

L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

A. Teza de doctorat

1. T1 **Dunca G.**, Dezvoltarea unor metode de analiză a parametrilor de funcționare a mașinilor hidraulice în regimuri nestaționare, teză postdoctorală, decembrie 2015, București.
2. T2 **Dunca G.**, Contribuții privind interacțiunea dintre rotorul și statorul unei pompe centrifuge multietajate, 14 mai 2010, București

B. Cărți și capitole în cărți publicate în ultimii 10 ani

1. **Dunca G.**, Bucur D.M., Iovănel R.G., Grecu I.S., Mitruț R., Mecanica fluidelor – Îndrumar de laborator, Editura Politehnica Press, cod CNCSIS 19, ISBN 978-606-9608-34-0, 2023
2. **Dunca G.**, Bucur D.M., Drăghici S., Intelligent energy system in protected areas, Cap7. Analysis of the hydraulic system operation during various steady flow regimes, pp.89-102, Ed. Performanțita, cod CNCSIS 1142, ISBN: 978-606-685-499-3, Editor Costică Roman, Iași, 2017
3. Bucur D.M., **Dunca G.**, Drăghici S., Intelligent energy system in protected areas, Cap 6. Hydropower sites developed within intelligent power microsystems, pp.73-87, Ed. Performanțita, cod CNCSIS 1142, ISBN: 978-606-685-499-3, Editor Costică Roman, Iași, 2017
4. Bucur D.M., **Dunca G.**, Mașini hidraulice – Îndrumar de laborator, Editura Politehnica Press, cod CNCSIS 19, ISBN 978-606-515-436-0, 2013

A. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. Cervantes M.J., **Dunca G.**, Mulu B., Jonsson P.P., Reformulation of the pressure-time method for application without flow rate cut-off, Measurement, Volume 188, 2022, 110583, ISSN 0263-2241, <https://doi.org/10.1016/j.measurement.2021.110583>, WOS:000763521300005"
2. Bunea, F, Ciocan, GD, Bucur, DM, **Dunca, G**, Nedelcu, A, Hydraulic Turbine Performance Assessment with Implementation of an Innovative Aeration System, WATER, DOI10.3390/w13182459, vol. 13, issue 18, pp. 1-16, 2021, WOS:000701547400001
3. Georgescu, AM ; Georgescu, SC; **Dunca, G**; Bucur, DM ; Aldea, A, Energy production assessment in a complex hydropower development, JOURNAL OF HYDROINFORMATICS, Volume: 22 Issue: 4 Pages: 725-737, DOI: 10.2166/hydro.2019.237, WOS:000555429500006
4. Iovanel R. G. , **Dunca G** , Bucur D. M. and Cervantes M. J. , Numerical Simulation of the Flow in a Kaplan Turbine Model during Transient Operation from the Best Efficiency Point to Part Load, ENERGIES, 2020, 13, 3129; doi:10.3390/en13123129, WOS:000550096700001
5. Iovănel, R.G., **Dunca, G.**, Cervantes, M.J., Study on the accuracy of RANS modelling of the turbulent flow developed in a Kaplan turbine operated at BEP. Part 2 - Pressure fluctuations, Journal of Applied Fluid Mechanics, 12(5), pp. 1463-1473, ISSN: 17353572, DOI: 10.29252/JAFM.12.05.29705, WOS:000482650000010

6. Bunea, F; Ciocan, GD; Nedelcu, A; Bucur, DM; **Dunca, G**; Chihaiia, R, Experimental setup for the study of new aeration devices in hydraulic turbines, ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL Volume: 16 Issue: 5 Pages: 1033-1040, WOS:000409069600001
7. Georgescu, SC; Georgescu, AM; Madulea, RA; Bucur, DM; **Dunca, G**, Efficient chlorination schedule for a water distribution network with multiple pumping stations, ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL Volume: 16 Issue: 5 Pages: 1071-1079, WOS:000409069600006
8. Bucur, DM; **Dunca, G**; Cervantes, MJ, Maximum Pressure Evaluation during Expulsion of Entrapped Air from Pressurized Pipelines, JOURNAL OF APPLIED FLUID MECHANICS, Volume: 10 Issue: 1 Pages: 11-20 Part: 1, Published: JAN 2017, WOS:000392357300002
9. **Dunca, G**; Iovanel, RG; Bucur, DM; Cervantes, MJ; On the Use of the Water Hammer Equations with Time Dependent Friction during a Valve Closure, for Discharge Estimation, JOURNAL OF APPLIED FLUID MECHANICS, FI 0,888, Volume: 9 Issue: 5 Pages: 2427-2434 Part: 2, WOS:000383414000007
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11. Pitorac L. I., Bucur D. M., **Dunca G.**, Cervantes M. J., Modeling transient multiphase flow in pipeline, U.P.B. Sci. Bull., Series D, Vol. 78, Iss. 2, pp.179-188 , 2016, ISSN 1454-2358, http://www.scientificbulletin.upb.ro/rev_docs_arhiva/rez5d0_457408.pdf
12. Digulescu A., Petrut T., Candel I., Ioana C., Bunea F., **Dunca G.**, Bucur D.M., Serbanescu A., Rotational vortex rope detection using recurrence plot analysis, MTA Review; Vol. XXV, No. 1, Mar. 2015;pp. 5-16, ISSN code: 1843-3391(cod cncsis 842), 2015, https://www.researchgate.net/publication/278965587_Rotational_Vortex_Rope_Detection_Using_Recurrence_Plot_Analysis, http://www.journal.mta.ro/index.php?m=volumes&id_volum=31&id_articol=198
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15. **Dunca G.**, Bucur D.M., Jonsson P., Cervantes M.J., Discharge measurements using the pressure-time method: different evaluation procedures, U.P.B. Sci. Bull., Series D, Vol. 76, Iss. 4, pp.195-202 , 2014, ISSN 1454-2358, http://www.scientificbulletin.upb.ro/rev_docs_arhiva/full27a_694623.pdf
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17. **Dunca, G.**, Cervantes, M.J., Flow rate evaluation using water hammer equations - Reformulation of the method, IOP Conference Series: Earth and Environmental Science, 1079(1),012060, 31st IAHR Symposium on Hydraulic Machinery and Systems, IAHR

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20. Mitruț R.;Bucur D.M.;**Dunca G.**;Cervantes M.J., Global linear stability analysis of the flow inside a conical draft tube, IOP Conference Series: Earth and Environmental ScienceOpen AccessVolume 1079, Issue 12022 Article number 01204931st IAHR Symposium on Hydraulic Machinery and Systems, IAHR 2022Trondheim26 June 2022through 1 July 2022Code 183412
21. Kalantar M.;Jonsson P.;**Dunca G.**;Cervantes M.J., Numerical investigation of the pressure-time method, IOP Conference Series: Earth and Environmental ScienceOpen AccessVolume 1079, Issue 12022 Article number 01207531st IAHR Symposium on Hydraulic Machinery and Systems, IAHR 2022Trondheim26 June 2022through 1 July 2022Code 183412
22. Primejdie, L.G., Achim, A.V., Bucur, D.M., **Dunca, G.**, Georgescu, S.-C., Rural water distribution system with groundwater supply and water tower: Numerical modelling in EPANET 2.2, IOP Conference Series: Earth and Environmental Science, 664(1),012040, Volume 664, Issue 112 May 2021 Article number 0120407th Conference of the Sustainable Solutions for Energy and Environment, EENVIRO 2020, Bucharest, Virtual, 21 October 2020 - 23 October 2020, 168977
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25. Bucur, Diana Maria;Grecu, Ionut Stelian;Mitrut, Robert;Dragoi, Constantin;Stroilescu, Adrian-Ion;**Dunca, Georgiana**, Design and Numerical Investigation of a Small Axial Hydrokinetic Turbine, Proceedings of 2021 10th International Conference on ENERGY and ENVIRONMENT, CIEM 20212021 10th International Conference on ENERGY and ENVIRONMENT, CIEM 2021Bucharest14 October 2021 through 15 October 2021Code 175003
26. **Dunca, G.** , Iovănel, R.G. , Roman, R. , 85 years of continuous operation of a hpp.part 1- Steady operation regimes, UPB Scientific Bulletin, Series D: Mechanical Engineering, Volume 79, Issue 1, 2017, Pages 229-23
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32. Jonsson, P.P., **Dunca, G.**, Cervantes, M.J., Development of the pressure-time method as a relative method, IOP Conference Series: Earth and Environmental Science, 240(2),022003, WOS:000560282600003
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35. Greu, IS; Bucur, DM; **Dunca, G** ; Panaitescu, VN; Cervantes, MJ, Implementation of the Standard Wall Function in Numerical Computation Software, 2017 8TH INTERNATIONAL CONFERENCE ON ENERGY AND ENVIRONMENT (CIEM), Location: Bucharest, ROMANIA, Date: OCT 19-20, 2017, Publisher IEEE, 345 E 47TH ST, NEW YORK, NY 10017 USA, Pages: 231-235, WOS:000427610300049
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37. **Dunca, G** ; Piraianu, VF; Roman, R; Ciuc, PO; Georgescu, SC, Experimental versus EPANET Simulation of Variable Speed Driven Pumps Operation, SUSTAINABLE SOLUTIONS FOR ENERGY AND ENVIRONMENT, EENVIRO 2016, Location: Bucharest, ROMANIA, Date: OCT 26-28, 2016, Pages: 100 - 107, WOS:000404848300013
38. **Dunca, G.**, Bucur, D.M., Cervantes, M.J., Sensitivity analysis on flow rate estimation using design of experiments: Application to the pressure-time method, 2017 10th International Symposium on Advanced Topics in Electrical Engineering, ATEE 2017, 19 April 2017, Article number 7905035, Pages 533-538, WOS:000403399400104
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40. Digulescu, A ; Murgan, I ; Candel, I; Bunea, F; Ciocan, G; Bucur, DM; **Dunca, G**; Ioana, C; Vasile, G; Serbanescu, A, Cavitating vortex characterization based on acoustic signal detection, 28TH IAHR SYMPOSIUM ON HYDRAULIC MACHINERY AND SYSTEMS (IAHR2016), PTS 1-12, Book Series: IOP Conference Series-Earth and Environmental Science, Volume: 49,

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45. Bucur D.M., **Dunca G.**, Cervantes MJ, Călinoiu C., Isbăsoiu E.C, Simultaneous transient operation of a high head hydro power plant and a storage pumping station in the same hydraulic scheme/ 27th IAHR Symposium-Hydraulic Machinery and Systems (IAHR 2014),16-18 oct, Montreal Canada, IOP Conf. Ser.: Earth Environ. Sci. 22 052007 doi: 10.1088/1755-1315/22/4/042015/, 8 pag., WOS:000347441900129
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B. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

- Reviste

1.

- Selecție cu maximum 20 lucrări în volume de conferințe

1. **Dunca G**, Sundström J, Dahl H., Cervantes M J, Investigation of the pressure-time method using design of experiments, 11th International conference on hydraulic efficiency measurement (IGHEM 2016), https://scholar.google.com/citations?view_op=view_citation&hl=ro&user=24Dw1a0AAAAJ&sortby=pubdate&citation_for_view=24Dw1a0AAAAJ:7PzIFSSx8tAC
2. Digulescu, A., Petrut, T.; Candel, I.; Bunea, F.; **Dunca, G.**; Bucur, D.; Ioana, C.; Serbanescu, A., On the vortex parameter estimation using wide band signals in active acoustic system, OCEANS 2014 MTS/IEEE Taipei Conference: Oceans Regeneration; Taipei; Taiwan; 7 April 2014 through 10 April 2014; Category number CFP14OCF-ART; Code 109351, Article number

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E. Brevete obținute în întreaga activitate

Inventor(s): Bunea, F., Ciocan, G.D., Nedelcu, A, Bucur, D.M., **Dunca, G.**, Codescu, S. (2020), Water aeration system for the hydraulic turbines, Eurasian Patent no 036765/17.12.2020 B1.

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Semnătura: