

Lista de lucrări ierarhizate

A. **Teza de doctorat.** “Cercetări privind posibilitățile de realizare a unor traductoare cu lichide magnetice”, Univ. Tehnică “Gh. Asachi” Iași, 1994, Cond. Științific, Prof.dr.ing. Mihai Antoniu.

B. **Cărți publicate în străinătate** (capitol de enciclopedie).

Radu Olaru, *Sensors using magnetic fluids*, in Encyclopedia of SENSORS, 10-Volume Set (Eds., Craig A. Grimes, Elizabeth C. Dickey, and Michael V. Pishko), Vol 9, American Scientific Publishers, USA, 2006, pg. 415-430, ISBN 1-58883-056-9.

C. **Cărți** (manuale, monografii, tratate, îndrumare etc.) **publicate în țară, la edituri recunoscute CNCISIS.**

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2. **R. Olaru**, *Proiectarea sistemelor electromecanice*, Editura „Gh. Asachi”, Iași, 2003, ISBN 973-621-015-4, 224 pagini.
3. **R. Olaru**, C. Cotae, *Traductoare și dispozitive magnetofluidice pentru măsurare și control*, Editura BIT, Iași, 1997, ISBN 973-9327-03-6, 269 pagini.

D. **Cărți** (manuale, monografii, tratate, îndrumare etc.) **publicate pe plan local.**

1. **R. Olaru**, *Analiza și sinteza schemelor electrice industriale*, Universitatea Tehnică „Gh. Asachi” Iași, 2004, 175 pagini.
2. **R. Olaru**, D. Zamfir, *Teoria sistemelor și automatizări, Curs pentru studenții Facultății de Construcții de mașini*, Universitatea Tehnică „Gh. Asachi” Iași, 1995, 265 pagini.
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E. **Lucrări științifice publicate în reviste cotate ISI sau indexate în baze de date internaționale.**

E1. Articole in reviste ISI (Thomson-Reuters SCI)

1. **R.Olaru**, M.M. Mihai, B. Girtan, Camelia Petrescu, A. Arcire, *Design and experiment of an electromagnetic vibrational inertial actuator using linearized magnetic spring*, Rev. Roum. Sci. Tech.-Électrotechn. et Énerg., Tome 63, Issue 3, pp. 253-258, Bucharest, 2018, ISSN: 0035-4066. I.F.=**0.763** (JCR2018).
2. **R. Olaru**, A. Arcire, Camelia Petrescu, Marius Mugurel Mihai, Bogdan Gîrtan, *A novel vibration actuator based on active magnetic spring*, Sensors and Actuators A-Physical, vol. 264, 1 September 2017, pp. 11-17. ISSN 0924-4247. DOI: 10.1016/j.sna.2017.07.041. I.F. = **2.739** (JCR2018).
3. **R. Olaru**, A. Arcire, Camelia Petrescu and Marius-Mugurel Mihai, *Study of the Magnetic Force delivered by an Actuator with Nonlinear Ferrofluid and Permanent Magnets*, IEEJ Transactions on Electrical and Electronic Engineering, vol. 12, Issue 1, pp. 24-30, 2017 (January), ISSN: 1931-4973, DOI: 10.1002/tee.22331. I.F. = **0.686** (JCR 2018), FIR=0,141.
4. **R. Olaru**, A. Arcire and Camelia Petrescu, *New linear actuator with ferrofluid and permanent magnets*, Rev. Roum. Sci. Tech.-Électrotechn. et Énerg., 60, Issue 2, pp. 113-121, Bucharest, 2015 (April-June), ISSN: 0035-4066. F.I.= **0.763** (JCR 2018); FIR=0,284 (2016), SRI= **0.034** (2016).
5. **Radu Olaru**, Robert Gherca and Camelia Petrescu, *Analysis and design of a vibration energy harvester using permanent magnets*, Rev. Roum. Sci. Tech.-Électrotechn. et Énerg., 59, Issue 2, pp. 131-140, Bucharest, 2014 (April-June), ISSN: 0035-4066. F.I.= **0.763** (JCR 2018); FIR=0,284 (2016), SRI=**0.034** (2016).

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7. **Radu Olaru**, Camelia Petrescu and Radu Hertanu, *A novel double-action actuator based on ferrofluid and permanent magnets*, Journal of Intelligent Material Systems and Structures, Vol. 23 (14), September 2012, pp. 1619-1626, ISSN 1045-389X, doi:10.1177/1045389X12449916. SAGE Publisher (UK). F.I. = **2.582** (JCR 2018), **SRI= 1.588 (2016)**.
8. **R. Olaru**, C. Astratini-Enache and C. Petrescu, *Analysis and design of a moving-magnet type linear actuator with repulsive magnetic forces*, Int. J. of Applied Electromagnetics and Mechanics, Volume 38, Number 2-3, 2012, pp. 127-137, ISSN 1383-5416 (Print), 1875-8800 (Online), doi 10.3233/JAE-2012-1414. IOS Press Publisher. F.I.= **0.804** (JCR2017). **SRI= 0.227 (2016)**.
9. **R. Olaru**, Camelia Petrescu, R. Hertanu, *Magnetic actuator with ferrofluid and non-magnetic disc*, Int. J. of Applied Electromagnetics and Mechanics, Volume 32, Number 4, 2010, pp. 267-274, ISSN 1383-5416 (Print), 1875-8800 (Online), doi 10.3233/JAE-2010-1083. I.F.= **0.804** (JCR2017). **SRI= 0,227 (2016)**.
10. Camelia Petrescu, **R. Olaru**, *Study of a Mini-Actuator with Permanent Magnets*, Advances in Electrical and Computer Engineering, ISSN 1582-7445, e-ISSN 1844-7600, vol. 9, no. 3, pp. 3-6, 2009, doi: 10.4316/AECE.2009.03001. I.F= **0.650** (JCR2018). **SRI=0.170 (2016)**.
11. Camelia Petrescu, Lavinia Ferariu, **R. Olaru**, *Optimization of ferrofluid actuator using evolutionary algorithms and finite element method*, Rev. Roum. Sci. Tech.-Électrotechn. et Énerg., 54, Issue 1, pp. 77-86, Bucharest, 2009 (Janvier-Mars), ISSN: 0035-4066. I.F. = **0.524** (2015). **SRI=0.049 (2015)**.
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13. **R. Olaru** and D.D. Dragoi, *Inductive tilt sensor with magnets and magnetic fluid*, Sensors and Actuators A-Physical, 120 (2005), pp.424-428. ISSN 0924-4247. I.F. = **2.499** (JCR2016); **SRI= 1.389** (2015).
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17. C. Cotae, O. Baltag, **R. Olaru**, D. Călărașu and D. Costandache, *The study of magnetic fluid based sensor*, Journal of Magnetism and Magnetic Materials, 201(1999), 394-397, ISSN: 0304-8853. F.I.= **2.683** (JCR2018).
18. **R. Olaru**, C. Cotae, *Tilt sensor with magnetic liquid*, Sensors and Actuators 59 A, 1997, 133 –135, ISSN 0924-4247 (i.f. 1997 = 0.635).
19. C. Cotae, **R. Olaru**, M. Luca, D. Creangă, *Magnetic liquid sensor in orthogonal magnetic field*, Sensors and Actuators 59 A, 1997, 222 – 225, ISSN 0924-4247 (i.f. 1997 = 0.635).
20. C. Cotae, Gh. Călugăru, **R. Olaru**, *Profile of Ferrofluid Around a Linear Current-Carrying Wire*, Revue roumaine de physique, Tome 29, no. 10, 1984, 927 – 930.
21. **R. Olaru**, C. Cotae, I. Grosu, Gh. Călugăru, *Investigation of an inclination ferrofluid transducer*, Journal of Magnetism and Magnetic Materials, 39, 1983, 162-164, ISSN: 0304-8853 (i.f. = 1.063).

E2. Articole și lucrări la conferințe indexate în BDI (SCOPUS, INSPEC, ISI Proceedings, IndexCopernicus, BL Direct, IEEEExplore*Digital Library)

ISI Proceedings (Thomson-Reuters CPCI)

1. N.B. Gîrtan, **R. Olaru**, *Improving the Performance of a Vibration Electromagnetic Actuator Based on Active Magnetic Springs*, 10th International Conference and Exposition on Electrical and Power Engineering (EPE2018), Iasi, October 18-19, 2018, IEEE Conference, p. 0284-0289.
2. N.B. Gîrtan, **R. Olaru**, *Electromagnetic Actuator With Ferromagnetic Disk and Magnetic Spring Suspension*, 11-th International Conference on Electromechanical and Power Systems (SIEMEN 2017), 11 October 2017 Iasi/ 12-13 October 2017, Chisinau, p. 397-402, USB PROCEEDINGS - ISBN 978-1-5386-1845-5.
3. Marius-Mugurel Mihai, Alexandru Arcire and **Radu Olaru**, *Vibration Mini Actuator with Magnetically Suspended Inertial Mass*, PROCEEDINGS OF THE 2016 INTERNATIONAL CONFERENCE AND EXPOSITION ON ELECTRICAL AND POWER ENGINEERING (EPE 2016) Book Series: International Conference and Exposition on Electrical and Power Engineering Pages: 83-86 Published: 2016. DOI: [10.1109/ICEPE.2016.7781308](https://doi.org/10.1109/ICEPE.2016.7781308).
4. Danut C. Irimia, Marian S. Poboroniuc, Florin Serea, Alina Baci, **Radu Olaru**, *Controlling a FES-EXOSKELETON Rehabilitation System by Means of Brain-Computer Interface*, 2016 International Conference and Exposition on Electrical and Power Engineering (EPE 2016), 20-22 October, Iasi, Romania. Nr. intrare: 1241. IEEE Xplore Digital Library, Pages:352–355. DOI: [10.1109/ICEPE.2016.7781361](https://doi.org/10.1109/ICEPE.2016.7781361).
5. Camelia Petrescu, **R. Olaru**, *Performance analysis of ferrofluid actuators with permanent magnets of variable magnetization pattern*, Advanced Topics in Electrical Engineering (ATEE), 2015 9th International Symposium, 374 - 379, DOI: 10.1109/ATEE.2015.7133849, Referenced in: IEEE Conference Publications.
6. Camelia Petrescu, **R. Olaru**, *Analysis of a Novel Type of Ferrofluid Actuator With Permanent Magnets in Halbach Pattern*, 2014 International Conference on Electrical and Power Engineering EPE 2014, Iași, 16-18 October 2014, IEEE Catalog Number CFP1447S-USB, ISBN 978-1-4799-5848-1.
7. F. Serea, M. Poboroniuc, S. Hartopanu, **R. Olaru**, *Preliminary Tests on a Hybrid Upper Arm Exoskeleton for Upper Arm Rehabilitation for Disabled Patients*, 2014 International Conference on Electrical and Power Engineering EPE 2014, Iași, 16-18 October 2014, IEEE Catalog Number CFP1447S-USB, ISBN 978-1-4799-5848-1.
8. Serea F., Poboroniuc M. S., Irimia D.C., Hartopanu S., **Olaru R.**, *Preliminary Results on a Hybrid FES-Exoskeleton System Aiming To Rehabilitate Upper Limb in Disabled People*, in Proceedings of the 17th International Conference on Systems Theory, Control and computing ICSTCC2013, Sinaia, Romania, 11-13 October 2013, pp.722-727, ISBN 978-1-4799-2228-4, ISBN 978-1-4799-2227-7, IEEE catalog Number CFP1336P-CDR. **ISI Proceedings**, indexed IEEE Xplore.
9. R. Gherca, **R. Olaru**, Camelia Petrescu, *Enhancement Of The Conversion Efficiency In An Energy Harvester From Vibrations*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, pag. 479-484. **ISI Proceedings**, IEEE Xplore Digital Library, SCOPUS.
10. R. Gherca, **R. Olaru**, *Power Analysis For An Electromagnetic Generator With Magnets Destined To Vibration Energy Harvesting*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, pag. 485-490. **ISI Proceedings**, IEEE Xplore Digital Library, SCOPUS.

11. Arcire, **R. Olaru**, Camelia Petrescu, *Study of The Influence of Ferromagnetic Material on the Characteristics of an Actuator Based on Ferrofluid and Permanent Magnets*, 2012 International Conference and Exposition on Electrical and Power Engineering (EPE 2012), 25-27 October, Iasi, Romania, pag. 776-780. *ISI Proceedings*, IEEE Xplore Digital Library, SCOPUS.
12. Camelia Petrescu, **Radu Olaru** and Radu Hertanu, *Study of a Ferrofluid Actuator with Levitating Nonmagnetic Disc*, Proceedings of the 7th International Symposium on ADVANCED TOPICS IN ELECTRICAL ENGINEERING, p. 349-352, May 12-14, 2011, Bucharest, Romania, ISSN: 2068-7966. *ISI Proceedings*, IEEE Xplore Digital Library.
13. **R. Olaru** and C. Tocan, *New type of sensors with compensation by magnetic fluid force*, V.Kose and J.Sievert (eds.), Nonlinear Electromagnetic Systems, Studies in Applied Electromagnetics and Mechanics, Vol 13, ISBN 4 274 90190 4, IOS Press, Amsterdam, Berlin, Oxford, Tokyo, Washington, DC, 1998, 353 – 356. *ISI Proceedings*.

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2. M.M. Mihai, A. Arcire and **R. Olaru**, *Novel Concepts of Inertial Actuators for Vibration Based on Magnets and Ferrofluid*, Buletinul Institutului Politehnic din Iasi, Vol. 62 (66), Nr. 1, 2016, Secția Electrotehnica, Energetica, Electronica. ISSN 1223-8139. IndexCopernicus.
3. A. Arcire and **R. Olaru**, *Investigations on output displacement of a ferrofluid actuator based on magnetic actuator*, Buletinul Institutului Politehnic din Iasi, Tomul LVII (LXI), Fasc. 3, p. 29-35, 2011, ISSN 1223-8139. IndexCopernicus.
4. **R. Olaru**, Camelia Petrescu and A. Arcire, *Maximizing the magnetic force generated by an actuator with non-magnetic body in a ferrofluid pre-magnetized by permanent magnets*, International Review of Electrical Engineering (IREE), Vol. 8, Number 2, March-April 2013, pp. 904-911. Print ISSN: 1827- 6660, Cd-Rom ISSN: 1827- 6679. Praise Worthy Prize. SCOPUS, Academic Search Complete - EBSCO Information Services, Cambridge Scientific Abstracts - CSA/CIG, Index Copernicus.
5. **R. Olaru**, R. Ghercă, *Theoretical characterization of an electromagnetic generator for vibration energy harvesting*, Buletinul AGIR nr. 3/2012, iunie-august, p. 75-81, ISSN-L 1224-7928. IndexCopernicus.
6. R. Ghercă, **R. Olaru**, *Harvesting vibration energy by electromagnetic induction*, Annals of the University of Craiova, Electrical Engineering series, No. 35, 2011; ISSN 1842-4805. IndexCopernicus.
7. R. Hertanu, **R. Olaru**, C. Petrescu, C. Astratini-Enache, *Vertical displacement actuator with non-magnetic body immersed in ferrofluid*, Buletinul Institutului Politehnic din Iasi, Tomul LVII (LXI), Fasc. 3, p. 29-35, 2011, ISSN 1223-8139. IndexCopernicus.
8. C. Astratini-Enache, **R. Olaru**, R. Hertanu, R. Gherca, *Analysis and optimization of a moving-magnet linear actuator with ring magnets*, Buletinul Institutului Politehnic din Iasi, Tomul LVII (LXI), Fasc. 3, p. 11-16, 2011, ISSN 1223-8139. IndexCopernicus.
9. C. Astratini-Enache, **R. Olaru**, Camelia Petrescu, *Moving Magnet Type Actuator with Ring Magnets*, Journal of Electrical Engineering- Elektrotechnicky Casopis, Vol. 61, No 7/s, 2010, pp. 144-147. ISSN 1335-3632. Indexed in IEE INSPEC, SCOPUS, UK and ULRICH'S, USA.
10. R. Hertanu, **R. Olaru**, *A Novel Minipump Actuated by Magnetic Piston*, Journal of Electrical Engineering- Elektrotechnicky Casopis, Vol. 61, No 7/s, 2010, pp. 148-151, ISSN 1335-3632. Indexed in IEE INSPEC, SCOPUS, UK and ULRICH'S, USA.

11. **R. Olaru**, R. Hertanu and C. Astratini-Enache, *A new magnetically actuated mini-pump*, Buletin I.P. Iasi, Tomul LVI(LX), Fasc. 1, Sectia Electrotehnica, Energetica, Electronica, 2010, p. 70-76. ISSN 1223-8139. IndexCopernicus.
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13. Camelia Petrescu, Lavinia Ferariu, **R. Olaru**, *Genetic Algorithm Combined with Finite Element Method for Optimum Design of Ferrofluid Actuator*, 15th IMEKO TC-4 International Symposium on NOVELTIES IN ELECTRICAL MEASUREMENTS AND INSTRUMENTATION, Proceedings, Volume II, September 18-22, 2007, Iasi, Romania, 611-615, ISBN 978-973-260-6, ISBN 978-973-667-262-0. IMEKO International Measurement Confederation. SCOPUS.
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20. **R. Olaru**, C. Cotae, *Levelling Transducers with Magnetic Liquids*, Romanian Reports in Physics, Vol. 47, Nos. 8-9-10, 1995, 917 – 921. BL Direct

F. Lucrări științifice publicate în reviste din străinătate. (BDI)

1. **R. Olaru**, C. Petrescu, *Optimal design of a New Type of Magnetic Fluid Electro-Pneumatic Device*, International Review of Electrical Engineering (IREE), Vol. 1, N.2, 2006, 254-259 (ISSN 1827-6660). BDI.

G. Lucrări științifice publicate în reviste din țară, recunoscute CNCSIS.

1. **R. Olaru**, *Actuators based on ferrofluids*, Buletin I.P.Iași., Tomul LII (LVI), Fasc. 5C, Sectia Electrotehnica, Energetica, Electronica, 4-TH INTERNATIONAL CONFERENCE ON ELECTRICAL AND POWER ENGINEERING EPE 2006, IASI, ROMANIA, OCTOBER 12-14, 2006, p. 1083-1088.
2. **R. Olaru**, *Magnetic actuations with ferrofluids*, Buletin I.P.Iași., Tomul LII (LVI), Fasc. 5C, Sectia Electrotehnica, Energetica, Electronica, 4-TH INTERNATIONAL CONFERENCE ON ELECTRICAL AND POWER ENGINEERING EPE 2006, IASI, ROMANIA, OCTOBER 12-14, 2006, p. 1089-1094
3. **R. Olaru**, D.D. Dragoi and Gh. Calugaru, *Study of a tilt inductive sensor based on repulsion magnetic forces*, Buletin I.P.Iași., Tomul L (LIV), Fasc. 3-4, Secția Matematică, Mecanică teoretică, Fizică, 2004, p. 145-152.

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5. D.D. Dragoi, **R. Olaru**, Gh. Calugaru, *Design of magnetorheological fluid valves*, Analele Universitatii "Dunarea de Jos" din Galati, Fascicula II, Matematica, Fizica, Mecanica teoretica, Anul XX(XXV) 2002, 73-82, ISSN 1221-4531.
6. D.D. Dragoi, **R. Olaru**, Gh. Calugaru, *Magnetorheological Valves*, Buletinul Institutului Politehnic Iasi, Tomul XLVIII (LII), Fasc. 1-2, 2002, sectia Stiinta si ingineria materialelor, pag. 129-134.
7. **R. Olaru**, *Magnetic fluid based electromagnetic actuators*, Postprints of Proiect Tempus M-PEC-12018/97, Universitatea "POLITEHNICA" din Bucuresti, Buletin informative no.3, Mars 2001, pp. 36-41.
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11. **R. Olaru**, Camelia Petrescu and C. Pal, *Force determination in ferrofluid differential actuator using the finite element method*, Buletin I.P.Iasi, Tomul XLV(IL), Fasc. 5A, 1999, Electrotehnica, Energetica, Electronica, 130 – 133.
12. C. Cotae, **R. Olaru** and M. Lozovanu, *Dielectric and magnetodielectric relaxion of ferrofluids*, Buletin I.P.Iași, Tom XLII (XLVI), Fasc. 3-4, Secția IX (Știința și ingineria materialelor), 1996, 311 – 314.
13. **R. Olaru**, *Low pressure transducers with magnetic liquid*, Buletin I.P.Iași, Tom XLI (XLV), Fasc. 5, Secția III (Electrot., Energ., Electron.), 1995, 945 – 949.
14. **R. Olaru**, *Pressure transducers with balancing magnetofluidic force*, Buletin I.P.Iași, Tom XLI (XLV), Fasc. 5, Secția III (Electrot., Energ., Electron.), 1995, 939 – 943.
15. **R. Olaru**, Gh. Călugăru, *Le Comportament Dynamique de Certaine Traducteurs de Niveau a Liquide Magnetique*, Analele Științifice ale Universității "Al. I. Cuza" Iași, Tomul XXXVIII-XXXIX (Serie nouă), Fizica solidelor, 1992-1993, p. 361-365.

H. Lucrări științifice publicate în volumele conferințelor.

H.1. Conferințe internaționale din țara

1. A Arcire, **R. Olaru**, *An experimental study on the displacement characteristics of a magnetic actuator based on ferrofluid*, SIELMEN 2013-9-th International Conference on Electromechanical and Power Systems, October 2013, 13-15 Iasi, Romania, 17-18 Chisinau, Moldavia, p. 165-170. ISBN 978-606-13-1560-4.
2. Camelia Petrescu, **R. Olaru**, C. Astratini-Enache, *Comparative Study of the Performance of several Current Controlled Actuators with Permanent Magnets*, EPE 2010-6th International Conference on Electrical and Power Engineering, October 28-30, Iasi, Romania, Proceedings of the International Workshop on Electromagnetic Compatibility and Engineering in Medicine and Biology, p. 75-78, ISBN 978-13-0071-6.

3. R. Hertanu, **R. Olaru**, *Magnetically Actuated Minipump with Passive Valves*, Proceedings of the 6th International Conference on Electrical and Power Engineering, EPE 2010, October 28-30, Iasi, Romania, Volume 2, p. II.20-23, ISBN vol.II: 978-606-13-0078-5, ISBN general: 978-606-13-0079-2.
4. C. Astratini-Enache, **R. Olaru**, Camelia Petrescu, *Magnetic Field Analysis of the Magnetic Assembly from a Moving Magnet Type Actuator*, Proceedings of the 6th International Conference on Electrical and Power Engineering, EPE 2010, October 28-30, Iasi, Romania, Volume I, p. I.215-218, ISBN vol.I: 978-606-13-0077-8, ISBN general: 978-606-13-0079-2.
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