

Lista lucrărilor științifice și didactice

selecție din perioada 2010 - 2024

1. Monografii

1. Săulescu, R., Neagoe, M., Jaliu, C. Amplificatoare de turație. Vol. II. Modelarea răspunsului mecanic al sistemelor cu generator electric contrarotativ, Editura Universității Transilvania din Brașov, 2021, isbn: 978-606-19-1406-7
2. Săulescu, R., Neagoe, M., Jaliu, C. Amplificatoare de turație. Vol. I. Modelarea răspunsului mecanic al sistemelor cu generator electric de curent continuu, Editura Universității Transilvania din Brașov, 2018, isbn:978-606-19-0972-8.
3. Jaliu, C., Climescu, O. Sisteme microhidroenergetice, Ed. Junimea Iași, 2015, ISBN 978-973-37-1895-6.
4. Vișa, I., Jaliu, C., Duță, A., Neagoe, M. ș.a. The Role of Mechanisms in Sustainable Energy Systems, Ed. Universității Transilvania din Brașov, 2015, ISBN 978-606-19-0571-3.
5. Diaconescu, D., Neagoe, M., Jaliu, C., Săulescu, R. Products' Conceptual Design. Editura Universității Transilvania, 2010, ISBN 978-973-598-230-0.
6. Neagoe, M., Diaconescu, D., Jaliu, C., Munteanu, O., Săulescu, R., Crețescu, N. Linkage accuracy modelling, Editura Universității Transilvania din Brașov, 2010, ISBN 978-973-635-921-7.
7. Jaliu, C., Diaconescu, D., Neagoe, M., Munteanu, O., Săulescu, R., Pascale, L., Gall, R. Planetary gearset modelling. Editura Universității Transilvania din Brașov, 2010, ISBN 978-973-598-481-6.

2. Manuale didactice

1. Săulescu, R., Ciobanu, D., Neagoe, M., Jaliu, C. Mecanisme. Elemente de teorie aplicată, Ed. Universității Transilvania din Brașov, 2016, ISBN 978-606-19-0850-9.

3. Lucrări publicate în reviste cotate ISI

1. Saulescu R., Jaliu, C., Neagoe, M., Ciobanu, D., Cretescu N. Comparative analysis of torque-adding wind energy conversion systems with a counter-rotating vs. conventional electric generator, Frontiers in Energy Research (FI 3,4), vol. 11, 2023, <https://www.frontiersin.org/articles/10.3389/fenrg.2023.1215509>, DOI10.3389/fenrg.2023.1215509, ISSN=2296-598X
2. Neagoe, M., Saulescu, R.; Jaliu, C., Munteanu, O., Cretescu, N. A Comparative Performance Analysis of Four Wind Turbines with Counter-Rotating Electric Generators, Applied Sciences (FI 2,7), 2022, 12, 4233. <https://doi.org/10.3390/app12094233>

Jaliu

3. Neagoe M., Saulescu R., Jaliu C., Neagoe I. Dynamic analysis of a single-rotor wind turbine with counter-rotating electric generator under variable wind speed, (2021) Applied Sciences (FI 2,838), 11 (19), <https://DOI.org/10.3390/app11198834> .
4. Saulescu R., Neagoe M., Jaliu C., Munteanu O. A comparative performance analysis of counter-rotating dual-rotor wind turbines with speed-adding increasers, (2021) Energies (FI 3,252), 14 (9), art. no. 2594, <https://DOI.org/10.3390/en14092594>
5. Neagoe M., Saulescu R., Jaliu C., Simionescu, PA. A Generalized Approach to the Steady-State Efficiency Analysis of Torque-Adding Transmissions Used in Renewable Energy Systems. Energies (FI 3,004). 2020; 13(17):4568, <https://doi.org/10.3390/en13174568>
6. Neagoe, M., Săulescu, R., Jaliu, C. Design and Simulation of a 1 DOF Planetary Speed Increaser for Counter-Rotating Wind Turbines with Counter-Rotating Electric Generators, Energies (FI 2,707), 2019 <https://www.mdpi.com/1996-1073/12/9/1754>.
7. Săulescu, R., Neagoe, M., Jaliu, C. Conceptual Synthesis of Speed Increasers for Wind Turbine Conversion Systems, Energies (FI 2,707), 2018 <http://www.mdpi.com/1996-1073/11/9/2257>.
8. Climescu, O., Săulescu, R., Jaliu, C. Specific features of a counter-rotating transmission for renewable energy systems. Environmental Engineering and Management Journal, August 2011 Vol.10, ISSN 1582 - 959, pp. 1105-1113 (FI 1,004). http://www.eemj.icpm.tuiasi.ro/pdfs/vol10/no8/26_348_Climescu_11.pdf.
9. Jaliu, C., Diaconescu, D., Neagoe, M., Săulescu, R., The eco-impact of small hydro implementation, Environmental engineering and management journal, Volume: 8, Issue: 4, Pages: 837-841, 2009, ISSN: 1582-9596. (FI 0,885).

4. Lucrări publicate în volumele conferințelor de specialitate (volume ISI)

1. Neagoe M., Saulescu R., Jaliu C., Cretescu N. Steady-State Modeling and Simulation of a 1-DOF Dual-Input and Dual-Output Planetary Speed Increaser for Counter-Rotating Wind Turbines, (2022) Mechanisms and Machine Science, 118 MMS, pp. 20 - 31, DOI: 10.1007/978-3-030-99826-4_3, WOS:000783302600003.
2. Ciobanu, D., Săulescu, R., Jaliu, C. Kinematic modelling of the tracking system for parabolic trough collector, 7th IEEE international conference on energy efficiency and agricultural engineering (EE&AE), 2020, DOI10.1109/eeae49144.2020.9279096, WOS:000659299700134.
3. Neagoe M., Saulescu R., Jaliu C., Cretescu N. Efficiency Analysis of a Planetary Speed Increaser for Wind Turbines with Counter-Rotating Versus Fixed-Stator Electric Generator, 7th IEEE international conference on energy efficiency and agricultural engineering (EE&AE), 2020, DOI10.1109/eeae49144.2020.9279068, WOS:000659299700108.
4. Neagoe, M., Săulescu, R., Jaliu, C. Comparative performance analysis of two chain planetary speed increasers for micro-hydro/wind conversion systems, PGSRET Conference Proceedings IEEE, 2019, DOI: 10.1109/PGSRET.2019.8882732, issn: 978—1, WOS:000611393300016.
5. Gheorghe, M., Ciobanu, D., Saulescu, R., Jaliu, C. Economic analysis algorithm of a PV – wind hybrid system. Acta Technica Napocensis - Series Applied Mathematics Mechanics And Engineering, vol. 61 / 3, pp. 107-114, 2018,

issn:1221-5872, WOS:000451702200014.

6. Jaliu, C., Săulescu, R., Ciobanu, D. Hybrid system for a stand-alone application, Proceedings of 2016 International Conference on Production Research - Regional Conference Africa, Europe and the Middle East (ICPR-AEM 2016) And 4th International Conference On Quality And Innovation In Engineering And Management (QIEM 2016) issn:978-606-737-180-2, 2016, WOS:000436122900021.
7. Săulescu, R., Neagoe, M., Jaliu, C. Improving the energy performance of wind turbines implemented in the built environment using counter-rotating planetary transmissions. Materials Science and Engineering, issn: 1757-8981, 2016, DOI: 10.1088/1757-899X/147/1/012089. <https://iopscience.iop.org/article/10.1088/1757-899X/147/1/012089/pdf>
8. Ciobanu, D., Jaliu, C. Step tracking program for concentrator solar collectors. Materials Science and Engineering, 2016. Doi: 10.1088/1757-899X/147/1/012149.
9. Neagoe, M., Saulescu, R., Jaliu, C., Cretescu, N. Novel Speed Increaser Used in Counter-rotating Wind Turbines. New advances in mechanisms, mechanical transmissions and robotics. Book Series: Mechanisms and Machine Science, issn:978-3-319-45449-8, 2016. DOI: 10.1007/978-3-319-45450-4_15.
10. Ciobanu, D., Eftimie, E., Jaliu, C. The influence of measured/simulated weather data on evaluating the energy need in buildings, Energy Procedia, Volume: 48 Pages: 796-805, DOI: 10.1016/j.egypro.2014.02.092, 2014.
11. Todi-Eftimie, A., Velicu, R., Săulescu, R., Jaliu C. Bearing friction vs. chain friction for chain drives, 3rd International Conference on Advanced Engineering Materials and Technology (AEMT 2013), Jurnal: Advanced Materials Research Vols. 753-755 (2013) pp 1110-1113, Trans Tech Publications, Switzerland, doi:10.4028/www.scientific.net/AMR.753-755.1110.
12. Săulescu, R., Jaliu, C., Climescu, O., Diaconescu, D. On the use of 2 DOF planetary gears as "speed increaser" in small hydros and wind turbines. Proceedings of the ASME 2011 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, IDETC/CIE 2011, 28 - 31.08, 2011, Washington, DC, USA, CD Proceedings, ISBN: 987-0-7918-3856-3.
13. Climescu, O., Saulescu, R., Jaliu, C., Diaconescu, D. Algorithm for the development of a concept for a mechanical function used in RES, Proc. of QIEM Conference, Pages: 391-396, 2011, issn:978-973-662-614-2.
14. Jaliu, C., Saulescu, R., Diaconescu, D., Neagoe, M., Climescu, O. Dynamic Features of a Planetary Speed Increaser Usable in Small Hydropower Plants. Proceedings of the 5th IASME International Conference on ENERGY & ENVIRONMENT (EE '10), pp. 241-246, February 23-25, 2010, University of Cambridge, UK. ISSN: 1790-5095, ISBN: 978-960-474-159-5.
15. Jaliu, C., Visa, I., Diaconescu, D.V., Săulescu, R., Neagoe, M., Climescu, O. Dynamic Model of a Small Hydropower Plant. OPTIM 2010. Proceedings of the 12th International Conference on Optimization of Electrical and Electronic Equipment. Renewable Energy Conversion and Control. May 20-21.10, Braşov, pp. 1216-1223. ISSN: 1842-0133, ISBN 978-973-131-080-0.
16. Jaliu, C., Diaconescu, D., Săulescu, R., Climescu, O. On a New Planetary Speed Increaser Drive Used in Small Hydros. Part I. Conceptual Design, Proc. of EUCOMES 2010: New Trends in Mechanism Science: Analysis and Design Book Series: Mechanisms and Machine Science, Volume: 5 Pages: 199-207, 2010, DOI: 10.1007/978-90-481-9689-

0_232010, issn:978-90-481-9688-3.

17. Saulescu, R., Jaliu, C., Diaconescu, D., Climescu, O. On a New Planetary Speed Increaser Drive Used in Small Hydros. Part II. Dynamic Model, Proc. of EUCOMES 2010 : NEW TRENDS IN MECHANISM SCIENCE: ANALYSIS AND DESIGN Book Series: Mechanisms and Machine Science, Volume: 5, pag. 209-216, 2010, DOI: 10.1007/978-90-481-9689-0_24 issn:978-90-481-9688-3

5. Lucrări publicate în reviste și conferințe cu volume BDI (Scopus)

1. Neagoe, M., Jaliu, C.I., Saulescu, R.G. Dynamic Modeling and Simulation of a Counter-Rotating Wind System with 1-DOF Planetary Speed Increaser, 16th International Federation of Theory of Machines and Mechanisms World Congress, IFToMM Tokyo, Mechanisms and Machine Science, 149, pp. 742–752, 2024, DOI 10.1007/978-3-031-45709-8_72.
2. Săulescu, R., Jaliu, C., Ciobanu, D. On the kinematic modelling of an accurate tracking system to be implemented into solar-thermal collectors, IOP Conference Series: Materials Science and Engineering, 2020, 997(1), 012090, DOI 10.1088/1757-899X/997/1/012090.
3. Neagoe M., Jaliu C., Saulescu R., Simionescu P.A. Steady-State Response of a Dual-Rotor Wind Turbine with Counter-Rotating Electric Generator and Planetary Gear Increaser. (2020) Mechanisms and Machine Science, 83, pp. 106 - 115, DOI: 10.1007/978-3-030-43929-3_10.
4. Neagoe, M., Săulescu, R., Jaliu, C. Power Flow Modelling in a Planetary Speed Increaser for Wind Turbines with Counter-rotating Electric Generator, Mechanisms and Machine Science, Volume 73, 2019, Pages 957-966, DOI: 10.1007/978-3-030-20131-9_95, issn: 22110984.
5. Ciobanu, D., Enescu, M., Jaliu, C. Mono-axial tracking system for parabolic trough collector, IOP Conference Series: Materials Science and Engineering Volume 514, Issue 1, 26 June 2019, DOI: 10.1088/1757-899X/514/1/012034, issn:17578981.
6. Ciobanu, D., Gheorghe, M., Saulescu, R., Midoi, B., Jaliu, C. The effect of urban buildings on the implementation of small wind turbines, IOP Conference Series: Materials Science and Engineering, Volume 514, Issue 1, DOI: 10.1088/1757-899X/514/1/012028, issn:17578981.
7. Săulescu, R., Neagoe, M., Jaliu, C. Modelling of the static response of a wind/hydro turbine with two rotors and a 1DOF speed increaser, Mechanisms and Machine Science, 57, pp. 321-329, 2018, DOI: 10.1007/978-3-319-79111-1_32, issn:22110984.
8. Săulescu, R., Jaliu, C., Neagoe, M. Structural and Kinematic Features of a 2 DOF Speed Increaser for Renewable Energy Systems, Applied Mechanics and Materials, Vol. 823 (2016) pp 367-372, doi:10.4028/www.scientific.net/AMM.823.367.
9. Săulescu, R., Neagoe, M., Jaliu, C., Munteanu, O. Comparative Analysis of Two Wind Turbines with Planetary Speed Increaser in Steady-State, Applied Mechanics and Materials, Vol. 823 (2016) pp 355-360, doi:10.4028/www.scientific.net/AMM.823.355.



10. Climescu, O., Jaliu, C., Saulescu, R. Comparative analysis of horizontal small scale wind turbines for a specific application, 015 IFToMM World Congress Proceedings, Taiwan, 2015, DOI: 10.6567/IFToMM.14TH.WC.OS16.005, issn:9789860460988.
11. Săulescu, R., Neagoe, M., Jaliu, C., Munteanu, O. On a New Chain Planetary Transmission for Renewable Energy Systems. Part I: Product Design, Applied Mechanics and Materials, Volume 658, pag. 147-152, 2015.
12. Săulescu, R., Jaliu, C., Neagoe, M., Climescu, O., On a New Chain Planetary Transmission for Renewable Energy Systems - Part II: Virtual Prototyping and Experimental Testing, Applied Mechanics and Materials, Vol. 760, pp. 153-158, 2015.
13. Săulescu, R., Climescu, O., Jaliu, C. Assessment of Wind Energy Resources in Communities. Case Study: Brasov, Romania, Springer Proceedings in Energy, pp. 151-166, 2014.
14. Papuc, R., Velicu, R., Lateş, M., Jaliu, C. Geometrico-static modeling and simulation of the contact between chain and guide of a reference transmission, Applied Mechanics and Materials, Volume 658, pag. 111-116, 2014.
15. Săulescu, R., Jaliu, C., Munteanu, O., Climescu, O. Planetary Gear for Counter-Rotating Wind Turbines, Applied Mechanics and Materials, Vol. 658, pp. 135-140, 2014.
16. Ciobanu, D., Jaliu, C., Saulescu, R. Chain Tracking System for Solar Thermal Collector, Applied Mechanics and Materials, Vol. 658, pp. 35-40, 2014, DOI: 10.4028/www.scientific.net/AMM.658.35.
17. Ciobanu, D., Jaliu, C. Innovative tracking system for parabolic dish solar collector, Mechanisms and Machine Science, 17, pp. 317-328, 2014, DOI: 10.1007/978-3-319-01845-4_32, issn:97894007 74841.
18. Jaliu C., Neagoe M., Săulescu R, Dobre E. B., Low-speed actuator used in solar tracking systems, The 11th IFToMM International Symposium on Science of Mechanisms and Machines- SYROM 2013. Mechanisms and Machine Science 18, November 11-12, pp. 381-389, 2013, ISBN: 978-3-319-01844-7, ISSN: 2211-0984, DOI 10.1007/978-3-319-01845_38. Ed. Springer.
19. Todi-Eftimie, A., Velicu, R., Săulescu, R., Jaliu, C. Geometric modelling of power joints from bush chain drives, The 11th IFToMM International Symposium on Science of Mechanisms and Machines- SYROM 2013. Mechanisms and Machine Science 18, November 11-12, pp. 471-479, 2013, ISBN: 978-3-319-01844-7, ISSN: 2211-0984, DOI 10.1007/978-3-319-01845_47.
20. Climescu, O., Jaliu, C., Săulescu, R. On the Efficiency of a Planetary Speed Increaser Usable in Small Hydros. Power Transmissions, Mechanism and Machine Science, Vol. 13, 2013, pp 259-268 (http://link.springer.com/chapter/10.1007/978-94-007-6558-0_18).
21. Săulescu, R., Jaliu, C., Ciobanu, D., Diaconescu, D. Differential Planetary Gear Transmission Usable in Renewable Energy Systems. Proceedings of MeTrApp 2011. Mechanism and Machine Science, Vol. 3, Mechanisms, Transmissions and Applications, Timișoara, România, pp. 275-282, Octombrie 2011, Ed. Springer, ISSN: 2211-0984, ISBN: 978-94-007-2726-7.
22. Jaliu, C., Diaconescu, D., Săulescu, R., Climescu, O. On a New Planetary Speed Increaser Drive Used in Small Hydros. Part I. Conceptual Design. Proceedings of EUCOMES 2010. New Trends in Mechanism Science. Analysis and Design. Mechanism and Machine Science, Vol. 5, Cluj Napoca, România, pp. 199-207, Septembrie 2010, Ed.

Springer, ISBN 987-90-481-9688-3.

23. Săulescu, R., Jaliu, C., Diaconescu, D., Climescu, O. On a New Planetary Speed Increaser Drive Used in Small Hydros. Part II. Dynamic Model. Proceedings of EUROMES 2010. New Trends in Mechanism Science. Analysis and Design. Mechanism and Machine Science, Vol. 5, Cluj Napoca, România, pp. 209-216, Septembrie 2010, Ed. Springer, ISBN 987-90-481-9688-3.

6. Brevete de invenție

1. Amplificator de turatie planetar monomobil cu două ieșiri contrarotative RO131740B1 / 21.11.2023 (autori: SĂULESCU Radu, NEAGOE Mircea, VIȘA Maria, JALIU Codruța, MUNTEANU Olimpiu, ȚOȚU Ioan, CREȚESCU Nadia)
2. Mecanism de orientare monoaxială de înaltă precizie RO131808 B1/28.02.2022 (autori: SĂULESCU Radu, NEAGOE Mircea, JALIU Codruța, CIOBANU Daniela, ȚOȚU Ioan).
3. Sistem eolian contrarotativ monomobil RO 131512 B1 / 30.03.2022 (autori: NEAGOE Mircea, SĂULESCU Radu, JALIU Codruța, MUNTEANU Olimpiu, CREȚESCU Nadia).
4. Actuator viteză mică cu reductor articulată intermitent RO 128120 B1/29.07.2022 (autori: VIȘA Ion, DIACONESCU Dorin, NEAGOE Mircea, JALIU Codruța, ALEXANDRU Cătălin, DOBRE Bianca, BOȚOMAN Monica, SĂULESCU Radu, MOLDOVAN Macedon, PORCA VĂTĂȘESCU Monica).
5. Transmisie planetară, BI RO 126694/28.08.15 (autori DIACONESCU Dorin; JALIU Codruța; NEAGOE Mircea; MUNTEANU Olimpiu; SĂULESCU Radu Gabriel; CLIMESCU Oliver; CIOBANU Daniela; BURDUHOS Bogdan).
6. Transmisie planetară cu lanț, BI RO 128109/30.07.2014 (autori DIACONESCU Dorin Valentin, JALIU Codruța, NEAGOE Mircea, MUNTEANU Olimpiu, SĂULESCU Radu Gabriel, CLIMESCU Oliver Laszlo, TOHONEANU Daniel Cornel).
7. Transmisie cicloidală cu role, BI RO125177 B1/30.11.2011 (Autori DIACONESCU Dorin Valentin; NEAGOE Mircea; JALIU Codruța; SĂULESCU Radu Gabriel; PASCALE Lucia; ȚOȚU Vlad).
8. Dispozitiv pentru producerea de hidrogen și oxigen prin fotoelectroliză cu senzori pentru monitorizarea parametrilor procesului, BI RO 125540/28.06.2013 (autori: VIȘA Ion; DUȚĂ Anca; JALIU Codruța; ENEȘCA Ioan Alexandru).
9. Mecanism de orientare, BI RO97189/1989 (autori: DUDIȚĂ Florea, DIACONESCU Dorin, ENACHE Vasile, GOGU Grigore, JALIU Codruța).

7. Granturi și contracte de cercetare științifică

Programul/Proiectul	Funcția	Perioada
Proiect Leonardo da Vinci NL/06/B/P/PP/157604 Euromaint: European Maintenance: Professional skills for Maintenance Managers & Maintenance Engineers	Coordonator partener	2006-2008

Sisteme mecatronice inovative destinate microhidrocentralelor pentru exploatarea eficientă a potențialului hidrologic din zonele izolate, Proiect tip PNII, cod CNCISIS ID_140/2007	Director de proiect	2007-2009
Modele, programe și simulări pentru optimizarea dinamică a transmisiilor mecanice cu flux energetic ramificat, prin eliminarea defectelor structurale. Grant de cercetare CNCISIS, proiect tip A, cod CNCISIS 1060 / 2005	Director de proiect	2005-2006
Unita Universitas Montis – UNITA, ERASMUS-EDU-2023-EUR-UNIV-1 -101124853	membru	2023-2027
Engineers Communicating and Collaborating Internationally for the Green Transition - ECO-GT, Erasmus + KA220 – ADU 2023-1-PL01-KA220-HED-000165199	membru	2023-2027
Reforming Undergraduate Education for GReen and Sustainable Development in Armenia and MolDova - RE-GRAD, ERASMUS-EDU-2023-CBHE-STRAND-3 / 101128817	membru	2024-2026
Creșterea competitivității SC ELDON SRL prin optimizarea tehnologiei de fabricație a dulapurilor industriale de podea, PN-III-P2-2.1-BG-2016-0349	membru	2016 - 2018
Îmbunătățirea tehnologiei sistemului mecatronic multispectral în vederea creșterii performanțelor de captare a parametrilor vegetativi în contextul schimbărilor climatice – MultiCanSPEC, PN-III-P2-2.1-BG-2016-0132	membru	2016 - 2018
Sistem inovativ integrat materiale-Tehnologie -Echipament pentru procese simultane de fotocataliză și adsorbție aplicate în epurarea sustenabilă a apelor uzate SimFotoAd, 217/2014	membru	2014 - 2017
Sistem inovativ sustenabil pentru auto-decontaminarea fotocatalitică a echipamentelor de protecție CBRN – CB-PhotoDeg, 282/2014	membru	2014 - 2017
Proiectarea, realizarea și experimentarea unui sistem mecatronic de monitorizare multispectrală a stării de vegetație a culturilor agricole – MoniCult, 225/2014	membru	2014 - 2016
Complex high surface area photoactive nano-materials for environmentally-friendly energy production and organic pollutants degradation (NANOVISMAT) PNII 162/2012	membru	2012 - 2014
CDS Dynamic Tribology, Contract cu Schaeffler 4029 / 2008	membru	2011 - 2014
Sisteme solar termice eficiente cu acceptanță ridicată pentru implementare în mediul urban EST IN URBA, 28 / 2012	membru	2012 - 2014
Stație autonomă de monitorizare cu aplicații în domeniul energiei fotovoltaice și al protecției mediului, Parteneriate 22-101/2008.	membru	2008 – 2011
Sisteme mecatronice complexe pentru aplicatii în medicină SMART, Parteneriate 72197/2008.	membru	2008 – 2011

06.03.2024

Prof.dr.ing. Codruta Ileana JALIU

