

**Curriculum Vitae****Informatii**

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 Nationalitate romana  
 Data nasterii 27.11.1942

**Funcția** Cercetator stiintific grad I - Ph.D. Matematici

**Experienta**

1966-1969  
 Cercetator stiintific stagiar  
 Mecanica Mediilor Deformabile. Proiectare Optimala. Vibratii.  
 Institutul *Traian Vuia*, Academia Romana  
 1969-1977  
 Cercetator Stiintific  
 Teoria Nelocala a Mediului Deformabil. Structuri Dinamice. Optimizare. Biomecanica.  
 Institutul *Traian Vuia*, Academia Romana  
 1977-1992  
 Cercetator Stiintific grad III (CS III)  
 Caracterizarea Materialelor. Vibratii si Unde. Acustica.  
 Materiale Inteligente. Control si Optimizare.  
 Centrul de Mecanica Solidelor, Institutul de Fizica si Tehnologia Materialelor (ICEFIZ)  
 1992-1994  
 Cercetator Stiintific grad II (CS II)  
 Materiale Inteligente si Structuri. Compozite Sonice. Sonoelasticitate.  
 Acustica. Proiectare Optimala. Controlul Vibratiilor si Undelor. Biomecanica, Robotica.  
 Institutul de Mecanica Solidelor, Academia Romana  
 1994-prezent  
 Cercetator Stiintific grad I (CS I)  
 Nanomecanica. Biomecanica. Controlul sunetului si zgomotului. Modelarea Multiscala a  
 Invizibilitatii Acustice. Controlul Vibratiilor si Undelor. Biomecanica, Robotica. Modelare Contact/  
 Impact si Control.  
 Institutul de Mecanica Solidelor, Academia Romana ([www.imsar.ro](http://www.imsar.ro))

**Educatie**

1961-1966  
 Licenta in Matematica-Mecanica  
 Universitatea din Bucuresti, Facultatea de Matematica-Mecanica, Sectia Elasticitate  
 1972-1973  
 Studii avansate in Mecanica mediilor deformabile - Nelocalitate  
 Fulbright Fellowship, Princeton University, Department of Aerospace and Mechanical Science, USA  
 1969-1980  
 Doctor in Matematici

	Universitatea din Bucuresti, Facultatea de Matematica-Mecanica
<b>Limba natala</b>	Romana
<b>Alte limbi</b>	Engleza, Franceza
<b>Publicatii</b>	<p><b>Descriere pe scurt:</b>  <b>Carti:</b> 7 (Editura Academiei).  <b>Carti co-editate:</b> 10 (Editura Academiei).  <b>Capitole in carti:</b> 17 (Editura Academiei).  <b>Jurnale cotate ISI:</b> 56 (Smart Materials and Structures, New Journal of Physics; Mechanical Systems and Signal Processing; European Journal of Mechanics-A/Solids; CMC: Computers, Materials &amp; Continua; Mechanics Research Communications; Mechanics Research Communications; International Journal of Heat and Mass Transfer; Physiological Measurement, Institute of Physics Publishing; Inverse Problems, Institute of Physics Publishing; Acoustics Journal of the Acoustical Society of America; Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science).  <b>Articole BDI:</b> 82 (World Journal of Mechanics; Computer and Experimental Simulations in Engineering and Science-CESES; Transactions on Mathematics; Acta Tehnica Napocensis, series Mechanical Engineering. Materials Science; International Review of Mechanical Engineering-IREME; AMSE: Modelling, Measurement and Control, Series B: Mechanics and Thermics, PVP:Natural Hazard Phenomena and Mitigation; Anales of the Universityi Eftimie Murgu Reșița, Theta Series in Advanced Mathematics; Scientific Bulletin of the University of Pitesti, series Applied Mechanics, Proceedings of the Institute of Solid Mechanics, and so on).  <b>Proceedings conferinte:</b> 107</p>
<b>Miscellanea</b>	<p><b>Conducator doctorat: Domeniul Inginerie Mecanica, Dept. Stiinte Ingineresti, Mecanice si Calculatoare</b> - 20 doctoranzi (12 au primit titlul de doctor, 2 in progres si 6 exmatriculati).  <b>Supervisor</b> 2 cercetatori postdoctorali (Proiect Postdoc CEEX 1531/2006, code 1/2005 - <i>Postdoctoral program for developing of new coupled atomistic-continuum theories with applications to nanocontacts and indentation modelling</i>) 2006-2008.  <b>Co-editor</b> 10 carti Editura Academiei.  <b>Consultant Stiintific-</b> Naval Research Lab. 2003-2004 (cu prof. P.P.Delsanto, Politecnico di Torino, Dipartimento di Fisica).  <b>Doctor Honoris causa Universitatea Tehnica din Cluj-Napoca (2016).</b>  <b>Referent stiintific jurnale:</b> New Journal of Physics, Journal of Acoustical Society of America; Mechanics Research Communication; CMES: Computer Modeling Engineering &amp; Sciences; CMC: Computers, Materials &amp; Continua; Physiological Measurement; Inverse Problems; Computer Methods in Applied Mechanics and Engineering; Soft Nanoscience Letters (SNL) Scientific Research Publishing; World Journal of Mechanics (WJM), Scientific Research Publishing; International Journal for Numerical Methods in Engineering; Computers and Mathematics with Applications; The International Review of Mechanical Engineering, AMSE: Modelling, Measurement and Control, Series B: Mechanics and Thermics.</p>
<b>Premii</b>	<p><b>Premiul Traian Vuia</b> – Academia Romana (1997).  <b>Anexa 1. Experienta manageriala</b>  <b>Anexa 2. Vizibilitatea contributiilor stiintifice</b>  <b>Anexa 3. Lista publicatiilor relevante</b></p>

### Anexa 1. Experienta manageriala

<i>Coordonator Program -Proiecte relevante</i>
Project Copernicus CIPA-CT94-0132, <i>Development of Mathematical Modelling and Computer Simulation Techniques for the Ultrasonic Characterization of Structural Materials</i> , European Community-Politecnico di Torino, Dip. di Fisica (1995-1998).
Research Project 3993/96/UdR-Topo-Pers., INFN-Istituto Nazionale per la Fisica della Materia, Torino, Politecnico di Torino, Dip. di Fisica, <i>The multiscale coupled theories with application in mechanics</i> , 1996.
Research Project 35/98/UdR-Topo-Pers., INFN-Istituto Nazionale per la Fisica della Materia, Torino, Politecnico di Torino, Dip. di Fisica, <i>Modelling mechanics at the multiscale</i> , 1998.
Project NATO 2000-2002, PST.CLG. 976864/2000, <i>Modelling of Nonlinear Mesoscopic Elastic Materials</i> , 2000-2002.
Research Project 23/01/UdR-Topo-Pers., INFN-Istituto Nazionale per la Fisica della Materia, Torino, Politecnico di Torino, Dip. di Fisica, <i>Modelling dynamics at the mesoscopic scale</i> , 2001.
Project 2657/2001, Svenska Institutet, Stockholm, <i>Active and passive damping with applications in manufacturing. Theory</i> , 2001-2004.
Project nr. 01834/2004, Svenska Institutet, Stockholm, <i>Active and passive damping with applications in manufacturing</i> .

*Applications*, 2004-2006.

Project CEEEX postdoctoral, 1531/2006, code 1/2005, *Postdoctoral program for developing of new coupled atomistic-continuum theories with applications to nanocontacts and indentation modelling*, 2006-2008.

Project CEEEX-partner, 2C32/2006, code MEC 5632, *Mechanical system for coupling of power electrical and thermal sources for ecological autovehicles with hybrid propulsion*, 2006-2008.

*Participare in echipa de cercetare a doua proiecte PNII:*

Project PCCA 2011- Partnerships Program in Priority Areas, PN-II-PT-PCCA-2011-3.1-0190, contract 149/2012

”Reconfigurable haptic interfaces used in reproduction of the dynamic contact – Theory and experiments”, manager dr.hab. Ligia Munteanu, partner Technical University from Cluj-Napoca, Prof.dr.ing. Cornel Brisan.

Project PN II – IDEI – PCE – 2012 – 4 – 0023, contract 3/2013: Local resonant sonic composites with applications to mechanics. Coordinator: Institute of Solid Mechanics, Romanian Academy, manager dr. hab. Ligia Munteanu.

## **Anexa 2. Vizibilitatea contributiilor stiintifice**

Membru Onorific la Academiei de Stiinte Tehnice din Romania din 2004.

Doctor Honoris Causa Universitatea Tehnica din Cluj-Napoca (2016).

**Conferinte invitate:** Politecnico di Torino, Dipartimento di Fisica, every year (1994-2015); Technical University of Braunschweig (2016), University from Lecce, Italy (2015), Friedrich-Alexander Universität (FAU) Erlangen-Nürnberg (2014), Gdansk University of Technology, Faculty of Mechanical Engineering (2009); Centre for Advanced Materials, Faculty of Engineering, The British University of Egypt (2009); Technical University of Moldova (2009); Center of Applied Space Technology and Microgravity (ZARM); University of Bremen (2008); Heraklion University of Crete Heraklion (2008); Pädagogische Akademie des Bundes in Wien (2007); Institute of Thermomechanics, Academy of Sciences of the Czech Republic Prague, every year in the period 1996-2003; Royal Institute of Technology, Department of Solid Mechanics, Stockholm (1999, 2004-2006); Chalmers University, Göteborg (1995).

**Membership organizatii profesionale:** Gesellschaft fuer Angewandte Mathematik und Mechanik (GAMM), European Mechanics Society (EUROMECH), Romanian Society of Industrial and Applied Mathematics (ROMAI), Romanian Acoustical Society (SRA), New York Academy of Sciences, Romanian Society of Applied Mechanics.

**Membra in Colectivul Editorial:** Computer and Experimental Simulations in Engineering and Science (CESES); Soft Nanoscience Letters (SNL) Scientific Research Publishing Paseo Segovia, Irvine; Revue Roumaine des Sciences Techniques, série de Mécanique Appliquée Romanian Journal of Technical Science - Applied Mechanics); Scientific Bulletin, Applied Mechanics, University of Pitesti.

**Editor-in-Chief :** Romanian Journal of Mechanics.

## **Anexa 3. Lista publicatiilor relevante**

### **Carti**

*V. Moşneguţu, V. Chiroiu*, 2013. Introducere matematica in modelarea genunchiului uman, Editura Academiei.

*N.D.Stanescu, L.Munteanu, V.Chiroiu, N.Pandrea*, 2010. Sisteme dinamice. Teorie si aplicatii, vol.2, Editura Academiei.

*N.D.Stanescu, L.Munteanu, V.Chiroiu, N. Pandrea*, 2007. Sisteme dinamice. Teorie si aplicatii, vol.1, Editura Academiei.

*V.Chiroiu, P.Stiuca, L.Munteanu, St.Donescu*, 2005. Introducere in nanomecanica, Editura Academiei.

*M.Mihailescu, V.Chiroiu*, 2004. Advanced mechanics on shells and intelligent structures, Editura Academiei.

*V.Chiroiu, C.Chiroiu*, 2003. Probleme inverse in mecanica, Editura Academiei.

*H.Popescu, V.Chiroiu*, 1981. Proiectarea optimala a structurilor, Editura Academiei.

### **Volume co-editate**

Inverse Problems and Computational Mechanics, 2016. vol.2, Editura Academiei (eds: L.Marin, L.Munteanu, V.Chiroiu); Inverse Problems and Computational Mechanics, 2011. vol.1, Editura Academiei.

Research Trends in Mechanics, 2010. vol.4, Editura Academiei (eds. L.Munteanu, V.Chiroiu, T.Sireteanu); Research Trends in Mechanics, 2009. vol.3, Editura Academiei; Research Trends in Mechanics, 2008. vol.2, Editura Academiei; Research Trends in Mechanics, 2007. vol.1, Editura Academiei; Topics in Applied mechanics, 2006. vol.3, Editura Academiei.

Proceedings of the Annual Symposium of the Institute of Solid Mechanics, 2006. Editura Academiei (eds. V.Chiroiu, M.Migdalovici)

Topics in Applied mechanics, 2004. vol.2, Editura Academiei (eds. V.Chiroiu, T.Sireteanu); Topics in Applied mechanics, 2003. vol.1, Editura Academiei.

### **Capitole in carti**

- L.Munteanu, **V.Chiroiu**, T.Sireteanu, R. Ioan, 2016. Sonic multilayer composite films, chapter 11, vol. 2 Editura Academiei (eds. L.Marin, L.Munteanu, V.Chiroiu) 251-272.
- M.F.Ionescu, T.Sireteanu, **V.Chiroiu**, P.P.Teodorescu, 2011. An inverse problem associated with the Bouc-Wen model, In: Inverse Problems and Computational Mechanics, vol.1, cap.6 (eds. L.Marin, L.Munteanu, V.Chiroiu), Editura Academiei, 2011.
- V.Mosneguțu, R.Ioan, **V.Chiroiu**, 2011. Two inverse problems for the human knee, In: Inverse, Problems and Computational Mechanics, vol.1, cap.10 (eds. L.Marin, L.Munteanu, V.Chiroiu), Editura Academiei.
- V.Chiroiu**, L.Munteanu, V.P.Paun, 2010. On the paddle resonator. Series in Micro and Nanoengineering, Nanostructuring and Nanocharacterization, vol.16, 83-97, Editura Academiei (eds. M.Zaharescu, M.Ciurea, I.Kleps, D.Dascalu).
- L.Munteanu, **V.Chiroiu**, P.P.Teodorescu, 2010. Nanobeams with damping elements, Series in Micro and Nanoengineering, Nanostructuring and Nanocharacterization, vol.16, 241-256, Editura Academiei (eds. M.Zaharescu, M.Ciurea, I.Kleps, D.Dascalu).
- A.Toader, T.Sireteanu, **V.Chiroiu**, D.Dumitriu, 2010. Decentralized control of large scale systems, Research Trends in Mechanics, vol. 4, Editura Academiei (eds. L.Munteanu, V.Chiroiu, T.Sireteanu), 340-368.
- A.M.Mitu, D.Baldovin, **V.Chiroiu**, 2010. On the sonic nanocomposites, Research Trends in Mechanics, vol 4, Editura Academiei (eds. L.Munteanu, V.Chiroiu, T.Sireteanu), 163-178.
- V.Chiroiu**, D.Dumitriu, A.M. Mitu, D.Baldovin, C.Secară, 2009. On the damage in nonlinear mesoscopic materials, Proceedings of the European Computing Conference, Lecture Notes in Electrical Engineering 28, vol.2 (eds. N.Mastorakis, V.Mladenov), 421-426, Springer-Verlag.
- D.Popa, L.Solomon, **V.Chiroiu**, N.-D.Stănescu, C.Secară, 2009. On the uniaxial deformation of nonhomogeneous materials, Research Trends in Mechanics, vol.3, 320-334, Editura Academiei (eds. D.Popa, V.Chiroiu, L.Munteanu) .
- L.Munteanu, D. Dumitriu, Șt. Donescu, **V.Chiroiu**, 2009. On the complexity of the auxetic systems, Proc.of the European Computing Conference, Lecture Notes in Electrical Engineering, 28(2), 1543-1549, Springer-Verlag (eds. N.Mastorakis, V.Mladenov).
- V.Chiroiu**, L.Munteanu, V.P.Paun, P.P.Teodorescu, 2009. On the bending and torsion of carbon nanotubes ropes New Applications of Micro-and Nanotechnologies, Series of Micro and Nanoengineering, 14, 26-44, Editura Academiei (eds. M.Zaharescu, M.Ciurea, I.Kleps, D.Dascalu).
- C.Secară, D.Popa, N.D.Stănescu, **V.Chiroiu**, C.Chiroiu, 2008. On the control of chaos with applications to multibody dynamics, Research Trends in Mechanics, vol.2, Editura Academiei (eds. D.Popa, V.Chiroiu, I.Toma).
- D.Baldovin, D.Dumitriu, **V.Chiroiu**, L.Solomon, 2008. On the elastic-plastic contact modeling, Research Trends in Mechanics, vol.2, Editura Academiei (eds. D.Popa, V.Chiroiu, I.Toma).
- V.Chiroiu**, D.Dumitriu, L.Solomon, 2007. On the nonlocal modeling of nanoindentation and nanocontacts, in Research Trends in Mechanics (eds. D.Popa, V.Chiroiu, I.Toma), vol.1, 33-54, Editura Academiei.
- V.Chiroiu**, M.Mihailescu, L.Munteanu, 2006. Applications of smart materials in engineering, in Advanced Engineering in Applied Mechanics (eds. L.Vladareanu, T.Sireteanu).
- V.Chiroiu**, L.Munteanu, P.Știucă, 2005. On the modeling of nanostructured materials, Topics in Applied Mechanics, vol.3, 31-56, Editura Academiei (eds. T.Sireteanu, V.Chiroiu).
- P.Știucă, **V.Chiroiu**, C.M.Nicolescu, 2004. On the mechanical behavior of nanostructured materials, Topics in Applied Mechanics, vol.2, Editura Academiei, 355-391 (eds. V.Chiroiu, T.Sireteanu).
- V.Chiroiu**, 2003. Identification and inverse problems related to material properties and behavior, Topics in Applied Mechanics, vol.1, Editura Academiei (eds. V.Chiroiu, T.Sireteanu).

### Jurnale cotate ISI

- V. Chiroiu**, C. Brișan, D. Dumitriu, L. Munteanu, 2018. A sonification algorithm for developing the off-road models for driving simulators, Mechanical Systems and Signal Processing, vol. 98, January 2018, 310-323.
- V.Chiroiu**, I.Girip, R.Ilie, 2017. Acoustical Wave Propagation in Sonic Composites, Journal of Vibration, Engineering & Technologies, Special issue SysStruc June 2017, 217-222.
- R.Ilie, **V.Chiroiu**, R.Ioan, 2017. On the achieving control of noise, Scientific Bulletin, University Politehnica from Bucharest, series A, 79(1), 213-222.
- V.Chiroiu**, L.Munteanu, D.Dumitriu, C.Rugina, C.Brisan, 2017. On the sonic films with defects, Proceedings of the Romanian Academy, series A, 2017 (in press).
- V. Chiroiu**, M.F. Ionescu, T. Sireteanu, R. Ioan, L. Munteanu, 2015. On intrinsic time measure in the modeling of cyclic behavior of a Nitinol cubic block, Smart Materials and Structures, 24(3), 035022 1-11, 2015.
- L. Munteanu, **V. Chiroiu**, T. Sireteanu, D. Dumitriu, 2015. A multilayer sonic film, Journal of Applied Physics, 118, 165302, 2015.
- L. Munteanu, **V. Chiroiu**, C. Brișan, D. Dumitriu, T. Sireteanu, S. Petre, 2015. On the 3D normal tire/off-road vibro-contact problem with friction, Mechanical Systems and Signal Processing, 54-55, 377-393.
- L. Munteanu, D. Dumitriu, **V. Chiroiu**, C. Brișan, M. Bara, D.Marin, 2015. On the tactile sensing based on the smart materials, CMC: Computers, Materials & Continua, 46(2), 79-103.
- L. Munteanu, V. Moșneguțu, **V. Chiroiu**, R. Ilie, 2015. The cnoidal method with application to sonic composites, Scientific Bulletin University Politehnica of Bucharest series A, 77(3), 271-284.
- L. Munteanu, **V. Chiroiu**, Șt. Donescu, C. Brișan, 2014. A new class of sonic composites, Journal of Applied Physics, 115, 104904.
- L.Munteanu, C.Brișan, **V.Chiroiu**, D.Dumitriu, R.Ioan, 2014. Chaos-hyperchaos transition in a class of models governed by Sommerfeld effect, Nonlinear Dynamics, 78(3), 1877-1889.

- L.Munteanu, **V.Chiroiu**, V. Șerban, 2014. From geometric transformations to auxetic metamaterials, *CMC: Computers, Materials & Continua*, 42(3), 175-203.
- V.Chiroiu**, C. Brișan, M.A. Popescu, I.Girip, L.Munteanu, 2013. On the sonic composites without/with defects, *Journal of Applied Physics*, 114(16), 164909-1-10.
- L.Munteanu, **V.Chiroiu**, T.Sireteanu, 2013. On the response of small buildings to vibrations, *Nonlinear Dynamics*, 73(3), 1527-1543.
- D. Dumitriu, L. Munteanu, C. Brișan, **V.Chiroiu**, R.-V. Vasiu, O. Melinte, V.Vlădăreanu, 2013. On the continuum modeling of the tire/road dynamic contact, *CMES: Computer Modeling in Engineering and Sciences*, 94(2), 159-173.
- L.Munteanu, **V.Chiroiu**, 2012. On the feedforward control of hysteresis for a piezoelectric plate, *CMC: Computers, Materials & Continua*, 28(1), 57-80.
- L.Munteanu, C.Brișan, Șt.Donescu, **V.Chiroiu**, 2012. On the compression viewed as a geometric transformation, *CMC: Computers, Materials & Continua*, 30(1), 1-20.
- I.Ursu, **V.Chiroiu**, L.Munteanu, 2012. Hysteresis modeling and feedforward control of a five-story system, *Proceedings of the Romanian Academy – Series A: Mathematics, Physics, Technical Sciences, Information Science*, 13(1), 55-61.
- L.Munteanu, **V.Chiroiu**, 2011. On the three-dimensional spherical acoustic cloaking, *New Journal of Physics*, 13(8), 083031.
- V.Chiroiu**, L.Munteanu, I.Ursu, 2011. On chaos control in uncertain systems, *CMES: Computer Modeling in Engineering & Sciences*, 72(3), 229-246.
- L.Munteanu, **V.Chiroiu**, 2010. On the dynamics of locally resonant sonic composites, *European Journal of Mechanics-A/Solids*, 29(5), 871–878.
- V.Chiroiu**, L.Munteanu, P.P.Delsanto, 2010. Evaluation of the Toupin-Mindlin Theory for Predicting the Size Effects in the Buckling of the Carbon Nanotubes, *CMC: Computers, Materials, & Continua*, 16(1), 75-100.
- V.Chiroiu**, L.Munteanu, A.S.Gliozzi, 2010. Application of the Cosserat theory for modeling the reinforcement carbon nanotube beams, *CMC: Computers, Materials & Continua*, 19(1), 1-16.
- V.Chiroiu**, V.Mosneguțu, L.Munteanu, R.Ioan, 2010. On a micromorphic model for the synovial fluid in the human knee, *Mechanics Research Communications*, 37(2), 246-255.
- V.Chiroiu**, L.Munteanu, A.Toader, 2010. Optimum design of a thin elastic rod using a genetic algorithm, *CMES: Computer Modeling in Engineering & Sciences*, 65(1), 1-26.
- A.Toader, **V.Chiroiu**, T.Sireteanu, V.Serban, 2010. On the non-trivial effect of fast vibration on the slow dynamics of a damped oscillator, *Proceedings of the Romanian Academy, Series A: Math, Physics, Technical Sciences, Information Sci*, 11(1).
- V.Mosnegutu, **V.Chiroiu**, 2010. On the dynamics of systems with friction, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 11(1).
- L.Munteanu, **V.Chiroiu**, 2009. Shell Buckling of Carbon Nanotubes Using Nanoindentation, 2009. *CMES: Computer Modeling in Engineering & Sciences*, 48(1), 27-41.
- Șt.Donescu, **V.Chiroiu**, L.Munteanu, 2009. On the Young's modulus of a auxetic composite structure, *Mechanics Research Communications*, 36, 294-301.
- D.Baldovin, **V.Chiroiu**, L.Munteanu, L.Solomon, 2009. On the double couple radiation pattern for a slab-track system, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 10(2), 151-156.
- P.P.Delsanto, L.Munteanu, **V.Chiroiu**, Șt.Donescu, 2009. On the nanotorsional pendulum, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 10(2), 173-178.
- D.Popa, L.Munteanu, **V.Chiroiu**, 2009. On the shape reconstruction of 3D Stokes flows, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 10(3), 254-260.
- L.Munteanu, **V.Chiroiu**, D.Dumitriu, M.Beldiman, 2008. On the characterization of auxetic composites, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 9(1), 33-40.
- V.Chiroiu**, L.Munteanu, D.Dumitriu, M.Beldiman, C.Secara, 2008. On the architecture of a new cellular elastic material, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Sci*, 9(2), 105-115.
- L.Munteanu, D.Popa, C.Secara, **V.Chiroiu**, 2007. The analysis of a system of rigid bodies's dynamics by linear equivalence method, *Proceedings of the Romanian Academy, Series A: Mathematics, Physics, Technical Sciences, Information Science*, 8(2), 145-150.
- V.Chiroiu**, L.Munteanu, 2007. On the free vibrations of a piezoceramic hollow sphere, *Mechanics Research Communications, Elsevier*, 34(2), 123-129.
- P.P.Teodorescu, **V.Chiroiu**, L.Munteanu, 2006. The pseudospherical reduction of an uniaxial deformation of the Carbon nanotubes, *Proceedings of the Balkan Society of Geometers, Geometry Balkan Press, BSG*, 157-165.
- L.Munteanu, Șt. Donescu, **V.Chiroiu**, 2006. An inverse problem for the motion of blood in small vessels, *Physiological Measurement, Institute of Physics Publishing*, 27, 865-880.
- L.Munteanu, C.Chiroiu, **V.Chiroiu**, 2002. Nonlinear dynamics of the left ventricle, *Physiological Measurement, Institute of Physics Publ.*, 23, 417-435.
- V.Chiroiu**, C.Chiroiu, C.Rugina, P.P.Delsanto, M.Scalerandi, 2001. Propagation of ultrasonic waves in nonlinear multilayered media, *Journal of Computational Acoustics*, 9(4), 1633-1646.
- V.Chiroiu**, P.P.Delsanto, M.Scalerandi, C.Chiroiu, T.Sireteanu, 2001. Subharmonic generation in piezoelectrics with Cantor-like structure, *Journal of Physics D: Applied Physics, Institute of Physics Publishing*, 34, 3, 1579-1586.
- C.Chiroiu, L.Munteanu, **V.Chiroiu**, P.P.Delsanto, M. Scalerandi, 2000. A genetic algorithm for determining of the elastic constants of a monoclinic crystal, *Inverse Problems, Institute of Physics Publishing*, 16, 121-132.
- M.Scalerandi, P.P.Delsanto, C.Chiroiu, **V.Chiroiu**, 1999. Numerical simulation of pulse propagation in nonlinear 1-D media, *Journal of the Acoustical Society of America*, 106, 2424-2430.
- L.Munteanu, **V.Chiroiu**, 1995. Focusing of nonlinear ultrasonic waves, *Acoustics*, 1, 141–144.

**V.Chiroiu**, P.P.Delsanto, L.Munteanu, C.Rugină, M.Scalerandi, 1987. Determination of the second-and third-order elastic constants in Al from the natural frequencies, Journal of the Acoustical Society of America, 102(1).

**Brevet RO109783-B1**: *Vibration transducer for dynamic measurement of thickness of pre-fabricated concrete component*; RO109783-B1 Patent Assignee: Institute of Solid Mechanics, Inventors: Luigi Vladareanu, Tudor Sireteanu, Veturia Chiroiu.

**Brevet A/00145** : Procedure and 3D printer for making items containing networks of composite materials, Inventors: Brișan Cornel, Bara Mircea, Munteanu Ligia, Chiroiu Veturia, 20 Febr., 2015

**11 Octombrie, 2017**

**Semnatura DHC.Dr. Veturia Chiroiu**

