

CURRICULUM VITAE

PERSONAL DATA

- First Name: Ionel – Dumitrel
- Last Name: GHIBA
- Date and Place of Birth: 27th December 1982, Tîrgu Neamţ, Romania
- Address and current position:
 - Academic position at the Faculty of Mathematics of the University Duisburg-Essen (full time).
 - Teaching Assistant at the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iasi (full time, without pay).
 - Scientific Researcher III at the Octav Mayer Institute of Mathematics of the Romanian Academy, Iasi Branch (part time, without pay).
- Mobile Phone: 0040745761070
- E-mail: dumitrel.ghiba@uaic.ro, ghiba.dumitrel@yahoo.com
- Nationality: Romanian

EDUCATION

- 2010 October: Ph.D. in Mathematics with the thesis entitled *The study of some generalized models in continuum mechanics* defended at the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iaşi, under the supervision of Prof. Dr. Stan Chiriţă.
- 2007 October - 2010 October: Ph.D. student under the supervision of Prof. Dr. Stan Chiriţă at the Doctoral School of the Alexandru Ioan Cuza University of Iaşi.
- 2007 June: I obtained the Master's Degree with the paper *Generalized models in continuum mechanics (Porous media)* supervised by Prof. Dr. Stan Chiriţă.
- 2005 - 2007: Master studies in Mathematics, Faculty of Mathematics, Alexandru Ioan Cuza University of Iaşi, Romania.
- 2005 June: Bachelor's Degree with the paper *Navier-Stokes equations* supervised by Prof. Dr. Stan Chiriţă.
- 2001 - 2005: Faculty of Mathematics, Alexandru Ioan Cuza University of Iaşi, Romania.
- 1997 - 2001: High school, National College Ştefan cel Mare, Tîrgu Neamţ, IT section.

PROFESSIONAL EXPERIENCE

- 2013 October - present: Academic position at Faculty of Mathematics of the University Duisburg-Essen, Germany.
- 2011 October - present: Teaching Assistant at the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iaşi, Romania.
- 2011 October - present: part time Scientific Researcher III at the Octav Mayer Institute of Mathematics of the Romanian Academy, Iaşi Branch, Romania.
- 2011 November - 2013 December: Post doctoral researcher at the Institute of Solid Mechanics of the Romanian Academy, Bucharest, Romania.

- 2011 June - 2011 October: Scientific Researcher III at the Octav Mayer Institute of Mathematics of the Romanian Academy, Iași Branch, Romania.
- 2007 September - 2011 June: Scientific Researcher at the Octav Mayer Institute of Mathematics of the Romanian Academy, Iași Branch, Romania.
- 2006 March - 2010 September: Research Assistant at the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iași, Romania, in various research grants.
- 2005 July - 2007 September: Research Assistant at the Octav Mayer Institute of Mathematics of the Romanian Academy, Iași Branch, Romania.

PRIZES FOR THE RESEARCH ACTIVITY AND MEMBERSHIP

- International Research Centre on *Mathematics & Mechanics of Complex Systems* M&MOCS, University of L'Aquila, Palazzo Caetani, Cisterna di Latina, Italy, 2014 January - present.
- *Octav Mayer Prize* of The Iași Branch of The Romanian Academy, 2011.

ACADEMIC VISITS

- University of Duisburg-Essen, Faculty of Mathematics, June 6-July 4, 2013.
- University of Duisburg-Essen, Faculty of Mathematics, August 27-September 29, 2012.
- International Centre for Mechanical Sciences (CISM), Udine, Italy, May 21-25, 2012.
- International Centre for Mechanical Sciences (CISM), Udine, Italy, September 19-23, 2011.
- The Erwin Schrodinger International Institute for Mathematical Physics (ESI), Vienna, Austria, June 12-26, 2011.

PAPERS

Papers in ISI journals:

- A. Madeo, P. Neff, I.D. Ghiba, L. Placidi, G. Rosi. Wave propagation in relaxed micromorphic continua: modelling metamaterials with frequency band-gaps, *Continuum Mechanics and Thermodynamics*, accepted, doi: 10.1007/s00161-013-0329-2, 2013.
- I.D. Ghiba, P. Neff, A. Madeo, L. Placidi, G. Rosi. The relaxed linear micromorphic continuum: existence, uniqueness and continuous dependence in dynamics, *Mathematics and Mechanics of Solids*, accepted, 2013.
- P. Neff, I.D. Ghiba, A. Madeo, L. Placidi, G. Rosi. A unifying perspective: the relaxed linear micromorphic continuum, *Continuum Mechanics and Thermodynamics*, accepted, doi: 10.1007/s00161-013-0322-92013, 2013.
- I.D. Ghiba, E. Bulgariu. On spatial evolution of the solution of a non-standard problem in the bending theory of elastic plates, *IMA Journal of Applied Mathematics*, accepted, doi: 10.1093/imamat/hxt0462013, 2013.
- E. Bulgariu, I.D. Ghiba. On the thermal stresses in anisotropic porous cylinders, *Discrete and Continuous Dynamical Systems - Series S*, 6, December, pp. 1539-1550, 2013.
- I.D. Ghiba. On the spatial behaviour in bending theory of porous thermoelastic plates. *Journal of Mathematical Analysis and Applications*, 403, pp. 129-142, 2013.
- I.D. Ghiba, C. Galeş. Some qualitative results in the linear theory of micropolar solid-solid mixtures, *Journal of Thermal Stresses*, 36, pp. 426-445, 2013.

- I.D. Ghiba. On the temporal behaviour in the bending theory of porous thermoelastic plates, ZAMM Zeitschrift für Angewandte Mathematik und Mechanik, 93, pp. 284-296, 2013.
- I.D. Ghiba, C. Gales. On the fundamental solutions for micropolar fluid-fluid mixtures under steady state vibrations, Appl. Math. Comput., 219, pp. 2749-2759, 2012.
- S. Chiriță, I.D. Ghiba. Rayleigh waves in Cosserat elastic materials, International Journal of Engineering Science, 51, pp. 117-127, 2012.
- C. Gales, I.D. Ghiba, I. Ignătescu. Asymptotic partition of energy in micromorphic thermopiezoelectricity, Journal of Thermal Stresses, 34, pp. 1241-1249, 2011.
- I.D. Ghiba. On the steady vibrations problem in linear theory of micropolar solid-fluid mixture, European Journal of Mechanics A/Solids, 30, pp. 584-593, 2011.
- I.D. Ghiba. On the thermal theory of micropolar solid-fluid mixture, Journal of Thermal Stresses, 34, pp. 1-17, 2011.
- C. Gales, I.D. Ghiba. On uniqueness and continuous dependence of solutions in viscoelastic mixtures, Meccanica, 45, pp. 901-909, 2011.
- I.D. Ghiba. Representation theorems and fundamental solutions for micropolar solid-fluid mixtures under steady state vibrations, European Journal of Mechanics A/Solids, 29, pp. 1034-1041, 2010.
- S. Chiriță, I.D. Ghiba. Inhomogeneous plane waves in elastic materials with voids, Wave Motion, 47, pp. 333-342, 2010.
- S. Chiriță, I.D. Ghiba. Strong ellipticity and progressive waves in elastic materials with voids, Proceedings of the Royal Society A, 466, pp. 439-458, 2010.
- I.D. Ghiba. On the deformation of transversely isotropic porous elastic circular cylinder, Archive of Mechanics, 61, pp. 407-421, 2009.
- I.D. Ghiba. Some uniqueness and stability results in the theory of micropolar solid-fluid mixture, Journal of Mathematical Analysis and Applications, 335, pp. 385-396, 2009.
- S. Chiriță, C. Gales, I.D. Ghiba. On spatial behavior of the harmonic vibrations in Kelvin-Voigt materials, Journal of Elasticity, 93, pp. 81-92, 2008.
- I.D. Ghiba. Spatial estimates concerning the harmonic vibrations in rectangular plates with voids, Archives of Mechanics, 60, pp. 263-279, 2008.
- I.D. Ghiba. Asymptotic partition of energy in micropolar mixture theory of porous media, Meccanica, 43, pp. 639-649, 2008.
- I.D. Ghiba. Semi-inverse solution for Saint-Venant's problem in the theory of porous elastic materials, European Journal of Mechanics - A/Solids, 27, pp. 1060-1074, 2008.
- I.D. Ghiba. Some uniqueness and continuous dependence results in the micropolar mixture theory of porous media, International Journal of Engineering Science, 44, pp. 1269-1279, 2006.

Papers in other journals:

- I.D. Ghiba, C. Gales. A uniqueness result for the motion of micropolar solid-fluid mixtures in unbounded domain, Ann. Univ. Ferrara, 57, pp. 275-286, 2011.
- I.D. Ghiba. On the spatial behaviour of harmonic vibrations in an elastic cylinder, An. Șt. Univ. Iași, Sect. Matematică, LII, f.1, pp. 75-86, 2006.

Papers in proceedings of the conferences:

- I.D. Ghiba. Existence and uniqueness results in the micropolar mixture theory of porous media. In O. Cârjă, I. Vrabie (eds.), Applied analysis and differential equations, pp. 139-152. World Scientific, 2007.

Book chapters:

- I.D.Ghiba. Chapter No. 246: Boundary-Initial Value Problems of Thermoelastodynamics. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, DOI 10.1007/978-94-007-2739-7, Springer, in print 2013.
- I.D.Ghiba. Chapter No. 255: Partition of Energy. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, DOI 10.1007/978-94-007-2739-7, Springer, in print 2013.
- I.D.Ghiba. Chapter No. 258: Saint-Venant's Principle. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, DOI 10.1007/978-94-007-2739-7, Springer, in print 2013.
- I.D.Ghiba. Chapter No. 260: Thermoelastic Waves. In R. Hetnarski (ed.), Encyclopedia of Thermal Stresses, DOI 10.1007/978-94-007-2739-7, Springer, in print 2013.

Edited books:

- O. Cârjă, I.D. Ghiba. Proceedings of the International Student Conference on Pure and Applied Mathematics, Editura Universităţii "Alexandru Ioan Cuza", 2011, ISBN 978-973-703-602-5.

TALKS IN CONFERENCES AND SEMINARS

- On the study of Saint-Venant problem for porous cylinders using a semi-inverse method, University of Duisburg-Essen, Faculty of Mathematics, September 27, 2012.
- Semi-inverse solutions for the deformation of porous cylinders, 8th European Solid Mechanics Conference, Graz, Austria, July 9-13, 2012.
- Representation formulas and existence results in the theory of micropolar solid-fluid mixtures under steady state vibrations, 6th European Congress of Mathematics, Krakow, Poland, July 2-7, 2012.
- Homogeneous and inhomogeneous plane waves in elastic materials with voids, International Conference on Material Modelling (ICMM2), Paris, France, August 29-September 3, 2011.
- Strong ellipticity and waves in elastic materials with voids, The Seventh Congress of Romanian Mathematicians, Brasov, Romania, June 29- July 5, 2011.
- Homogeneous and inhomogeneous plane waves in elastic materials with voids, in the Nonlinear Water Waves Programmes, The Erwin Schrodinger International Institute for Mathematical Physics (ESI), Vienna, Austria, June 14, 2011.
- On the asymptotic partition of energy in micromorphic thermopiezoelectricity, 9th International Congress on Thermal Stresses, Budapest, Hungary, June 5-9, 2011. (with C. Gales and I. Ignătescu)
- On uniqueness and continuous dependence in the theory of micropolar thermoelastic mixtures, International Conference on Mathematics and Mathematical Sciences (ICMMS2010), Paris, France, October 27-29, 2010. (with C. Gales)
- On the relaxed Saint-Venant's problem for transversely isotropic porous elastic circular cylinder, 10eme Colloque Franco-Roumain de Mathematiques Appliquees, Poitiers, France, August 2010.
- Some estimates describing the behaviour of the solution in micropolar solid-fluid mixture theory, International Student Conference on Pure and Applied Mathematics, Iaşi, Romania, July 2010.
- Representations of the solution and existence results in micropolar solid-fluid mixtures theory, "Alexandru Myller" Mathematical Seminar Centennial Conference, Iaşi, Romania, June 2010.

- On the existence and behaviour of the solution in the theory of micropolar mixtures, “Alexandru Myller” National Mathematics Conference for University Students , Iași, Romania, July 2009.
- On the deformation of elastic cylinders with voids, 9eme Colloque Franco-Roumain de Mathematiques Appliquees, Brașov, Romania, August 2008.
- Existence and Uniqueness Results in the Micropolar Mixture Theory of Porous Media, ICAADE, Iași, Romania, September 2006.
- On the Micropolar Mixture Theory of Porous Media, Conference of young scientists, Computer Algebra and Scientific Computation, Chișinău, Republica Moldova, September 2006.

TEACHING EXPERIENCE

- In the last academic years I taught the following seminars:
 - Analysis 1 (Faculty of Mathematics, University Duisburg-Essen)
 - Mechanics (Faculty of Mathematics, Alexandru Ioan Cuza University of Iași)
 - Theory of elasticity (Faculty of Mathematics, Alexandru Ioan Cuza University of Iași)
 - Astronomy (Faculty of Mathematics)
 - Arithmetic and combinatorics (Faculty of Mathematics, Alexandru Ioan Cuza University of Iași)
 - Mathematics- Linear algebra and differential equations (Faculty of Chemistry, Alexandru Ioan Cuza University of Iași)
 - Software for Mathematics (Faculty of Mathematics, Alexandru Ioan Cuza University of Iași)
 - Computer Assisted Communication (Faculty of Letters, Alexandru Ioan Cuza University of Iași)
- Over 50 planetarium lessons for students and pupils interested in astronomical phenomena.
- Team leader of the Department of Mathematics, Alexandru Ioan Cuza University of Iași team at the South Eastern European Mathematical Olympiad for University Students with International Participation, Blagoevgrad BULGARIA, 2012 (2 gold medals, 2 silver medals and 1 bronze medal).

GRANTS

- Member in the following grants:
 - CERES-2-CEX06-11-12/2006 - Project manager Prof. Dr. Sanda Cleja-Țigoiu, hosted by the University of Bucharest.
 - CERES-2-CEX06-11-56/2006 - Project manager Prof. Dr. Stan Chiriță, hosted by the Alexandru Ioan Cuza University of Iași.
 - CEEEX-72, no. 1510/2006 - Project manager Lect. Dr. Cătălin Galeș, hosted by the Alexandru Ioan Cuza University of Iași.
 - ID-401, no. 15/2007 - Project manager Prof. Dr. Stan Chiriță, hosted by the Alexandru Ioan Cuza University of Iași.
 - ID-89, no. 457/2008 - Project manager Conf. Dr. Mircea Birsan, hosted by the Alexandru Ioan Cuza University of Iași.
 - TE-184, no. 86/2010 - Project manager Lect. Dr. Cătălin Galeș, hosted by the Alexandru Ioan Cuza University of Iași.
 - PN-II-ID-PCE-2011-3-0521, Project manager CSII. Dr. Liviu Marin, hosted by the Institute of Solid Mechanics of the Romanian Academy.
- individual grants:

- BD-300/2008, hosted by the Alexandru Ioan Cuza University of Iași.

MEMBER IN ORGANIZING COMMITTEES OF CONFERENCES

- Chairman of the International Student Conference on Pure and Applied Mathematics (ISCOPAM), Iași, Romania, July 2010.
- Member in the organizing committee of the National Mathematics Conference for University Students (SNCSSM) organized by the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iași in 2007.
- Member in the organizing committee of the National Mathematics Conference for University Students (SNCSSM) organized by the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iași in 2006.
- Member in the organizing committee of the National Mathematics Conference for University Students (SNCSSM) organized by the Faculty of Mathematics of the Alexandru Ioan Cuza University of Iași in 2005.

FOREIGN LANGUAGES

- ENGLISH- good;
- FRENCH- basic;
- GERMAN- beginner.

SKILLS

- Computer skills-general use, Internet, mathematical software (*Matlab*, *Mathematica*, *Latex*).

OTHERS

- I attended the following conferences and workshops:
 - Multiscale Modelling of Complex Materials, Coordinated by Tomasz Sadowski, Patrizia Trovalusci, 21- 25 May 2012, International Centre for Mechanical Sciences (CISM), Udine, Italy.
 - Generalized Continua from the Theory to Engineering Applications, Coordinated by Victor A. Eremeyev, Holm Altenbach, 19-23 September 2011, International Centre for Mechanical Sciences (CISM), Udine, Italy.
 - Workshop on Partial Differential Equations, Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest, 25-26 November 2010.
 - Exploratory Workshop “Teme Actuale de Cercetare în Matematici Aplicate” 22-23 September 2010, Bucharest, at the conference “Diaspora în cercetarea științifică și învățământul superior din România”, Simion Stoilow Institute of Mathematics of the Romanian Academy București, 21-24 September 2010.
 - The Mechanics Conference to celebrate the 100th anniversary of the Department of Engineering Science and Mechanics, May 29-30, 2008 at The Inn at Virginia Tech and Skelton Conference Center.
- I wrote, at the editors’ request, critical reviews of papers submitted for publications at the ISI journals: *Mathematical Problems in Engineering* (2007), *Mechanics Research Communications* (2010, 2012, 2013), *Physics Letter A* (2010), *An. St. Univ. Iasi Sect. Matematica* (2009, 2010), *Heat Transfer - Asian Research* (2010), *Journal of Zhejiang University-SCIENCE A* (2010), *Applied Mathematical Modelling* (2010, 2013a, 2013b), *International Journal of Thermophysics* (2011), *Carpathian Journal of Mathematics* (2011), *Meccanica* (2012), *Proceedings of the Romanian Academy, Series A* (2012), *ZAMP* (2013), *Comptes rendus Mecanique* (2013), *ZAMP* (2013) and at the journals: *Journal of Mechanical Engineering Research* (2010), *International Journal of Engineering, Science and Technology* (2012).
- I published many book reviews in the journal *Memoriile Secțiilor Științifice*, Editura Academiei Române.