

LIST OF PUBLICATIONS

a) Publications considered by the candidate to be the most relevant (max. 10)

1. V. Marinca, **N. Herisanu** - *Nonlinear Dynamical Systems in Engineering. Some Approximate Approaches*, Springer Verlag, Berlin, Heidelberg, 2011, ISBN 978-3-642-22734-9, monograph presentă in more than 250 university libraries, according to WorldCat – **19 citations** ISI-Web of Science and **26 citations** Google Scholar
2. **N. Herisanu**, V. Marinca, Gh. Madescu - An analytical approach to non-linear dynamical model of a permanent magnet synchronous generator, *Wind Energy*, JUL 2014 | DOI: 10.1002/we.1785
3. **N. Herişanu**, V. Marinca, Optimal Homotopy Perturbation Method for a Non-Conservative Dynamical System of a Rotating Electrical Machine, *Zeitschrift fur Naturforsch 67a* (2012) 509-516 – **5 citations** ISI-Web of Science and **6 citations** Google Scholar
4. **N.Herişanu**, V.Marinca, A modified variational iteration method for strongly nonlinear problems, *Nonlinear Sci. Lett. A*, 1(2) (2010) 183-192 – **43 citations** in ISI-Web of Science and **49 citations** in Google Scholar
5. V. Marinca, **N. Herisanu**, Determination of periodic solutions for the motion of a particle on a rotating parabola by means of the optimal homotopy asymptotic method, *Journal of Sound and Vibration*, Elsevier UK, ISSN: 0022-460X, vol.329, 2010, p.1450–1459– **26 citations** ISI-Web of Science and **46 citations** in Google Scholar
6. **N. Herisanu**, V. Marinca, Accurate analytical solutions to oscillators with discontinuities and fractional-power restoring force by means of the optimal homotopy asymptotic method, *Computers and Mathematics with Applications*, Elsevier UK, ISSN 0898-1221, vol.60, 2010, p.1607-1615– **18 citations** ISI-Web of Science and **31 citations** in Google Scholar
7. **N. Herisanu**, V. Marinca, Explicit analytical approximation to large-amplitude non-linear oscillations of a uniform cantilever beam carrying an intermediate lumped mass and rotary inertia, *MECCANICA - Int. Journal of the Italian Association of Theoretical and Applied Mechanics*, Springer Netherlands, ISSN 0025-6455, vol.45, 2010, p.847-855– **19 citations** ISI-Web of Science and **34 citations** in Google Scholar
8. **N. Herisanu**, V. Marinca, *An iteration procedure with application to Van der Pol oscillator*, *International Journal of Nonlinear Science and Numerical Simulation*, ISSN 1565-1339, vol.10, no.3, 2009, p.353-361– **6 citations** ISI-Web of Science and **9 citations** Google Scholar
9. **N. Herişanu**, V. Marinca, T. Dordea, Gh. Madescu - A new analytical approach to nonlinear vibration of an electrical machine, *Proceedings of the Romanian Academy Series A - Mathematics Physics Technical Sciences Information Science*, Vol.9(3), pp.229-236, 2008 – **37 citations** ISI-Web of Science and **73 citations** in Google Scholar
10. V. Marinca, **N. Herisanu**, Application of Optimal Homotopy Asymptotic Method for solving nonlinear equations arising in heat transfer, *Int. Commun. Heat and Mass Transf.*, Vol.35(6), pp.710-715 , 2008– **82 citations** ISI-Web of Science and **154 citations** in Google Scholar

b) PhD Thesis

Contributions to the study of machine tools vibration, PhD supervisor - prof.dr.ing. Liviu Brîndeu, Timișoara – 1999

c) Books

1. V. Marinca, **N. Herișanu** - *Nonlinear Dynamical Systems in Engineering. Some Approximate Approaches*, Springer Verlag, Berlin, Heidelberg, 2011
2. **N. Herișanu**, *Fundamentals of Mechanical engineering. Statics*, Editura Politehnica Timisoara, 2010
3. **N. Herișanu**, V. Marinca, *Fundamentals of mechanics*, Ed. Electronica, 2013

d) Articles published in journals from main international scientific flux (ISI journals)

1. V. Marinca, **N. Herișanu**, 2006, A modified iteration perturbation method for some non-linear problems, *Acta Mechanica*, Austria, Volume 184, Issue 1-4, Jul 2006, p.231-242, ISSN 0001-5970
2. V. Marinca, **N. Herișanu**, 2007, Periodic solutions for some strongly nonlinear oscillations by He's variational iteration method, *Computers & Mathematics with Applications*, Elsevier, ISSN 0898-1221, vol.54, no.7-8, 2007, p.1188-1196
3. V. Marinca, **N. Herișanu**, C. Bota, 2008, Application of the variational iteration method to some nonlinear one-dimensional oscillations, *Meccanica*, ISSN 0025-6455, vol.43, p.75-79
4. V. Marinca, **N. Herișanu**, 2008, Periodic solutions of Duffing equation with strong nonlinearity, *Chaos, Soliton, Fractals*, ISSN 0960-0779, vol.37(1), p.144-149
5. V. Marinca, **N. Herișanu**, 2008, Application of Optimal Homotopy Asymptotic Method for solving nonlinear equations arising in heat transfer, *International Communication in Heat and Mass Transfer*, ISSN 0735-1933, vol.35, pp.710-715
6. V. Marinca, **N. Herișanu**, Iacob Nemeș, Optimal Homotopy Asymptotic Method with application to thin film flow, *Central European Journal of Physics* 6 (2008) 648-653
7. **N. Herișanu**, V. Marinca, Toma Dordea, Gheorghe Madescu, A new analytical approach to nonlinear vibration of an electrical machine, *Proceedings of the Romanian Academy Series A: Mathematics, Physics, Technical Sciences, Information Science*, vol.9, no.3, September-December 2008, ISSN 1454-8267
8. **N. Herișanu**, V. Marinca, An iteration procedure with application to Van der Pol oscillator, *International Journal of Nonlinear Science and Numerical Simulation*, ISSN 1565-1339, 10 (2009) 353-361
9. V. Marinca, **N. Herișanu**, C. Bota, B. Marinca, An optimal Homotopy Asymptotic Method applied to the steady flow of a fourth-grade fluid past a porous plate, *Applied Mathematics Letters* 22 (2009) 245-251
10. V. Marinca, **N. Herișanu**, Determination of periodic solutions for the motion of a particle on a rotating parabola by means of the optimal homotopy asymptotic method, *Journal of Sound and Vibration*, 359 (2010) 1450-1459
11. **N. Herișanu**, V. Marinca, Explicit analytical approximation to large-amplitude nonlinear oscillations of a uniform cantilever beam carrying an intermediate lumped mass and rotary inertia, *MECCANICA*, vol.45, 2010, pp.847-855

12. **N.Herişanu**, V.Marinca, Accurate analytical solutions to oscillators with discontinuities and fractional-power restoring force by means of the optimal homotopy asymptotic method, *Computers and Mathematics with Applications*, vol.60, 2010, pp.1607-1615
13. V.Marinca, **N.Herişanu**, Comments on ‘A one-step optimal homotopy analysis method for nonlinear differential equations’, *Communications in Nonlinear Science and Numerical Simulation*, 15 (2010) 3735–3739
14. V.Marinca, **N.Herişanu**, Nonlinear dynamic analysis of an electrical machine rotor-bearing system by Optimal Homotopy Perturbation Method, *Computers and Mathematics with Applications*, 61 (2011) 2019–2024
15. V.Marinca, **N.Herişanu**, An optimal iteration method with application to the Thomas-Fermi equation, *Central European Journal of Physics*, vol.9(3), 2011, pp.891-895
16. V.Marinca, **N.Herişanu**, Explicit and exact solutions to cubic Duffing and double-well Duffing equations, *Mathematical and Computer Modelling*, vol.53 (2011) 604–609
17. V.Marinca, **N.Herişanu**, An optimal homotopy asymptotic approach applied to nonlinear MHD Jeffery-Hamel flow, *Mathematical Problems in Engineering*, 2011, ID 169056
18. V.Marinca, **N.Herişanu**, An Optimal Iteration Method for Strongly Nonlinear Oscillators, *J. of Applied Mathematics*, Vol.2012, Article ID 906341, doi:10.1155/2012/90634
19. V.Marinca, **N.Herişanu**, Optimal parametric iteration method for solving multispecies Lotka-Volterra equation, *Discrete Dynamics in Nature and Society*, Volume 2012, Article ID 842121
20. **N. Herişanu**, V.Marinca, An Optimal Approach to Study the Nonlinear Behaviour of a Rotating Electrical Machine, *Journal of Applied Mathematics*, Volume 2012, Article ID 465023, 10 pages, doi:10.1155/2012/465023
21. **N.Herişanu**, V.Marinca, Optimal Homotopy Perturbation Method for a Non-Conservative Dynamical System of a Rotating Electrical Machine, *Zeitschrift fur Naturforsch 67a* (2012) 509-516
22. V.Marinca, **N.Herişanu**, The Optimal Homotopy Asymptotic Method for solving Blasius equation, *Applied Math. Computation*, 231 (2014) 134-139
23. V.Marinca, **N.Herişanu**, On the flow of a Walters-type B’ viscoelastic fluid in a vertical channel with porous wall, *Int. J. Heat and Mass Transfer*, 79 (2014) 146-165
24. **N. Herişanu**, V.Marinca, Gh. Madescu, An analytical approach to non-linear dynamical model of a permanent magnet synchronous generator, *Wind Energy*, Jul. 2014 | DOI: 10.1002/we.1785

e) Articles published in the main international scientific flux (ISI Proceedings)

1. V.Marinca, **N.Herişanu**, An optimal homotopy perturbation approach to thin film flow of a fourth grade fluid *AIP Conference Proceedings*, 1479 (2012) 2383-2386
2. V.Marinca, **N.Herişanu**, An approximate solution for the nonlinear Lane-Emden type equation on a semi-infinite domain , *AIP Conference Proceedings*, 1479 (2012) 2387-2390
3. **N.Herişanu**, V.Marinca, Optimal Homotopy Asymptotic Approach to self-excited vibrations, *Acoustics & Vibration of Mechanical Structures*, Book Series: Applied Mechanics and Materials 430 (2013) 27-31

4. V.Marinca, **N.Herişanu**, Approximate Solutions to a Cantilever Beam Using Optimal Homotopy Asymptotic Method, *Acoustics & Vibration of Mechanical Structures*, Book Series: Applied Mechanics and Materials 430 (2013) 22-26
5. V.Bacria, **N.Herişanu**, Noise Control in an Industrial Hall, *Acoustics & Vibration of Mechanical Structures*, Book Series: Applied Mechanics and Materials 430 (2013) 251-256
6. **N.Herişanu**, V.Bacria, Some effects of rubberized asphalt on decreasing the phonic pollution, *Acoustics & Vibration of Mechanical Structures*, Book Series: Applied Mechanics and Materials 430 (2013) 257-261
7. V.Vladut, S.Biris, S.Bungescu, **N.Herişanu**, Influence of Vibrations on Grain Harvesters Operator, *Acoustics & Vibration of Mechanical Structures*, Book Series: Applied Mechanics and Materials 430 (2013) 290-296

f) Articles published in other international journals

1. V.Marinca, B.Marinca, **N.Herişanu**, 2002, On the response of the second mode of a cantilever beam, *Facta Universitatis, Series Mechanics, Automatic control and robotics*, vol.3, no.12, University of Nis (Yugoslavia), pag.457-463, ISSN 0354-2009
2. **N.Herişanu**, V.Marinca, 2005, On the natural frequencies of Timoshenko type beams, *Romanian Journal of Acoustics and Vibration*, vol.2, nr.2, 2005, ISSN 1584-7284, p.71-75
3. V.Marinca, **N.Herişanu**, 2005, Forced Duffing oscillator with slight viscous damping and hardening non-linearity, *The Journal "Facta Universitatis", Series Mechanics, Automatic Control and Robotics*, vol.4, no.17, 2005, Serbia, ISSN 0354-2009, pp.245-255
4. V.Marinca, **N.Herişanu**, 2006, An iteration procedure for some nonlinear oscillations, *Facta Universitatis, Series Mech., Automatic control and Robotics*, vol.5, no.1, p.71-78
5. **N.Herişanu**, V.Bacria, M.Toader, S.Popa Radovan, 2006, Investigation of noise pollution in an urban area, *WSEAS Transactions on Systems*, ISSN 1109-2777, vol.5, no.7, July 2006, p.1648-1653
6. **N.Herişanu**, V.Marinca, 2007, Solution of a nonlinear oscillator using an iteration procedure, *WSEAS Transaction on Systems*, 1, 6, p.156-161, ISSN 1109-2777
7. **N.Herişanu**, V.Marinca, B.Marinca, 2007, An analytic solution of some rotating electric machines vibration, *International Review of Mechanical Engineering, Praise Worthy Prize*, ISSN 1970-8734, vol.1, no.5, September 2007, p.559-564
8. **N. Herişanu**, V. Marinca, analytical investigation to nonlinear vibration of an electrical machine supported by nonlinear bearings, *Romanian J. of Acoustics and Vibration*, (2009) 6(2), pp.99-104
9. **N.Herişanu**, V.Marinca, A modified variational iteration method for strongly nonlinear problems, *Nonlinear Sci. Lett. A*, 1(2) (2010) 183-192.
10. **V.Marinca**, N.Herişanu, Optimal homotopy perturbation method for strongly nonlinear differential equations, *Nonlinear Science Letters A*, 1(3) (2010) 273-280
11. V.Marinca, **N.Herişanu**, D.Bala, Some optimal approximate methods with application to thin film flow, *WSEAS Transaction on Systems*, nr.9(7), 2010, p.744-753
12. V.Marinca, **N.Herişanu**, Approximate analytic solutions for non-linear oscillators with fractional-order restoring force by means of the optimal variational iteration

method, International Journal of Physical Sciences Vol. 7(37), pp. 5407-5414, 30 September, 2012

g) Articles published in international conferences

1. V.Marinca, **N.Herişanu**, 2000, Use of cubic spline functions for analysis of free vibrations of elastically restrained non-uniform Timoshenko beams, Proceed. of the 7-th Int. Congress on Sound and Vibr., Garmish-Partenkirchen, Germany, p.1163-1170
2. **N.Herişanu**, V.Marinca, 2000, A study of non-linear dynamic cutting system of a machine-tool, Proceed. of the 7-th Int. Congress on Sound and Vibr., Garmish-Partenkirchen, Germany, p. 2861-2866
3. V.Marinca, **N.Herişanu**, 2004, The oscillator with cubic elastic restoring force, „Noise and Vibration Conference, Niş, (Serbia and Muntenegro), I.D.19-30
4. V.Marinca, **N.Herişanu**, 2006, An approximate solution for a modified Van der Pol oscillator, Proceed. 2-nd WSEAS Int. Conf. on Dynamical Systems and Control, Bucharest, 59-63, ISBN 960-8457-54-8
5. V.Marinca, **N.Herişanu**, 2006, Approximate analytical solution for non-linear oscillations, XX Conf. Noise and Vibration, Niş, ID. 20-15
6. V.Marinca, **N.Herişanu**, B.Marinca, Application of the optimal variational iteration method to the nonlinear pendulum, Proceedings of the XXI Conference „Noise and Vibration”, Tara, Serbia, 2008, (Proceedings pe CD)
7. V.Marinca, **N.Herişanu**, T.Marinca, A new procedure for constructing analytical approximations of strongly nonlinear oscillations, Proceedings of the XXI Conference „Noise and Vibration”, Tara, Serbia, 2008, (Proceedings pe CD)
8. **N.Herişanu**, V.Marinca, “Study on the dynamic behavior of an electrical machine rotor-bearing system with non-linear suspension by optimal variational iteration method, 2nd International Congress of Serbian Society of Mechanics (IConSSM 2009), Palić (Subotica), Serbia, 1-5 June 2009, C-26:1-10
9. V.Marinca, **N.Herişanu**, Analytical approximation of a conservative system with inertia and static nonlinearity, 2nd International Congress of Serbian Society of Mechanics (IConSSM 2009), Palić (Subotica), Serbia, 1-5 June 2009, C-25:1-7
10. **N. Herişanu**, V. Marinca, Investigation of periodic solutions of a class of nonlinear oscillations, Proc. of the 2-nd International Conference “Research people and actual tasks on multidisciplinary sciences”, 10-12 June 2009, Lozenec, Bulgaria, p.24-28
11. V.Marinca, **N.Herişanu**, Optimal iteration procedure for construction of periodic solutions of nonlinear oscillators, Proc. of the 2-nd International Conference “Research people and actual tasks on multidisciplinary sciences”, 10-12 June 2009, Lozenec, Bulgaria, p.29-33
12. V. Marinca, **N. Herişanu**, D. Bala, On an optimal parametric iteration method for thin film flow – Proceed. 4-th European Computing Conference (ECC’10), Bucureşti, 2010, 34-38 (2010) ISSN 1790-5117