

# CURRICULUM VITAE

## Personal Details

**Full Name:** Vasile Lupulescu

**Date of Birth and Place of Birth:** the 12th June, 1957, Targu-Jiu, Romania

**Nationality:** Romanian

**Residency:** Strada Solidaritatii, 5- Targu Jiu

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## Education and Qualifications

- B. Sc. in Mathematics, “West University” of Timisoara 1982
- Tenure in Education: Faculty of Mathematics, University of Craiova, Romania 1985, 1990.
- Ph.D. in Mathematics, University of Bucharest 1998 (Thesis: *New aspects in optimal control theory*, advisor Prof. Stefan Mirica)

## Employment Record

- High School mathematical teacher Liceul Agricol Targu-Jiu 1982-1992
- Asst. Lecturer University Constantin Brâncusi of Târgu-Jiu 1992-1993 (Department of Applied Mechanics)
- Lecturer University Constantin Brâncusi of Târgu-Jiu 1993-2004 (Department of Applied Mechanics)
- Assoc. Professor University Constantin Brâncusi of Târgu-Jiu 2004-present (Reader) (Department of Mathematics)

## Research Interests

Optimal control  
differential equations  
differential inclusions

## Professional Affiliations

Romanian Mathematical Society  
American Mathematical Society

## Honourary Appointments

President of Romanian Mathematical Society of Gorj's County

## Adviser for Doctoral-thesis

Touffik Bouremani, *Contributions to Control Optimal Theory for Differential Inclusions-Autonomous Differential Games*, University of Bucuresti, November 21, 2004

## Teaching Experience

Mathematical Analysis  
Differential Equations  
Mathematics for Economists

## Professional Service:

- Reviewer for Mathematical Reviews,
- Member of Editorial Board of international journal **Surveys in Mathematics and its Applications** (<http://www.emis.de/journals/SMA>)

## Grants

### International Research Grants

1. Maths. Department of Aveiro University, Portugal (Fundação para Ciencia e Tecnologia SFRH/BPD/3638/2000, Portugal).

### National Research Grants

2. Scientist in charge for the project: *The promotion of scientific research concerning: operator models and applications*, grant CEEEX (module: The promotion of participation to research European and international programs; type: Increasing institutional and research programs visibility) from the Romanian Ministry of Education and Research, code PR-D11-PT00-48/2005.

3. Grant (to which I participated as member) (*Incluziuni diferentiale, incluziuni discrete si aplicatii in control optimal si jocuri diferentiale*, Grant CNCSIS -A 887/2005.

## PUBLICATIONS

### Conferences

1. The 3-th National Conference of Mathematical Analysis and its Applications, Timisoara, November 14-15, 1998;
2. International Workshop „Analysis and Control of Differential Systems”, August 10-15, Constanta, 1998;
3. The 5-th National Conference of Mathematical Analysis and its Applications, Craiova, November 23-24, 2001;
4. International Conference on Theory and Applications of Mathematics and Informatics, Alba Iulia, 24-26 oct., 2003;
5. 7ème Colloque Franco-Roumain de Mathématiques Appliquées, Craiova (Roumanie) du 30 août au 3 septembre 2004;
6. Workshop on Viability & Flow Invariance, Galanesti, August 22-25, 2005, (organized by Univ. „Al. I. Cuza” of Iasi);
7. The 7-th National Conference of Mathematical Analysis and its Applications, Craiova, September 23-24, 2005;
8. Sixth International Conference on Numerical Methods and Applications - NM&A'06, August 20-24, 2006, Borovets, Bulgaria
9. The 4-th International Colloquium “Mathematics in Engineering and Numerical Physics”, October 6-8, 2006, Bucharest, Romania
10. The 8-th National Conference of Mathematical Analysis and its Applications, Timisoara, December 01-02, 2006;
11. ICDS International Conference on Dynamical Systems 2007, June 26-30, 2007. Abant İzzet Baysal University Bolu, Turkey.
12. Equadiff 07, Vienna University of Technology, August 5th-11th, 2007

### Papers Published in Refereed Mathematics Journals

- 1) End-point monotonicity of real functions anal application, *An. St. Univ. Ovidius Constanta*, vol 6 (1), 1998, 89-96 (with St. Mirica); Zbl 0972.26006, MR1695051;
- 2) Verifications Theorems for Discontinuous Value Functions in Optimal Control, *Math. Reports*, vol. 2 (52), No.3, 2000, 299-326 (with St. Mirica); MR1889614;
- 3) On differentiability with respect to parameters of the Lebesgue integral, *JIPAM, J. Inequal. Pure Appl. Math.* 2002, No.4, Paper No.64, 12 p., Zbl 1029.26003, MR1923363;

- 4) Characterization of stability for strongly continuous semigroups by boundedness of its convolutions with almost periodic functions, *Interantional Journal of Differential Equations and Applications*, vol. 2, No.1, 2001; 103-109 (with C. Buse si S.S. Dragomir); MR2006440;
- 5) A variability result for second order differential inclusions, *Electronic Journal of Differential Equations*, Vol. 2002(2002), No. 76, pp. 1-12; Zbl 1023.34010, MR1927890;
- 6) Existence of solutions to a class of non convex second order diferential inclusions, *Appl. Math. E-Notes*, 3(2003), Zbl 1034.34018, MR 1 980 574;
- 7) Existence of solutions for a class of nonconvex second order differential inclusions. *An. Univ. Craiova Ser. Mat. Inform.* 29 (2002), 120--126, MR2064905;
- 8) Existence of solutions to a class of second order differential inclusions, *An. Univ. Craiova Ser. Mat. Inform.*, 30(2003), 1-7; MR2064629;
- 9) Exponential stability of linear and almost periodic systems on Banach spaces, *Electron. J. Differ. Equ.*, 2003, Paper No.125, 7 p.(with C. Buse), Zbl pre02033645, MR2022073;
- 10) A viability result for nonconvex semilinear differential inclusions, *Nonlinear Functional Analysis and Applications*, 9(3)(2004), 495-512 (with M. Necula); MR2101195, Zbl 1073.34077
- 11) Continuous selections of solutions sets to second order evolution equations, *Acta Universitatis Apulensis*, 7(2004),163-170; MR2157959
- 12) Existence of solutions for nonconvex functional differential inclusions, *Electronic Journal of Differential Equations*, Vol. 2004(2004), No. 141, pp. 1-6. MR2108912, Zbl pre02187299
- 13) Viable solutions for a class of nonconvex functional differential inclusions, *Mathematical Reports*, 7(57)(2)(2005), (with A. Cernea); MR2153589
- 14) An existence result for a class of nonconvex functional differential inclusions, *Acta Universitatis Apulensis*, 9(2005), 49–56; MR2158472
- 15) Viable solutions for second order nonconvex functional differential inclusions, *Electronic Journal of Differential Equations*, Vol. 2005(2005), No. 110, pp.1-11, MR2174542
- 16) On a class of differential inclusions governed by a sweeping process, *Bull. Math. Soc. Sci. Math. Roumanie*, TOME 48 (96), no. 4, 2005, p.361-367, MR2192514(with A. Cernea).
- 17) Potential type functional differential inclusions, *Analele Universitatii Bucuresti, Matematica*, vol.54, nr.1, 2005, pag.5-9 (with A. Cernea)
- 18) A viability result for nonconvex semilinear functional differential inclusions, *Discussiones Mathematicae, Differential Inclusions, Control and Optimization*, 25(2005), pp. 109-128, MR2228423(with M. Necula);
- 19) A viability result for nonconvex differential inclusions with memory, *Portugaliae Mathematica*, 63(3)(2006), pp.335-350 (with M. Necula); Zbl 1114.34043
- 20) A viability result for a class of functional differential equations, *An. Stiint. Univ. „Al. I. Cuza” Iasi, Sect. I-a Math.*, **51** (2005), no. 2, 319--336 (2006), MR2227070(with M. Necula);
- 21) Discrete approximations of singularly perturbed systems, Boyanov, Todor (ed.) et al., Numerical methods and applications. 6th international conference, NMA 2006, Borovets, Bulgaria, August 20--24, 2006. Revised papers. Berlin: Springer. Lecture Notes in Computer Science 4310, 304-311 (2007) (with Tzanko Dochev),
- 22) Existence of viable solutions for a class of nonconvex differential inclusions with memory, *Mathematica - Tome 49(72)*, No. 1 (2007), pp. 21 - 28 (with A. Cernea).
- 23) On a class of functional differential equations, *Analele Universitatii de Vest, Timisoara, Seria Matematica-Informatica*, XLV, 2(2007), 23-31.

### Accepted for publication

- 1) Successive Approximations to Solutions of Set Differential Equations in Banach Spaces, *Dynamics of Continuous, Discrete and Impulsive Systems*, Series A(in press),
- 2) On a class of fuzzy functional differential equations, *Fuzzy Sets and Systems*
- 3) Causal functional differential equations in Banach spaces, *Nonlinear Analysis Series A: Theory, Methods & Applications* (2007), doi: 10.1016/j.na.2007.11.028

### Papers Submitted to Refereed Mathematics Journals

- 1) Initial value problem for fuzzy differential equations under dissipative conditions, *Information Sciences*
- 2) Monotone iterative technique for impulsive differential equations with causal operators, *Applied Mathematics and Computation*

## Research Monographs

- 1) Variational calculus and optimal control, Ed. Carminis, Pitesti, 1999;
- 2) Nonsmooth analysis, differential inclusions and optimal control, Ed. Mirton, Timisoara, 2003.

## Books (lecture notes)

- 1) Elements of linear algebra and mathematical analysis for economists, Ed. Axioma Teomsnic, Tg.Jiu, 2005 (470 pag., ISBN 07082-5-7)
- 2) Mathematics for economists, Ed. Academica, 2003(137 pag.);
- 3) Differential equations, Ed Univ. "C. Brâncusi" - Tg. Jiu, 2000 (100 pag.);
- 4) Linear algebra and differential equations, Ed. Univ. "C. Brâncusi" - Tg. Jiu, 1995 (116 pag.);

## Didactic Publications

- 1) Matematica pentru bacalaureat, Ed. Carminis, Pitesti, 2000 (288 pagini, Avizat de MEC cu nr. 73 275, Avizat de MEC cu nr. 81393, ISBN 973-8074-24-X) (in colaborare);
- 2) Matematica, clasa a X-a, Culegere de probleme, Ed. Carminis, Pitesti, 2001 (318 pagini, Avizat de MEC cu nr. 81393/3.09.2001, ISBN 973-8074-57-6) (in colaborare);
- 3) Matematica, clasa a XI-a, Culegere de probleme, Ed. Carminis, Pitesti, 2002 (320 pag., Avizat de MEC cu nr. 81393/3.09.2001, ISBN 973-85621-3-9). (in colaborare);
- 4) Matematica – Culegere de probleme de liceu, Ed. Axioma Teomsnic, Tg.Jiu, 2006 (410 pag., ISBN 973-87622-6-X) (in colaborare).

## Preprints

- 1) Characterization of stability for strongly continuous semigroups by boundedness of its convolutions with almost periodic functions, *Research Group in Mathematical Inequalities and Applications*, vol. 2, No.7, 1999; (with C. Buse si S.S. Dragomir);
- 2) Existence of solutions to a class of second order differential inclusions, Tehnical report, CM01/I-11, *Departament of Mathematic of Aveiro*, 2001;
- 3) A viability result for second order differential inclusions, Tehnical report, CM01/I-12, *Department of Mathematic of Aveiro*, 2001