

Universitatea Națională de Știință și Tehnologie POLITEHNICA București
Centrul Universitar Pitești
Facultatea de Științe, Educație Fizică și Informatică
Departamentul de Matematică Informatică

LISTA DE LUCRĂRI
a cadrului didactic DUMITRACHE VASILICA-MIHAELA

A. Teza de doctorat

Metode calitative pentru studiul unor ecuații diferențiale și sisteme diferențiale care modelează fenomene mecanice, Universitatea din Pitesti, Matematică, 2011

B. Cărți și capitole în cărți publicate în perioada 2006 - 2025

B2. Cărți și capitole în cărți de specialitate naționale ca autor (cu ISBN intern)

1. E. Asadurian, M. Dumitrache, *Matematici pentru ingineri. Geometrie analitica si algebra liniara.*, carte. Editura Tiparg, ISBN 978-973-735-601-7, 2011, Nr pg. 245., 2011
2. C. Gheldiu, M. Dumitrache, *Tehnici de omogenizare în mecanica mediilor continue*, Carte / Editura UPIT, 2012, ISBN 978-606-560-275-5, nr.pg. 180., 2012.
3. E. Asadurian, M. Dumitrache, *Matematici pentru ingineri. Geometrie analitică. Algebră liniară. Geometrie diferențială*, Carte / Ed. Tiparg, 2012, Nr pg. 330, ISBN 978-973-735-667-3, 2012.
4. M. Dumitrache, C. Gheldiu, *Metode numerice*, Carte / Editura Juventus Press, 2013, ISBN 978-606-8350-65-3, nr. pg. 230., 2013.
5. M. Dumitrache, C. Gheldiu, *Matematici speciale*, Carte / Editura Tiparg, 2014, ISBN 978-973-735-779-3, nr. pg. 350., 2014.
6. E. Asadurian, M. Dumitrache, *“Matematici pentru ingineri.*, Ed. Tiparg, 2014, Nr pg. 328, ISBN 978-973-735-802-8.
7. Camelia Gheldiu, Mihaela Dumitrache, Gheorghe Nistor, *Analiză complexă și transformări integrale*, Editura Universitatii din Pitesti, ISBN 978-606-560-564-0, 2017, pg. 242, 2017.
8. Camelia Gheldiu, Mihaela Dumitrache, *Ecuații diferențiale*, Carte, ISBN 978-606-560-564-5, Nr. pg 300, 2018.
9. Gheldiu Camelia, Dumitrache Mihaela, *Analiza matematica*, Carte. Editura Universitatii din Pitesti. ISBN 978-606-560-633-3. Nr pg 120, 2019.
10. Gheldiu Camelia, Dumitrache Mihaela, *Matematici aplicate in inginerie*, Carte Editura UPIT, 2020, ISBN 978-606-560-664-7, nr.pg.370, 2020.
11. Gheldiu Camelia, Dumitrache Mihaela, *Ecuațiile fizicii matematice*, Carte Editura UPIT, 2023, ISBN 978-606-560-776-7, nr.pg.229, 2023.

C. Lucrări (articole) ISI / BDI publicate în perioada 2006 - 2025

C3. Articole în reviste și volumele unor manifestări științifice indexate în alte baze de date internaționale

1. M. Dumitrache, H. Ene, B. Nicolescu, *Some Theoretically Aspects of the Seismic problems*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.13 (2007), pg 65-72., 2007
2. M. Dumitrache, *The Green's function for the wave equation*, Articol / Universitatea din Pitești, Seria Matematică și Informatică, Nr.14 (2008), pg 83-88., 2008
3. M. Dumitrache, *About the coefficient of wave equation*, Articol / Universitatea din Pitești, Seria Matematică și Informatică, Nr.15 (2009), pg 25-28., 2009
4. M. Dumitrache, *Velocity reconstruction in weakly laterally inhomogeneous medium*, Articol / Romanian Journal of Acoustics and Vibration, ISSN 1584-7284, Nr.vol.7, issue 2 (2010), pg. 99-102., 2010
5. M. Dumitrache, H. Ene, B. Nicolescu, *About the inverse problem from seismology*, Articol / Buletinul Științific al Universității din Pitești, Seria Mecanică Aplicată, Nr. 1 (20) din 2010., 2010
6. M. Dumitrache, H. Ene, *About the canonical form of second-order hyperbolic equation*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.16 (2010), pg. 45-48 ., 2010
7. M. Dumitrache, H. Ene, B. Nicolescu, *Some Theoretically Aspects of The Inverse Problem From Seismology*, Articol / The International Session of 12-th Scientific Papers “Scientific Research and Education in the Air Force”, AFASES 2010, 27-29 mai Brașov, ISBN 978-973-8415-76-8, pg. 322-327. “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic, 2010
8. M. Dumitrache, *On the integration along characteristics*, Articol / Universitatea din Pitești, Seria Matematică și Informatică, Nr.17 (2011), pg 31-34., 2011
9. M. Dumitrache, C. Gheldiu, *The first order derivative of function $\chi_i(t)$* , The International Session of 14-th Scientific Papers “Scientific Research and Education in the Air Force”, AFASES 2012, 24-26 mai Brașov, ISSN, ISSN-L 2247- 3173, pg. 521-524, http://www.afahc.ro/afases/AFASES_2012/Docs/volum_b.pdf. “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic (indexata BDI: EBSCO)
10. M. Dumitrache, C. Gheldiu, *Hyperbolic equation - the coefficient $d = d(t)$* , Proceedings of the 13-th International Conference of Mathematics and its Applications, (ICMA'12), Timisoara, 1-3 Noiembrie 2012, ISSN 1224-6069.
11. C. Gheldiu, M. Dumitrache, *The propagation of the vibrations in thin and periodic plates – transfer by homogenization*, Proceedings of the 36-th International Conference of Mechanics of Solids, Acoustics and Vibrations, 25-26 octombrie 2012, Cluj-Napoca. (<http://icmsav.utcluj.ro>)
12. R. Georgescu, C. Gheldiu, M. Dumitrache, *Finite singularities of total multiplicity four for a particular competing species model with one parameter*, Articol / Universitatea din Pitești, Seria Matematică și Informatică, Nr.18 (2012), pg. 29-36. (BDI- Zentralblatt Math), 2012.
13. C. Gheldiu, M. Dumitrache, *Free vibrations in a thin reticulated structure*, Articol / ROMAI JOURNAL, nr. 2, 2012, pg 71-78. (B+), 2012.
14. M. Dumitrache, C. Gheldiu, R. Georgescu, *Homogenization of nonstationary diffusion problem with boundary values in a perforated domain*, Articol / Universitatea din Pitești, Seria Matematică și Informatică, Nr.18 (2012), pg 21-28. (BDI- Zentralblatt Math), 2012.

15. M. Dumitrache, C. Gheldiu, *The splitting operator method for convection-diffusion*, Articol / ROMAI Journal, vol 9, no. 2 (2013), pg. 47-54 (B+, BDI: Mathematical reviews, Zentralblatt MATH, DOAJ, Google Scholar)., 2013.
16. M. Dumitrache, C. Gheldiu, *Controlled vibrations with boundary conditions for periodically thin structure*, Articol / Romanian Journal of Acoustics and Vibration, ISSN 1584-7284, Nr.vol.10, issue 2 (2013), pg. 119-122. (B+, indexata BDI: IndexCopernicus, ProQuest, Zentralblatt MATH, EBSCO), 2013.
17. M. Dumitrache, C. Gheldiu, *The curve of dispersion in the plane*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.19 (2013), pg.51-54 . (BDI-Zentralblatt Math), 2013.
18. C. Gheldiu, M. Dumitrache, *Homogenization without regularity in alveolar structure*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.19 (2013), pg.63-66. (BDI- Zentralblatt Math), 2013.
19. M. Dumitrache, C. Gheldiu, *Vibrații controlate ale stâlpilor de electricitate*, Articol / A -37-a conferință națională de mecanică a solidelor, acustică și vibrații, CNMSAV XXXVII, 6-8 iunie, Chișinău, Volumul I, pg 136-141, 2013. (indexata BDI), 2013.
20. M. Dumitrache, *Propagarea undei de înaltă frecvență într-o placă metalică subțire*, Articol / A -37-a conferință națională de mecanică a solidelor, acustică și vibrații, CNMSAV XXXVII, 6-8 iunie, Chișinău, Volumul I, pg 165-167, 2013. (indexata BDI)., 2013.
21. C. Gheldiu, M. Dumitrache, *The waves homogenization as a function of the epsilon - period of oblique gridwork*, Articol / Romanian Journal of Acoustics and Vibration, ISSN 1584-7284, Nr.vol.10, issue 1 (2013), pg. 54-58. (B+, indexata BDI: IndexCopernicus, ProQuest, Zentralblatt MATH, EBSCO), 2013.
22. M. Dumitrache, C. Gheldiu, *High-frequency waves. The equation of the displacement vector*, Articol / Proceeding of The International Session of 15-th Scientific Papers “Scientific Research and Education in the Air Force”, AFASES 2013, 23-25 mai Brașov, ISSN, ISSN-L 2247- 3173, pg. 329-332, “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic (indexata BDI: EBSCO), 2013.
23. C. Gheldiu, M. Dumitrache, *Thermal conduction in gridworks (cylindrical domains)*, Articol / Acta Universitatis Apulensis – Mathematics-Informatics, Vol. 34/2013, ISSN: 1852-5329, Alba Iulia, 2013, pg. 185-190 (B+, BDI: Zentralblatt für Mathematik, Mathematical Reviews), 2013.
24. M. Dumitrache, C. Gheldiu, *About the plate velocity in a particular case of Lamb waves propagation*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.20 (2014). (BDI- Zentralblatt Math), 2014.
25. C. Gheldiu, M. Dumitrache, *The transformation of vibrations of the high-tension pillars by homogenization in the vibrations of the finite string*, Articol / Romanian Journal of Acoustics and Vibration, ISSN 1584-7284, Nr.vol.XI, issue 1 (2014), pg. 63-66. (B+, indexata BDI: IndexCopernicus, ProQuest, Zentralblatt MATH, EBSCO), 2014.
26. M. Dumitrache, C. Gheldiu, *The equation of dispersion and the displacement vector in the symmetric case*, Articol / Proceeding of The International Session of 16-th Scientific Papers “Scientific Research and Education in the Air Force”, AFASES 2014, 22-24 mai Brașov, ISSN, ISSN-L 2247- 3173, pg. 345-347, “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic.(indexata BDI: EBSCO), 2014.
27. M. Dumitrache, C. Gheldiu, *The double scale convergence for problem of dissipative evolution in periodically perforated environment*, Articol / AIP. Conf. Proc. 1602, issue 1, 279-285 (2014), DOI: 10.1063/1.4882500, The 3th International Conference on Mathematical Sciences (ICMS3), 17-19 Decembrie 2013, Kuala Lumpur, Malaysia., 2014.
28. C. Gheldiu, M. Dumitrache, *The conductivity in an environment consisting of three different materials*, Articol / Journal of Abstract Differential Equations and Applications, Volume 7,

- Number 1, pp 30-41 (2016) ISSN: 2158-611X.(BDI: MATHSCINET ZENTRALBLATT-MATH), 2015.
29. C. Gheldiu, M. Dumitrache, R. Georgescu, *The heat diffusion in a thin alveolar structure*, Articol / Buletin Științific – Universitatea din Pitești, Seria Matematică și Informatică, Nr.21 (2015). (BDI- Zentralblatt Math), 2015.
 30. M. Dumitrache, C. Gheldiu, *The equation of dispersion and the displacement vector in the antisymmetric case.*, Articol / Proceeding of The International Session of 16-th Scientific Papers “Scientific Research and Education in the Air Force”, AFASES 2015, 28-30 mai Brașov, ISSN, ISSN-L 2247- 3173, “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic.(indexata BDI: EBSCO), 2015.
 31. C. Gheldiu, M. Dumitrache, *Exact controllability in oblique gridworks structures*, Articol / Romanian Journal of Acoustics and Vibration, ISSN 1584-7284, Nr.vol.XII, issue 1 (2015), pg. 103-106. (B+, indexata BDI: IndexCopernicus, ProQuest, Zentralblatt MATH, EBSCO), 2015.
 32. M. Dumitrache, *The stability of the controllability by two scale homogenization*, Articol / Proceeding of The International Session of 16-th Scientific Papers “Scientific Research and Education in the Air Force”, “Henri Coandă” Air Force Academy, Romania and “General M. R. Stefanik” Slovak Republic.(indexata BDI:), AFASES 2016, 26-28 mai Brașov, ISSN, ISSN-L 2247- 3173, pp 441-444, DOI:10.19062/2247-3173.2016.18.1.60., 2016.
 33. Mihaela Dumitrache, Camelia Gheldiu, *Exact controllability for the wave problem with Robin conditions on an epsilon periodic domain*, Articol / Acta Universitatis Apulensis, ISSN: 1582-5329, vol 50, pg 1-10, doi: 10.17114/j.aaa.2017.50.01, 2017., 2017.
 34. Enescu Florentina-Magda, Hoarca Cristian, Dumitrache Mihaela, *The study algorithms for the identification of the figures*, Articol, 17-th International Multidisciplinary Scientific GeoConference, SGEM 2018, Albena, Bulgaria, 30 iunie-8 iulie, Scopus DOI: 10.5593/sgem2018/61/S25.127,2018., 2018.
 35. Florentina Magda Enescu, Ioan Cristian Hoarca, Dumitrache Vasilica Mihaela, *the design of the man machine interface for the control of energy networks on an industrial platform that uses and green energy*, Articol: 19th International Multidisciplinary Scientific GeoConference SGEM 2019, 30 June - 6 July, 2019. Book number: 4.1. Pages: 527-534ISBN: 978-619-7408-83-6. ISSN:1314-2704DOI: 10.5593/sgem2019/4.1/S17.067, 2019.
 36. Ioan Cristian Hoarca, Dumitrache Vasilica Mihaela, Florentina Magda Enescu, *PV Systems, modeling PV modules*, Articol Proceedings of the International Multidisciplinary Scientific GeoConference SGEM; 2019, Vol. 19 Issue 1, p417-425, 9p.ISSN:13142704 DOI: 10.5593/sgem2019/4.1, 2019.
 37. C. Gheldiu, M Dumitrache, *Controlled vibrations in reticulated structures*, Buletinul Științific al Universității din Pitești, Seria Matematică și Informatică, ISSN 1453-116x, nr.27/2021, indexat Zentralblatt MATH, 2021.
 38. C. Gheldiu, M. Dumitrache, *The heat diffusion through a periodically perforated structure with small holes*, Buletin Științific – UNSTPB -Centrul Universitar Pitești, Seria Matematică și Informatică, Nr.29 (2023).
 39. C. Gheldiu, M. Dumitrache, *The homogeneous diffusion into a doubly periodic composite domain*, Buletin Științific – UNSTPB -Centrul Universitar Pitești, Seria Matematică și Informatică, Nr.29 (2023).
 40. Adrian Tase, Vasilica-Mihaela Dumitrache, Florian Calina, Laura-Adina Stanciulescu, Adrian Stoiculescu, *Could piano music therapy alleviate high sinus rhythm in subjects with controlled hypertension?*, EUROPEAN HEART JOURNAL (35.6 Q1), ISSN: 0195-668X, WOS: 001345366500009, 28.10.2024.
 41. Ana-Catalina Tantu, Marius Eugen Ciurea, Vasilica-Mihaela Dumitrache, Alina Paunescu, Marilena Monica Tantu, Constantin Ciucurel, Elena-Ioana Iconaru, Daniel-Corneliu Diaconescu, Georgeta Ionescu, George Mihail Man, Sorina Octavia Honțaru, Consuela Dicu,

George Vladut Popescu, *Influence of the patient's demographic profile and tumor characteristics on reconstructive techniques in lip cancers*, Romanian Journal of Morphology and Embryology (1.5 Q4), WOS: 001493998900021, 30.05.2025.

D. Lucrări (articole) publicate în perioada 2006 - 2025 în reviste și volume de conferințe cu referenți (neindexate)

D2. Articole în volumele manifestărilor științifice

1. C. Gheldiu, M. Dumitrache, *Free vibrations in a thin reticulated structure*, Articol / 22-25 August 2012, Chisinau, Republic of Moldova, The 20th conference on applied and industrial mathematics (CAIM 2012), 2012.

2. M. Dumitrache, C. Gheldiu, *Hyperbolic equation - the coefficient $d=d(t)$* , Articol / Proceedings of the 13-th International Conference of Mathematics and its Applications, (ICMA'12), Timisoara, 1-3 Noiembrie 2012., 2012.

3. C. Gheldiu, M. Dumitrache, *The propagation of the vibrations in thin and periodic plates – transfer by homogenization*, Articol / Proceedings of the 36-th International Conference of Mechanics of Solids, Acoustics and Vibrations, 25-26 octombrie 2012, Cluj-Napoca., 2012.

4. M. Dumitrache, C. Gheldiu, *High frequency waves and the equation of dispersion*, Articol / 18-22 August 2013, Chisinau, International Scientific Conference “Mathematics & IT: Research and Education (MITRE-2013)” at the Moldova State University (MSU), Faculty of Mathematics and Computer Science, 2013.

5. M. Dumitrache, C. Gheldiu, *The two-scale convergence and the splitting operator method for convection-diffusion*, Articol / 19-22 Septembrie 2013, Bucuresti, Romania, The 21th conference on applied and industrial mathematics (CAIM 2013), 2013.

6. Mihaela Dumitrache, Camelia Gheldiu, *Controlled vibrations with boundary conditions for a periodically thin structure*, Articol / 24-25 Octombrie 2013, Cluj-Napoca, Romania, The 4th International Conference on Advanced Engineering in Mechanical Systems – ADEMS ' 13., 2013.

7. C. Gheldiu, M. Dumitrache, *The discretization of the limit of a boundary value diffusion problem in a perforated domain*, Articol / 4-25 Octombrie 2013, Braşov, Romania, The 5th International Conference COMPUTATIONAL MECHANICS and VIRTUAL ENGINEERING „COMEC 2013”., 2013.

8. C. Gheldiu, M. Dumitrache, *Temperature transfer in a double-periodic composite consisting of three materials with different resistivity*, Proceedings of the 16 th international conference of mathematics and its applications ICMA 2025, 30.06.2025

9. C. Gheldiu, M. Dumitrache, *Non-stationary diffusion problem with non-zero Robin conditions in the double perforated domain*, Mathematics information technologies research and education MITRE 2025, 26 iunie 2025 - 29 iunie 2025, Moldova.

10. C. Gheldiu, M. Dumitrache, *Homogenization of the diffusion-convection equation*, The 32nd Conference of Applied and Industrial Mathematics CAIM 2025, 18-21 septembrie 2025, Bucureşti.

PARTICIPĂRI LA CONFERINȚE

1. **June 28 - July 4, 2007, Bucharest, Romania**, 6-th Congress of Romanian Mathematicians, M. Dumitrache, H. Ene, B. Nicolescu, *Some Theoretically Aspects of the Seismic problems.* (http://www.imar.ro/~purice/conferences/Cong-6/Participants_f/lista-cmr6.html)
2. June 28 - July 4, 2011, Brasov, Romania, **7-th Congress of Romanian Mathematicians**, M. Dumitrache, *On the inverse problem for equation of hyperbolic type*, (http://www.imar.ro/organization/activities/standalone/congmatro2011/past_events/program.pdf).
3. 29-30 September 2011, Petrosani, Romania, **International Conferences "Noise. Vibration"**, M. Dumitrache, *On the inverse problem for equation of hyperbolic type*.
4. 22-25 August 2012, Chisinau, Republic of Moldova, The 20th conference on applied and industrial mathematics (CAIM 2012) C. Gheldiu, M. Dumitrache, *Free vibrations in a thin reticulated structure*.
5. 27-30 June 2013, Alba Iulia, Romania, **Joint International Mathematics Meeting**, University of Alba Iulia, M. Dumitrache, C. Gheldiu, *The vibratios of the high tension pillars*.
6. 27-30 June 2013, Alba Iulia, Romania, **Joint International Mathematics Meeting**, University of Alba Iulia, C. Gheldiu, M. Dumitrache, *The conductivity in an environment consisting of three different materials*.
7. 18-22 August 2013, Chisinau, **International Scientific Conference "Mathematics & IT: Research and Education (MITRE-2013)"** at the Moldova State University (MSU), Faculty of Mathematics and Computer Science, M. Dumitrache, C. Gheldiu, *High frequency waves. The equation of dispersion*.
8. 19-22 Septembrie 2013, Bucuresti, Romania, **The 21th conference on applied and industrial mathematics (CAIM 2013)**, M. Dumitrache, C. Gheldiu, *The two-scale convergence and the splitting operator method for convection-diffusion*.
9. 24-25 Octombrie 2013, Cluj-Napoca, Romania, **The 4th International Conference on Advanced Engineering in Mechanical Systems – ADEMS ' 13**, Mihaela Dumitrache, Camelia Gheldiu, *Controlled vibrations with boundary conditions for a priodically thin structure*.
10. 24-25 Octombrie 2013, Braşov, Romania, **The 5th International Conference COMPUTATIONAL MECHANICS and VIRTUAL ENGINEERING „COMECE 2013"**, C. Gheldiu, M. Dumitrache, *The discretization of the limit of a boundary value diffusion problem in a perforated domain*.
11. 17-20 September 2015, Suceava, Romania, The 23th Conference on Applied and Industrial Mathematics, CAIM 2015, C. Gheldiu, M. Dumitrache, *Double scale convergences and exact internal controllability with Fourier conditions*.

12. 24-26 September 2015, Resita, Romania, **39th Conference on Solid Mechanics, Acoustics and Vibrations**, C. Gheldiu, **M. Dumitrache**, *The dissipated waves following the Langmuir model in an alveolar structure.*
13. 05-07 Noiembrie 2015, Timisoara, Romania, **The XIVth International Conference on Mathematics and its Applications**, C. Gheldiu, **M. Dumitrache**, *The diffusion in a double periodic perforated domain with boundary conditions.*

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DUMITRACHE VASILICA-MIHAELA