehicule, pg. 237-240.
  23. Mariașiu, F.; Barabás, I.; **Todoruț, A.** (2001). *Influența arhitecturii camerei de ardere asupra procesului de injecție la motoarele cu aprindere prin comprimare.* In: Prima conferință internațională SMAT2001, Craiova 08-09 Noiembrie, Autovehiculul, Siguranță, Confort și Fiabilitate. Vol. III, Motoare pentru autovehicule, pg. 241-244.
  24. Barabás, I.; Brânzaș, P.; **Todoruț, A.**; Barabás Judit-Eva (2001). *Cercetări teoretice privind dependența dintre cifra octanica și energia de ionizare a hidrocarburilor.* In: Prima conferință internațională SMAT2001, Craiova 08-09 Noiembrie, Autovehiculul, Siguranță, Confort și Fiabilitate. Vol. III, Motoare pentru autovehicule, pg. 245-248.

## E. ALTE LUCRĂRI ȘI CONTRIBUȚII ȘTIINȚIFICE

## E1. Articole/studii publicate în volume ale unor manifestări științifice naționale cu participare internațională

1. **Todoruț, A.**; Barabás, I.; Cordoș, N. (2012). *Posibilități de evaluare ai parametrilor capacității de demarare a autovehiculelor.* In: Știință și Inginerie, Vol. 22, pg. 421-430. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
2. **Todoruț, A.**; Barabás, I.; Cordoș, N. (2012). *Modelarea reținerii pasagerului de către centura de siguranță.* In: Știință și Inginerie, Vol. 22, pg. 431-440. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
3. Cordoș, N.; **Todoruț, A.**; Moldan, R. (2012). *Aspecte cu privire la reconstrucția accidentelor rutiere bicicletă-automobil.* In: Știință și Inginerie, Vol. 22, pg. 441-450. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
4. **Todoruț, A.**; Barabás, I. (2011). *Determinarea caracteristicilor fizico-chimice ale biocombustibililor pe bază de ulei alimentar uzat, în amestec cu motorina.* In: Știință și Inginerie, Vol. 20, pg. 521-528. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
5. **Todoruț, A.**; Barabás, I. (2011). *Evaluarea distanței de siguranță dintre autovehicule la desprinderea din coloană, în vederea depășirii.* In: Știință și Inginerie, Vol. 20, pg. 529-538. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
6. **Todoruț, A.**; Barabás, I.; Brânzaș, P.; Gavrițaș, C.A. (2010). *Reconstrucția accidentelor rutiere motocicletă-automobil.* In: Știință și Inginerie, Vol. 17, pg. 135-144. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
7. Barabás, I.; **Todoruț, A.**; Brânzaș, P. (2010). *Sporirea siguranței rutiere prin îmbunătățirea calităților de frânare ale automobilelor.* In: Știință și Inginerie, Vol. 17, pg. 145-154. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.





## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

8. **Todoruț, A.**; Barabás, I.; Brânzaș, P.; Szathmari, R. (2010). *Studii asupra suspensiei unui autovehicul cu trei roți (trike) și asupra parametrilor dinamici ai acestuia*. In: Știință și Inginerie, Vol. 17, pg. 533-542. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
9. Barabás, I.; **Todoruț, A.**; Brânzaș, P.; Efrim, R.M. (2010). *Îmbunătățirea protecției conducătorului auto prin reproiectarea coloanei volanului autoturismului Dacia Logan*. In: Știință și Inginerie, Vol. 17, pg. 543-550. București, Editura AGIR, ISSN 2067-7138, e-ISSN 2359-828X.
10. **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2009). *Evaluarea comparativă a parametrilor principali, calculați față de cei determinați experimental, ai motorului D-2402.000 alimentat alternativ cu combustibili pe bază de ulei alimentar uzat și motorină*. In: Știință și Inginerie, Vol. 15, pg. 539-544. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-245-1.
11. **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2009). *Evaluarea analitică al coeficientului de exces de aer în funcție de compoziția gazelor de evacuare măsurate experimental în cazul motorului D-2402.000 alimentat alternativ cu combustibili pe bază de ulei de floarea soarelui și motorină*. In: Știință și Inginerie, Vol. 15, pg. 545-550. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-245-1.
12. **Todoruț, A.**; Barabás, I. (2007). *Simularea numerică a ciclului de lucru al motorului diesel alimentat cu combustibili pe bază de ulei de floarea soarelui uzat comparativ cu motorina*. In: Știință și Inginerie, Vol. 11, pg. 425-430. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-122-5.
13. **Todoruț, A.**; Barabás, I. (2007). *Simularea numerică a solicitărilor dinamice din mecanismul motor al motorului diesel alimentat cu combustibili pe bază de ulei de floarea soarelui uzat comparativ cu motorina*. In: Știință și Inginerie, Vol. 11, pg. 431-436. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-122-5.
14. **Todoruț, A.**; Barabás, I. (2007). *Evaluarea prin calcule numerice a căldurilor specifice, a energiilor interne și a entalpiilor amestecului de gaze în cazul motoarelor diesel alimentate alternativ cu combustibili pe bază de ulei de floarea soarelui și motorină*. In: Știință și Inginerie, Vol. 11, pg. 437-442. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-122-5.
15. **Todoruț, A.** (2007). *Cercetări privind utilizarea uleiurilor de floarea soarelui ca și combustibili pentru motoarele diesel (rezumat teză doctorat)*. In: Știință și Inginerie, Vol. 12, pg. 487. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 978-973-720-123-2.
16. **Todoruț, A.**; Burnete, N.; Barabás, I. (2006). *Utilizarea uleiului alimentar uzat sub formă de combustibil pentru motoarele diesel*. In: Știință și Inginerie, Vol. 10, pg. 271-274. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 973-720-030-6.
17. **Todoruț, A.**, Barabás, I.; Burnete, N. (2006). *Evaluarea gradului de poluare chimică a motorului D-2402.000 alimentat cu combustibili pe bază de ulei de floarea soarelui uzat, comparativ cu motorina*. In: Știință și Inginerie, Vol. 10, pg. 275-280. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 973-720-030-6.
18. Burnete, N.; Barabás, I.; **Todoruț, A.**; Varga, B. (2004). *Uleiurile vegetale - Combustibili viitorului?* In: Știință și Inginerie, Vol. 5, pg. 65-70. București, Editura AGIR, ISBN 973-8130-82-4, ISBN 973-8466-67-9.

## E2. Articole/studii publicate în volume ale unor manifestări științifice naționale

1. Roșu, O.; **Todoruț, A.** (coordinator) (2011). *Analiza ciocnirilor în accidente dintre motociclete și automobile, prin metoda conservării momentului liniar*. In: Scientific Communication Session by the Students of Mechanic Faculty from Technical University of Cluj-Napoca, Ediția a VII-a,



## DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI

- Secțiunea "Autovehicule și energie", 20 May, Acta Mecanica of the Technical University of Cluj-Napoca, Editura U.T.PRESS, ISSN 2066-9577.
2. Antal, C.; **Todoruț, A.** (coordinator) (2011). *Studiu cu privire la determinarea vitezelor autovehiculelor aflate în mișcare de translație și de rotație*. In: Scientific Communication Session by the Students of Mechanic Faculty from Technical University of Cluj-Napoca, Ediția a VII-a, Secțiunea "Autovehicule și energie", 20 may, Acta Mecanica of the Technical University of Cluj-Napoca, Editura U.T.PRESS, ISSN 2066-9577.
  3. Szathmari, R.; **Todoruț, A.** (coordinator) (2008). *The design and realization of the suspension sistem for a thry weel vehicle (trike) and the study of its dinamical parameters*. In: Scientific Communication Session by the Students of Mechanic Faculty from Technical University of Cluj-Napoca, 22 may, Ediția a IV-a, Cluj-Napoca, Editura U.T.PRESS, ISBN 978-973-662-424-7.
  4. Pascu, A.L.; **Todoruț, A.** (coordinator) (2008). *The calculation method of requested chest displacement of the cars occupant, restrained by passive safety systems in a car crash accident*. In: Scientific Communication Session by the Students of Mechanic Faculty from Technical University of Cluj-Napoca, 22 may, Ediția a IV-a, Cluj-Napoca, Editura U.T.PRESS, ISBN 978-973-662-424-7.
  5. Pop, M.P.; **Todoruț, A.** (coordinator) (2006). *Studiul formării agregatelor agricole având ca sursă energetică tractorul de 35 CP*. In: Sesiunea de Comunicări Științifice a Studenților Facultății de Mecanică din Universitatea Tehnică din Cluj-Napoca, Secțiunea Automobile, Ediția a II-a, Cluj-Napoca, 18 mai, (Premiul I).
  6. Bărnauț, A.S.; **Todoruț, A.** (coordinator) (2005). *Studii privind modelarea matematică a ciclului de lucru al motoarelor cu aprindere prin comprimare alimentate cu combustibili pe bază de ulei vegetal comparativ cu motorina*. Sesiunea de Comunicări Științifice a Studenților Facultății de Mecanică din Universitatea Tehnică din Cluj-Napoca, secțiunea Autovehicule Rutiere, Mașini și Instalații pentru Agricultură și Industrie Alimentară, Ediția I, Cluj-Napoca, 28 aprilie, (Premiul I).
  7. Suci, F.; **Todoruț, A.** (coordinator) (2005). *Studii privind modelarea matematică a solicitărilor dinamice din mecanismul motor al motoarelor cu aprindere prin comprimare, alimentate cu combustibili pe bază de ulei vegetal comparativ cu motorina*. Sesiunea de Comunicări Științifice a Studenților Facultății de Mecanică din Universitatea Tehnică din Cluj-Napoca, secțiunea Autovehicule Rutiere, Mașini și Instalații pentru Agricultură și Industrie Alimentară, Ediția I, Cluj-Napoca, 28 aprilie.
  8. Candale, L.I.; **Todoruț, A.** (coordinator) (2005). *Calcul numeric al schimbului de gaze pentru motoarele cu aprindere prin comprimare alimentate cu combustibili pe bază de ulei vegetal comparativ cu motorina*. Sesiunea de Comunicări Științifice a Studenților Facultății de Mecanică din Universitatea Tehnică din Cluj-Napoca, secțiunea Autovehicule Rutiere, Mașini și Instalații pentru Agricultură și Industrie Alimentară, Ediția I, Cluj-Napoca, 28 aprilie.
  9. **Todoruț, A.**; Barabás, I.; Brânzaș, P.; Loșonți, L.; Mariașiu, F. (2005). *Posibilitățile și limitele privind integrarea organică a bicicliștilor în sistemul traficului rutier*. În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.
  10. **Todoruț, A.**; Loșonți, L.; Barabás, I.; Brânzaș, P.; Mariașiu, F. (2005). *Evaluarea costurilor sociale datorate accidentelor de circulație rutieră*. În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.
  11. Loșonți, L.; **Todoruț, A.**; Barabás, I.; Brânzaș, P. (2005). *Model matematic pentru calcularea parametrilor vătămarilor corpului uman în cazul unui impact frontal*. În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.

**DEPARTAMENTUL AUTOVEHICULE RUTIERE ȘI TRANSPORTURI**

12. Mariașiu, F.; Brânzaș, P.; Barabás, I.; **Todoruț, A.** (2005). *Contribuția sistemului de securitate activă ESP (Electronic Security Program) la prevenirea și reducerea accidentelor rutiere.* În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.
13. Ghimici, M.; **Todoruț, A.**; Barabás, I.; Brânzaș, P.; Mariașiu, F. (2005). *Analiza dinamicii accidentelor de circulație rutieră cu urmări grave.* În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.
14. Barabás, I.; Brânzaș, P.; **Todoruț, A.**; Mariașiu, F. (2005). *Sisteme moderne de supraveghere a traficului rutier.* În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.
15. Brânzaș, P.; Barabás, I.; **Todoruț, A.**; Mariașiu, F. (2005). *Indicatorii dezvoltării transportului rutier european și ai siguranței traficului - barieră sau trambulină pentru integrarea României?* În Simpozion Național: Siguranța Circulației în Actualitate "Participăm la trafic, suntem responsabili", Ediția a III-a, Cluj-Napoca, 10-11 Noiembrie, România, Editura U.T.PRESS, ISBN 973-662-196-0.

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