REZULTATELE ACTIVITĂȚILOR DE CERCETARE – DEZVOLTARE DESFĂȘURATE ÎN CADRUL TEZEI DE DOCTORAT CU TITLUL

CERCETĂRI PRIVIND CONTROLUL ATITUDINII VEHICULELOR SPAȚIALE REALIZAT CU SISTEME ELECTRICE SAU HIBRIDE

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DOMENIU DE DOCTORAT					
Data înmatriculării	1.10.2015	Data susținerii publice	17.01.2020	Data confirmării	
REZULTATELE ACTIVITĂȚII DE CERCETARE-DEZVOLTARE					
DENUMIRE REZULTAT					
CATEGORIA REZULTATULUI	Rezultat final			DETALIERE CARACTERISTICI ALE REZULTATULUI FINAL	
documentații, studii, lucrări	[X]				
planuri, scheme	[X]				
tehnologii	[X]				
procedee, metode	[X]				
produse informatice	[X]				
rețete, formule	[ ]				
obiecte fizice / produse	[X]				
brevet invenție / altele asemenea	[ ]				
STADIUL DE DEZVOLTARE	soluție / model conceptual	[X]			
	model experimental / funcțional	[X]			
	prototip	[X]			
	instalație pilot sau echivalent	[ ]			
	altele	[ ]			
DOMENIUL DE CERCETARE	tehnologiile societățiiinformaționale	[X]			
	energie	[ ]			
	mediu	[ ]			
	sănătate	[ ]			
	agricultură, securitatea șisiguranța alimentară	[ ]			
	biotehnologii	[ ]			
	materiale, procese și produse inovative	[ ]			
	Spațiișisecuritate	[X]			
	cercetări socio – economice și umaniste	[ ]			
CARACTERUL INOVATIV	produs nou	[ ]			
	produs modernizat	[ ]			

	tehnologie nouă	[X]	
	serviciu nou	[ ]	
	serviciu modernizat	[X]	
	altele.....	[ ]	

INFORMAŢII PRIVIND PROPRIETATEA INTELECTUALĂ	
cerere înregistrare brevet de invenţie	Nr . ..... data.....
brevet de invenţie înregistrat (naţional, european, internaţional)	Nr . ..... data.....
cerere înregistrare modele şi desene industriale protejate	Nr . ..... data.....
modele şi desene industriale protejate înregistrate (naţional, european, internaţional)	Nr . ..... data.....

DOMENII DE APLICABILITATE	**DETALIERE APLICABILITATE**
În domeniul de interes al MApN	Autopiloti pentru diferite aplicatii, modele de dinamica zborului cu aplicatii in sistemele de aparare anti-aeriana, colectare informatii din zone de interes
În alte domenii	
DISEMINAREA REZULTATELOR CERCETĂRII REALIZATE ÎN CADRUL TEZEI DE DOCTORAT	**DENUMIRE ARTICOL/REVISTĂ/CONFERINŢĂ**
Articole publicate în reviste /Proceedingscotate ISI	1. **Florin Mingireanu**, Nicolae Jula, Sorin Miclos, Dan Savastru, Laurentiu Baschir, "Solid rocket motors internal ballistic model with erosive and condensed phase considerations", UPB, Scientific Bulletin, Series A, Vol. 80, Iss. 4, ISSN: 1223-7027, 2018 2. **Florin Mingireanu**, Nicolae Jula, Cristian Boboc, "Boosted dart sounding vehicle", Conference: 2017 International Conference on Control, Artificial Intelligence, Robotics & Optimization (ICCAIRO), DOI: 10.1109/ICCAIRO.2017.65, ISBN: 978-1-5090-6536-3, IEEE, 20-22 Mai 2017 3. George Mogildea, M. Mogildea, Iulia Jivanescu, C. Porosnicu, Mihail Lungu, G. Chiritoi, **Florin Mingireanu**, "Direct vaporization and ionization of the metals wires using microwave field", Journal of Optoelectronics and Advanced Materials, Vol. 17, No. 3-4, pp. 367-371, ISSN: 1841-7132, 2015 4. **Florin Mingireanu,** Lucian P. Georgescu, Ionut Mocanu, Gabriel Murariu, "Trajectory modeling of grad rocket with low-cost terminal guidance upgrade coupled to range increase through step-like thrust-curves", Romanian journal of physics, Volume 59, Number 3-4, pp. 369-381, ISSN 1221-146X, 2014 5. **Florin Mingireanu**, Lucian Georgescu, Gabriel Murariu,

	Ionut Mocanu, Marius Stoia-Djeska, Nicolae Jula, "Increase of regression speed of combustion through oxidizer doping", Surface Engineering and Applied Electrochemistry, Vol. 50, Issue 3, pp 267-274, DOI: 10.3103/S1068375514030053, 2014 6. Marius Stoia-Djeska, **Florin Mingireanu**, "A Computational Fluid Dynamics Based Stability Analysis For Hybrid Rocket Motor Combustion",16th AIAA/CEAS Aeroacoustics conference, pp. 1-4, Chapter DOI: 10.2514/6.2010-3909, ISBN:9781617388545, 4 Noiembrie 2012 7. Marius Stoia-Djeska, **Florin Mingireanu, "**Mathematical and computational model for the analysis of micro hybrid rocket motor",9th International Conference on Mathematical problems in engineering, Aerospace and Sciences, ICNPAA 2012, Viena, Austria- publicat de American Institute of Physics, pp. 983-988, ISBN: 978-0-7354-1105-0, 10-14 Iulie 2012 8. Chelaru, Teodor-Viorel; **Mingireanu, Florin**, "Hybrid rocket engine, theoretical model and experiment",ACTA ASTRONAUTICA, Volume 68, Issues (11-12), pp. 1891-1902, 2011
Articole publicate în reviste /Proceedingscotate BDI	1. Frunzulica, F., Stoia-Djeska, M., and **Mingireanu, Florin,** "Validation with Numerical Simulations of a Simplified Model of a Hybrid Rocket Motor," Proceedings in Applied Mathematics and Mechanics, Vol. 15, No. 1, pp. 429-430. doi: 10.1002/pamm.201510205, 21 Octombrie 2015 2. Marius Stoia-Djeska, **Mingireanu Florin,** "A Mathematical and Numerical Model for the Analysis of Hybrid Rocket Motors",INCAS Bulletin, Volume 3, Issue 4, pp. 113-125, ISSN 2066–8201, DOI: 10.13111/20668201, 2011
Articole susținute la conferințe internaționale	1. **Florin Mingireanu**, Nicolae Jula, "Access to space using a reusable space vehicle", 70th International Astronautical Congress, IAC-19.D2.6.10, Washington DC, USA, 21-25 Octombrie 2019 2. **Florin Mingireanu,** Nicolae Jula"High altitude UAV development and testing", International Conference and Expo on Aerospace&Aeronautical Engineering, Abu Dhabi, UAE, 26-27 Februarie 2018 3. **Florin Mingireanu,** Nicolae Jula, "Internal ballistic numerical modelling for next generation space launchers and micro-launchers", International Conference and Expo on Aerospace&Aeronautical Engineering, Abu Dhabi, UAE, 26-27 Februarie 2018 4. **Florin Mingireanu,** Nicolae Jula,"Boosted dart vehicle development and optimization", 68th International Astronautical Congress, IAC-17.D2.6.5, ISBN: 978-1-5108-5537-3, pp. 10095-10101, Adelaide, Australia, 25-29 Septembrie 2017

	5. **Florin Mingireanu,** Nicolae Jula,"High altitude UAV development and flight testing", 68th International Astronautical Congress, IAC-17.D2.6.4, ISBN: 978-1-5108-5537-3, pp. 10091-10095, Adelaide, Australia, 25-29 Septembrie 2017 6. **Florin Mingireanu,** Marius Stoia-Djeska, "Boosted dart optimization", Research Advances in Space Technologies, DOI: 10.1109/RAST.2017.8002931, IEEE, 19-Istanbul, Turcia, 22 Iunie 2017 7. **Florin Mingireanu,** and Nicolae Jula, "Workshop on boosted dart optimization," 17th International Conference on Aerospace Sciences & Aviation Technology, ASAT – 17, Cairo, Egipt, 15-17 Aprilie 2017 8. **Florin Mingireanu**, Nicolae Jula , "Boosted dart optimization for maximum altitude on 120 mm diameter booster", 6th International Conference Space Technologies: Present and Future, Dnepr, Ucraina, 23-26 Mai 2017 9. **Florin Mingireanu,** "High altitude flying wing UAV for automatic payload recovery and high altitude tests of novel propulsion units", Proceedings of the 17th AMME Conference, WS-4/(S09), Cairo, Egipt, 19-21 Aprilie 2016. 10. **Florin Mingireanu,** Nicolae Jula, "High altitude flying wing UAV for automatic payload recovery and high altitude tests of novel propulsion units", 8th International Scientific Conference of the Military Technical College (lucrare invitata si organizata sub forma de seminar), Cairo, Egipt, 19-21 April 2016 11. **Florin Mingireanu,** Nicolae Jula, "Small launcher enabled by hybrid rocket motor technology", 8th International Scientific Conference of the Military Technical College, Cairo, Egipt, 19-21 Aprilie 2016 12. **Florin Mingireanu,** "Errosive burning modelling on solid rocket motor. Application on development of SRM 120.", 67th International Astronautical Congress, IAC-16,C4,2,9,x33735, ISBN: 978-1-5108-3582-5, pp. 6796-6802, Guadalajara, Mexic, 2630 Septembrie 2016 13. **Florin Mingireanu,** "Microthruster development for trajectory correction on upper stages and satellites", 66th International Astronautical Congress, IAC-15,C4,IP,48,x29922, ISBN: 978-1-5108-1893-4, pp. 8114-8117, Ierusalim, Israel, 12-16 Octombrie 2015 14. **Florin Mingireanu**, "Performance increase of liquid rocket motor through pump modification for higher injection pressure operation", 66th International Astronautical Congress, IAC-15,C4,IP,45,x29974, ISBN: 978-1-5108-1893-4, pp. 8100-8103, Ierusalim, Israel, 12-16 Octombrie 2015 15. Florin Frunzulica, Marius Stoia-Djeska, **Florin Mingireanu,** "Validation with CFD simulations of a simplified model of a hybrid rocket motor, 66th International Astronautical Congress, IAC-15,C4,IP,36,x30772, ISBN: 978-1-5108-1893-4, pp.

	8077-8080, Ierusalim, Israel, 2015 16. **Florin Mingireanu**, Lucian P. Georgescu, Gabriel Murariu, Ionut Mocanu Razvan, "Effect of multi-pulse thrust on flight trajectory", 4th International Conference: Space technologies: Present and future, Dnepropetrovsk, Ucraina, 17-19 Aprilie 2015 17. **Florin Mingireanu**, Lucian P. Georgescu, Gabriel Murariu, Ionut Mocanu Razvan, "Trajectory Modeling of GRAD Rocket with Low-Cost Terminal Guidance Upgrade Coupled to Range Increase Through Step-Like Thrust-Curves",15th International Conference in Aerospace Sciences and Aviation Technology, Cairo, Egipt, 10-15 Mai 2013 18. **Florin Mingireanu**, Marius Stoia-Djeska, "Small Hybrid Thruster Development for Small Satellite Attitude Control System",International Conference on Recent Advances in Space Technologies, ISBN- 978-1-4673-6395-2, DOI: 10.1109/RAST.2013.6581221, Istanbul, Turcia, 12-14 Iunie 2013 19. Lucian P Georgescu, Gabriel Murariu, **Florin Mingireanu**, Ionut Mocanu, "Small launcher enabled by hybrid rocket motor technology",63rd International Astronautical Congress, IAC-12-C4.5.4, pp. 9005-9006, Napoli, Italia, 1-5 Octombrie 2012 20. Lucian P Georgescu, Gabriel Murariu, **Florin Mingireanu**, Ionut Mocanu, "Ramjet thruster using ozone dissociation energy for high altitude", 63rd International Astronautical Congress, IAC-12-C4.5, pp. 7697-7703, Napoli, Italia, 1-5 Octombrie 2012 21. Teodor Viorel Chelaru, Virgil Stanciu, **Florin Mingireanu,** Adrian Chelaru, "Mathematical model for jet command system using continuous hybrid micro-thrusters", 63rd International Astronautical Congress, IAC-12,C4,6,12.p1,x14676, ISBN: 978-1-62276-979-7, pp. 7816-7826, Napoli, Italia, 1-5 Octombrie 2012 22. **Mingireanu Florin,** and Stoia-Djeska, M., "Methane Based Cryogenic Hybrid Rocket Motor Oxidizer Doping," 62nd International Astronautical Congress, IAC-11 – D9.2.8, Vol. 10, pp. 8373–8382, Cape Town, Africa de Sud, IAF, 3-7 Octombrie 2011 23. **Florin Mingireanu**, Gabriel Murariu, Lucian Georgescu, Ionut Mocanu, Daniel Constantin, "Improved observation monitoring system using UAV", Optoelectronic Techniques and Environmental Monitoring, ISSN 20066-8651, pag.168-175, 2011 24. **Florin Mingireanu, "**Solid Methane Hybrid Rocket Engine. Regression Speed Increase by Oxidizer Doping and Embedding Wires. Vehicle Optimization Application Through Motor Parameters",International Conference on Recent Advances in Space Technologies, IEEE Proceedings, ISBN-978-1-4244-9617-4, DOI: 10.1109/RAST.2011.5966928,

	Istanbul, Turcia, 9-11 Iunie 2011 25. **Florin Mingireanu**, Teodor Viorel-Chelaru, Enache Vasile, Neagu Ion, "Scalability and Dynamic Stability of Hybrid Rocket Engines",International Conference on Recent Advances in Space Technologies, IEEE Proceedings, ISBN-978-1-4244-9617-4, DOI: 10.1109/RAST.2011.5966936 , Istanbul, Turcia, 9-11 Iunie 2011 26. Marius Stoia-Djeska, **Florin Mingireanu,** "A mathematical model for the analysis of hybrid rocket motor", "Caius Iacob" conference, Bucuresti, Romania, 29-30 Septembrie 2011 27. **Florin Mingireanu**, G.Murariu, L.P. Georgescu, A.Chirila, I.Fertu, V.Ilie, I.Mocanu, Contribution to flying wing UAV aerodinamisc and autonomous flight, prezentare orala la conferinta internationala The 5th international conference UAV world, Frankfurt Main , Germany, 2-4 noiembrie 2011
Articole susținute la conferințe naționale	-

Data *Semnatura*