

TABEL
 cu rezultatele institutelor Academiei Romane in 2021
 (in completare pt. „Anexa 2”)

A. Articole publicate in reviste WoS din străinătate.

- [1] **V. Ungureanu**, I. Both, M. Burca, B. Radu, C. Neagu, **D. Dubina**: Experimental and numerical investigations on built-up cold-formed steel beams using resistance spot welding. *Thin-Walled Structures* 161 (2021) 107456, IF = 4.442.(Q1)
- [2] Maria Kotelko, J. Grudziecki, **V. Ungureanu**, **D. Dubina**: Ultimate and post-ultimate behaviour of thin-walled cold-formed steel open-section members under eccentric compression. Part I: Collapse mechanisms database (theoretical study). *Thin-Walled Structures* 169 (2021) 108366, IF = 4.442. (Q1)
- [3] R. Buzatu, **V. Ungureanu**, A. Ciutina, M. Gireadă, D. Vitan, I. Petran, Experimental Evaluation of Energy-Efficiency in a Holistically Designed Building, *Energies* 2021, 14, 5061. <https://doi.org/10.3390/en14165061>, IF = 3.004. (Q3)
- [4] **Dubina, D, Dinu, F** and Stratan, A, Resilience of dual steel-dual frame buildings in seismic areas, *Steel Construction-Design and Research* STC0 14(3), pp. 150-166, (2021). DOI 10.1002/stco.202100016.
- [5] **N. Herişanu, V. Marinca**, A Solution Procedure Combining Analytical and Numerical Approaches to Investigate a Two-Degree-of-Freedom Vibro-Impact Oscillator. *Mathematics*, 9(12), Article Number 1374 (2021). IF= 2.258 (Q1)
- [6] B. Marinca, **V. Marinca**, C. Bogdan, Dynamics of SEIR epidemic model by optimal auxiliary functions method. *Chaos Solitons & Fractals*, 147, Article Number 110949 (2021), IF= 5.044 (Q1)
- [7] **N. Herişanu, V. Marinca**, An effective analytical approach to nonlinear free vibration of elastically actuated microtubes, *Meccanica*, 56 (4), pp.813-823 (2021). IF=2.258 (Q3)
- [8] **D. Hulea**, O. Cornea, **N. Muntean**, B. Fahimi, A bidirectional hybrid switched inductor converter with wide voltage conversion range, *IET Power Electronics*, 14(10) , pp.1753-1767 (2021). DOI: 10.1049/pel2.12138 (Q2)
- [9] E. Quaranta, G. Aggidis, R.M. Boes, C. Comoglio, C. De Michele, E.R. Patro, E. Georgievskaja, A. Harby, I. Kougias, S. **Muntean**, J. Perez-Diaz, P. Romero-Gomez, M. Rosa-Clot, A. Schleiss, E. Vagnoni, M. Wirth, A. Pistocchi, Assessing the energy potential of modernizing the European hydropower fleet, *Energy Conversion and Management*, **246**, Article Number 114655 (2021). doi: 10.1016/j.enconman.2021.114655 IF=9.709 (Q1)
- [10] R.A. Szakal, A. Doman, **Muntean S.**, Influence of the Reshaped Elbow on the Unsteady Pressure Field in a Simplified Geometry of the Draft Tube, *Energies*, 14(5), 1393, (2021). doi:10.3390/en14051393 IF=3.004 Q3)
- [11] S.V. Galatanu, **S. Muntean**, L. Marsavina, I.I. Ailinei, D. Micota, Rainwater propeller pumps structural integrity, *International Journal of Structural Integrity*, 12(4), pp. 645-665 (2021). doi:10.1108/IJSI-10-2018-0070
- [12] K. Philippou, C.N Christou, **V. Socoliuc**, **L. Vekas**, E. Tanasă, M. Miclau, I. Pashalidis, T.K. Christoforou, Superparamagnetic polyvinylpyrrolidone/chitosan/Fe3O4 electrospun nanofibers as effective U(VI) adsorbents, *Journal of Applied Polymer Science* 138(15), 50212 (2021) IF=2.52 (Q2)
- [13] OV Tomchuk, MV Avdeev, VL Aksenov, AV Shulenina, OI Ivankov, V Ryukhtin, **L Vékás**, LA Bulavin, Temperature-dependent fractal structure of particle clusters in aqueous ferrofluids by small-angle scattering, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 613, 126090 (2021) IF= 4.539 (Q2)
- [14] M. Nikolaou, K. Avraam, A. Kolokithas-Ntoukas, A. Bakandritsos, F. Lizal, O. Misik, M. Maly, J. Jedelsky, I. Savva, **F. Balanean**, T. Krasia-Christoforou, Superparamagnetic electrospun microrods for magnetically-guided pulmonary drug delivery with magnetic heating, *Materials Science and Engineering C*, 126, 112117, (2021). IF=7.328 (Q1)
- [15] **V. Socoliuc**, C. N. Marin, The effect of long time exposure to light of a water-based ferrofluid on its low frequency complex magnetic permeability, *Journal of Magnetism and Magnetic Materials*, 523, 167635 pp. 6, (2021) <https://doi.org/10.1016/j.jmmm.2020.167635> IF=2.717 (Q2)
- [16] E.-A. Moaca, C.-G. Watz, **V. Socoliuc**, R. Racoviceanu, C. Pacurariu, R. Ianos, S. Cînta-Pînzaru, L. Barbu Tudoran, F. Nekvapil, S. Iurciuc, C. Stoica, C.-A. Dehelean, Biocompatible Magnetic Colloidal Suspension Used as a Tool for Localized Hyperthermia in Human Breast Adenocarcinoma Cells: Physicochemical Analysis and Complex In Vitro Biological Profile, *Nanomaterials* 11, 1189, pp.28, (2021) <https://doi.org/10.3390/nano11051189> IF=5.076 (Q1)
- [17] R.I. Baron, G. Biliuta, **V. Socoliuc**, S. Coseri, Affordable Magnetic Hydrogels Prepared from Biocompatible and Biodegradable Sources, *Polymers* 13(11) 1693, pp.15, (2021) <https://doi.org/10.3390/polym13111693> IF=4.329 (Q1)
- [18] A.C. Csakvari, C. Moisa, D.G. Radu, L.M. Olariu, A.I. Lupitu, A.O. Panda, G. Pop, D. Chambre, **V. Socoliuc**, L. Copolovici, D.M. Copolovici, Green Synthesis, Characterization, and Antibacterial Properties of Silver Nanoparticles Obtained by Using Diverse Varieties of Cannabis sativa Leaf Extracts, *Molecules*, 26(13), 4041, pp. 17, (2021) <https://doi.org/10.3390/molecules26134041> IF=4.412 (Q2)

B. Articole publicate in reviste WoS din Romania.

- 19 C. Neagu, **D. Dubina**, **F. Dinu**, I. Petran, Structural investigations on the progressive collapse of a steel-timber intermediate roofing, *Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science* 22(3), pp. 257-266, (2021). IF = 1.523 (Q3)

- 20 R.A. Szakal, D. Mecea, A.I. Bosioc, I. Borbáth, **S. Muntean**, Design and testing a magneto-rheological brake with cylindrical configuration, *Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science*, 22(2), pp. 189-197, (2021). IF=1.523 (Q3)
- 21 **I. Boldea, L.N. Tutelea, N. Munteanu**, A. Popa, F. Blaabjerg, Robotics electric actuators: recent progress in high torque density designs and their advanced motion control-a review, *Proceedings of the Romanian Academy Series A-Mathematics Physics Technical Sciences Information Science*, 21(4), pp337-355, (2020). IF = 1.523 (Q3)
- 22 **A. Cristea**, R. Horhat, A. Neagu, Lattice Boltzmann simulations of morphogenesis in artificial tissues, *Romanian Journal of Physics*, 66 (3-4) (2021). IF=1.888 (Q3)

B'. Articole in reviste non-WoS

- [1] B. Marinca, **V. Marinca**, Analytical approximation solution of nonlinear Blasius problem, *The Romanian Journal of Technical Sciences. Applied Mechanics*, 65(1), 2020.

23 Articole ISI Conference Proceedings

- [1] **V. Ungureanu**, I. Lukačević, I. Both, **D. Dubina**, Numerical investigations on built-up cold-formed steel beams for long spans. 4(2-4), Special Issue: EUROSTEEL 2021 Sheffield — Steel's coming home, 01 September 2021, pp. 2277-2284. <https://doi.org/10.1002/cepa.1550>.
- [2] **D. Dubina**, L. Czechowski, M. Kotelko, **V. Ungureanu**. Some aspects of buckling behavior of channel section members under eccentric compression (June 15, 2021). Proceedings of the 8th International Conference on Coupled Instabilities in Metal Structures (CIMS 2021). <http://dx.doi.org/10.2139/ssrn.3867138>.
- [3] **S. Muntean**, D.C. Moș, R.A. Szakal, A.I. Bosioc, **R. Susan-Resiga**, Influence of the elbow shape on the unsteady pressure field in decelerated swirling flows, 30th Symposium on Hydraulic Machinery and Systems, Lausanne, Switzerland, 5-10 July 2020, prezentata on-line in perioada 21-26 March 2021. IOP Conference Series: Earth and Environmental Science, Volume 774, Paper no. 012116 (2021). doi:10.1088/1755-1315/774/1/012116
- [4] R.A. Szakal, **S. Muntean**, A.I. Bosioc, **R. Susan-Resiga**, **L. Vékás** 3D numerical investigations of the swirling flow in a straight diffuser for the variable speed values of the rotor obtained with a magneto-rheological brake, 30th Symposium on Hydraulic Machinery and Systems, Lausanne, Switzerland, 5-10 July 2020, prezentata on-line in perioada 21-26 March 2021. IOP Conference Series: Earth and Environmental Science, Volume 774, Paper no. 012019, (2021). doi:10.1088/1755-1315/774/1/012019
- [5] **R.F. Susan-Resiga**, **S. Muntean**, A. Bosioc, A. Stuparu, Stabilisation of the swirl exiting a Francis runner far from the best efficiency point, 30th Symposium on Hydraulic Machinery and Systems, Lausanne, Switzerland, 5-10 July 2020 prezentata on-line in perioada 21-26 March 2021. IOP Conference Series: Earth and Environmental Science, Volume 774, Paper no. 012113 (2021). doi:10.1088/1755-1315/774/1/012113.
- [6] F.D. Stoian, S. Holotescu, **D. Susan-Resiga**, O. Marinica, Concentrated Magnetic Nanofluids for Use as Liquid Core: Magnetic and Transport Properties, (12th International Symposium on Advanced Topics in Electrical Engineering (ATEE), Bucharest, Romania, MAR 25-27, 2021), Book Series: International Symposium on Advanced Topics in Electrical Engineering, 2021, DOI: 10.1109/ATEE52255.2021.9425139.

24 Carti/capitole carti publicate in străinătate.

- [1] **V. Marinca**, **N. Herisanu**, B. Marinca, The Optimal Auxiliary Functions Method in Engineering Applications, Springer, Heidelberg, 2021, ISBN 978-3-030-75652-9.
- [2] **I. Boldea**, **L. Tutelea**, Electric Machines book, 2nd edition, volume 1+2 (800pp) CRC Press, Taylor & Francis Group 6000 Broken Sound Parkway NW, Suite 300, Boca Raton, Florida, New York, 2021. ISBN: 9780367375621

25 Carti publicate in EAR. -

26 Carti publicate in tara. -

27 Citări ale lucrărilor anterioare, în 2021 (fara autocitari): (listate in fisier separat)

28 Conferinte.

- [1] **D. Dubina**, **V. Ungureanu**: Local-distortional and overall interactive buckling of thin-walled cold-formed steel members with open cross-section (Keynote Lecture). The 8th International Conference on Coupled Instabilities in Metal Structures, Lodz University of Technology, Poland, July 12-14, 2021.
- [2] **D. Dubina**, **F. Dinu**, Aurel Stratan, (Keynote Lecture), High Strength Steel and Fuse Dissipative Solutions for Seismic Resistant Building Structures, The 9th European Conference on Steel and Composite Structures EUROSTEEL, 1–3 September 2021, Sheffield, UK.
- [3] **V. Ungureanu** (Keynote Lecture). “Case Studies on the Reuse of Reclaimed Steel. Lessons Learned from the Past.” SCEC Webinar on Green and Digital Steel Technologies. May 27, 2021, organized by Hâme University of Applied Sciences with SCEC Partners.

- [4] **V. Ungureanu** (Keynote Lecture). Eficiența energetică în clădiri. Conferința anuală Interreg-IPA Cross-border Cooperation Romania-Serbia Programme. Timișoara, 23 Februarie 2021.
- [5] **D. Dubina**, International Webinar lectures, Webinar on «Design of Steel Structures for Buildings in Seismic Areas» organized by European Constructional Steelwork - ECCS (<https://www.steelconstruct.com/eccs-online-training-eight-90-min-sessions/>), 18/02/2021 10:30-12:00? Conceptual design of seismic resistant structures, 09/03/2021 10:30-12:00 Design Case Studies - (1) Multistory Building; (2) Single Story Industrial Hall (D. Dubina)
- [6] **D. Dubina**, Webinar on «Design of Cold-Formed Steel Structures», organized by European Constructional Steelwork – ECCS, <https://www.steelconstruct.com/product/design-of-cold-formed-steel-structures/>, 08/06/2021 10:30-12:00 : Specific features of cold-formed steel structures Past, Present and Future, 5/06/2021 - 10:30-12:00: Design assisted by testing (D. Dubina) 29/06/2021 10:30-11:30: Conceptual design and technology aspects of modular multi-storey buildings - Modular Steel Construction - Structural systems and technologies (D. Dubina).
- [7] **N. Herișanu, V. Marinca**, Construction of Approximate Solution to Thermal Radiation on MHD Flow Over a Stretching Porous Sheet. Conferința ICNAAM Grecia-2021.
- [8] **V. Marinca, N. Herișanu**, *On the Autonomous Modified Van der Pol Oscillator*. Conferința ICNAAM Grecia-2021
- [9] **I. Boldea** – Reluctance electric motor drives for high efficiency in line-start and variable speed applications – an overview în calitate de profesor invitat la Gaeta, Italy 12.06.2021 (curs on-line)
- [10] **I. Boldea**, Curs intensiv (3 ore) la EU-EE 2021 PhD School, iunie 2021
- [11] **I. Boldea, L. N. Tutelea, A. Popa**, Linear oscillatory electric motor/generators: an overview (The 13th international symposium on linear drives for industry application - LDIA 2021, July 1-3, Wuhan, China)
- [12] **L. Tutelea, I. Torac, I. Boldea**, 100kW 2400-4800rpm -spoke-PM bonded NdFeB traction motor preliminary design, optimal design with FEM imported parameter circuit controlled dynamics validation (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [13] **L. Tutelea, I. Torac, A-S Isfanuti, A. Popa, I. Boldea**, 10MW, 10rpm, 30Hz spoke Ferrite and bonded NdFeB-rotor wind PMSG preliminary and low computation time FEM based optimal design with key FEM validations (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [14] **A.D. Martin, D. Vitan, I. Torac, L. Tutelea, I. Boldea**, BEGA-biaxial excitation generator - operation for constant diode dc output voltage with 3,6,9 phases for increased redundancy (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [15] **M. Gireada, D. Hulea, O. Cornea, N. Muntean**, A High Gain Hybrid non-isolated Magnetically-Coupled Switched-Inductor Converter (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [16] **L.D. Vitan, A.D. Martin, L. Tutelea, I. Boldea**, Supercapacitor city minibus propulsion system simulations, methodology, and case study (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [17] **C.M. Ancuti, A. S. Isfanuti, L. Tutelea, I. Boldea**, Referencing position versus speed active flux based encoderless control of PM-RSM drives at ultra-low speeds without signal injection (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [18] **S. Isfanuti, L. Tutelea, I. Boldea**, Doubly Salient Ferrite rotor PM single phase SM motor: FEM based optimal design and analysis (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [19] **L. Tutelea, T. Staudt, I. Boldea**, Magnetic equivalent circuit based optimal design code of high torque density and efficiency small power claw pole inner stator PM motor (International Joint Conference OPTIM-ACEMP 2021, on-line, Sept, 2-3, 2021)
- [20] **M.-C. Ioncica, A. Totorean, S. Bernad**, *CFD in magnetic particle targeting for bio-medical applications*, Hungarian – Romanian Workshop on Magneto-rheological fluids and applications, June 30, 2021 (online). Organizer: Romanian Academy – Timișoara Branch, Timișoara, România, Pannonia University, Veszprém, Hungary, University Politehnica Timișoara, România, ROSEAL S.A. Odorheiul Secuiesc, Romania.
- [21] **R.A. Szakal, D.A. Mecea, A.I. Bosioc, I. Borbath, S. Muntean, L. Vekas**, *Design and testing a magneto-rheological brake with cylindrical configuration*, Hungarian – Romanian Workshop on Magneto-rheological fluids and applications, June 30, 2021 (online). Organizer: Romanian Academy – Timișoara Branch, Timișoara, România, Pannonia University, Veszprém, Hungary, University Politehnica Timișoara, România, ROSEAL S.A. Odorheiul Secuiesc, Romania.
- [22] **R.A. Szakal, A. Doman, A.I. Bosioc, L. Vekas, S. Muntean**, *Control speed with a magneto-rheological brake with cylindrical configuration in swirling flows*, Hungarian – Romanian Workshop on Magneto-rheological fluids and applications, June 30, 2021 (online). Organizer: Romanian Academy – Timișoara Branch, Timișoara, România, Pannonia University, Veszprém, Hungary, University Politehnica Timișoara, România, ROSEAL S.A. Odorheiul Secuiesc, Romania.
- [23] **M. Ioncica, A. Totorean, S. Bernad**, *Influence of the stent geometry on flow parameters after arterial stent placement*, Conference AVMS 2021 - Acoustics and Vibrations of Mechanical Structures, Timisoara, May 28-29, 2021.
- [24] **M. Ioncica, S. Bernad, A. Totorean, T. Ciocan, C. Totorean, E. Bernad**, Particle release from the simplified stent geometry surface. Numerical investigations, The 25th International Conference “Mechanika-2021” Kaunas, Lithuania, May 21, 2021 (on-line).
- [25] **A.F. Totorean, Maria C. Ioncica, S.I. Bernad, T. Ciocan, C.I. Totorean, E.S. Bernad**, Medical image based numerical simulation of the abdominal aorta flow, 10th International Conference on Energy and Environment - CIEM 2021, 14-15 October 2021, Bucharest, Romania.

- [26] M.C. Ioncica, **S.I. Bernad**, A.F. Totorean, T. Ciocan, C.I. Totorean, E. Bernad, Drug particle dynamics in the two different simplified stent geometries, 10th International Conference on Energy and Environment - CIEM 2021, 14-15 October 2021, Bucharest, Romania.
- [27] **L. Vekas**, *Magnetic Fluids*, prelegere la European School on Magnetism (ESM) "From fundamental properties of matter to magnetic materials and applications, organizat de European Magnetism Association la Cluj-Napoca, 8-16 septembrie, 2021 (<http://magnetism.eu/esm/2021/slides/slides-vekas.pdf>)
- [28] **V. Socoliuc**, C.N. Marin, Spontaneous and magnetically induced nanoparticle clustering in moderately concentrated transformer oil based magnetic fluids, acceptata pentru prezentare la *TIM20-21 Physics Conference, 11th-13th November 2021, Timisoara, Romania*,

29 Rapoarte de interes public. -

30 Brevete de inventie.

- [1] I., Borbath T. Borbath, **L. Vekas**, Sistem de etansare rotitor cu nanofluid magnetic pentru viteze periferice ridicate, Brevet OSIM nr.132393 B1(2020) - neraportat in 2020

