

RAPORT IMS 2019 – LUCRĂRI ȘTIINȚIFICE

ARTICOLE PUBLICATE

Articole publicate în Reviste ISI din străinătate

1. Yan H., Wang H., **Vlădăreanu L.**, Lin M., **Vlădăreanu V.**, Li Y. “Detection of Participation and Training Task Difficulty Applied to the Multi-Sensor Systems of Rehabilitation Robots”, *Sensors* 2019, 19(21), 4681; ISSN 1424-8220, <https://doi.org/10.3390/s19214681> , IF 3.031
2. Ioan Dumitrache , Simona Iuliana Caramihai , Mihnea Alexandru Moisescu , Ioan Stefan Sacala , **Luige Vladareanu** and Dragos Repta, “A Perceptive Interface for Intelligent Cyber Enterprises”, *Sensors* 2019, 19(20), 4422; <https://doi.org/10.3390/s19204422> - 12 Oct 2019, Special Issue Advanced Intelligent Control through Versatile Intelligent Portable Platforms , IF 3.031
3. Yongfei Feng , Hongbo Wang , **Luige Vladareanu** , Zheming Chen and Di Jin, “New Motion Intention Acquisition Method of Lower Limb Rehabilitation Robot Based on Static Torque Sensors” *SENSORS* 2019, 19(15), 3439; <https://doi.org/10.3390/s19153439> - Aug 2019, IF 3.031, WOS:000483198900194
4. **Căpitanu, L. ,Vlădăreanu, V. Vlădăreanu, L. Bădiță, LL.** *A neural network approach to the steel surface wear on linear dry contact, plastic material reinforced with SGF/steel*, *JURNAL TRIBOLOGII*, Volume 22, Pages: 75-108, Published: SEP 2019, Accession Number: WOS:000488258400008, ISSN: 2289-7232
5. D. Noje, I. Dzitac, **N. Pop**, R. Tarca, *IoT Devices Signals Processing based on Multi-dimensional Shepard Local Approximation Operators in Riesz MV-algebras*, *INFORMATICA*, 2019, International JournalPublished by Vilnius University Institute of Data Science and Digital Technologies, Lithuanian Academy of Sciences, Lithuania. ISSN print 0868-4952. ISSN online 1822-8844, IF 1.585, WOS:000458616200004.
6. **V.Chiroiu, L.Munteanu, R.Ioan**, C.Dragne, L.Majercsik, Using the Sonification for Hardly Detectable Details in Medical Images, *Scientific Reports*, December 2019, ISSN 2045-2322, IF (2019) 4,011, (acceptat spre publicare Decembrie 2019).

Articole publicate în Reviste ISI din România

1. **T Sireteanu, AM Mitu, AI Niculescu**, M Kowalski, A Jankowski *Condition Monitoring Of Vehicle Dampers Using Shock Excitation*, *Proceedings of The Romanian Academy Series A-Mathematics Physics Technical Science* Volume 20, Number 1/2019, pp. 87–95.
2. C.Lăpușan, M.Lăpușan, C.Brișan, **V.Chiroiu**, *On the modular design in mass customisation production*, *Proceedings of the Romanian Academy, series A*, 2019, ISSN 1454-9069, IF (2017/2018) 1,752. (acceptat spre publicare)

1. **L. VLADAREANU, M. RADULESCU, R. I. MUNTEANU, H. WANG**, *Image processing and analysis developed on Versatile Portable Intelligent VIPRO Platform*. Acta Electrotehnica, vol. 60/nr.1-2, ISSN 2344-5637, 2019.
2. **Ionel-Alexandru Gal, Luige Vladareanu, Radu Munteanu, Marius Pandeale**, *Fuzzy decision algorithm for hybrid fire-fighting robots*. Acta Electrotehnica, vol. 60/nr.1-2,ISSN 2344-5637, 2019.
3. **Marcel MIGDALOVICI, Luige VLADAREANU, Nicolae POP**, Grigore SECRIERU, Daniela BARAN, Gabriela VLADANU. *On physical identification of walking robots critical positions*, Acta Electrotehnica, Vol. 60/nr.1-2, ISSN 2344-5637, p.143-152, 2019.
4. **A. VLĂDEANU, M. MIGDALOVICI, G. VLĂDEANU**, *The establishment of the variation of the motor moments in the case of some kinematics conditions imposed to the leg of a biped robot*. Acta Electrotehnica, vol. 60/nr.1-2, ISSN 2344-5637, 2019.
5. **Ghiocel GROZA, Tudor SIRETEANU, Ana-Maria MITU, Nicolae POP**. *Modeling the semi-active base isolation systems with controllable dry friction using piecewise analytic functions*, Acta Electrotehnica, Vol. 60 Issue 1/2, p.29-36, 2019.
6. **M.M. FRĂȚILĂ, V. VLADAREANU, V.A. GROSU, M. S. MUNTEANU, Y. FENG**, *Autonomous mobile robot navigation based on fuzzy logic control*. Acta Electrotehnica, vol. 60/nr.1-2, ISSN 2344-5637, 2019.
7. **AI Niculescu**, $\frac{1}{2}$ With Two Tracks Complex Car Model, Acta Electrotehnica 60, Number 1-2, 2019, pp. 192-199
8. **L.Majercsik, L.Munteanu**, *Direct and inverse problems for an inhomogeneous medium*, Romanian Journal of Technical Science-Applied Mechanics, Tome 64, N° 1, pp.73-80, ISSN 0035-4074, Bucharest, 2019.
9. **V.Chiroiu, N. Nedelcu, V. Moşneguţu**, *Inteligent control of a visual attention system based on the chalcogenide glass optical fibers*, Analele Universităţii Eftimie Murgu din Reşiţa, Fascicola de Inginerie, vol.26, no.1, ISSN 1453-7397, 2019.
10. **C. Dragne**, *Directional kinematics - first step in robotic action*, Analele Universităţii Eftimie Murgu din Reşiţa, Fascicola de Inginerie, vol.26, no.1,IISSN 1453-7397, 2019.
11. **R.Ioan, C. Dragne, C. Rugină, C. Stirbu, V. Chiroiu**, *On the inverse sonification problem*, Romanian Journal of Technical Science-Applied Mechanics, Tome 64, N° 1, pp.11-19, ISSN 0035-4074, Bucharest, 2019.
12. **C.Rugină, V.Chiroiu, L.Munteanu**, *The electromechanical impedance spectroscopy method on thin plates at intermediate and high frequencies*, Romanian Journal of Technical Science-Applied Mechanics, Tome 64, N° 2, ISSN 0035-4074, Bucharest, 2019.
13. **V.Chiroiu, L.Munteanu, R.Ioan, V.Mosneguţu, I.Girip**, *On the dL algorithm for controlling the hybrid systems*, Acta Electronica, Special Issue Proceedings of the XXIX th, SISOM, vol. 60, nr,1-2, pp. 58-65, Mediamira Science Publishing, ISSN 2344-5637, 2019.

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1. **Vlădăreanu V., Vlădăreanu L.,** Munteanu, R. I., Căpitanu, L., Dobrescu, E. M., **Rădulescu, M.,** & Grosu, V. A. (2019). *Adaptive neural network fuzzy inference system for HFC processes*. Periodicals of Engineering and Natural Sciences, 7(1), 311-317.
2. **Luige Vlădăreanu,** Ramona Lile, **Mihai Radulescu,** Daniel Mitroi, **Doina Marin, Alexandra Cătălina Ciocîrlan,** Elena Corina Boscoianu, Mircea Boscoianu, *Intelligent control interfaces developed on Versatile Portable Intelligent Platform in order to improving autonomous navigation robots performances*, Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.324-329, ISSN 2303-4521, <http://pen.ius.edu.ba>.
3. **Mihaiela Iliescu, Luige Vlădăreanu,** Corina Radu (Frenț), Ileana Dugăeșescu, **Marius Pandelea, Doina Marin.** *Research on upper limb biomechanical system*, Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.267-274, ISSN 2303-4521, DOI: [10.21533/pen](https://doi.org/10.21533/pen).
4. **Vladareanu Luige, Pandelea Marius, Vladareanu Victor,** Feng Yongfei, Grosu Vlad Alexandru, El Emary Ibrahim, Moga Daniel, **Iliescu Mihaiela.** *Improving anthropomorphic robot stability using advanced intelligent control interfaces*, Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.349-355, ISSN 2303-4521, DOI: [10.21533/pen](https://doi.org/10.21533/pen)
5. Yongfei Feng, **Luige Vladareanu,** Zheming Chen, Di Jin, Ilias Mimouni, Hongbo Wang, *Research on mechanical design of a multi-function finger rehabilitation robot*, Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.356-360, ISSN 2303-4521.
6. **Luige Vladareanu, Victor Vladareanu,** Hongbo Wang, Yongfei Feng, **Mihai Radulescu,** and **Alexandra-Catalina Ciocîrlan.** *Versatile Intelligent Portable Robot Platform Developed through Adaptive Neuro-Fuzzy Control*. International Journal of Modeling and Optimization, Vol. 9, No. 5, October 2019, pg 271 – 276, DOI: [10.7763/IJMO.2019.V9.722](https://doi.org/10.7763/IJMO.2019.V9.722)
7. **Luige Vladreanu, Victor Vladareanu, Ionel-Alexandru Gal, Daniel-Octavian Melinte,** Vlad Grosu, **Mihai Radulescu.** *IoT Open Architecture Ground Control System by adaptive fusion intelligent interfaces for robot vectors applied to 5G network Densification Era*. Published in International Conference on Future Access Enablers of Ubiquitous and Intelligent Infrastructures (pp. 118-123). Springer, Cham.
8. **Nicolae Pop, Luige Vladareanu, Marcel Migdalovici,** Adrian I Pop, **Mihai Radulescu,** *Trajectory optimization for mobile robots using model predictive control*, Periodicals of Engineering and Natural Sciences, Vol. 7, Nr. 1, p. 242-248, ISSN: 2303-4521, Scopus, 2019.
9. **Migdalovici M., Vlădăreanu L., Pop N., Vlădăreanu V.,** Vlădeanu A., Baran D., & Vlădeanu G.. *News on modeling of walking robot critical positions*. Periodicals of Engineering and Natural Sciences, Vol. 7, Nr. 1, p. 249-254, ISSN: 2303-4521, Scopus, 2019.

10. **Melinte Octavian, Luige Vladareanu, and Ionel-Alexandru Gal.** *NAO robot fuzzy obstacle avoidance in virtual environment.* Periodicals of Engineering and Natural Sciences 7.1 (2019): 318-323.
11. Adrian Muraru, Ramona Lile, Elena Corina Boşcoianu, Mircea Boşcoianu, **Luigie Vlădoreanu,** *The UAV Control Approach by using Multi Agent Systems,* Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.330-336, ISSN 2303-4521.
12. Alexandru Lodin, Daniel Moga, Nicoleta Stroia, Dorin Petreus, Vlad Muresan, Radu Adrian Munteanu, **Luige Vladareanu,** *Modelling and simulation of a remote controlled mechatronic device,* Periodicals of Engineering and Natural Sciences, Vol. 7, No. 1, June 2019, pp.255-260, ISSN 2303-4521.
13. **Adrian Ioan Niculescu,** Antony Jankowski, Mirosław Kowalski, **Tudor Sireteanu,** *Solutions in the vehicle suspension,* European KONES Congress, Jastrebja Gora 8-11 September 2019, Jurnal of KONES Powertrain and Transport, Vol 4, ISSN 1231-4005, e-ISSN 2354-0133.
14. **Liviu Florin ISVORANU, Constantin ȚIGĂNEȘTEANU,** Ștefan – Alexandru ILAȘ, *“The advantages of using implantable elements with complex geometries from biocompatible metal powders by using selective laser sintering technology”*, Education and creativity for a knowledge based society – the 13rd edition, 14-16 Noiembrie 2019, București, România.
15. **R. Ioan, L. Munteanu,** Saketh Virupakshi, *A soft tentacle robot for minimally invasive surgery ,* Romanian Journal of Mechanics, vol 4, nr.1, 15-26, 2019.
16. L. Majercsik, *On the dL control applied to a Stewart platform with flexible joints,* Romanian Journal of Mechanics, vol 4, nr.1, 27-38, 2019.
17. **V. Chiroiu,** Seyed Mehdi Rakhtala, C. Brișan, *Optimisation of a packing manipulation robot,* Romanian Journal of Mechanics, vol 4, nr.1, 39-50, 2019.
18. **L.Munteanu,** *Relationship between the equilibrium and motion equations for a thin elastic beam,* Romanian Journal of Mechanics, vol 4, nr.1, 51-63, 2019.
19. **L.Munteanu, V.Chiroiu, C.Dragne, C.Rugină, P.Bratu,** *On the sonification technique,* Journal of Engineering and Innovation (JESI), 4(2),155-167, 2019, ISSN 2637-320X, 2019.
20. **C. Rugină, C. Dragne, I. Girip, D. Baldovin,** L. Majercsik, *Numerical and experimental investigations of the behaviour of a frame equipped with niti wires. part 1. The case of absence of niti wires,* Romanian Journal of Mechanics, vol 4, nr.1, 2019, pp 3-14, ISSN 2537-5229.
21. **V. Chiroiu, L. Munteanu, R. Ioan, C. Dragne, C. Rugină,** L. Majercsik, *Using the Sonification for Hardly Detectable Details in Medical Images,* International Journal of Scientific and Research Publications, vol.9, issue 7, 342-351, 2019, ISSN 2250-3153.

CĂRȚI PUBLICATE

Cărți publicate/editate la Editura Academiei Române

1. C. Brișan, C. Boanță, **V. Chiroiu**, *Introduction in optimisation of industrial robots. Theory and applications*, Editura Academiei, 2019 <https://www.ear.ro/>

Cărți/capitole publicate/editate în străinătate

1. **Ionel-Alexandru Gal**, Danut Bucur, **Luige Vladareanu**. *DSmT Decision-Making Algorithms for Finding Grasping Configurations of Robot Dexterous Hands*. Chapter in EBook: Algebraic Structures of Neutrosophic Triplets, Neutrosophic Duplets, or Neutrosophic Multisets: Volume 1, MDPI 2019. Editors: Florentin Smarandache, Xiaohong Zhang, Mumtaz Ali. ISBN: 303897384X, 9783038973843.

Cărți publicate/editate în alte edituri din țară

1. *Proceedings of The Annual Symposium of the Institute of Solid Mechanics and Session of the Commission of Acoustics*", *ACTA ELECTROTECHNICA 2019*, Vol. 60, Nr. 1-2, Special issue, Dedicated to the Great Union Centenary, **Editors in Chief: Luige Vladareanu and Marcel Migdalovici**, Published by MEDIAMIRA, ISSN 2344-5637, <https://ie.utcluj.ro/acta-electrotehnica.html>
2. **Gal Ionel-Alexandru**. *Strategii de control hibrid forță-poziție în robotică*. Editura Editgraph, ISBN: 978-606-663-732-9, 200 pagini, anul apariției 2019

BREVETE DE INVENȚII - Brevete depuse/înregistrate în 2019

1. **Luige Vladareanu** , Lucian Marius Velea , Radu Adrian Munteanu , **Tudor Sireteanu** , Mihai Stelian Munteanu , Gabriela Tont , **Victor Vladareanu** , **Cornel Balas** „*Metoda și dispozitiv pentru controlul dinamic al unui robot pășitor*”, IMSAR brevet de invenție OSIM nr. 125970 din 29.03.2019
2. **Iliescu Mihaiela**, Lazăr Marian, Ioana Pintilie, **Luige Vladareanu**, Necsoiu Teodor,etc., *Printer pentru depunerea de straturi ultra-subțiri cu proprietăți fizico-chimice diferite*, Optoelectronica 2001, brevet de invenție OSIM nr. 132082 / 28.06.2019
3. Radu Ioan Munteanu, **Luige Vladareanu**, Ovidiu Sandru, Lucian Marius Velea, Hongnian Yu, Nikos Mastorakis: Gabriela Tont, Eugen Diaconescu, Radu Adrian Munteanu, **Victor Vladareanu**, Alexandra Sandru, „*Metoda și dispozitiv de actionare și control al robotilor mobili inertiali*”, IMSAR brevet de invenție OSIM nr. 126268/30.09.2019.
4. **Sireteanu Tudor**, **Ghiță Gheorghe**, **Mitu Ana Maria**, Sebeșan Ioan, Popa Gabriel, Arsene Sorin, Manea Ion, Brevet (cerere 133356 A0 publicata in Buletin OSIM BOPI nr 5/2019), *Dispozitiv cu fluid magnetoreologic pentru controlul semiactiv al amortizării hidraulice*.

CITĂRI ALE LUCRĂRILOR ANTERIOARE ÎN 2019

Notă: Se vor exclude autocitățile.

Total institut: 341 citări – lista este disponibilă la cerere.

CONFERINȚE

Conferințe în străinătate

1. 22nd INTERNATIONAL CONFERENCE ON CONTROL SYSTEMS AND COMPUTER SCIENCE, CSCS 2019, pp. 610-615, DOI : 10.1109/CSCS.2019. *Mobile Robots Applied on Virtual and Real Environments*. 00111 , WOS:000491270300104, participanți: **Vladareanu Luige, Vladareanu Victor, Melinte Octavian, Radulescu Mihai, Pandelea Marius, Ciocirlan Alexandra**. IEEE
2. 9th IFAC Conference on Manufacturing Modelling, Management and Control , MIM 2019, 28-30 August 2019, Berlin , ” Bio-Inspired Techniques in Future Manufacturing Enterprise Control” Special Sesiune , ” Intelligent Control Interfaces Using Extenics Multidimensional Theory Applied on VIPRO Platforms for Developing the IT INDUSTRY 4.0 Concept (I)”, participanți **Vladareanu Luige, Vladareanu Victor**, IEEE
3. 4th EAI International Conference on Future Access Enablers of Ubiquitous and Intelligent Infrastructures. Presented at FABULOS Conference , Martie 28-29, 2019. Sofia, Bulgaria, *IoT Open Architecture Ground Control System by adaptive fusion intelligent interfaces for robot vectors applied to 5G network Densification Era*, participanți: **Luige Vladreanu, , Ionel-Alexandru Gal, Ciocirlan Alexandra**, Springer.
4. 8th International Conference on Smart Cities and Green ICT Systems, 3-5 May, 2019, *Intelligent Manufacturing System of LGS Profiles for Green Metallic Constructions*, indexat WoS, participanți: **Mihaiela Iliescu, Marius Pandelea**, indexat WoS
5. 8th International Conference on Smart Cities and Green ICT Systems, Modelling Practical Paradigms of Green Manufacturing Systems - MoMa-GreenSys, 3 - 5 May, 2019, Heraklion, Crete, Greece, *Anthropomorphic Walking Robots Integration in Smart Green Systems*, participanți: **Marius Pandelea, Mihaiela Iliescu**, –SMARTGREENS 2019, (ISI Proceedings)
6. Communication, Management and Information Technology, ICCMIT 19, 26-28 March, 2019, Vienna , *Trajectory optimization using model predictive control for mobile robots*, participanți **Vladareanu Luige, N. POP, Mihaiela Iliescu, Melinte Octavian, Radulescu Mihai, Pandelea Marius**.
7. 25rd International Conference on Difference Equations and Applications - ICDEA 2019, June 24 - June 28, 2019, University College London, Gower Street, London, United Kingdom, *On the Neumann boundary optimal control of a frictional quasi-static contact problem with dry friction*, participant **Nicolae Pop**.
8. **Gheorghe Ghita**, Tiberiu Adrian Salaoru Marius Pop, **Ana-Maria Mitu**, *Magnetorheological Fluid Device for Semi-Active Control Of Hydraulic Damping*, conferinta

IWSHM 2019 Stanford (The 12th International Workshop on Structural Health Monitoring September 10-12, 2019, Stanford, California, USA)

9. **D. Dumitriu, D.O. Melinte**, M. Ionescu, M. Mărgăritescu, *Scissor-type grasping tool for electric parallel gripper equipping a mobile x-y-z robotic system*, (Abstract Book) 3rd Annual International Conference on Mechanical Engineering (ed. Gregory T. Papanikos), pag. 21-22, Atena, Grecia, 22-25 Iulie 2019.

10. **D. Dumitriu**, M. Ionescu, **D.O. Melinte**, *New scissor-grasping tool for parallel grippers, ensuring stroke enhancement*, (Extended Abstracts) 36th Danubia Adria Symposium on Advances in Experimental Mechanics, pag. 131-132, Plzeň, Republica Cehă, 24-27 Septembrie 2019.

11. **M. Migdalovici, L. Vlădăreanu, N. Pop, V. Vlădăreanu, Al. Vlădeanu**, D. Baran, **G. Vlădeanu**, *News on modeling of walking robot critical positions*, ICCMIT 2019, 5th International Conference on Communication, Management and Information Technology, Vienna, Austria, 26-28 March 2019.

Conferințe în România

1. 4th International Conference on Design, Modelling and Optimisation in the fields of Aerospace, Astronautics, Robotics, Mechanical Engineering, Manufacturing Systems, New Technology of Materials, Non Conventional Energy, Artificial Intelligence and Neurorehabilitation, **OPTIROB 2019**, Iunie 27 – Iulie 1, 2019, Jupiter, România, **Luige Vladareanu, Victor Vladareanu**, Hongbo Wang, Yongfei Feng, Mihai Radulescu, Alexandra-Catalina Ciocîrlan, „*Versatile Intelligent Portable Robot Platform developed through Adaptive Neuro-Fuzzy Control*”
2. 11th International Conference on Material Science and Technology, BRAMAT 2019, 13-16 March, 2019, “*Induction Hardening Applied to Light Gauge Steel of Metallic Profiles for eco-Buildings*”, **M. Iiescu**, M. Purcarea, E.M.Stanciu, M.M. Roșu, D. Căpățînă and **L. Vlădăreanu**.
3. 12th The international conference of the Carpathian euro-region specialists in industrial systems CEurSIS 2019 11th-12th April 2019, Baia Mare Romania, “*Motion control of an elevator*”, **N. Pop, L. Valadareanu**, Miorita Ungureanu, Ioana Craciun, A. I. Pop, W. Kapłonek, Eliza Piroška Mastan.
4. **Tudor Sireteanu, Ana-Maria Mitu, Gheorghe Ghita**, *Severity indices of strong earthquakes*, International Multi-Conference on Systems & Structures (SysStruc '19), Resita, Romania, November 7th – 8st, 2019
5. **Lucian CĂPITANU, Liliana - Laura BĂDIȚĂ, Constantin ȚIGĂNEȘTEANU**, Virgil FLORESCU, **Liviu Florin ISVORANU**, “*Fretting manifestations in total hip prosthesis*”, RoTRIB, 2019, Cluj, România.
6. **Liviu Florin ISVORANU, Constantin ȚIGĂNEȘTEANU**, Ștefan – Alexandru ILAȘ, “*Eliminarea tensiunilor interne la produsele metalice realizate prin utilizarea de tehnologii additive*”, Simpozion Îmbunătățirea performanțelor de cercetare prin participarea instituțiilor în consorții CDI în domeniile prioritare, 19 Noiembrie 2019, Pitești, România.

7. **Liviu Florin ISVORANU, Constantin ȚIGĂNEȘTEANU, Ștefan – Alexandru ILAȘ**, “*Post-procesare repere fabricate prin tehnologii aditive pentru eliminarea tensiunilor interne și eliminarea deformațiilor*”, SINUC 2019 al XXV - lea simpozion național de UTILAJE PENTRU CONSTRUCȚII, Universitatea TEHNICA de CONSTRUCȚII Sectia UTILAJ TEHNOLOGIC, 13 Decembrie 2019, București, România.
8. N. Nedelcu, **V. Chiroiu, C. Rugină**, *On the GeSbSe thin films synthesized by conventional melt-quenching method and their characteristics*, International Multi-Conference on Systems & Structures (SysStruc '19), Resita, October 31st November 1st, 2019, <http://www.sysstruc19.uem.ro/sysstruc19.html>
9. **R.Ioan, L.Munteanu, I.Girip**, *Advances in non-surgical management of liver tumor*, International Multi-Conference on Systems & Structures (SysStruc '19), Resita, October 31st November 1st, 2019 <http://www.sysstruc19.uem.ro/sysstruc19.html>
10. **V. Chiroiu, N. Nedelcu, V. Moșneguțu**, *Inteligent control of a visual attention system based on the chalcogenide glass optical fibers*, International Multi-Conference on Systems & Structures (SysStruc '19), Reșița, November 7-8, 2019, <http://www.sysstruc19.uem.ro/sysstruc19.html>
11. **C.Dragne**, *Directional kinematics - first step in robotic action*, International Multi-Conference on Systems & Structures (SysStruc '19), Reșița, November 7-8, 2019 <http://www.sysstruc19.uem.ro/sysstruc19.html>
12. **C. Dragne, V.Chiroiu**, *Advanced Collision Detection Techniques*, International Multi-Conference on Systems & Structures (SysStruc '19), Reșița, November 7-8, 2019 <http://www.sysstruc19.uem.ro/sysstruc19.html>
13. **D.O. Melinte, D. Dumitriu**, M. Mărgăritescu, P.N. Ancuța, *Deep learning computer vision for sorting and size determination of municipal waste*, Proceedings of the International Conference of Mechatronics and Cyber-MixMechatronics – ICOMECYME 2019 (ed. Gh. I. Gheorghe), București, 5-6 Septembrie 2019, In: Lecture Notes in Networks and Systems, vol. 85, pag. 142-152, Springer, Cham, 2020, DOI https://doi.org/10.1007/978-3-030-26991-3_14
14. M. Mărgăritescu, P.-N. Ancuța, E.V. Canale, D.I. Stanciu, **D. Dumitriu, C.M. Brișan**, *Control of an autonomous mobile waste collection robot*, Proceedings of the International Conference of Mechatronics and Cyber-MixMechatronics – ICOMECYME 2019 (ed. Gh. I. Gheorghe), București, 5-6 Septembrie 2019, In: Lecture Notes in Networks and Systems, vol. 85, pag. 51-63, Springer, Cham, 2020, DOI https://doi.org/10.1007/978-3-030-26991-3_6.
15. Coaliția Română pentru Educație în Inginerie, CREDING, 23 mai 2019.

<p>Lucrări prezentate la XXVIIIth Annual Symposium of the Institute of Solid Mechanics SISOM 2019 and Session of the Commission of Acoustics</p>

1. **Luige Vlădăreanu, Ruxandra Vidu, Mihaiela Iliescu, Sergiu Boris Cononovici, Marcel Migdalovici, Nicolae Pop, Victor Vlădăreanu, Alexandru I. Gal, Octavian D. Melinte**, *Real-time control system of the cooperative intelligent nano-micro manipulators platform for the design and characterization of semiconductor nanowires on the same layer*. CD Proceedings SISOM 2019
2. **Nicolae POP, Luige VLĂDĂREANU**, Adrian I. POP, Eliza MASTAN, *Motion control for mobile robots using the model predictive control* CD Proceedings SISOM 2019

3. Ileana Nicoleta POPESCU, Ruxandra VIDU, **Nicolae POP**, *Compressibility, densification mechanism and compaction behavior modeling of metallic or composite powders*. CD Proceedings SISOM 2019
4. **Marcel Migdalovici, Luige Vlădăreanu, Nicolae Pop, Victor Vlădăreanu**, Alexandru Vlădeanu, Daniela Baran, Gabriela Vlădeanu, *Algorithm for physical identification of walking robots critical position*. CD Proceedings SISOM 2019
5. Alexandru VLADÉANU, **Marcel MIGDALOVICI, Gabriela VLADÉANU**, *Method of determining critical positions at walking robots*. CD Proceedings SISOM 2019
6. **Ionel-Alexandru GAL, Luige VLĂDĂREANU, Alexandra CIOCÎRLAN, Ana-Maria TRAVEDIU**, *Smart wireless sensors routing protocol development aimed for smart wireless robot networks*. CD Proceedings SISOM 2019
7. **Dan N. DUMITRIU, Octavian Daniel MELINTE**, Marius IONESCU, *Neural networks kinematics guidance of LewanSoul LeArm 5R serial manipulator*. CD Proceedings SISOM 2019
8. **Mihai RADULESCU, Victor VLADAREANU, Luige VLADAREANU**, Emilian DOBRESCU, **Doina MARIN, Ana-Maria TRAVEDIU**, *Real time rehabilitation robot control by artificial intelligence techniques using adaptive neuro-fuzzy inference systems*. CD Proceedings SISOM 2019
9. **Mihai RADULESCU, Luige VLADAREANU, Alexandru GAL, Doina MARIN, Alexandra CIOCÎRLAN**, *3D Modeling Advanced Techniques in Virtual Reality of the mobile rescue robot developed on the Versatile Intelligent Portable Platform VIPRO*. CD Proceedings SISOM 2019
10. **Marius PANDELEA, Luige VLADAREANU, Mihaiela ILIESCU**, Vlad Alexandru GROSU *Intelligent advanced control techniques of the anthropomorphic walking robot AWR in undefined and unstructured virtual environments*. CD Proceedings SISOM 2019
11. **Corina RADU (Frenț), Luige VLADAREANU**, Liviu UNGUREANU, Ileana DUGĂEȘESCU, Marian LAZĂR and **Mihaiela ILIESCU**, *Study on Upper Limb Prosthesis*, CD Proceedings SISOM 2019
12. Cristina Nițu, **Victor Vlădăreanu, Ana-Maria Travediu, Alexandra Ciocîrlan**, Vlad - Alexandru Grosu, *Education management machine learning model*, CD Proceedings SISOM 2019
13. **Dragos CĂPĂȚÎNĂ, Marius PANDELEA, Doina MARIN and Mihaiela ILIESCU**, *Vibration Compaction Process of Soils in Roads – Overview*. CD Proceedings SISOM 2019
14. **Tudor Sireteanu, Ana Maria Mitu**, Bogdan Cioruța, *Control of bilinear hysteresis with variable friction*, CD Proceedings SISOM 2019
15. Bogdan Cioruța, **Tudor Sireteanu**, *Optimization of dynamic systems sequence control using variable dry friction*, CD Proceedings SISOM 2019
16. **Lucian CĂPITANU, Liliana - Laura BĂDIȚĂ, Constantin ȚIGĂNEȘTEANU, Virgil FLORESCU, Liviu Florin ISVORANU**, “*On the fretting implications in total hip prostheses*”, SISOM 2019, București, România, CD Proceedings SISOM 2019
17. **L. Majercsik**, *On the use of intelligent materials in vibration control*, CD Proceedings SISOM 2019

18. **L. Munteanu, C. Dragne, C. Rugină, D. Dumitriu, M. Ionescu, V. Chiroiu**, *A review on the optimum design criteria in robotics*, CD Proceedings SISOM 2019
19. **I. Girip, V. Moşneguţu, R. Ioan**, *On the phenomenon of electromagnetically induced transparency and its applications*, CD Proceedings SISOM 2019
20. **C. Dragne**, *Robotics design - inverse kinematics*, CD Proceedings SISOM 2019
21. **C. Dragne, L. Majercsik, C. Rugină, I. Girip**, 2019. *Updating and correlation of FEM with experimental data*, CD Proceedings SISOM 2019
22. **A. Vlădeanu, M. Migdalovici, G. Vlădeanu**, *Method of determining critical positions at walking robots*, CD Proceedings SISOM 2019

ALTE LUCRARI

1. **Sergiu Cononovici, Luige Vladareanu**, *Istoria Roboticii în România*, Cap. *Robotica în IMSAR – scurt istoric*, acceptat pentru publicare, septembrie 2019
2. Rely Victoria V. PETRESCU, **Mihaiela Iliescu**, Florian Ion T. PETRESCU, *“Tramvaiul românesc ieri, azi și mâine”*, Divizia de Istoria Tehnicii din cadrul CRIFST - Academia Română, Sesiune tematică: Istoria transportului public în România, 26 septembrie 2019

Premii internaționale/naționale, ale Academiei Române obținute de către cercetători (autori, lucrări premiate).

1. Premiu internațional ICCMIT 2019, **Luige Vladareanu**
2. Hybrid Method of recovery and / or Creation of Components by Laser Cladding Allied with nano-particles / Metoda hibrid de recuperare si / sau de creare cu depunere laser de componente cu aliere cu nanoparticule – Medalie Argint, Autori Popovici Ernest, Mihailescu Ion, Mihailiescu Cristian,..., **Milaiela Iliescu, Luige Vladareanu**, EUROINVENT, 16 – 18 May, 2019.

Cooperări științifice naționale și internaționale, inclusiv în cadrul proiectelor (cu menționarea numărului proiectului și a partenerilor); vizitatori din străinătate.

1. Cooperare științifică IMSAR- Universitatea Fudan “Research on the key technology of rehabilitation robot”, PN-III-P3-3.1-PM-RO-CN-2018-0144, Coordonator IMSAR **Luige Vladareanu**.
2. Cooperare științifică IMSAR – Yanshan University “Joint Laboratory of Intelligent Rehabilitation Robot”/ LIRR,” KY201501009, 2016-2018, coordonator IMSAR **Luige Vladareanu**
3. Parteneriat științific INFLPR, IMSAR, UPB, AFA, CCSA, CBNRE, “Platforma de sisteme inteligente multiagent pentru monitorizarea calitatii apei pe sectorul românesc al Dunării și Deltei Dunării”, PNIII-P1-1.2-PCCDI-2017-063, coordonator IMSAR **Luige Vladareanu**

4. Cooperare internațional, Kingdom Of Saudi Arabia, Ministry of Education, UNIVERSITY Of Jeddah – **Luige Vladareanu**, evaluator academic al Permanent Committee for Academic Promotion.
5. Revista Sensors, revista Q1&Q2, IF 3.031, Coordonare număr special “Advanced Intelligent Control through Versatile Intelligent Portable Platforms”, publicat 8 articole
6. Societatea de Robotica din România, 177 membrii din mediul universitar și companii pe robotică, Coordonare și Președinție Filiala București 2019
7. Cooperare internațional, International Federation for the Promotion of Mechanism and Machine Science, IMSAR membru organizație
8. Universitatea Tehnică din Cluj-Napoca (prof. Doina Pîslă, prof. C. Brîsan) în cadrul proiectului UEFISCDI nr 59/2018, Control hibrid logic diferențial destinat sistemului robotic pentru tratamentul intraoperator al tumorilor hepatice rezecabile. Responsabil proiect **V.Chiroiu** <https://cester.utcluj.ro/improve/home.html>
9. Institutul Național de Cercetare-Dezvoltare pentru Mecatronică și Tehnica Măsurării INCDMTM, București (director proiect: M. Mărgăritescu), și Universitatea Tehnică din Cluj-Napoca (UTCN, responsabil C. Brîsan), în cadrul proiectului Proiect național PN-III-P1-1.2-PCCDI-2017-0086, contract no. 22 PCCDI /2018, “Sisteme robotice autonome pentru managementul deșeurilor în contextul orașului inteligent” (acronim: SIRAMAND) <http://www.incdmtm.ro/siramand/>
10. Phenomenological Universalities as a new tool for experimental and cross-disciplinary research: Sonification, A. Gliozzi, **L. Munteanu, V. Chiroiu, R. Ioan, C. Rugina, C. Dragne**, Politecnico di Torino, DISAT -Dipartimento Scienza Applicata e Tecnologia, 2018-2022.
11. Implementarea tehnologiilor aditive în fabricarea componentelor complexe și suprasolicitate - DigiTech, care face obiectul contractului nr. 77PCCDI/2018, Număr de parteneri 5

Conferințe (simpozioane)/manifestări științifice organizate de institut
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1. SISOM 2019, The Annual Symposium of the Institute of Solid Mechanics and Session of the Commission of Acoustic
2. Workshop, experiments, demonstrations, product exhibition, organized on SMOOTH project, H2020-MSCA-RISE-2016-734875/2016-2020, KEYTHROB project PN-III-P3-3.1-PM-RO-CN-2018-0144 / 2 BM / 2018, PNCDI III and “Joint Laboratory of Intelligent Rehabilitation Robot” collaborative research agreement between Romanian Academy by IMSAR, RO and Yanshan University, CN, project KY201501009/2016 and MULTIMOND2 project number PN-III-P1-1.2-PCCDI2017-0637/33PCCDI/01.03.2018 by Robotics and Mechatronics Department of the IMSAR.
3. Conferință internațională ” International Conference on Communication, Management and Information Technology”, *organizare conferință în calitate de Vice-Președinte*, ICCMIT 2019, Viena, ICCMIT 2019, Conference Web Site: <https://www.iccmitconference.net>, Sesiune specială ”Advanced Intelligent Control Methods in Robotics and Mechatronics”,

organizata de IMSAR, <https://www.iccmitconference.net/specialsessions> , ICCMIT 2019, Viena, 2019

Granturi/proiecte câștigate în competiții naționale/europene (titlul, director grant/proiect, organismul finanțator, durata grantului/proiectului, valoarea totală /valoarea pentru anul 2019).

A se vedea ANEXA 4.

Alte rezultate

1. **Luige Vlădăreanu** președinte Filiala București SRR – Societatea de Robotică din Romania
2. **Luige Vlădăreanu**, Vice-Presedinte ICCMIT19, Viena, 2019, ICCMIT 2019 Conference Web Site
3. **Luige Vladareanu**, Guest Editor Sensors (IF 3.031), “Advanced Intelligent Control through Versatile Intelligent Portable Platforms”,
4. **Luige Vladareanu**, Chair, Special Session ” Advanced Intelligent Control Methods in Robotics and Mechatronics”, <https://www.iccmitconference.net/specialsessions>
5. **Luige Vladareanu**, Chair - SISOM 2019 and Symposium of Acoustics, Bucharest, 16-17 May, 2019, ROBOTICS SESSION AND WORK-SHOP on ROBOTICS
6. **Mihaiela Iliescu**, Co-chair - SISOM 2019 and Symposium of Acoustics, Bucharest, 16-17 May, 2019, ROBOTICS SESSION AND WORK-SHOP on ROBOTICS
7. **Mihaiela Iliescu**, Chair – SMARTGREENS 2019, “Case Studies, Business Models and Innovative Applications for Smart(er) Cities”, May 4th, 2019
8. **Luige Vladareanu**, Scientific reviewer for Sensors journal (IF 3.031), 14 review papers
9. **Luige Vladareanu**, Scientific reviewer for Symmetry journal (IF2,143), 5 reviewed
10. **Mihaiela Iliescu**, Scientific reviewer for the 6th International Conference on Computer Science and Information Technology (CoSIT 2019), <https://ccsit2018.org/cosit2019/index.html>
11. **V.Chiroiu**, Editor- in- Chief, Romanian Journal of Mechanics, <http://journals.srmta.ro/index.php/rjm>
12. **V.Chiroiu**, Member Editorial Board of thre Scientific Journal of Politehnica University, seria D - Mechanical Engineering , https://www.scientificbulletin.upb.ro/SeriaD_-_Inginerie_Mecanica.php?page=colegiul2.
13. **V.Chiroiu**, Member Editorial Board of the Romanian Journal of technical Sciences Applied Mechanics, <https://rjts-am.utcluj.ro/#titleBoards>
14. **L.Munteanu**, Member Editorial Board of the Romania Journal of Mechanics, <http://journals.srmta.ro/index.php/rjm/about/editorialTeam>

15. **R. Ioan**, Member Editorial Board of the Romanian Journal of Mechanics, <http://journals.srmta.ro/index.php/rjm/about/editorialTeam>
16. **D. Dumitriu**, Scientific editorial secretary of “Romanian Journal of Technical Sciences – Applied Mechanics” (până în Aprilie 2019) <https://rjts-am.utcluj.ro/#titleBoards>
17. **D. Dumitriu**, Scientific editorial secretary of “Proceedings of the Romanian Academy – Series A: Mathematics, Physics, Technical Sciences, Information Science” https://acad.ro/sectii2002/proceedings/proc_pag_eb.htm
18. **V. Mosnegutu**, Scientific editorial secretary of the Romanian Journal of technical Sciences Applied Mechanics, <https://rjts-am.utcluj.ro/#titleBoards>
19. **V. Chiroiu**, membră Comisia de Acustică. Academia Română
20. **L. Munteanu**, membră Comisia de Acustică. Academia Română
21. **V. Chiroiu**, membră Comisia de Acustică. Academia Română
22. **L. Munteanu**, membership GAMM Gesellschaft fuer Angewandte Mathematik und Mechanik (GAMM),
23. **L. Munteanu**, Romanian Acoustical Society (SRA).
24. **V.Chiroiu**, membership GAMM Gesellschaft fuer Angewandte Mathematik und Mechanik (GAMM),
25. **V.Chiroiu**, Romanian Acoustical Society (SRA).
26. **L. Munteanu**, membership Societatea Română de Mecanică Teoretică și Aplicată (SRMTA)
27. **V.Chiroiu**, membership Societatea Română de Mecanică Teoretică și Aplicată (SRMTA)
28. **V.Moșneguțu**, membership Societatea Română de Mecanică Teoretică și Aplicată (SRMTA)
29. **R. Ioan**, membership Societatea Română de Mecanică Teoretică și Aplicată (SRMTA)
30. **R. Ioan**, membră AMS (American Mathematical Society),
31. **R. Ioan**, membră European Mathematical Society
32. **R. Ioan**, membră în colectivul de redacție și membră în comitetul editorial, Analele Universitatii Spiru Haret, Seria Matematică-Informatică <http://anale-mi.spiruharet.ro/board.html>
33. **L. Munteanu**, membership Societatea Română de Mecanică Teoretică și Aplicată (SRMTA)