LISTA DE LUCRĂRI

a) Lista a 20 lucrări relevante

1. **Rotaru Constantin**, „*Nonlinear Characteristics of Helicopter Rotor Blade Airfoils: An Analytical Evaluation*", Journal of Mathematical Problems in Engineering, ISSN 1024-123X, doi:10.1155/2013/503858, Published 2013.
2. **Rotaru Constantin**, Mihăilă-Andres Mihai, Matei Gabriel Pericle, „*An Extended Combustion Model for the Aircraft Turbojet Engine*", International Journal of Turbo & Jet Engines, ISSN 0334-0082, Vol. 31, Issue 3, Pages 229-237, doi:10.1515/tjj-2013-0048, Published 2014.
3. **Constantin Rotaru**, Gabriel Răducanu, "*Analitical approaches of detonation waves*", Review of the Air Force Academy, ISSN 1842-9238, No. 3 (33)/2017, Pages 57-64, DOI: 10.19062/1842-9238.2017.15.3.5, (EBSCO, Index Copernicus, CrossRef, J-Gate)
4. **Constantin Rotaru,** Jănel Tănase, Oliver Ciuică, Eduard Mihai, "*Coaxial rotor systems-characteristics and performances*", AFASES 2018, DOI: 10.19062/2247-3173.2018.20.31, pages 233-238, (EBSCO, CrossRef)
5. **Constantin Rotaru**, Ionică Cîrciu, Raluca Ioana Edu, Oliver Ciuică, Eduard Mihai, "*Nonlinear Effects of the Sidewash Gradient on an Airplane Vertical Tail*", Proceedings of the 17th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pages 475-480, Braşov,2015 (EBSCO, CrossRef, Index Copernicus).
6. **Constantin Rotaru**, Carmen Ştefan, Gabriel Răducanu, Radu Dincă, "*Airplane propellers aerodynamic design and performances analysis*", Review of the Air Force Academy, ISSN 1842-9238, No. 1(33)/2017, Pages 99-105, DOI: 10.19062/1842-9238.2017.15.1.12, (EBSCO, CrossRef, J-Gate, Index Copernicus).
7. **Rotaru Constantin**, Roateşi Simona, Raluca Ioana Edu, Cîrciu Ionică, "*Human Pilot's Dynamic Response Characteristics*", E-Health and Bioengineering International Conference, ISBN: 978-1-4673-7544-3, DOI: 10.1109/EHB.2015.7391350, 2015, WOS: 000380397900003.
8. **Constantin Rotaru**, Mihai Andres-Mihăilă, Pericle Gabriel Matei, Raluca Ioana Edu, "*Dynamics of a Turbojet Engine Considered a Quasi-static System*", International Journal of Mechanics, ISSN 1998-4448, Volume 8, Pages 158-166, 2014 (SCOPUS, Engineering Village, Inspec, Index Copernicus).
9. **Constantin Rotaru**, "*Lift Capability Improvement for an Airfoil with Filled Cavity*", International Journal of Mechanics, ISSN 1998-4448, Volume 10, Pages 368-375, 2016 (SCOPUS, Engineering Village, Inspec, Index Copernicus).
10. **Constantin Rotaru**, George Cristian Constantinescu, Oliver Ciuică, Ionică Cîrciu, Eduard Mihai "*Mathematical Model and CFD Analysis of Partially Premixed Combustion in a Turbojet*", Review of the Air Force Academy, ISSN 1842-9238, Volume XIV, No2(32)/2016, Pages 83-92, DOI: 10.19062/1842-9238.2016.14.2.10, (EBSCO, Index Copernicus, CrossRef).
11. **Constantin Rotaru**, "*Lift Capability Improvement for an Airfoil with Filled Cavity*", International Journal of Mechanics, ISSN 1998-4448, Volume 10, Pages 368-375, 2016 (SCOPUS, Engineering Village, Inspec, Index Copernicus, CrossRef).
12. **Rotaru Constantin**, „*Aspects Regarding Combustion Chamber Dynamics for Turbojet Engines*", Proceedings of ICMT'09 International Conference on Military Technologies, ISBN: 978-80-7231-649-6, WOS:000284810600048, Pages 342-349, Published 2010, (SCOPUS, CrossREf, EBSCO)
13. **Constantin Rotaru**, Mihai Andres-Mihăilă, Pericle Gabriel Matei, Raluca Ioana Edu, "*Dynamics of a Turbojet Engine Considered a Quasi-static System*", International Journal of Mechanics, ISSN 1998-4448, Volume 8, Pages 158-166, 2014 (SCOPUS, Engineering Village, Inspec, Index Copernicus).
14. **Constantin Rotaru**, Adrian Arghiropol, "*Maple solutions for nonlifting flow over arbitrary bodies*", Proceedings of the 3rd International Conference on Finite Differences-Finite Elements-Finite Volumes-Boundary Elements, ISSN 1790-2769, Pages 270-274, Bucharest, 2010 (ACM, Google Scholar, Zentralblatt).
15. **Constantin Rotaru**, Raluca Ioana Edu, "*Lift Capability Prediction for Aerodynamic Configurations*", Review of the Air Force Academy, ISSN 1842-9238, No. 3(27), 2014, Pages 57-62 (EBSCO, Index Copernicus, CrossRef)

16. **Constantin Rotaru**, Pericle Gabriel Matei, Raluca Ioana Edu, Mihai Andres-Mihăilă, "*Unsteady aerodynamic model for an airfoil with time dependent boundary conditions*", Proceedings of the 16th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pags 97-104, May 22-24, Braşov,2014 (EBSCO, Index Copernicus, CrossRef)
17. **Constantin Rotaru**, Raluca Ioana Edu, Mihai-Andres Mihăilă, "*Applications of Multivariable Control Techniques to Aircraft Gas Turbine Engines*", Review of the Air Force Academy, ISSN 1842-9238, No. 2(26), 2014, Pages 45-50 (EBSCO, CrossRef, Index Copernicus).
18. **Constantin Rotaru**, Valentin Jaulin, "*Numerical Simulations of Helicopter Rotor Blade Airfoil*", Journal of Military Technical Academy – MTA Review, ISSN 1843-3391, Volume XXII, No. 2, Pages 81-90, June 2012 (Index Copernicus, EBSCO, Ulrich's Periodicals, GoogleScholar, Genamics Journal Seek).
19. **Constantin Rotaru, „***Aerodinamică-Elemente teoretice şi aplicaţii*", Editura Academiei Tehnice Militare, ISBN 978-973-640-186-2, 272 pagini, 2009
20. **Constantin Rotaru**, Mihai Mihăilă-Andres, „*Dinamica zborului avionului*", Editura PRINTECH, ISBN 978-606-23-0252-8, 234 pagini, 2014

b) Teza de doctorat

Contribuţii privind studiul unor fenomene termogazodinamice specific sistemelor de propulsie aeroreactoare de tip combinat

Academia Tehnică Militară, 183 pp., 1996/Conducător ştiinţific: Prof.univ.dr.ing. Florin ZĂGĂNESCU

c) Cărţi şi capitole din cărţi

1. **Constantin Rotaru, „***Aerodinamică-Elemente teoretice şi aplicaţii*", Editura Academiei Tehnice Militare, ISBN 978-973-640-186-2, 272 pagini, 2009
2. **Constantin Rotaru**, Mihai Mihăilă-Andres, „*Dinamica zborului avionului*", Editura PRINTECH, ISBN 978-606-23-0252-8, 234 pagini, 2014
3. **Constantin Rotaru**, „*Termogazodinamica sistemelor de propulsie aeroreactoare*", Editura Academiei Tehnice Militare, ISBN 978-973-640-201-2, 326 pagini, 2010
4. **Constantin Rotaru**, „*Teoria motoarelor de aviaţie*", Editura Academiei Tehnice Militare, ISBN 973-98940-8-9, 174 pagini, 1999
5. Mihai Mihăilă-Andres, **Constantin Rotaru**, „*Mecanica fluidelor*", Editura PRINTECH, ISBN 978-606-23-0271-9, 203 pagini, 2014
6. **Constantin Rotaru**, Mircea Boşcoianu, „*Teoria motoarelor aeroreactoare*", Editura Academiei Tehnice Militare, ISBN 973-8290-52-x, 228 pagini, 2002
7. Mihai Stoicescu, **Constantin Rotaru**, *„Motoare turboreactoare. Caracteristici şi metode de reglare"*, Editura Academiei Tehnice Militare, ISBN 973-98940-5-4, 232 pagini, 1999
8. Mircea Boşcoianu, **Constantin Rotaru**, „*Procese aerotermodinamice în compresoarele axiale ale motoarelor turboreactoare*", Editura Academiei Tehnice Militare, ISBN 973-8290-53-8, 170 pagini, 2002
9. **Constantin Rotaru**, Mihai Mihăilă-Andres, „*Mecanica fluidelor – Îndrumar de laborator*", Editura PRINTECH, ISBN 978-606-23-0272-6, 98 pagini, 2014
10. Ştefan Sterie, Dan Ionescu, **Constantin Rotaru**, Viorel Pădureanu, Dănuţ Grosu, „*Complemente de mecanica solidului rigid şi deformabil"*, Eitura Academiei Tehnice Militare, 119 pagini, 1997
11. **Constantin Rotaru**, Michael Todorov, Capitol din cartea „*Flight Physics*" ISBN: 978-953-51-5639-0, publicată în Editura internaţională InTech, în anul 2017, editor dr. Konstantin Volkov. Capitolul este intitulat „*Helicopter Flight Physics*".

d) Articole în extensor publicate în reviste cotate ISI, proceedings indexate ISI Thomson Reuters sau SAE

Articole ISI si indexate ISI

1. **Rotaru Constantin**, „*Nonlinear Characteristics of Helicopter Rotor Blade Airfoils: An Analytical Evaluation*", Journal of Mathematical Problems in Engineering, ISSN 1024-123X,

doi:10.1155/2013/503858, WOS: 000326830400001, Published 2013, https://www.hindawi.com/journals/mpe/2013/503858/ , **Factor Impact 0,806.**

2. **Rotaru Constantin**, Mihăilă-Andres Mihai, Matei Gabriel Pericle, „*An Extended Combustion Model for the Aircraft Turbojet Engine*", International Journal of Turbo & Jet Engines, ISSN 0334-0082, Vol. 31, Issue 3, Pages 229-237, doi:10.1515/tjj-2013-0048, WOS: 000341513200004, Published 2014, https://www.degruyter.com/view/j/tjj.ahead-of-print/tjj-2013-0048/tjj-2013-0048.xml **Factor Impact 0,351**.

3. Mihăilă-Andres Mihai, **Rotaru Constantin (**corresponding author**)**, Matei Gabriel Pericle, „*Staggered Approach for Fluid-Structure Interaction Phenomena of an AGARD 445.6 Wing Using Commercial CFD/CSM Software*", Journal of Aerospace Engineering, ISSN 0893-1321, doi:10.1061/(ASCE)AS.1943-5525.0000427, WOS: 000356420000005, Published 2014, https://ascelibrary.org/toc/jaeeez/28/4 **Factor Impact 0,928**.

4. Lungu Mihai, Lungu Romulus, **Rotaru Constantin**, „*New Systems for Identification, Estimation and Adaptive Control of the Aircrafts Movement*", Journal of Studies in Informatics and Control, ISSN 1220-1766, Volume 20, Issue 3, Pages 273-284, WOS: 000299459200008, Published 2011, https://sic.ici.ro/past-issues/volume20-issue3-2011/lungu/ **Factor Impact 0,578**.

5. Lungu Romulus, Lungu Mihai, **Rotaru Constantin**, „*Non-Linear Adaptive Systems for the Command of the Helicopter Pitch's Angle*", Review of the Romanian Academy Series A – Mathematics, Physics, Technical Sciences, Information Science, ISSN 1454-9069, Volume 12, Issue 2, Pages 133-142, WOS:000291510700008, Published 2011, http://www.acad.ro/sectii2002/proceedings/proc_pag2011_n02.htm **Impact Factor 0,276**.

6. Cîrciu Ionică, Luculescu Doru, Prisacariu Vasile, Mihai Eduard, **Rotaru Constantin**, „*Theoretical Analysis and Experimental Researches Regarding the Asymmetrical Fluid Flow in Aeronautics*", Advances in Materials Science and Engineering Journal, ISSN: 1687-8434, Volume 2015, DOI: 10.1155/2015/681284, WOS: 000355447900001, https://www.hindawi.com/journals/amse/2015/681284/ **Impact Factor 0,254**.

7. Gherman Laurian, **Rotaru Constantin**, Pearsică Marian, *„Electromagnetic launch system based on Halbach array configuration"*, Scientific Journal of Silesian University of Technology-Series Transport, ISSN: 0209-3324, DOI: 10.20858/sjsutst.2018.101.6, Volume: 101, Pages: 55-66, 2018, https://sjsutst.polsl.pl

8. **Rotaru Constantin**, „*Aspects Regarding Combustion Chamber Dynamics for Turbojet Engines*", Proceedings of ICMT'09 International Conference on Military Technologies, ISBN: 978-80-7231-649-6, WOS:000284810600048, Pages 342-349, Published 2010, http://apps.webofknowledge.com.am.e-nformation.ro/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=C3Q9lDTNJYiIbV8Jr8T&page=3&doc=30 (**ISI Proceedings**)

9. **Rotaru Constantin**, Arghiropol Adrian, „*Numerical Computation of Internal Flow for Turbo Jet Engine Combustion Chamber*", Proceedings of 16th International Conference the Knowledge-Based Organisation: Applied Technical Sciences and Advanced Military Technologies, ISSN 1843-6722, WOS: 000297596200019, Pages 117-122, Published 2010, http://apps.webofknowledge.com.am.e-nformation.ro/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=C3Q9lDTNJYiIbV8Jr8T&page=3&doc=29 (**ISI Proceedings**).

10. **Rotaru Constantin**, Arghiropol Adrian, Barbu Cristian, Boşcoianu Mircea, „*Some Aspects Regarding Possible Impovements in the Performances of the Aircraft Engines*", Proceedings of the 6th IASME International Conference on Fluid Mechanics and Aerodynamics", ISBN 978-960-6766-98-5, WOS: 000260495700029, Pages 196-201, Published 2008, http://www.worldses.org/books/2008/rhodes/new_aspects_of_fluid_mechanics_and_aerodynamics.pdf (**ISI Proceedings**).

11. **Rotaru Constantin**, Cîrciu Ionică, "*Some aspects regarding unsteady fluid flow with time dependent boundary conditions*", Progress in Applied Mathematics in Science and Engineering Proceedings, ISBN: 978-0-7354-1352-8, DOI: 10.1063/1.4940253, 2015, WOS: 000371420700005, https://aip.scitation.org/toc/apc/1705/1?size=20&expanded=1705 (**ISI Proceedings**).

12. **Rotaru Constantin**, Roateşi Simona, Raluca Ioana Edu, Cîrciu Ionică, "*Human Pilot's Dynamic Response Characteristics*", E-Health and Bioengineering International Conference, ISBN: 978-1-

4673-7544-3, DOI: 10.1109/EHB.2015.7391350, 2015, WOS: 000380397900003, http://toc.proceedings.com/29132webtoc.pdf (**ISI Proceedings**).

13. **Rotaru Constantin**, Roateşi Simona, Cîrciu Ionică, "*Aircraft Engine Mathematical Model – Linear System Approach*", the 13th International Conference of Numerical Analysis and Applied Mathematics, Rhodes, Greece, 2015, DOI: 10.1063/1.4952084, WOS: 000380803300316, https://aip.scitation.org/doi/10.1063/1.4952084 (**ISI Proceedings**).
14. **Rotaru Constantin**, Circiu Ionică, Luculescu Doru, "*Lift Capability Prediction for Helicopter Rotor Blade – Numerical Evaluation*", ", the 13th International Conference of Numerical Analysis and Applied Mathematics, Rhodes, Greece, 2015, DOI: 10.1063/1.4952208, WOS: 000380803300430, https://aip.scitation.org/doi/10.1063/1.4952208 (**ISI Proceedings**).
15. **Rotaru Constantin**, Cîrciu Ionică, Raluca Ioana Edu, "*Mathematical Model of Induced Flow on the Airplane Vertical Tail*", the 13th International Conference of Numerical Analysis and Applied Mathematics, Rhodes, Greece, 2015, DOI: 10.1063/1.4951802, WOS: 000380803300057, https://aip.scitation.org/doi/10.1063/1.4951802, (**ISI Proceedings**).
16. Roateşi Iurie, Roateşi Simona, **Rotaru Constantin**, Creţoiu Sanda, Creţoiu Dragoş, "*Mathematical Model of Living Cells Behaviour. Case of Telocytes*", the 13th International Conference of Numerical Analysis and Applied Mathematics, Rhodes, Greece, 2015, DOI: 10.1063/1.4952125, WOS: 000380803300352, https://aip.scitation.org/doi/10.1063/1.4952125, (**ISI Proceedings**).
17. Andruseac Gladiola, Grigorie Teodor Lucian, Adochiei Felix, **Rotaru Constantin**, Păsărică Alexandru, Costin Hariton, Adochiei Ioana, "*A remote-controlled platform for identifying indoor human in risk situations*", E-Health and Bioengineering International Conference, ISBN: 978-1-4673-7544-3, DOI: 10.1109/EHB.2015.7391546, 2015, WOS 000380397900199, http://toc.proceedings.com/29132webtoc.pdf (**ISI Proceedings**).
18. Roateşi Iulia, Roateşi Simona, **Rotaru Constantin**, "*FEM analysis of one element prosthesis on dental implant*", E-Health and Bioengineering International Conference, ISBN: 978-1-4673-7544-3, DOI: 10.1109/EHB.2015.7391353, 2015, WOS: 000380397900006, http://toc.proceedings.com/29132webtoc.pdf (**ISI Proceedings**).
19. Edu Ioana, Grigorie Lucian, Adochiei Felix, Rotaru Constantin, "*Inertial sensor denoising with directed transfer function*", 9th International Symposium on Advanced Topics in Electrical Engineering, ISSN: 2068-7966, Pages 945-948, DOI: 10.1109/ATEE.2015.7133938, 2015, WOS: 000368159800175, https://ieeexplore.ieee.org/document/7133938, (**ISI Proceedings)**.
20. Arghiropol Adrian, **Rotaru Constantin**, Safta Doru, Florin Zăgănescu, „*Cycling Loading Effect on a Solid Propellant Engine Performances Part 2-3D CFD Study and validation of CFD Results*", Proceedings of the 6th IASME International Conference on Fluid Mechanics and Aerodynamics", ISBN 978-960-6766-98-5, WOS: 000260495700030, Pages 202-207, Published 2008 http://apps.webofknowledge.com.am.e-nformation.ro/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=C2CnZuUBcInZ7GlEMdp&page=4&doc=32, (**ISI Proceedings)**.
21. Arghiropol Adrian, **Rotaru Constantin**, „*Finite Element Real Case Study of a Solid Propellant Rocket Engine Internal Pressure and Performance Variations under Various Nole Diameter Change*", International Conference the Knowledge-Based Organisation: Applied Technical Sciences and Advanced Military Technologies, ISSN 1843-6722, WOS: 000297596200003, Pages 22-27, Published 2010, http://apps.webofknowledge.com.am.e-nformation.ro/full_record.do?product=WOS&search_mode=GeneralSearch&qid=1&SID=C3Q9lDTNJYiIbV8Jr8T&page=3&doc=29, (**ISI Proceedings**).
22. **Rotaru Constantin**, Safta Doru, Barbu Cristian, „*Aspects Regarding Internal Flow in Combustion Chamber of Turbojet Engines*" , Proceedings of the 5th IASME International Conference on Fluid Mechanics and Aerodynamics", ISBN 978-960-8457-99-7, WOS: 000258498500043, Pages 279-284, Published 2007 http://www.wseas.org/multimedia/books/2007/f-m-a.pdf, (**ISI Proceedings**).
23. Boşcoianu Mircea, Pahonie Radu, **Rotaru Constantin**, Fuiorea Ion, Popoviciu Nicolae „*A Method to Predict the Flapping Wing MAV Global Aerodynamic Performances*", Proceedings of the 6th IASME International Conference on Fluid Mechanics and Aerodynamics", ISBN 978-960-6766-98-5, WOS: 000260495700028, Pages 190-195, Published 2008, http://www.wseas.org/multimedia/books/2008/rhodes/new_aspects_of_fluid_mechanics_and_aerodynamics.pdf, (**ISI Proceedings).**

24. **Rotaru Constantin**, Sprinţu Iuliana, „*State Variable Modeling of the Integrated Engine and Aircraft Dynamics*", Proceedings of 10th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA 2014), ISSN 0094-243X, doi: 10.1063/1.4904661, Vol. 1637, Pages 889-898, WOS: 000347812200104, Published 2014 https://aip.scitation.org/toc/apc/1637/1?expanded=1637, (**ISI Proceedings**)

25. Sprinţu Iuliana, **Rotaru Constantin**, „*Dynamic Behaviour of Thin Composite Plates for Different Boundary Conditions*", Proceedings of 10th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA 2014), ISSN 0094-243X, DOI: 10.1063/1.4904680, Vol. 1637, Pages 1048-1055, WOS: 000347812200122, Published 2014 https://aip.scitation.org/toc/apc/1637/1?expanded=1637, (**ISI Proceedings**)

26. Edu Ioana Raluca, Adochiei Felix, Matei Gabriel Pericle, **Rotaru Constantin**, „*Numerical Method for Processing and Analysing Flying Effects on Pilots*", Proceedings of 10th International Conference on Communications (COMM 2014), ISBN 978-1-4799-2385-4, DOI:10.1109/ICComm.2014.6866701, Pages 89-93, WOS: 000345844600045, Published 2014, https://ieeexplore.ieee.org/search/searchresult.jsp?action=search&newsearch=true&searchField=Search_All&matchBoolean=true&queryText=((COMM%202014)%20AND%20Rotaru%20Constantin), (**ISI Proceedings**).

27. Matei Gabriel Pericle, **Rotaru Constantin**, Mihăilă-Andres Mihai, Edu Ioana Raluca, „*Software System for Data Extraction and Communication in Virtual Environment for Pilots' Performances*", Proceedings of 10th International Conference on Communications (COMM 2014), ISBN 978-1-4799-2385-4, doi:10.1109/ICComm.2014.6866668, Pages 243-247, WOS: 000345844600012, Published 2014, https://ieeexplore.ieee.org/search/searchresult.jsp?action=search&newsearch=true&searchField=Search_All&matchBoolean=true&queryText=((COMM%202014)%20AND%20Rotaru%20Constantin) (**ISI Proceedings**).

28. Pericle Gabriel Matei, **Constantin Rotaru**, Ioana Edu, "*Pilots' performances optimizing in complex simulated environment. Contribution of longitudinal component of virtual flight"*, Proceedings of the International Conference on E-Health and Bioengineering - EHB, doi: 10.1109/EHB.2013.0707349, WOS: 000346672900117, 21-23 Nov. 2013, Iaşi, România, http://toc.proceedings.com/20789webtoc.pdf, (**ISI Proceedings**).

29. **Constantin Rotaru**, Mihai Mihăilă-Andres, „*New Solutions for Aircraft Wings and Helicopter Blade Airfoils",* Mathematics and Computers in Sciences and in Industry (MCSI 2016) Proceedeings, DOI: 10.1109/MCSI.2016.019, Pages 46-50, 2016, (**ISI Proceedings**).

30. **Constantin Rotaru**, „*Aspects Regarding Aerodynamic Shape of the Turbojet Combustion Chamber",* Mathematics and Computers in Sciences and in Industry (MCSI 2016) Proceedeings, DOI: 10.1109/MCSI.2016.020, Pages 51-56, 2016, (**ISI Proceedings**).

31. **Constantin Rotaru,** *„Analysis of Turbojet Combustion Chamber Performances Based on Flow Field Simplified Mathematical Model"*, International Conference on Applied Mathematics and Computer Science (ICAMCS 2017) Proceedings, DOI: 10.1063/1.4981987, (**ISI Proceedings**).

32. Mihai Mihăilă-Andres, Coprian Larco, Paul Roşu, **Constantin Rotaru,** *„Aeroelastic Tailoring of Composite Aircraft Wings"*, International Conference on Numerical Analysis and Applied Mathematics (ICNAAM 2017) Proceedings (**ISI Proceedings**).

33. **Constantin Rotaru**, "*Flow field analysis of turbojet combustion chamber*", BulTrans 2017-9th International Scientific Conference on Aeronautics, Automotive and Railway Engineering and Technologies, MATEC Journal, ISSN: 2261-236X, DOI: 10.1051/matecconf/201713301008.

34. **Constantin Rotaru**, Gabriel Răducanu, "*Aspects Regarding Airplane Propeller Flow Field Mathematical Model*", 4th International Conference on Mathematics and Computers in Science and Industry (MSCI),DOI: 10.1109/MCSI.2017.57, https://ieeexplore.ieee.org/document/8326856, Pages: 309-315, (**ISI Proceedings**).

35. **Constantin Rotaru**, Gabriel Răducanu, Vasile Prisacariu, Laurian Gherman, Time dependent and multidimensional effects of detonation combustion waves, 12th International Conference on Mathematical Problems in Engineering, Aerospace and Sciences (ICNPAA 2018), Volume 2046, DOI: 10.1063/1.5081597, https://aip.scitation.org/doi/10.1063/1.5081597.

Articole publicate în reviste naţionale şi volumele unor manifestări ştiinţifice indexate în BDI, recunoscute de comisia CNATDCU

1. **Constantin Rotaru**, "*Lift Capability Improvement for an Airfoil with Filled Cavity*", International Journal of Mechanics, ISSN 1998-4448, Volume 10, Pages 368-375, 2016 (SCOPUS, Engineering Village, Inspec, Index Copernicus), **(BDI Journal)**, www.naun.org/main/NAUN/mechanics/2016/b102003-017.pdf,

2. **Constantin Rotaru**, George Cristian Constantinescu, Oliver Ciuică, Ionică Cîrciu, Eduard Mihai "*Mathematical Model and CFD Analysis of Partially Premixed Combustion in a Turbojet*", Review of the Air Force Academy, ISSN 1842-9238, Volume XIV, No2(32)/2016, Pages 83-92, DOI: 10.19062/1842-9238.2016.14.2.10, (EBSCO, Index Copernicus, CrossRef), **(BDI Journal),** www.afahc.ro/ro/revista/2016_(2).html

3. **Constantin Rotaru**, Mihai Andres-Mihăilă, Pericle Gabriel Matei, Raluca Ioana Edu, "*Dynamics of a Turbojet Engine Considered a Quasi-static System*", International Journal of Mechanics, ISSN 1998-4448, Volume 8, Pages 158-166, 2014 (SCOPUS, Engineering Village, Inspec, Index Copernicus), **(BDI Journal),** www.naun.org/main/NAUN/mechanics/2014/a202003-082.pdf

4. Adrian Arghiropol, **Constantin Rotaru**, "*Overview of the 2D and 3D Finite Element Studies Versus Experimental Results of a Solid Propellant Engine Performances under Cycling Loading Effect*", International Journal of Mathematics and Computers in Simulation, ISSN 1998-0159, Volume 4, Pages 42-49, 2010 (SCOPUS, Engineering Village, Inspec, Index Copernicus), **(BDI Journal)** www.naun.org/main/NAUN/mcs/19-312.pdf

5. Mihai Ivănică, **Constantin Rotaru**, "*Numerical Investigation of an Impact Between an External Body and an Aerodynamic Surface"*, Journal of Frontiers in Aerospace Engineering, ISSN 2325-6796, Volume 3, Issue 2, Pages 56-63, 2014, doi: 10.14355/fae.2014.0302.04 (Cross.ref, WorldCat, Academia.edu, UlrichsWeb), **(BDI Journal),** www.fae-journal.org

6. **Constantin Rotaru**, Matei Gabriel Pericle, Amado Stefan, "*An analytical evaluation of nonlinear airfoil characteristics for helicopter rotor blade"*, Journal of the Technical University of Sofia, Volume 19, Book 2, 2013, ISSN 1310-8271, Pages 77-83,Bulgaria, (Index Copernicus, WorldCat), **(BDI Journal),** www.tu-plovdiv.bg/Container/journal/journal_V19_book2.pdf

7. **Constantin Rotaru**, Ionică Cîrciu, Cornel Aramă, Cristian George Constantinescu, "Aspects regarding Velocity Distribution in the Secondary Zone of a Gas Turbine Combustor", Review of the Air Force Academy, ISSN 1842-9238, No. 3(30), 2015, Pages 33-39, DOI: 10.19062/1842-9238.2015.13.3.5, (EBSCO, Index Copernicus, CrossRef), **(BDI Journal),** www.afahc.ro/ro/revista/2016_(2).html

8. **Constantin Rotaru**, Valentin Jaulin, "*Numerical Simulations of Helicopter Rotor Blade Airfoil*", Journal of Military Technical Academy – MTA Review, ISSN 1843-3391, Volume XXII, No. 2, Pages 81-90, June 2012 (EBSCO, Index Copernicus, CrossRef), **(BDI Journal),** http://journal.mta.ro/index.php?m=volumes&id_volum=20

9. **Constantin Rotaru**, Mihai Andres-Mihăilă, Paul Renard, "*New Constructive Solutions for Aircraft Turbojet Engine Combustion Chamber*", Journal of Military Technical Academy – MTA Review, ISSN 1843-3391, Volume XXIII, No. 4, Pages 219-230, December 2013, **(BDI Journal),** (EBSCO, Ulrich's Periodicals, Google Scholar),

   http://journal.mta.ro/index.php?m=volumes&id_volum=26

10. Cîrciu Ionică, **Rotaru Constantin**, Luculescu Doru, Constantinescu George Cristian, "*Aircraft Engine Combustion Chamber Performances – Numerical Evaluation*", Applied Mechanics and Materials Journal, ISSN: 1662-7482, Pages 167-171, DOI: 10.4028/www.scientific.net/AMM.811.167, 2015, Vol. 811, Index Copernicus, EBSCO, CrossRef, Inspec, Google Scholar, Genamics Journal Seek), **(BDI Journal),** https://www.scientific.net/AMM.811.167

11. Edu Ioana Raluca, Adochiei Felix, Obreja Radu, **Rotaru Constantin**, Grigorie Lucian, "*Inertial Sensor Signals Denoising with Wavelet Transform*", INCAS Bulletin, ISSN: 2066-8201, Volume 7, Issue 1, pp. 57-64, DOI: 10.13111/2066-8201.2015.7.1.6, 2015, **(BDI Journal)**, (CrossRef, EBSCO, Index Copernicus, Google Scholar, Genamics Journal Seek),

    http://www.incas.ro/images/stories/INCAS_BULLETIN/incas_bulletin_vol_7_iss_1_2015_internet.pdf

12. Ion Grigore, Victor Ghidavu, **Constantin Rotaru**, "*FEM Study of Heat Transfer in Braking System of IAR-99 Aircraft*", Journal of Military Technical Academy – MTA Review, ISSN 1843-3391,

Volume XX, No. 2, Pages 95-104, June 2010 (EBSCO, Ulrich's Periodicals, Google Scholar), **(BDI Journal),** http://journal.mta.ro/index.php?m=volumes&id_volum=12

13. Mihai Mihăilă-Andres, **Constantin Rotaru**, Paul-Virgil Roşu, "*Nonlinear aeroelastic analysis of rotor blades*", Journal of Military Technical Academy – MTA Review, ISSN 1843-3391, Volume XXIV, No. 1, Pages 15-28, March 2014 (EBSCO, Ulrich's Periodicals, Google Scholar), **(BDI Journal),** http://journal.mta.ro/index.php?m=volumes&id_volum=27
14. **Constantin Rotaru**, Raluca Ioana Edu, "*Lift Capability Prediction for Aerodynamic Configurations*", Review of the Air Force Academy, ISSN 1842-9238, No. 3(27), 2014, Pages 57-62 (EBSCO, Index Copernicus), **(BDI Journal)** http://www.afahc.ro/ro/revista/2014_(3).html
15. **Constantin Rotaru**, Raluca Ioana Edu, Mihai-Andres Mihăilă, "*Applications of Multivariable Control Techniques to Aircraft Gas Turbine Engines*", Review of the Air Force Academy, ISSN 1842-9238, No. 2(26), 2014, Pages 45-50 (EBSCO, CrossRef, Index Copernicus), **(BDI Journal),** http://www.afahc.ro/ro/revista/2014_(2).html
16. **Constantin Rotaru**, Ionică Cîrciu, Mircea Boşcoianu, "*Computational Methods for the Aerodynamic Design*", Review of the Air Force Academy, ISSN 1842-9238, No. 2, 2010, Pages 43-49 (EBSCO, CrossRef, Index Copernicus), **(BDI Journal),** http://www.afahc.ro/ro/revista/2010_(2).html
17. Pavel Necas, Ionică Cîrciu, **Constantin Rotaru**, Mircea Boşcoianu, "*An Analysis of the Stability and Performances of Rotary Wing Micro Aerial Vehicles*", Review of the Air Force Academy, ISSN 1842-9238, No. 1, 2010, Pages 5-9 (EBSCO, CrossRef, Index Copernicus), **(BDI Journal),** http://www.afahc.ro/ro/revista/2010_(1).html
18. **Constantin Rotaru**, Mihai-Andres Mihăilă, Pericle Gabriel Matei, Amado Ştefan, "*Computing Nonlinear Characteristics of Helicopter Rotor Blades*", Review of the Air Force Academy, ISSN 1842-9238, No. 1(23), 2013, Pages 5-12 (EBSCO, CrossRef, Index Copernicus), **(BDI Journal),** http://www.afahc.ro/ro/revista/2013_(1).html
19. Doru Goga, Viorel Ţigănescu, B. Pulpea, Cristian Moldoveanu, **Constantin Rotaru**, "*A quantitative method of comparative assessment of primers ignition*", Journal of Advances in Military Technologies, ISSN: 1802-2308, Vol. 12, No. 2 (2017), DOI: 10.3849/aimt.01185, pages 217-228, (Scopus, CrossRef, EBSCO), **(BDI Journal),** http://aimt.unob.cz/vol12is2.htm
20. **Constantin Rotaru**, Carmen Ştefan, Gabriel Răducanu, Radu Dincă, "*Airplane propellers aerodynamic design and performances analysis*", Review of the Air Force Academy, ISSN 1842-9238, No. 1(33)/2017, Pages 99-105, DOI: 10.19062/1842-9238.2017.15.1.12, (EBSCO, CrossRef, J-Gate, Index Copernicus), **(BDI Journal),** http://www.afahc.ro/ro/revista/2017_(1).html
21. **Constantin Rotaru**, Gabriel Răducanu, "*Analitical approaches of detonation waves*", Review of the Air Force Academy, ISSN 1842-9238, No. 3 (33)/2017, Pages 57-64, DOI: 10.19062/1842-9238.2017.15.3.5, (EBSCO, Index Copernicus, CrossRef, J-Gate), **(BDI Journal),** http://www.afahc.ro/ro/revista/2017_(3).html
22. **Constantin Rotaru,** Jănel Tănase, Oliver Ciuică, Eduard Mihai, "*Coaxial rotor systems-characteristics and performances*", AFASES 2018, DOI: 10.19062/2247-3173.2018.20.31, pages 233-238, (EBSCO, CrossRef) **(BDI Proceedings)** http://www.afahc.ro/afases/volum_afases_2018.pdf
23. Marius Cîrmaci, Adrian Rotariu, Alexandru Dena, Octavian Orban, **Constantin Rotaru**, "*Numerical analysis of impact phenomenon between a frangible projectile and thin metallic plates used in aircraft structures*", Review of the Air Force Academy, ISSN 1842-9238, No. 3(33)/2017, Pages 95-104, DOI: 10.19062/1842-9238.2017.15.3.12, (EBSCO, Index Copernicus, CrossRef, J-Gate), **(BDI Journal),** http://www.afahc.ro/ro/revista/2017_(3).html
24. Irina Andrei, **Constantin Rotaru**, Maria Fadgyas, Gabriela Stroe, Marius Niculescu, "*Numerical Investigation of turbojet engine thrust correlated with the combustion chamber's parameters*", Proceedings of the 19th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, DOI: 10.19062/2247-3173.2017.19.1.3, Pages 23-35, Braşov, 2017 (EBSCO, Index Copernicus, CrossRef), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2017_I.pdf
25. Gherman Laurian, **Rotaru Constantin**, Pearsică Marian, "*Electromagnetic launch system based on a Halbach array configuration*", Scientific Journal of Silesian University of Technology, Series Transport, Volume 101, DOI: 10.20858/sjsutst.2018.101.6, ISSN:0209-3324, pages 59-67,(CrossRef, Index Copernicus) **(BDI Journal),** http://sjsutst.polsl.pl, 2018.

26. **Constantin Rotaru**, Adrian Arghiropol, "*Maple solutions for nonlifting flow over arbitrary bodies*", Proceedings of the 3rd International Conference on Finite Differences-Finite Elements-Finite Volumes-Boundary Elements, ISSN 1790-2769, Pages 270-274, Bucharest, 2010 (ACM, Index Copernicus, Google Scholar, Zentralblatt), **(BDI Proceedings)**, http://www.wseas.org/multimedia/books/2010/Bucharest/FB.pdf

27. Adrian Arghiropol, **Constantin Rotaru**, "*Cycling loading effect on a solid propellant Engine Performances Part. 3-Overview over 2D and 3D CFD Studies versus experimental results*", Proceedings of the 3rd International Conference on Finite Differences-Finite Elements-Finite Volumes-Boundary Elements, ISSN 1790-2769, Pages 275-280, Bucharest, 2010 (ACM, Index Copernicus, Google Scholar, Zentralblatt), **(BDI Proceedings)**, http://www.wseas.org/multimedia/books/2010/Bucharest/FB.pdf

28. **Constantin Rotaru**, Oliver Ciuică, Eduard Mihai, Ionică Cîrciu, Radu Dincă, "*Simplified Mathematical Model for Aircraft's Response Characteristics*", Proceedings of the 18th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, DOI: 10.19062/2247-3173.2016.18.1.7, Pages 55-60, Braşov,2016 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2016_I.pdf

29. **Constantin Rotaru**, Ionică Cîrciu, Raluca Ioana Edu, Oliver Ciuică, Eduard Mihai, "*Nonlinear Effects of the Sidewash Gradient on an Airplane Vertical Tail*", Proceedings of the 17th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pages 475-480, Braşov,2015 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2015_I.pdf

30. **Constantin Rotaru**, Ionică Cîrciu, Mircea Boşcoianu, "*Numerical panel method for incompressible potential flow-Maple soft applications*", Proceedings of the 12nd International Conference Scientific Research and Education in the Air Force, ISBN 987-973-8415-76-8, Pages 1170-1176, May 27-29, Braşov,2010 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2010.pdf

31. **Constantin Rotaru**, Valentin Jaulin, Vicent Monot, "*Aspects regarding the unsteady aerodynamics and its applications to helicopter rotor blade*", Proceedings of the 14th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pages 935-942, May 24-26, Braşov,2012 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2012.pdf

32. **Constantin Rotaru**, Pericle Gabriel Matei, Paul Renard, "*Aeroengine combustion instabilities – an analytical evaluation*", Proceedings of the 15th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pags 573-578, May 23-25, Braşov,2013 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2013.pdf

33. Pericle Gabriel Matei, **Constantin Rotaru**, Thomas Gudet, Amelia Sandu, "*Pilots' performance improving in dual stream environment: vertical component of virtual flight and physiological profile*", Proceedings of the 15th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pags 539-544, May 23-25, Braşov,2013 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2013.pdf

34. **Constantin Rotaru**, Pericle Gabriel Matei, Raluca Ioana Edu, Mihai Andres-Mihăilă, "*Unsteady aerodynamic model for an airfoil with time dependent boundary conditions*", Proceedings of the 16th International Conference Scientific Research and Education in the Air Force, ISSN 2247-3173, Pags 97-104, May 22-24, Braşov,2014 (EBSCO, CrossRef, Index Copernicus), **(BDI Proceedings)**, http://www.afahc.ro/afases/volum_afases_2014_I.pdf

35. Raluca Ioana Edu, Felix Adochiei, Radu Obreja, **Constantin Rotaru**, Tudor Lucian Grigorie, "*New Tuning Method of the Wavelet Function for Inertial Sensor Signals Denoising*", International Conference on Advances in Applied and Pure Mathematics, ISBN 978-1-61804-240-8, Pages 153-157, July, 2014, Santorini, Greece (SCOPUS, CrossRef, Google Scholar), **(BDI Proceedings)**, http://www.inase.org/library/2014/santorini/MATH.pdf

36. Romulus Lungu, **Constantin Rotaru**, Alexandru Tudosie, Adrian Stanciu, "*Air debit's automatic regulation in the aircrafts' cabins using debit regulator with direct action*", Proceedings of the International Conference Mathematical Models and Engineering Science, ISBN 978-960-474-252-3, Pages 51-56, Spain, 2010, (ACM, ProQuest, Ulrich's Periodicals) **(BDI Proceedings)**, http://www.wseas.us/books/2010/Tenerife/MMES.pdf

37. **Constantin Rotaru**, Ionică Cîrciu, "*Integrated mathematical model of the engine and the aircraft longitudinal dynamics*", Proceedings of the International Conference on Applied Numerical

Mathematics and Scientific Computation, ISBN 979-1-61804-253-8, Pages 71-78, 28-30 Nov. 2014, Athens, Greece (Google Scholar, EBSCO), **(BDI Proceedings)**, http://www.inase.org/library/2014/athens/APPLIED.pdf

38. **Constantin Rotaru**, Ionică Cîrciu, Ivănică Mihai, "*Numerical simulations of flow over a helicopter rotor blade airfoil with a filled cavity*", Proceedings of the International Conference on Applied Numerical Mathematics and Scientific Computation, ISBN 979-1-61804-253-8, Pages 41-46, 28-30 Nov. 2014, Athens, Greece (Google Scholar, EBSCO), **(BDI Proceedings)**, http://www.inase.org/library/2014/athens/APPLIED.pdf
39. **Constantin Rotaru**, Mihai Mihăilă-Andres, Pericle Gabriel Matei, Raluca Ioana Edu, "*Thermodynamic performances of the turbojet combustion chamber – numerical evaluation*", Proceedings of the International Conference on Mechanics, Fluid Mechanics, Heat and Mass Transfer, ISBN 978-1-61804-220-8, Pages 86-91, February 22-24, 2014, Interlaken, Switzeland (SCOPUS, Google Scholar, EBSCO), **(BDI Proceedings)**, http://inase.org/library/2014/interlaken/bypaper/MECH/MECH-10.pdf
40. **Constantin Rotaru**, "Some considerations about the aircraft engine combustion chambers performances, RECENT Journal of Transilvania University, Brasov, ISSN: 1582-0246, Vol. 18, no. 2(52), 2017, pages: 116-121 (Index Copernicus, Ulrich's Directory, ROAD Directory) **(BDI Journal),** http://www.recentonline.ro/no_052.html.

Articole neindexate

1. **Constantin Rotaru**, Ionică Cîrciu, Ciuică Oliver, Mihai Eduard, "*Reduced Order Model for the Aircraft-Engine longitudinal Dynamics*", Conference on Scientific Aspects Concerning Operation of Manned and Unmanned Aerial Vehicles, Deblin, Poland, May, 2015.
2. **Constantin Rotaru**, Mihai Mihăilă-Andres, "*An extended combustion model for the aircraft turbojet engine*", Proceedings of the International Conference on Aeronautics, Automotive and Railway Engineering and Technologies – BulTrans, ISSN 1313-955X, pages 137-141, October 16-18, 2013, Sofia, Bulgaria.
3. **Constantin Rotaru**, Raluca Ioana Edu, Mihai Mihăilă-Andres, Mihai Ivănică, "*Integrated model of the engine and aircraft longitudinal dynamics*", Proceedings of the International Conference on Aeronautics, Automotive and Railway Engineering and Technologies – BulTrans, ISSN 1313-955X, pages 17-21, September 17-19, 2014, Sozopol, Bulgaria.
4. **Constantin Rotaru**, Andra Negru, "*New constructive solution for the turbojet combustion chamber*", Proceedings of the 1st International Conference "New Challenges in Aerospace Sciences – NCAS 2013", ISSN 2344-4762, pages 158-162, November 07-08, 2013, Bucharest, Romania.
5. **Constantin Rotaru**, Matei Gabriel Pericle, Adrian Arghiropol, "*Aspects regarding unsteady airloads on helicopter rotor blades*", International Conference in Military Technology Proceedings, ICMT'13, ISBN 978-80-7231-917-6, Pages 709-717,University of Defence, Brno, Czech Republic, 2013.
6. Adrian Arghiropol, **Constantin Rotaru**, Matei Gabriel Pericle, "*Overview of the 2D and 3D CFD studies and validation of CFD rocket range results versus general experimental practices & procedures applied to rocket technologies*", International Conference in Military Technology Proceedings, ICMT'13, ISBN 978-80-7231-917-6, Pages 789-799,University of Defence, Brno, Czech Republic, 2013.
7. Matei Gabriel Pericle, **Constantin Rotaru**, Adrian Arghiropol, "*Integrated adaptive system: virtual environment and physiological profiling in pilot performance improvement*", International Conference in Military Technology Proceedings, ICMT'13, ISBN 978-80-7231-917-6, Pages 623-635,University of Defence, Brno, Czech Republic, 2013."
8. **Constantin Rotaru**, Doru Safta, Cristian Barbu, "*Combustion Instabilities in Propulsion Systems*", The 5th International Conference –New Challenges in the field of military sciences, 11-12.11.2007, Zrinyi Miklos National Defence University- Budapest, Ungaria, ISBN: 978-963-87706-0-8, Pages 83-89.
9. Cristian Barbu, Doru Safta, **Constantin Rotaru**, "*Aerodynamical Aspects for Nose Longitudinal and Circular Variable Configuration Missile*", The 32nd International Scientific Conference on the Military Technical Academy, 01-02 November 2007, Pages 1.232-1.239, ISBN: 978-973-640-127-5.

10. Radu Pahonie, **Constantin Rotaru**, Mircea Boşcoianu, "*Surface Transportation Surveillance from Unumaned Aerial Vehicles*", The 32nd International Scientific Conference on the Military Technical Academy, 01-02 November 2007, pag. 2.64-2.70, ISBN: 978-973-640-127-5.

11. **Constantin Rotaru**, "*Application of the Fluent Software for Combustion Modelling in the Turbojet Engine*", International Conference AVIA-2006, National Aviation University, 25-27 Septembrie, 2006, Kiev, Ucraina, ISBN 629-735-0102-045, Pages 3.164-3.168.

12. Benjamin Grandjean, **Constantin Rotaru**, "*Application of the Fluent Software for the Modelisation and Simulation of the Combustion in the Turbojet Engine*", The 31st International Scientific Conference of the Military Technical Academy, 03-04 November, 2005, Pages 3.48-3.55, Bucharest, ISBN 073-640-074-3.

13. **Constantin Rotaru**, *Consideraţii privind aplicarea teoriei lanţurilor Markov la modelarea matematică a unui sistem mecanic neliniar cu "n" grade de libertate*, Revista Academiei Tehnice Militare nr. 1/1995, Pages 68-72

14. **Constantin Rotaru,** *Issues about aircraft turbojet engines control laws*

    First International Symposium on "Future Aviation Technologies" FAT 2002, Miklos Zrinyi National Defense University, Budapesta, Ungaria, Pages 223-229.

15. **Constantin Rotaru,** *Cu privire la optimizarea unor parametrii termogazodinamici specifici sistemelor de propulsie aeroreactoare de tip combinat,* A V-a Conferinţă Naţională de Termotehnică, 26-27 mai 1995, Cluj Napoca, vol. 1, pag. 312-316.

16. **Constantin Rotaru,** *Modelarea fenomenelor termogazodinamice pe baza algoritmilor cu element finit,* A V-a Conferinţă Naţională de Termotehnică, 26-27 mai 1995, Cluj Napoca, vol. 1, pag. 316-322

17. **Constantin Rotaru,** *Consideraţii privind studiul transferului termic în motoarele aeroreactoare de tip combinat, prin metoda elementului finit,* A XXVI – a Sesiune de Comunicări Ştiinţifice a Academiei Tehnice Militare, cu participare internaţională, 16-17 noiembrie 1995, vol. 2, pag. 149-155

18. **Constantin Rotaru,** *Un model dinamic al camerei de ardere pentru sistemele de propulsie aeroreactoare de tip combinat,* A XXVI – a Sesiune de Comunicări Ştiinţifice a Academiei Tehnice Militare, cu participare internaţională, 16-17 noiembrie 1995, vol. 2 pag. 120-126

19. **Constantin Rotaru,** *Metode numerice de calcul a parametrilor termogazodinamicie,* A VI-a Conferinţă Naţională de Termotehnică, 24-25 mai 1996, Iaşi, vol. 2, pag. 305-308

20. **Constantin Rotaru**, Adrian Coman, *Consideraţii privind optimizarea parametrilor specifici ai motoarelor aeroreactoare pentru aeronave de mare viteză,* A VI-a Conferinţă Naţională de Termotehnică, 24-25 mai 1996, Iaşi, vol. 2, pag. 326-331

21. **Constantin Rotaru,** *Particularităţi privind funcţionarea camerelor de ardere, care echipează motoare aeroreactoare",* A VII-a Conferinţă Naţională de Termotehnică, 23-24 mai 1997, Braşov, vol. 1, pag. 257-263

22. **Constantin Rotaru,** *Un model analitic de studiu a performanţelor compresoarelor polietajate, la regimuri nominale,* A VII-a Conferinţă Naţională de Termotehnică, 23-24 mai 1997, Braşov vol. 2, pag. 51-57

23. **Constantin Rotaru,** *Unele aspecte privind optimizarea ajutajelor de reacţie,* A VII-a Conferinţă Naţională de Termotehnică, 23-24 mai 1997, Braşov, vol. 2, pag. 205-209

24. **Constantin Rotaru,** *Particularităţi privind stabilitatea procesului de ardere din motoarele aeroreactoare ce echipează aeronave de mare viteză,* Sesiunea de Comunicări Ştiinţifice a Academiei Trupelor de Uscat-Sibiu, decembrie 1996, pag. 169-174

25. **Constantin Rotaru,** *Aspecte privind exploatarea tehnicii de aviaţie în condiţii de dislocare,* Sesiunea de Comunicări Ştiinţifice a Academiei Trupelor de Uscat-Sibiu, decembrie 1996, vol.1, pag. 60-65, Secţiunea Artă militară

26. **Constantin Rotaru,** *Metode analitice şi statistice de determinare a rezervei de muniţie pentru aeronavele militare,* Sesiunea de Comunicări Ştiinţifice a Academiei Trupelor de Uscat-Sibiu, decembrie 1996, vol.1, pag. 65-6, Secţiunea Artă militară

27. **Constantin Rotaru,** *Ecuaţiile stratului limită specifice regimurilor la viteze mari,* Sesiunea de Comunicări Ştiinţifice a Academiei Trupelor de Uscat-Sibiu, decembrie 1996, pag. 221-224

28. **Constantin Rotaru,** *Modelarea sistemelor mecanice prin ecuaţii diferenţiale de tip stochastic* A XV-a Sesiune de Comunicări Ştiinţifice a Academiai Navale –Constanţa, 05-07 noiembrie 1997, vol. 1B, pag. 197-202

29. **Constantin Rotaru,** *Unele consideraţii privind determinarea densităţii de probabilitate a vectorului de stare al unui sistem mecanic,* A XV-a Sesiune de Comunicări Ştiinţifice a Academiai Navale – Constanţa, 05-07 noiembrie 199, pag. 203-206

30. **Constantin Rotaru,** *Consideraţii asupra fenomenului de difuzie de căldură într-o conductă, utilizând metoda volumului finit,* A XV-a Sesiune de Comunicări Ştiinţifice a Academiai Navale – Constanţa, 05-07 noiembrie 199, vol. III, pag 64-69

31. **Constantin Rotaru,** *Unele aspecte privind undele de şoc curbilinii*, A XV-a Sesiune de Comunicări Ştiinţifice a Academiai Navale –Constanţa, 05-07 noiembrie 199 vol. III, Pag. 69-74

32. Gavril Maloş, **Constantin Rotaru**, Compressible Law of the Wall, A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4, pag. 201-205

33. Mircea Boşcoianu, **Constantin Rotaru**, *Asupra posibilităţii de control activ a pompajului în compresoarele axiale polietajate de înaltă performanţă,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4m, pag. 217-221

34. **Constantin Rotaru,** *Consideraţii privind modelarea curgerii la regimuri nestaţionare în compresoarele axiale,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4, pag. 221-225

35. **Constantin Rotaru,** *Particularităţi privind procesul de ardere în motoarele aeroreactoare,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4 pag. 245-249.

36. **Constantin Rotaru,** *Unele consideraţii privind răcirea paletelor de turbină,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4 pag. 249-253

37. **Constantin Rotaru, "***Modelarea curgerii gazelor în motoarele cu turbină cu gaze prin metoda elementului finit",* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4 pag. 253-257

38. **Constantin Rotaru,** *Aspecte privind metodele analitice de profilare a paletelor de turbină,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4 pag. 257-263

39. **Constantin Rotaru,** *Heat Transfer in Supersonic Flow,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 13-14 noiembrie 1997, secţiunea 4 pag. 287-291

40. Gavril Maloş, **Constantin Rotaru**, *Unele consideraţii asupra aplicaţiilor metodei volumului finit pentru probleme de convecţie-difuzie* Conferinţa Naţională de Termotehnică, 29-30 mai 1998, Piteşti, vol. III, pag. 67-70

41. **Constantin Rotaru,,** *Particularităţi ale curgerii în apropierea unei frontiere permeabile,* Conferinţa Naţională de Termotehnică, 29-30 mai 1998, Piteşti, vol. III, pag. 71-74

42. **Constantin Rotaru,** *Aspecte privind răcirea paletelor de turbină ale motoarelor de aviaţie,* Conferinţa Naţională de Termotehnică, 29-30 mai 1998, Piteşti, vol. III, pag. 147-150

43. **Constantin Rotaru,** *Consideraţii privind aplicarea metodei elementului finit la modelarea curgerii în reţelele de palete ale motoarelor aeroreactoare* Conferinţa Naţională de Termotehnică, 29-30 mai 1998, Piteşti, vol.III, pag. 151-154

44. **Constantin Rotaru,** *Consideraţii privind aplicaţiile teoriei proceselor stochastice la analiza variaţiei unor parametri termogazodinamici în jurul valorilor medii* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 21-22 octombrie 1999, secţiunea 4, pag. 252-255

45. **Constantin Rotaru**, Aurel Cazacu "*Issues about the turbojet engines control laws for high speed aircraft*", The 37th International Scientific Symposium of the Military Equipment and Technologies Research Agency, 25-26 may 2006, Bucharest.

46. **Constantin Rotaru**, Aurel Cazacu "*Issues about the turbojet engines control laws for high speed aircraft*", The 37th International Scientific Symposium of the Military Equipment and Technologies Research Agency, 25-26 may 2006, Bucharest.
47. **Constantin Rotaru**, "*Modelling the Combustion Process for the Aircraft Turbojet Engines*", Southeastern Europe Fluent Event, 11-13 May 2005, Salonic, Grecia.
48. **Constantin Rotaru,** *Issues about the complex potential of a parachute movement*, The 33-rd International Scientific Symposium, 23.-24.05.2002, Military Equipment & Technologies Research Agency, Bucharest.
49. **Constantin Rotaru**, "*Internal Flow Modelling for Combustion Chamber of Turbojet Engines",*International Conference of Aerospace Sciences "AEROSPATIAL 2010", Bucuresti, 20-21 Octombrie, 2010, ISSN 2067-8622
50. **Constantin Rotaru**, Doru Safta, Cristian Barbu, Anton Soloi, "*Analysis of Compressor-Combustion Chamber Dynamics for Aircraft Engines*", The 7th International Conference on "Mathematical Problems in Engineering, Aerospace and Sciences", University of Genoa, Italia, 25-27 Iunie, 2008
51. **Constantin Rotaru,** *Consideraţii privind modelarea sistemelor mecanice prin ecuaţii diferenţiale de tip stochastic",* Conferinţa Internaţională a Academiei Militare din Sumen-Bulgaria, 16-17 octombrie, 1998
52. **Constantin Rotaru,** *Contribuţii privind aplicarea teoriei proceselor stochastice la modelarea sistemelor neliniare,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 15-16 noiembrie 2001, secţiunea 4, CD
53. **Constantin Rotaru,** *Legi şi programe de reglare specifice motoarelor turboreactoare,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 15-16 noiembrie 2001, secţiunea 4, CD
54. **Constantin Rotaru,** *Particularităţi privind instabilitatea procesului de ardere în motoarele aeroreactoare,* A XXVII-a Sesiune de Comunicări Ştiinţifice, cu participare internaţională, a Academiei Tehnice Militare, 15-16 noiembrie 2001, secţiunea 4 CD
55. Raluca Ioana Edu, Radu Pahonie, Pericle Matei, **Rotaru Constantin**, "Cercetări privind precalibrarea senorilor inerţiali utilizaţi în monitorizarea aerospaţială", Simpozionul naţional organizat de Centrul de Încercări în Zbor, Craiova, 29 mai 2014, ISBN 978-973-0-16835-8, CD.
56. George Potrivitu, **Constantin Rotaru**, "*Thermal Modelling of a Hall Effect Thruster*", Proceedings of the International Conference on Applied and Theoretical Electricity (ICATE), doi: 10.1109/ICATE.2014.6972683, ISBN 978-1-4799-4162-9, 2014, Craiova (Ieeexplore), https://www.researchgate.net/publication/312948814_Thermal_Modeling_of_a_Hall_Effect_Thruster.
57. George Potrivitu, **Constantin Rotaru**, "*Hall Effect Thruster Erosion Mechanism and the Thruster Lifetime*", Proceedings of the International Conference on Applied and Theoretical Electricity (ICATE), doi: 10.1109/ICATE.2014.6972684, ISBN 978-1-4799-4162-9, 2014, Craiova (Ieeexplore), https://www.researchgate.net/publication/312081878_Hall_Effect_Thruster_Erosion_Mechanism_and_the_Thruster_Lifetime

Proiecte de cercetare ştiinţifică

1	Proiect european de cercetare/dezvoltare „*Technology Development for Aeroelastic Simulations on Unstructured Grids – TAURUS*", condus de către EADS – Germania, la care Academia Tehnică Militară a fost partener (alături de alte 15 instituţii europene), derulat în perioada 2003 – 2007, valoare contract 5.000.000 Euro din care **98.000** Euro pentru Academia Tehnică Militară, **director de proiect din partea Academiei Tehnice Militare;**
2	Proiect de cercetare dezvoltare naţional (**Programul AEROSPAŢIAL**, Contractul nr. 39/2001), „*Cercetări privind remotorizarea avionului IAR-99*", derulat în perioada 2001-2004, valoare contract **50.000** RON, **director de proiect.** Proiectul a fost condus de către Academia Tehnică Militară având ca partener INCAS Bucureşti
3	Proiect în cadrul Programului PHARE, denumit „*Dezvoltarea resurselor umane în contextul restructurării armatei. Cod proiect RO 0007.02.02.02.0298*", numit de către conducerea ATM **director de proiect**, pentru perioada de implementare a proiectului, respectiv 2004-2006, cu

	acordul autorităţii contractante, respectiv Ministerul Integrării Europene şi cu acordul Agenţiei de Devoltare Regională Sud-Est. Proiectul a fost câştigat prin competiţie în anul 2002. Valoare contract **376.000** Euro.
4	Proiect de cercetare „*Microlansator bazat pe motorul cu detonaţie*", **Programul STAR** coordonat de către Agenţia Spaţială Română, contract nr. 174/2017, **responsabil de proiect** din partea Academiei Forţelor Aeriene „Henri Coandă". Valoare contract 2.700.000 lei, din care **200.000** lei pentru Academia Forţelor Aeriene Braşov. Proiectul este condus de către Institutul Naţional de Cercetare Dezvoltare Turbomotoare – COMOTI, Bucureşti. Parteneri: Academia Forţelor Aetiene „Henri Coandă", Braşov, Universitatea „Politehnica" Bucureşti şi Universitatea din Craiova.
5	**Programul CALIST** / *Dezvoltarea, implementarea şi certificarea sistemului de management al calităţii în cadrul Centrului de Excelenţă "Laborator de explozivi şi muniţii*". Contract nr. 3409/2002, derulat în perioada 2002-2005 (director de proiect prof.univ.dr.ing. Vlăsceanu Nicolae), **membru în echipa de proiect**.
6	**Programul AEROSPAŢIAL** / *Sistem aeropurtat de avertizare de tip minielicopter acţionat electric.* Contract nr. 2267 / 2002, derulat în perioada 2002-2005 (director de proiect prof.univ.dr.ing. Jula Nicolae), **membru în echipa de proiect**.
7	**Programul AEROSPAŢIAL** / *Cercetări privind realizarea unor traductoare aplicabile în domeniul aeronautic.* Contract nr. 2270/2002, derulat în perioada 2002-2005 (director de proiect prof.univ.dr.ing. Jula Nicolae), **membru în echipa de proiect**.
8	**Programul CALIST** / *Sistem automat de măsurare şi control a parametrilor funcţionali specifici maşinilor electrice.* Contract nr. 4675 /2004, derulat în perioada 2004-2006, (director de proiect prof.univ.dr.ing. Jula Nicolae**), membru în echipa de proiect**.
9	Planul Sectorial de Dezvoltare al M.Ap.N, proiectul "*Modul adaptat pentru sisteme de paraşutare HAHO (High Altitude High Opening) / HALO (High Altitude Low Opening)"*, derulat în perioada 2010-2011, **director de proiect**. Acest proiect nu a fost câştigat prin competiţie.
10	Planul Sectorial de Dezvoltare al M.Ap.N, proiectul *Realimentarea în zbor a avionului MIG-29*, programul M.Ap.N., perioada 1998-1999, **membru în echipa de proiect**. Acest proiect nu a fost câştigat prin competiţie.
11	Planul Sectorial de Dezvoltare al M.Ap.N, proiectul *Tehnologie de revitalizarea rezervoarelor de combustibil ale avionului*. *Modernizarea avioanelor IAR-93 şi IAR-99*, programul M.Ap.N., perioada 1987-1988, **membru în echipa de proiect**. Acest proiect nu a fost câştigat prin competiţie.

19.09.2019