



## Europass Curriculum Vitae

### Informatii personale

Nume, prenume **Munteanu, Ligia Adriana**  
Telefon +40 0213126736  
Fax +40 0213126736  
E-mail [ligia.munteanu@imsar.ro](mailto:ligia.munteanu@imsar.ro)  
Nationalitate romana

**Ocupatia actuala** Cercetator stiintific grad 1 - Doctor in Matematica

### Experienta profesionala

1992-1993 Cercetator stiintific  
Institutul de Mecanica Solidelor al Academiei Romane

1993-2000 Cercetator stiintific  
Institutul de Mecanica Solidelor al Academiei Romane  
Programe de cercetare:  
Propagari de unde, Materiale cu microstructura, Optimizare, Caracterizare contact/impact

2000-2002 Cercetator stiintific grad III  
Institutul de Mecanica Solidelor al Academiei Romane  
Programe de cercetare  
Compozite, Medii structurale, Teoria solitonilor, Nanomecanica, Controlul vibratiilor, Amortizare

2002-2007 Cercetator stiintific grad II  
Institutul de Mecanica Solidelor al Academiei Romane  
Programe de cercetare  
Compozite, Medii structurale, Teoria solitonilor, Nanomecanica, Controlul vibratiilor, Amortizare  
Materiale inteligente,

2007-prezent Cercetator stiintific grad I  
Programe de cercetare  
Robotica, Optimizare, Medii complexe, Teoria solitonilor, Nanomecanica, Controlul vibratiilor,  
Amortizare, Materiale inteligente

Abilitare 2015 Titlu teza: Metode cnoidale cu aplicatii la sisteme dinamice neliniare SCOSAAR

Educatie 1986-1992  
MSc in Matematica  
Universitatea din Bucuresti, Facultate Matematica, Dept. Mecanica Solidelor, Bucuresti, Romania

1992-1993  
Studii avansate in Mecanica (DEA)  
Universitatea din Poitiers, Laborator Mecanica Teoretica, Poitiers, Franta

1994-1999  
Doctor in Matematica  
Universitatea din Bucuresti, Facultate Matematica, Dept. Mecanica Solidelor, Bucuresti, Romania

Limba materna romana

Alte limbi Engleza, Franceza

Nivel European (*)	Intelegere		Vorbire		Writing
	Ascultare	Citire	Vorbire interactiva	Vorbire productiva	
Engleza	C2	C2	C2	C1	C1
Franceza	C2	C2	C2	C1	C1

(\*) [Common European Framework of Reference for Languages](#)

#### Publicatii

**Descriere succinta:**

**Dizertatii:** 4 – MSc Thesis (Universitatea din Bucuresti, Facultate Matematica); Teza DEA (Universitatea din Poitiers, Laborator Mecanica Teoretica, Poitiers, Franta); Teza PhD (Universitatea din Bucuresti, Facultate Matematica), Abilitare SCOSAAR.

**Carti:** 6– 1 monografie (Kluwer Academic Publishers, Dordrecht, Boston (Springer Netherlands; new edition New York: Springer, 2005); 5 monografii (editura Academiei Romane).

**Carti Co-editate:** 4 (editura Academiei Romane).

**Capitole Carte:** 17 – 1 (Springer-Verlag); 1 (Bentham Science Publishers Ltd); 16 (Publishing House of the Romanian Academy).

**Jurnale ISI:** 37 (Smart Materials and Structures, New Journal of Physics; Mechanical Systems and Signal Processing; European Journal of Mechanics-A/Solids; Transportation Research part C: Emerging Technologies, New Journal of Physics; CMC: Computers, Materials & Continua; Mechanics Research Communications; CMES: Computer Modeling in Engineering & Sciences; Mechanics Research Communications RIS 0.86486; 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; Proceedings of the Balkan Society of Geometers, Geometry Balkan Press, BSG).

**Alte publicatii:** 223 (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: Modeling, Measurement and Control, Series B: Mechanics and Thermics, PVP: Natural Hazard Phenomena and Mitigation; Anales of the University Eftimie Murgu Reșița, Theta Series in Advanced Mathematics; Scientific Bulletin of the University of Pitești, series Applied Mechanics, Proceedings of the Institute of Solid Mechanics).

**Proceedings Conferinte:** 85

#### Miscellanea

**Conducator doctorat Inginerie Mecanica din 2015**

<http://www.researcherid.com/rid/A-7563-2008> Researcher ID: A-7563-2008

[http://www.cercetatori-romani.ro/on-line\\_intro\\_CEEEX.php](http://www.cercetatori-romani.ro/on-line_intro_CEEEX.php)

Membru CNATDCU în comisia 17, Inginerie mecanică, mecatronică și robotică și inginerie genistică și de armament din 2018.

**Profesor invitat:** 2 - University of Luxemburg and University of New South Wales, Sydney. A review of the book [3], SIAM REVIEW, 48, no. 4.

**Referent jurnale:** Journal of Acoustical Society of America 2000-prezent; Mechanics Research Communication 2007-prezent; CMES: Computer Modeling Engineering & Sciences, CMC: Computers, Materials & Continua 2008-prezent; Physiological Measurement 2002-prezent; Inverse Problems 2002-present; Computer Methods in Applied Mechanics and Engineering 2005-present; International Journal for Numerical Methods in Engineering 2008-present; Computers and Mathematics with Applications 2008-present, Soft Nanoscience Letters (SNL) Scientific Research Publishing 2010-prezent; World Journal of Mechanics (WJM), Scientific Research Publishing 2010-prezent.

**Carti coeditate 4 Editura Academiei Romane.**

#### Premii

**Premiul Henri Coandă** – 2002 pentru volumul *Introducere in teoria solitonilor. Aplicatii in Mecanica. Editura Academiei.*

Profesor Asociat in Matematica, Universitatea Tehnica de Constructii Bucuresti 2000-2008.

#### Patente

Patent Number A/00145 : Procedure and 3D printer for making items containing networks of composite materials, Autori: Brișan Cornel, Bara Mircea, Munteanu Ligia, Chiroiu Veturia, 26 feb. 2015

Cerere brevet inventie: Simulator pentru cutremure cu topologie hibrida si grade de mobilitate decuplate; autori: Brisan C., Bara V., Chiroiu V., Munteanu L., Prodan O., Gorgan S., August 2022

#### Experienta manageriala

Anexa 1

Vizibilitatea Contributiilor	Anexa 2
Carnet conducere auto	da

## Anexa 1. Experienta manageriala

### Proiecte nationale ca principal investigator

Proiect	Perioada
1. Project 6109/2000 ANSTI, <i>Simulation code for dynamical behavior of the human cardio-vascular system.</i>	2000
2. Projects 33517/2002 CNCSIS, code 49/2003 and 34395/2003 <i>Solitonic behavior of the nonlinear mesoscopic materials.</i>	2002-2003
3. Project 27664/2005 CNCSIS, code 160/2005 <i>Architecture of new nanocomposites with tailored properties of strength and damping.</i>	2005-2007
4. Project PN2 Idei 106/2007, code ID_247/2007, <i>Knowledge-based characterization of damping capacity of nanocomposites with auxetic materials and carbon nanotubes.</i>	2007-2010
5. Project PN-II-PT-PCCA-2011-3.1-0190, Contract 149/2012, <i>Reconfigurable Haptic Interfaces used in Dynamic Contact Reproduction -Theoretical and Experimental Developments, manager dr. hab. Ligia Munteanu, partener Technical University from Cluj-Napoca, prof.dr.ing. Cornel Brisan.</i>	2012-2016
6. Project PNII-ID-PCE-2012-4-0023, Contract 3/2013, <i>Local resonant sonic composites with applications in mechanics, manager dr.hab. Ligia Munteanu</i>	2013-2016

### Investigator (membru echipar): 12 (4 International si 8 proiecte nationale)

Program/Proiect	Perioada
1. 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, Dipartimento di Fisica.	1995-1998
2. Project GAR 4024/1998 Romanian Academy, code 8/1998, <i>Wavelets analysis in modelling of the supermodulus effect in modulated metallic foils.</i>	1998
3. Project MCT 4105 GR/1998, <i>Inverse strategies in composites modelling for obtaining new materials with desired properties.</i>	1998-1999
4. Project ANSTI 5208/1999, <i>Optimal configuration of smart structures with applications in aeronautics and machine tools.</i>	1999
5. Project 6109/2000, ANSTI, <i>Fracture processes in laminated composites with adhesive bonding.</i>	2000
6. Project NATO 2000-2002, PST.CLG. 976864/2000, <i>Modeling of Nonlinear Mesoscopic Elastic Materials.</i>	2000-2002
7. Projects 99/2003 and 95/2004 Romanian Academy, code 4/2003, <i>Shape memory alloys with applications to control of vibrations.</i>	2003-2004
8. Project 40197/2003, CNCSIS, A1, code_CNCSIS 152/2003, <i>On the intelligent control of damping in nanostructures and nanostructured materials with application in mechanics.</i>	2003-2005
9. Project 2657/2001, Svenska Institutet, Stockholm, <i>Active and passive damping with applications in manufacturing. Theory.</i>	2001-2004
10. Project 01834/2004, Svenska Institutet, Stockholm, <i>Active and passive damping with applications in manufacturing. Applications.</i>	2004-2006
11. Project GAR 95/2005-2006, code 3/2005 Romanian Academy, <i>Vibrations of carbon nanotubes with single walls subjected to axial forces, transverse forces and bending moments on elastic medium, with applications to super-strength nanostructured materials.</i>	2005-2006
12. Project CEEEX-partner, X2C32/2006, code MEC 5632, <i>Mechanical system for coupling of power electrical and thermal sources for ecological autovehicles with hybrid propulsion.</i>	2006-2008

## Anexa 2. Vizibilitatea Contributiilor

### (a) Atragere de fonduri prin proiecte de cercetare :

- a) Co-Investigator (membru in echipa) Proiect Copernicus CIPA-CT94-0132. Title: *Development of Mathematical Modelling and Computer Simulation Techniques for the Ultrasonic Characterization of Structural Materials*. Funding Agency: European Community – Politecnico di Torino, Dipartimento di Fisica, Italy (1995-1998);
- b) Co-Principal Investigator (i.e. Proiect Co-Manager) of the Project NATO 2000-2002, PST.CLG. 976864/2000. Title: *Modelling of Nonlinear Mesoscopic Elastic Materials*. Funding Agency: The Science for Peace and Security (SPS) (2000-2002);

c) Co-Investigator (membru in echipa) Proiect 2657/2001, Svenska Institutet, Stockholm. Title: *Active and passive damping with applications in manufacturing. Theory*. Funding Agency: Svenska Institutet, Stockholm (2001-2004);

d) Co-Investigator (membru in echipa) Project 01834/2004, Svenska Institutet, Stockholm. Title: *Active and passive damping with applications in manufacturing. Applications*. Funding Agency: Svenska Institutet, Stockholm (2004-2006). We add to these the organizing and running two workshops (Tri Studne Czech Republic (1997), Galanesti (1998)) as Co-Investigator of the Project Copernicus CIPA-CT94-0132

**(b) Prelegeri la universitati:**

2010-2020 (fiecare an) Politecnico di Torino, Dipartimento di Fisica; 2016 Technical University of Braunschweig, 2015 University from Lecce, Italy, 2014 Technical University of Braunschweig; 2002 University of New South Wales, Sydney. A review of the book [4], mentioned in the list of publications was published in SIAM REVIEW, 48, no. 4, (2006): 815-816 (author C. Roger from the University of New South Wales); 2000-2010 (fiecare an) Polytechnic University of Turin; 2005 University of Luxemburg; 2008 ZARM University of Bremen; 2009 Gdansk University of Technology, 2001 University of Roma La Sapienza and Istituto di Acustica O.M.Corbino, Roma; 2010 Karlsruhe Institut fur Technologie; 2011 Graz University of Technology; 1995 Technische Universität Hamburg-Harburg; Biography included in the 2010 Edition of *Dictionary of the personalities from Romania*.

**Prelegeri si comunicari Academia Romana:** 2020-2023 Aplicatii ale materialelor chalcogenice in seismologie. Un seismometru chalcogenic cu facilitati de alarmare si informare. Acest proiect avanseaza un sistem robotic modular si reconfigurabil pentru simularea cutremurelor cu facilitati de alarmare si informare folosind materialele chalcogenice. Reproducerea cutremurului in laborator. Prototip POSEIDON al simulatorului seismic, Sistem robotic modular si reconfigurabil pentru simularea cutremurelor.

**(d). Memberships Organizatii Profesionale:** Gesellschaft fuer Angewandte Mathematik und Mechanik (GAMM); European Mechanics Society (EUROMECH); Society of the Scientific Research Publishing Paseo Segovia, Irvine; European Society of Biomechanics (ESB); Romanian Society of Industrial and Applied Mathematics (ROMAI); New York Academy of Sciences. Scientific Consultant- Naval Research Lab. 2003-2004, 2011 (with Prof. P.P.Delsanto, Politecnico di Torino).