

Curriculum Vitae

– Mircea Bîrsan –

Education and studies

I was born on the 1st of May 1973 in Iași, Romania. I graduated the high-school College “C. Negruzzi” of Iași in 1992. In the period 1990-1992, I was a member of the National Team of Mathematics of Romania and I won the gold medal at the Balkan Olympiad of Mathematics in Athens (Greece, May 4-9, 1992).

I was a student of the Faculty of Mathematics at the University “A.I. Cuza” of Iași between 1992 and 1997. I graduated the Faculty of Mathematics, the specialization Mathematics–Mechanics, with the maximum grade (grade points 10 out of 10).

On the 4th of July 2003, I have defended my Ph.D. thesis entitled “Study of the deformation of some elastic solids with microstructure” at the University “A.I. Cuza” of Iași, under the supervision of Professor D. Ieșan.

From November 2005 until September 2007, I worked also as a post-doctoral researcher at the Faculty of Mathematics, due to a grant funded by the Romanian Ministry of Education and Research.

Professional experience

In February 1998, I obtained a position of research assistant at the Faculty of Mathematics from Iași, and in the year 2000 I became an assistant professor. Then, in February 2004 I was promoted as a lecturer in the Department of Applied Mathematics of the same faculty. In October 2007, I have become associate professor in the Department of Applied Mathematics.

During all these years, I have delivered courses and working-classes for the students of the Faculty of Mathematics, in the following subjects: rational mechanics, continuum mechanics, theory of elasticity and thermoelasticity, computational mechanics, differential equations, astronomy, mathematics for economists, etc.

Research and publications

My research activity is focused on the mathematical problems of the mechanics of solids. The main fields of interest are the theory of elasticity and

thermoelasticity, with emphasis on the theory of media with microstructure and the theory of shells and plates.

I have written 40 scientific articles: 22 in internationally renowned journals, 11 in Romanian or international journals and 7 as chapters in books or conference proceedings (see the list of publications). I have written 2 books: the first one on the deformation of porous elastic plates (a mathematical study) and the second one on the theory of Cosserat shells.

Prizes

In December 2007, I have received the prize “Gheorghe Lazăr” of the Romanian Academy for my articles on the deformation of the elastic Cosserat shells.

In April 2012, I have received the prize “Nicolae Teodorescu” of the Academy of Romanian Scientists for the group of articles published in the years 2010-2011.

International fellowships and research projects

In 2008, I was awarded a Humboldt Research Fellowship for Experienced Researchers for the implementation of a scientific research project in Germany, at the Martin-Luther University Halle–Wittenberg, Department of Engineering Sciences. During 15 months I have worked on this research project in collaboration with Professor H. Altenbach, who was my host at the Martin-Luther University in Halle.

In the year 2011, I have participated as a researcher to the following European Research Project supported by the 7th E.U. Framework Programme: “Centre of Excellence for Modern Composites Applied in Aerospace and Surface Transport Infrastructure” (FP7-REGPOT-2009-1, grant agreement no. 245479), which was coordinated by Professor T. Sadowski from the Lublin University of Technology (Poland).

I was invited to present lectures about my research achievements in open seminars at the Technical University of Darmstadt (on September 16, 2008), University of Essen (on September 18, 2009) and University of Halle (on April 4, 2010).

In the academic year 2011-2012 I was invited by Professor P. Neff to hold a didactic and research position at the Faculty of Mathematics, University Duisburg–Essen, Campus Essen. Our collaboration is motivated by the common interests in the research field of mathematical theory of shells.

National research grants

I have coordinated as project manager 3 national research grants :

1) 2009–2011 : Research project of the type “Project of Exploratory Research” (PNII - IDEI), grant no. 457/2009, code 89, supported by the Romanian Ministry of Education and Research through CNCSIS–UEFISCSU. Title : “Generalized models of elastic solids with microstructure”.

Total financial support granted : 389 647,42 lei (RON).

2) 2005–2006 : Research project of the type CEEEX for young researchers, grant no. 2975/11.10.2005, code 44/2005, supported by the Romanian Ministry of Education and Research through UEFISCSU.

Title : “Study of the mechanical behavior of some elastic solids made from materials with microstructure or from mixtures”.

Total financial support granted : 100 000 lei (RON).

3) 2005 : Research project of the type CNCSIS – AT, grant no. 27693/2005, code 170/2005, supported by the Romanian Ministry of Education and Research through CNCSIS.

Title : “Mathematical modeling of elastic and thermoelastic porous media: study of thin bodies and solids filled with fluids”.

Total financial support granted : 8 000 lei (RON).

I have also participated in other 10 national research projects along the period 1999–2011, as member of the research team.

In the years 2010 and 2011, I participated to the national project entitled: “Development of an operational system of qualifications for higher education in Romania” – DOCIS (<http://docis.acpart.ro>); type and number of the project: POSDRU/2/1.2/S/2 . The project was supported by the Romanian Government through the National Authority for Qualifications (ANC), and partially by the European Social Fund (ESF). Within the DOCIS project, I was a short-term expert for the specialization “Applied Mathematics”.

Participation to conferences and workshops

I have presented my original research results in many scientific international conferences, such as:

- The 3rd European Conference on Computational Mechanics, Lisbon (Portugal), June 5-9, 2006;
- International Conference on Applied Analysis and Differential Equations, Iași (Romania), September 4-9, 2006;

- IUTAM Symposium on Relation of Shell, Plate, Beam and 3D Models, Tbilisi (Georgia), April 23-27, 2007;
- The 3rd International Conference on Structural Engineering, Mechanics and Computation, Cape Town (South Africa), September 10-12, 2007;
- The 36th Solid Mechanics Conference, Gdansk (Poland), September 9-12, 2008;
- The 7th EUROMECH Solid Mechanics Conference, Lisbon (Portugal), September 7-11, 2009;
- The 1st International Conference on Material Modeling, Dortmund (Germany), September 15-17, 2009;
- The 9th Conference: Shell Structures - Theory and Applications, Jurata (Poland), October 14-16, 2009;
- The 81st Annual Scientific Conference of GAMM, Karlsruhe (Germany), March 22-26, 2010;
- The 4th European Conference on Computational Mechanics, Paris (France), May 16-21, 2010;
- The 37th Solid Mechanics Conference, Warsaw (Poland), September 6-10, 2010;
- The EUROMECH Colloquium: Shell-like Structures - Nonclassical Theories and Applications, Wittenberg (Germany), August 22-26, 2011;
- The 2nd International Conference on Material Modeling, Paris (France), August 30 - September 3, 2011.

I have also participated to the following workshops and courses:

- Workshop on Thin Structures, Naples (Italy), September 15-17, 2005, at: Università degli studi di Napoli Federico II;
- Experimental Techniques and Modelling of Advanced Materials, Cracow (Poland), February 6-17, 2006, at: Cracow University of Technology;
- Advanced course on “Poly- Quasi- and Rank-One Convexity in Applied Mechanics”, Udine (Italy), September 24-28, 2007, at: CISM - International Centre for Mechanical Sciences, coordinated by J. Schröder and P. Neff;
- Advanced course on “Modern Engineering and Mathematical Concepts in Computational Shell Mechanics”, Udine (Italy), May 19-23, 2008, at: CISM - International Centre for Mechanical Sciences, coordinated by P.G. Ciarlet, W.B. Krätzig, and W. Wagner.

Editorial activities for scientific journals

In recent years, I was invited to review manuscripts submitted to the following journals:

- Zeitschrift für Angewandte Mathematik und Mechanik ;
- International Journal of Solids and Structures ;
- Mathematics and Mechanics of Solids ;
- Meccanica ;
- Reviews in Mathematical Physics ;
- Journal of Mechanics of Materials and Structures ;
- Zeitschrift für Angewandte Mathematik und Physik ;
- Journal of Applied Mechanics ASME ;
- Archives of Mechanics ;
- GAMM-Mitteilungsband ;
- International Journal of Non-Linear Mechanics ;
- Mechanics of Advanced Materials and Structures ;
- Mathematics and Mechanics of Solids ;
- Analele Științifice ale Universității “A.I. Cuza” Iași, Ser. Matematică.

Since January 2012, I am member of the Editorial Board of the following journal: Annals of the Academy of Romanian Scientists, Series on Mathematics and its Applications (ISSN 2066-6594).