

## LISTĂ LUCRĂRI ȘTIINȚIFICE

### A. Teza de doctorat

(scrisa in limba engleza):

**Flows of viscous and incompressible Newtonian and non-Newtonian fluids through thin tubes and porous media**

**(Miscari fluide vascoase incompresibile newtoniene si neneutroniene prin tuburi subtiri si medii poroase)**

### B. Cărți și capitole din cărți

- D.S. Cimpean, Mathematical models applied in engineering, Digital Data, 2009
- D.S. Cimpean, An introduction to advanced mathematics: Differential equations, Mediamira, 2010.
- D. Cimpean, D. Inoan, I. Rasa, An invitation to linear algebra and analytic geometry, Mediamira, 2009.
- A. Mitrea, S. Nedevschi, D. Ivan, D. Mitrea, O. Gurzau, N. Lung, D. Cimpean, Modele deformabile 2D. Aplicatii, Utpress, 2009.
- Colectivul catedrei, Teste grila de matematica- Admitere , Utpress, 2005 – 2022.
- D. Iozon, D. Cimpean, M. Dinea, B. Georgescu, A. Helgiu, Sistemica si ecologia pasarilor, RISOPRINT, Cluj-Napoca, 2002.
- D.S. Cimpean, D. Inoan, I. Rasa, Special Mathematics, 2016- pdf material for students

### C. Lucrări științifice indexate ISI/BDI

1. **D.S. Cimpean**, I. Pop, Fully developed mixed convection flow of a nanofluid through an inclined channel filled with a porous medium, Int. J. Heat Mass Transfer, 55 , 907–914 (2012).
2. **D. Cimpean**, I. Pop, D. B. Ingham , J. H. Merkin, Fully Developed Mixed Convection Flow Between Inclined Parallel Plates Filled with a Porous Medium , Transport in Porous Media International Journal, Vol 77, pp.87-102, (2009).
3. **D.S. Cimpean**, D. Popa, On the stability of the linear differential of higher order with constant coefficients, Applied Mathematics and Computation, 217, 4141-4146 (2010).
4. **D.S. Cimpean**, D. Popa, Hyers-Ulam stability of Euler's equation, Applied Mathematics Letter, 24, 1539-1543 (2011).

5. **D. Cimpean**, J.Merkin, I. Pop, D.Ingham, On a Free Convection Problem Over a Vertical Flat Surface in a Porous Medium, *Transport in Porous Media International Journal*, 64: 393-411, DOI 10.1007/s11242-005-5236-y, Springer 2006, ISSN: 0169-3913 (2006).
6. Y. Lok, N Amin, **D. Cimpean**, I Pop, Steady mixed convection flow of a micropolar fluid near the stagnation point on a vertical surface, *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol 15 No. 7, pg. 654-670, Emerald Group ISSN 0961-5539 (2005).
7. I. Pop, M. Sheremet, **D.S. Cimpean**, Natural convection in a partially heated wavy cavity filled with a nanofluid using Buongiorno's nanofluid model, *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 27 Issue: 4, 2017, pp.924-940, <https://doi.org/10.1108/HFF-12-2015-0529>, (2017), (ISI). ISSN: 0961-5539.
8. M.A.Sheremet, **D.S. Cimpean**, I.Pop, Free convection in a partially heated wavy porous cavity filled with a nanofluid under the effects of Brownian diffusion and thermophoresis, *Applied Thermal Engineering*, Volume 113, 25 February 2017, Pages 413-418, ISSN: 1359-4311 <https://doi.org/10.1016/j.applthermaleng.2016.11.033>, (2017).
9. N. Ciont , R. D. Cadar, **D.S. Cimpean**, A Road Traffic Prediction Study Based On Weigh-In-Motion Data, *Proceedings Of The Romanian Academy, Series A, Volume 19, Number 4/2018*, pp. 567–574 *TECHNICAL SCIENCES*, ISSN: 1454-9069.
10. **D.S. Cimpean**, C. Revnic, I. Pop, Natural Convection in a Square Inclined Cavity Filled with a Porous Medium with Sinusoidal Temperature Distribution on Both Side Walls, *Transport In Porous Media*, ISSN: 0169-3913, Volume: 130 Issue: 2 Pages: 391-404, DOI: 10.1007/s11242-019-01315-w, Published: NOV 2019.
11. **D.S. Cimpean**, I. Pop, Free convection in an inclined cavity filled with a nanofluid and with sinusoidal temperature on the walls: Buongiorno's mathematical model, *International Journal Of Numerical Methods For Heat & Fluid Flow*, ISSN: 0961-5539, Volume: 29 Issue: 12 Pages: 4549-4568, DOI: 10.1108/HFF-04-2019-0317, Published: DEC 2 2019.
12. M.A.Sheremet, **D.S. Cimpean**, I.Pop, Thermogravitational Convection of Hybrid Nanofluid in a Porous Chamber with a Central Heat-Conducting Body, *Symmetry* 2020, 12 (4), 593; <https://doi.org/10.3390/sym12040593>
13. **D.S. Cimpean**, M.A.Sheremet, I.Pop, Mixed convection of hybrid nanofluid in a porous trapezoidal chamber, *International Communications in Heat and Mass Transfer*, Volume 116, 2020, 104627, <https://doi.org/10.1016/j.icheatmasstransfer.2020.104627>
14. **D.S. Cimpean**, I. Pop (2021), Entropy generation of a nanofluid in a porous cavity with sinusoidal temperature at the walls and a heat source bellow, *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 32 No. 1, pp. 23-40., <https://doi.org/10.1108/HFF-10-2020-0654>.
15. **D.S. Cimpean**, Dynamics of Colloidal Mixture of Cu-Al<sub>2</sub>O<sub>3</sub>/Water in an Inclined Porous Channel Due to Mixed Convection: Significance of Entropy Generation. *Coatings*. 2022; 12(9): 1347. <https://doi.org/10.3390/coatings12091347>, ISSN: 2079-6412

16. **D.S. Cimpean**, Entropy analysis for a mixed convection flow in an inclined channel: downward case, Automation Computers Applied Mathematics, Vol. 17, no 3, 229-236, (2008).
17. **D. Cimpean**, Flow of a micropolar fluid for a weak concentration of particles near the stagnation point on a vertical surface, ACAM, Vol. 16 no.2, pp. 9-16, ISSN 1221-437X, (2007).
18. **D.S. Cimpean**, I. Pop, Parametric analysis of entropy generation in a channel filled with a porous medium, Recent Researches in Applied and Computational Mathematics, ISBN: 978-1-61804-002-2, 54-59, (2011), (ISI-Proc).
19. **D.S. Cimpean**, I. Pop, A study of entropy generation minimization in an inclined channel, Wseas Transactions On Heat And Mass Transfer, Issue 2, Volume 6, 31- 40 (2011) .
20. **D.S. Cimpean**, I. Pop, Steady Flow of a Micropolar Fluid in a Sinusoidal Channel, Automat. Comput. Appl. Math., 97-106, Vol. 19 (2010).
21. **D. Cimpean**, N. Lungu, I. Pop, A problem of entropy generation in a channel filled with a porous medium, Creative Math & Inf, Sp. Vol. 17, no.3, , 357-362, (2008).
22. **D. Cimpean** and I. Pop, Mixed convection flow in an inclined channel filled with a porous medium: downflow case, Automation Computers Applied Mathematics, 75-84, ISSN 1221-437X, (2006).
23. M. Kumari, **D. Cimpean**, I. Pop, Transient boundary layer in stagnation-point flow of a micropolar fluid over a stretching sheet, International Journal of Fluid Mechanics Research, Vol. 33, No.4, pg. 362-378, ISSN 1064-2277, Begel House, Inc. (2006).
24. **D. S. Cimpean**, The Importance of Nanoparticles Addition in a Base Fluid Flow through a Porous Medium, Advanced Engineering Forum, Vols. 8-9, pp. 225-234, ISSN: 2234-991X, (2013).
25. **D.S. Cimpean**, Ana-Maria Geczi, Calin Neamtu, A study of water pressure optimization for a city network, Automation Computers Applied Mathematics, Vol. 24-25, no. 1, pp. 3–8, ISSN 1221–437X, (2015-16).
- 26 . Carmen Mârza, **D. Cîmpean**, Georgiana Corsiuc, About the geometry and the applications of the twisted surfaces, Journal Of Industrial Design And Engineering Graphics, Volume 10 , Special Issue **40** ICEGD, (2015).

**D. Articole/studii in extenso, publicate în reviste din fluxul științific internațional principal, în conferințe internaționale de specialitate:**

- **D.S. Cimpean** and I. Pop, Mixed convection flow of a nanofluid between two inclined parallel plates filled with a porous medium- the case of an adiabatic plate, Proceedings of the 5<sup>th</sup> International Conference on Applications of Porous Media, aug 25-28, 2013, ISBN: 978-973-595-546-5
- **D.S. Cimpean**, An Analysis Of A Fluid Flow In A Channel With Uniform Heated Walls, Acta Technica Napocensis, Series: Applied Mathematics And Mechanics, 293-298, Vol 2, No 54, (2011).

- Iozon D., **Cimpean D.**, Georgescu B., Helgiu A., Some aspects of ecological education with references to the protection of terrestrial ecosystems, Bul. USAMVCN, 55-56, 295, ISSN: 1454-2382 (2001).
- **D. Cimpean** and Pop I., The influence of the material parameter on a steady forced convection flow of a micropolar fluid in a sinusoidal channel, 2nd IC-EpsMsO Conference, Grece, 2007.
- **D. Cimpean** and Pop I., Flows of a micropolar fluid in a corrugated channel, ICTCAM, Bucharest, Romania, 20-23 June 2007.
- A. I. Mitrea, O. M. Gurzau, P. Mitrea, **D. Cimpean**, Numerical Methods for finding the Optimal Model in the Theory of Deformable Surfaces, 11-th International Symposium on Mathematics and its Applications, Timisoara 5-7 nov 2009.
- **D. Cimpean**, I. Pop, D. Ingham, A problem about a steady micropolar flow in a sinusoidal channel, SCRA 2006 FIM XIII, Forum for Interdisciplinary Mathematics, Portugal, September 1-4, 2006.

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