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RECTORATUL

## Universitatea Babeş-Bolyai Competiția Excelenței 2010

### Dosar individual

**Notă: Toate datele se referă la perioada 2005-2009**

Nume, prenume, grad did.	VARGA GYORGY CSABA, PROF. UNIVERSITAR
Facultatea, Catedra	Facultatea de Matematică și Informatică, Catedra de Algebră, Analiză și Geometrie
Domeniul științific	Geometrie Riemann-Finsler, Calcul Variațional,
Adresa paginii web personale	<a href="http://www.cs.ubbcluj.ro/~csvarga/">www.cs.ubbcluj.ro/~csvarga/</a>
Adresa e-mail	<a href="mailto:csvarga@cs.ubbcluj.ro">csvarga@cs.ubbcluj.ro</a>

### Criteriul I – Output

**1. Articole științifice publicate în reviste indexate ISI (cu menționare factorului de impact în cazul celor cotate)**

1. Hannelore Lisei, Csaba Varga, "Multiple Solutions for a Differential Inclusion Problem with Nonhomogeneous Boundary Conditions" Numerical Functional Analysis and Optimization, 30(5–6)(2009), 566–581. **IF: 0.586**

2. Alexandru Kristály, Csaba Varga, *Multiple solutions for a degenerate elliptic equation involving sublinear terms at infinity*, Journal of Math. Anal. Appl. 352 (2009), 139-148.

**IF: 1.046**

3. Brigitte E. Breckner, Alexandru Horváth, **Csaba Varga**, *A multiplicity result for a special class of gradient-type systems with non-differentiable term*, Nonlinear Analysis TMA, 70 (2009) 606-6020. **IF : 1.295**

4. Hannelore Lisei, Gheorghe Morosanu, **Csaba Varga**, *Multiplicity Results for Double Eigenvalue Problems Involving the  $p$ -Laplacian*, Taiwanese Journal of Mathematics, 13. No.3(2009), 1095-1110. **IF: 0.583**

5. Ildiko Mezei, Csaba Varga, *Multiplicity result for a double eigenvalue quasilinear problem on unbounded domain*, Nonlinear Analysis: Theory, Methods & Applications, 69(2008), 4099-4105. **IF: 1.295**

6. Hannelore Lisei, Alexandru Horváth, Csaba Varga, *Multiplicity results for a class of quasilinear eigenvalue problems on unbounded domain*, Archiv der Mathematik., Vol. 90., No.3. (2008), pp 256-266.

**IF: 0.500**

7. Brigitte E. Breckner, Csaba Varga, A multiplicity result for gradient type systems with non-differentiable term, Acta Mathematica Hungarica, 118, Nr. 1-2(2008), pp. 85-104.

**IF: 0.317**

8. Alexandru Kristály, Hannelore Lisei, Csaba Varga, *Multiple solutions for  $p$ -Laplacian type Equations.*, Nonlinear Anal. TMA, 68 (2008), pp.1375-1381.

**IF: 1.295**

9. Francesca Faraci, Antonio Iannizzotto, Pál Kupán, Csaba, Varga, *Existence and Multiplicity Results for Hemivariational Inequalities with two Parameters*, Nonlinear Anal. TMA, 67(2007), No. 9, pp. 2654-2669.

**IF: 1.295**

10. Alexandru Kristály, Csaba Varga, *Multiple solutions for elliptic problems with singular and sublinear potentials*, Proc. AMS, 135(2007), 2121-2126.

**IF: 0.584**

11. Francesca Faraci Antonio Iannizzotto, Hannelore Lisei, Csaba Varga, *A Multiplicity Result for Hemivariational Inequalities*, Journal of Math. Anal. And Appl. 330, (2007) No.1 683-698

**IF: 1.046**

12. A. Kristály, Cs. Varga and V. Varga, *A nonsmooth principle of symmetric criticality and variational-hemivariational inequalities*, Journal of Math. Anal. And Appl 325(2007), no. 2, 975-986. **IF: 1.046**

13. Hannelore Lisei, Csaba Varga, *Some Applications to Variational-Hemivariational Inequalities of the Principle of Symmetric Criticality for Motreanu-Panagiotopoulos Type Functionals*, Journal of Global Optimization, Vol. 36, No. 2, (2006), pp. 283-305.

**IF: 1.062**

14. Alexandru Kristály, Csaba Varga, *On a class of quasilinear eigenvalue problems in  $R^N$* , Math. Nachr, 278, No. 15, (2005), pp. 1-10.

**IF: 0.537**

15. Alexandru Kristály, Csaba Varga and Viorica Varga, *An eigenvalue problem for hemivariational inequalities with combined nonlinearities on an infinite strip*, Nonlinear Analysis, Volume 63, Issue 2, (2005), pp. 260-272.

**IF: 1.295**

16. Cs. Varga, *Existence and infinitely many solutions for an abstract class of hemivariational inequality*, Journal of Inequalities and Applications, Vol .8 (2005), pp. 1-16.

**IF: 0.764**

## 2. Articole științifice publicate în ISI proceedings

## 3. Articole științifice indexate în BDI (din lista CNCSIS)

1. A. Kristály, D. O' Regan, Cs. Varga, *Parametrized nonlinear equations on Dirichlet forms*, Comm. Appl. Analysis, **13** (2009), no. 3, pp. 317–326

2. A. Kristály, V. Motreanu, Cs. Varga, *A minimax principle with general Palais-Smale conditions*, Comm. Appl. Analysis, **Vol 9**, No.2 (2005), pp. 285-299.

3. Csaba Varga, Pál Kupán, István Székely, *Multiple solutions for a class of parametrized elliptic problems with singular and sublinear potentials*, Analele Universitatii de Vest, Timisoara, Seria Matematica-Informatica, **XLV**, 2 (2007), 231-242.

4. Cs. Varga, H. Csapó, *Contingent Nash points for set-valued maps*, Fixed Point Theory, **Vol.6**, No.1 (2005), pp.139-148.

## 4. Alte articole științifice/capitole publicate în reviste/volume cu referenți (peer-reviewed)

H. Lisei, Cs. Varga, *Multiple Solutions for Nonlinear Equations Involving Dirichlet Forms. Topics in Mathematics, Computer Science and Philosophy. St. Cobzas (Ed.), Presa Universitara Clujeana, Cluj-Napoca, ISBN: 978-973-610-672-9, p. 135-145 (2008).*

## 5. Cărți științifice publicate în edituri internaționale

## 6. Cărți științifice publicate în edituri naționale acreditate

Cs. Varga, *Metode topologice în calcul variațional*, Casa Cărții de Știință, Cluj-Napoca, 2005, p.250., ISBN 973-686-702-1.

## 7. Editor de volume publicate în edituri naționale și internaționale

Critical point Theory and its Applications, Casa Cărții de Știință, Cluj Napoca, 2007, ISBN 978-973-133-093-8

## 8. Brevete internaționale

## 9. Brevete naționale

## 10. Impact tehnologic al brevetelor: resurse financiare extrabugetare atrase în relație cu economia

## 11. Realizări artistice naționale și internaționale (Domeniul Arte)

(Expoziții, spectacole, concerte, publicații, filme, înregistrări)

### (Criteriul II – Prestigiu profesional

#### 1. Citări ale articolelor ISI listate la Criteriul I

1. A. Kristaly, Cs. Varga and V. Varga, *A nonsmooth principle of symmetric criticality and variational-hemivariational inequalities*, *Journal of Math. Anal. And Appl* 325(2007), no. 2, 975-986.

Lucrarea este citata in:

- G. Dai, *Infinitely many solutions for a differential inclusion problem in  $\mathbb{R}^N$  involving the  $p(x)$ -Laplacian*, *Nonlinear Analysis TMA*, 71(2009), 1116-1123.
- Siegfried Carl and Patrick Winkert, *General Comparison Principle for Variational-Hemivariational Inequalities*, *Journal of Inequalities and Applications*, Volume 2009, Article ID 184348, 29, doi:10.1155/2009/184348
- G. Dai, *Three symmetric solutions for a differential inclusion system involving the  $(p(x), q(x))$ -Laplacian in  $\mathbb{R}^N$* , *Nonlinear Analysis TMA*, 71(2009), 1763-1771.
- Gao Chang and Zifei Shen, *Three solutions for an obstacle problem for a class of variational-hemivariational inequalities*, *Applied Mathematics and Computation* Volume 215, Issue 6, 15 November 2009, Pages 2063-2069.
- Caisheng Chen and Hui Wang, *Ground state solutions for singular  $p$ -Laplacian equation in  $\mathbb{R}^N$* , *Journal of Mathematical Analysis and Applications*, Volume 351, Issue 2, 15 March 2009, Pages 773-780

2. Alexandru Kristály, Csaba Varga, *Multiple solutions for elliptic problems with singular and sublinear potentials*, *Proc. AMS*, 135(2007), 2121-2126.

Lucrarea este citata in:

- B. Ricceri, *A three critical points theorem revisited*, *Nonlinear Analysis: Theory, Methods & Applications*, Volume 70, Issue 9, 1 May 2009, Pages 3084-3089.
- B. Ricceri, *MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS*, *Fixed Point Theory*, Volume 9, No. 1, 2008, 275-291.
- Yinbin Deng and Huirong Pi, *Multiple solutions for  $p$ -harmonic type equations*, *Nonlinear Analysis: Theory, Methods & Applications*, Volume 71, Issue 10, 15 November 2009, Pages 4952-4959

3. Alexandru Kristaly, Hannelore Lisei, Csaba Varga, *Multiple solutions for  $p$ -Laplacian type Equations.*, *Nonlinear Anal. TMA*, 68 (2008), pp.1375-1381.

- B. Ricceri, *A three critical points theorem revisited*, *Nonlinear Analysis: Theory, Methods & Applications*, Volume 70, Issue 9, 1 May 2009, Pages 3084-3089.
- Chun Li and Chun-Lei Tang, *Three solutions for a class of quasilinear elliptic systems involving the  $(p, q)$ -Laplacian*, *Nonlinear Analysis: Theory, Methods & Applications* Volume 69, Issue 10, 15 November 2008, Pages 3322-3329

- Gabriele Bonanno and Pasquale Candito, *Non-differentiable functionals and applications to elliptic problems with discontinuous nonlinearities*, Journal of Differential Equations, Volume 244, Issue 12, 15 June 2008, Pages 3031-3059
- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.
- Weihua Wang and Peihao Zhao, *Nonuniformly nonlinear elliptic equations of  $p$ -biharmonic type*, Journal of Mathematical Analysis and Applications, Volume 348, Issue 2, 15 December 2008, Pages 730-738
- Caisheng Chen and Hui Wang, *Ground state solutions for singular  $p$ -Laplacian equation in  $\mathbb{R}^N$* , Journal of Mathematical Analysis and Applications, Volume 351, Issue 2, 15 March 2009, Pages 773-780
- Yinbin Deng and Huirong Pi, *Multiple solutions for  $p$ -harmonic type equations*, Nonlinear Analysis: Theory, Methods & Applications, Volume 71, Issue 10, 15 November 2009, Pages 4952-4959
- Nikolaos S. Papageorgiou, Eugénio M. Rocha and Vasile Staicu, *A multiplicity theorem for hemivariational inequalities with a  $p$ -Laplacian-like differential operator*, Nonlinear Analysis: Theory, Methods & Applications, Volume 69, Issue 4, 15 August 2008, Pages 1150-1163

**4. Hannelore Lisei, Csaba Varga , *Some Applications to Variational-Hemivariational Inequalities of the Principle of Symmetric Criticality for Motreanu-Panagiotopoulos***

***Type Functionals*, Journal of Global Optimization, Vol. 36, No. 2, (2006), pp. 283-305.**

Lucrarea este citata in:

- Siegfried Carl and Patrick Winkert, *General Comparison Principle for Variational-Hemivariational Inequalities*, Journal of Inequalities and Applications, Volume 2009, Article ID 184348, 29 , doi:10.1155/2009/184348

**5. Alexandru Kristály, Csaba Varga, *On a class of quasilinear eigenvalue problems in  $\mathbb{R}^N$* , Math. Nachr, 278, No. 15, (2005), pp. 1-10.**

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- Gabriele Bonanno and Pasquale Candito, *Non-differentiable functionals and applications to elliptic problems with discontinuous nonlinearities*, Journal of Differential Equations, Volume 244, Issue 12, 15 June 2008, Pages 3031-3059
- Guoqing Zhang and Sanyang Liu, *Three symmetric solutions for a class of elliptic equations involving the  $p$ -Laplacian with discontinuous nonlinearities in  $\mathbb{R}^N$* , Nonlinear Analysis: Theory, Methods & Applications, Volume 67, Issue 7, 1 October 2007, Pages 2232-2239
- Nikolaos S. Papageorgiou, Eugénio M. Rocha and Vasile Staicu, *A multiplicity theorem for hemivariational inequalities with a  $p$ -Laplacian-like differential operator*, Nonlinear Analysis: Theory, Methods & Applications, Volume 69, Issue 4, 15 August 2008, Pages 1150-1163
- B. Ricceri, *A three critical points theorem revisited*, Nonlinear Analysis: Theory, Methods & Applications, Volume 70, Issue 9, 1 May 2009, Pages 3084-3089.
- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.
- Nikolaos S. Papageorgiou, Eugénio M. Rocha and Vasile Staicu, *A multiplicity theorem for hemivariational inequalities with a  $p$ -Laplacian-like differential operator*, Nonlinear

**6. Alexandru Kristály, Csaba Varga, *Multiple solutions for a degenerate elliptic equation involving sublinear terms at infinity*, Journal of Math. Anal. Appl. 352 (2009), 139-148.**

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- Caisheng Chen and Hui Wang, *Ground state solutions for singular  $p$ -Laplacian equation in  $\mathbb{R}^N$* , Journal of Mathematical Analysis and Applications, Volume 351, Issue 2, 15 March 2009, Pages 773-780

**7. Cs. Varga, *Existence and infinitely many solutions for an abstract class of hemivariational inequality*, Journal of Inequalities and Applications, Vol .8 (2005), pp. 1-16.**

Lucrarea este citata in:

- Jong Yeoul Park and Sun Hye Park, *Existence and Asymptotic Stability of Solutions for Hyperbolic Differential Inclusions with a Source Term*, Journal of Inequalities and Applications Volume 2007, Article ID 56350, 13 pages doi:10.1155/2007/56350

**8. Brigitte E. Breckner, Csaba Varga, *A multiplicity result for gradient type systems with non-differenriable term*, Acta Mathematica Hungarica,118, Nr. 1-2(2008),pp. 85-104.**

Lucrarea este citata in:

- B. Ricceri, *MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS*, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.
- Guoqing Zhang and Sanyang Liu, *Multiplicity result for a class of elliptic problems with non-differentiable terms in  $R^N$* , Nonlinear Analysis: Theory, Methods & Applications Volume 71, Issues 5-6, 1 September 2009-15 September 2009, Pages 1611-1619

**9. Brigitte E. Breckner, Alexandru Horváth, Csaba Varga, *A multiplicity result for a special class of gradient- type systems with non-differenriable term*, Nonlinear Analysis TMA, 70 (2009) 606-6020.**

Lucrarea este citata in:

- B. Ricceri, *MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS*, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.

**10. Hannelore Lisei, Gheorghe Morosanu, Csaba Varga, *Multiplicity Results for Double Eigenvalue Problems Involving the  $p$ -Laplacian*, Taiwanese Journal of Mathematics, 13. No.3(2009), 1095-1110.**

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- B. Ricceri, *A three critical points theorem revisited*, Nonlinear Analysis: Theory, Methods & Applications, Volume 70, Issue 9, 1 May 2009, Pages 3084-3089.
- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291

**11. Hannelore Lisei, Alexandru Horváth, Csaba Varga, *Multiplicity results for a class of quasilinear eigenvalue problems on unbounded domain*, Archiv der Mathematik., Vol. 90., No.3. (2008), pp 256-266.**

Lucrarea este citata in:

- B. Ricceri, *A three critical points theorem revisited*, Nonlinear Analysis: Theory, Methods & Applications, Volume 70, Issue 9, 1 May 2009, Pages 3084-3089.
- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291

**12. Ildiko Mezei, Csaba Varga, *Multiplicity result for a double eigenvalue quasilinear problem on unbounded domain*, Nonlinear Analysis: Theory, Methods & Applications, 69(2008), 4099-4105.**

- Zifei Shen and Chenyin Qian, *Solutions and multiple solutions for  $p(x)$ -Laplacian equations with nonlinear boundary condition*, Chinese Annals of Mathematics - Series B, Volume 30, Number 4 / July, 2009, 397-412.

**13. Francesca Faraci Antonio Iannizzotto, Hannelore Lisei , Csaba Varga , *A Multiplicity Result for Hemivariational Inequalities*, Journal of Math. Anal. And Appl. 330, (2007) No.1 683-698**

- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.

**14. Francesca Faraci, Antonio Iannizzotto, Pál Kupán, Csaba Varga, *Existence and Multiplicity Results for Hemivariational Inequalities with two Parameters*, Nonlinear Anal. TMA, 67(2007), No. 9, pp. 2654-2669.**

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- B. Ricceri, MINIMAX THEOREMS FOR FUNCTIONS INVOLVING A REAL VARIABLE AND APPLICATIONS, Fixed Point Theory, Volume 9, No. 1, 2008, 275-291.

## 2. Alte citări ale lucrărilor listate mai sus

**1. A. Kristály, V. Motreanu, Cs. Varga, *A minimax principle with general Palais-Smale conditions*, Comm. Appl. Analysis, Vol 9, No.2 (2005), pp. 285-299.**

Este citat in articolele:

- R Livrea, SA Marano, *A min-max principle for non-differentiable functions with a weak compactness condition*, Comm. Pure and Appl. Anal. (2009)
- S. A. Marano, D. Motreanu, *Critical points of non-smooth functions with a weak compactness condition*, Journal of Math. Anal. and Appl. **358**(2009), 189-201.

**2. Hannelore Lisei, Csaba Varga , *Some Applications to Variational-Hemivariational Inequalities of the Principle of Symmetric Criticality for Motreanu-Panagiotopoulos Type Functionals*, Journal of Global Optimization, Vol. 36, No. 2, (2006), pp. 283-305.**

- ILDIKO-ILONA MEZEI, LIA SAPLACAN, *EXISTENCE RESULTS AND APPLICATIONS FOR GENERAL VARIATIONAL-HEMIVARIATIONAL INEQUALITIES ON UNBOUNDED DOMAINS*, Electronic Journal of Differential Equations, Vol. 2009(2009), No. 48, pp. 1–10.

**3. Cs. Varga, *Existence and infinitely many solutions for an abstract class of hemivariational inequality*, Journal of Inequalities and Applications, Vol .8 (2005), pp. 1-16.**

Lucrarea este citata in:

- Jin Mun Jeong, Jong Yeoul Park, and Sun Hye Park, *HYPERBOLIC HEMIVARIATIONAL INEQUALITIES WITH BOUNDARY SOURCE AND DAMPING TERMS*, Commun. Korean Math. Soc. 24 (2009), No. 1, pp. 85–97
- ILDIKO-ILONA MEZEI, LIA SAPLACAN, *EXISTENCE RESULTS AND APPLICATIONS FOR GENERAL VARIATIONAL-HEMIVARIATIONAL INEQUALITIES ON UNBOUNDED DOMAINS*, Electronic Journal of Differential Equations, Vol. 2009(2009), No. 48, pp. 1–10

**4. Ildiko Mezei, Csaba Varga, *Multiplicity result for a double eigenvalue quasilinear problem on unbounded domain*, Nonlinear Analysis: Theory, Methods & Applications, 69(2008), 4099-4105.**

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- DUMITRU MOTREANU, NICOLAE TARFULEA, *QUASILINEAR DIFFERENTIAL EQUATIONS IN EXTERIOR DOMAINS WITH NONLINEAR BOUNDARY CONDITIONS AND APPLICATION*, Electronic Journal of Differential Equations, Vol. 2009(2009), No. 138, pp. 1–13.

**5. Francesca Faraci Antonio Iannizzotto, Hannelore Lisei , Csaba Varga , *A Multiplicity Result for Hemivariational Inequalities*, Journal of Math. Anal. And Appl. **330**, (2007) No.1 683-698**

Lucrarea este citata in:

- B. Ricceri, *Recent advances in minimax theory and applications*, Pareto Optimality, Game Theory And Equilibria, Springer New York (2008).



- ILDIKO ILONA MEZEI AND TUNDE KOVACS, *MULTIPLE SOLUTIONS FOR A HOMOGENEOUS SEMILINEAR ELLIPTIC PROBLEM IN DOUBLE WEIGHTED SOBOLEV SPACES*, STUDIA UNIV. "BABES, -BOLYAI", MATHEMATICA, Volume LIV, Number 3, September 2009.

**7. A. Kristály, Cs. Varga and V. Varga, *A nonsmooth principle of symmetric criticality and variational-hemivariational inequalities*, Journal of Math. Anal. And Appl 325(2007), no. 2, 975-986.**

- ILDIKO-ILONA MEZEI, LIA SAPLACAN, *EXISTENCE RESULTS AND APPLICATIONS FOR GENERAL VARIATIONAL-HEMIVARIATIONAL INEQUALITIES ON UNBOUNDED DOMAINS*, Electronic Journal of Differential Equations, Vol. 2009(2009), No. 48, pp. 1–10.

8. L. Kozma, R. Peter, Cs. Varga, *Warped product on Finsler manifolds*, Annales Univ. Sci. Budapest, 44, 2001, pp. 157 –170

Lucrarea este citata in:

- László Kozma, Ioan Radu Peter and Hideo Shimada, *On the twisted product of Finsler manifolds*, Reports on Mathematical Physics Volume 57, Issue 3, June 2006, Pages 375-383
- Ioan Radu Peter, *Some connectedness problems in positively curved Finsler manifolds*, Journal of Geometry and Physics, Volume 59, Issue 1, January 2009, Pages 54-62

**9. Alexandru Kristály, Csaba Varga, *Multiple solutions for elliptic problems with singular and sublinear potentials*, Proc. AMS, 135(2007), 2121-2126.**

Lucrarea este citata in:

- Ionica Andrei, *Existence Theorems for Some Classes of Boundary Value Problems Involving the  $P(X)$ -Laplacian*, Nonlinear Analysis: Modelling and Control, 2008, Vol. 13, No. 2, 145–158.

**10. Alexandru Kristály, Hannelore Lisei, Csaba Varga, *Multiple solutions for  $p$ -Laplacian type Equations.*, Nonlinear Anal. TMA, 68 (2008), pp.1375-1381.**

- Ionica Andrei, *Existence Theorems for Some Classes of Boundary Value Problems Involving the  $P(X)$ -Laplacian*, Nonlinear Analysis: Modelling and Control, 2008, Vol. 13, No. 2, 145–158.

**3. Citări în perioada 2005-2009 ale articolelor anterioare anului 2005**

**1. A. Kristály, Cs. Varga, *Set-valued version of Ky Fan's inequality with application to variational inclusion theory*, Journ of Math. Anal. and its Applications, 282, 2003, pp. 8-20.**

Articolul este citat:

- Weili Kong, *Equilibrium Problems for KKM Set-Valued Maps*, Int. Journal of Math. Analysis, Vol. 1, 2007, no. 2, 55 – 64.
- M Balaj, DO'Regan, *A Generalized Quasi-Equilibrium Problem*, Nonlinear Analysis and Variational Problems, Springer (2010), 201-211.
- Qinghai He and Fuchun Yang, *Variational conclusions of set-valued bifunctions on convex subsets of Banach spaces with applications*, . J. Math. Anal. Appl. **333**(2007), 1070-1078.
- LQ Anh, PQ Khanh, *SEMICONINUITY OF THE SOLUTION SETS TO PARAMETRIC QUASIVARIATIONAL INCLUSION PROBLEMS WITH APPLICATIONS TO TRAFFIC NETWORK PROBLEMS*, Set –Valued Analysis **16**(2008), 943-960.
- Nguyen Xuan Hai , Phan Quoc Khanh and Nguyen Hong Quan, *On the existence of solutions to quasivariational inclusion problems*, Journal of Global Optimization, **45**(2009), 565-581.
- N.X. Hai and P.Q. Khanh, *The solution existence of general variational inclusion problems*, Journal of Math. Anal. Appl., **328**(2007), 1268-1277.
- N. X. Hai and P. Q. Khanh, *Existence of Solutions to General Quasiequilibrium Problems and Applications*, Journal of Optimization Theory and Applications, **133**(2007), 317-327.
- M. Fakhar and J. Zafarani, *Generalized Vector Equilibrium Problems for Pseudomonotone Multivalued Bifunctions*, Journal of Optimization Theory and Applications, **126**(2005), 109-124.
- M. Fakhar and J. Zafarani, *Systems of Set-Valued Quasivariational Inclusion Problems*, Journal of Optimization Theory and Applications, **135**(2007), 55-67.
- M. Fakhar and J. Zafarani, *Equilibrium Problems in the Quasimonotone Case*, Journal of Optimization Theory and Applications, **126**(2005), 125-136.
- Funchun Yang, Congxin Wu and Qinghai He, *Applications of Ky Fan's inequality on  $\sigma$ -compact set to variational inclusion and n-person game theory*, Journal of Mathematical Analysis and Applications, **319**(2006), 177-186.

**2. Kristály, L. Kozma, Cs. Varga, *The dispersing of geodesics on Berwald space of negative flag curvature*, Houston Journal of Math., 30 (2), 2004, pp. 413-420.**

Lucrarea este citata in:

- C.T.J. Dodson, *A short review on Landsberg space*, Workshop on Finsler and Semi-Riemannian geometry, 24-26 May 2006, San Luis Potosi, Mexico .
- Shin-ichi Ohta, *Optimal transport and Ricci curvature in Finsler geometry*, Advanced Studies in Pure Mathematics, 1-20(2009).

**3. D. Motreanu, Cs. Varga, *Some critical piont results for locally Lipschitz functionals*, Comm. on Appl. Nonlinear Anal. 4., 1997, pp. 17–33.**

Acest articol este citat în următoarele lucrări:

- M. Filippakis, L. Gasinski, N. S. Papageorgiu, *A multiplicity results for semilinear resonant elliptic problems with nonsmooth potential*, Nonlinear Analysis, **65**(2005), 61-75.

- M. Filippakis, L. Gasinski, N. S. Papageorgiu, *On the Existence of Positive Solutions for Hemivariational Inequalities Driven by the  $p$ -Laplacian*, Journal of Global Optimization, **31**(2005), 173-189.
- S. Marano, D. Motreanu, *A critical point result for non-differentiable indefinite functionals*. Comment. Math. Univ. Carolin. **45** (2004), no.4,663--679.
- Roberto Livre, Giovanni Molica Bisci, *Some remarks on nonsmooth critical point theory*, Journal of Global Optimization, **37**(2007), 245-261.
- Salvatore A. Marano, Dumitru Motreanu, *A critical point result for non-differentiable indefinite functionals*, Comment.Math.Univ.Carolinae 45,4 (2004)663–679.
- Giuseppina Barletta, *Applications of two critical point results for non-differentiable indefinite functionals*, Rendiconti del Circolo Matematico di Palermo, **55**(2006), 323-352.

**4. Zs. Dályai, Cs. Varga, *An existence result for hemivariational inequalities*, Electronic Journal of Differential Equations, 2004, No. 37, pp. 1-17.**

- ILDIKO-ILONA MEZEI, LIA SAPLACAN, *EXISTENCE RESULTS AND APPLICATIONS FOR GENERAL VARIATIONAL-HEMIVARIATIONAL INEQUALITIES ON UNBOUNDED DOMAINS*, Electronic Journal of Differential Equations, Vol. 2009(2009), No. 48, pp. 1–10

**5. L. Kozma, A. Kristály, Cs. Varga, *Critical point theorems of Finsler manifolds*, Beitragen fur Algebra und Geometrie, Vol. 45, No.1, 2004, pp. 47-59.**

Lucrarea este citata in:

- Ioan Radu Peter, *Some connectedness problems in positively curved Finsler manifolds*, Journal of Geometry and Physics Volume 59, Issue 1, January 2009, Pages 54-62 .

**6. D. Motreanu, Cs. Varga, *A nonsmooth equivariant minimax principle*. Communications in Applied Analysis, Vol.3., 1999, pp. 115–130.**

- A. Kristály, *Infinitely many radial and non-radial solutions for a class of hemivariational inequalities*, ROCKY MOUNTAIN JOURNAL OF MATHEMATICS 35 (4): 1173-1190 2005.

**4. Distincții, premii și alte recunoașteri naționale și internaționale**

**5. Studenți naționali atrași (activități de coordonare științifică și didactică)**

- Îndrumare lucrari de licență (număr lucrări susținute) **8**
- Îndrumare lucrări de disertație (număr lucrări susținute) **10**
- Doctoranzi (lista nominală a doctoranzilor înmatriculați resp. lista nominală a tezelor susținute)

**Doctoranzi înmatriculați :**

1. Dobai Barna
2. Saplacan Lia

3. Nagy Szilard

**Teze susținute:**

**Mezei Ildiko Ilona** : ‘ ‘ *Metode neliniare în studiul inegalităților hemivariaționale și al problemelor eliptice* ’ ’ , , **septembrie, 2008**

- Post-doctoranzi (lista nominală)

#### **6. Studenți internaționali atrați (activități de coordonare științifică și didactică)**

- Îndrumare lucrari de licenta (număr lucrări susținute)
- Îndrumare lucrări de disertație (număr lucrări susținute)
- Doctoranzi (lista nominală a doctoranzilor înmatriculați resp. lista nominală a tezelor susținute)
- Post-doctoranzi (lista nominală)

#### **7. Membru in comitetul de redacție la reviste ISI**

#### **8. Membru in comitetul de redacție la reviste BDI**

- Editor la Studia Mathematica din 2009
- Membru în Comitetul de Redactie la revista "Studia Universitatis Babes-Bolyai", seria Mathematica, între anii 1997-2001
- Membru în Comitetul de Redactie la revista "Mathematica" (Cluj), din anul 2006.

#### **9. Participări la programe/granturi de cercetare finanțate din sursă internațională (se menționează și valoarea)**

#### **10. Participări la programe/granturi finanțate din sursă națională (se menționează și valoarea)**

- **APLICAREA UNOR METODE VARIATIONALE RECENTE LA STUDIUL ECUAȚIILOR ELIPTICE NELINIARE ȘI AL PROBLEMELOR DE OPTIMIZARE,**  
Grant CNCSIS, PNII\_IDEI\_527, 2007-2100. **Director de Grant : Alexandru Kristaly**  
**Valoarea grantului : 777630 RON**
- Exploratory Research Project PN II ID PCE 2008 nr. 501, ID 2162 (2009,2010,2011)  
**"Nonsmooth Phenomena in Nonlinear Elliptic Problems", Director de grant: Hannelore Lisei**  
**Valoarea grantului : 876000 RON**
- CNCSIS project A 1467/2007-2008 "Puncte critice si categorii Lusternik-Schnirelmann. Probleme variationale"; **Director: Cornel-Sebastian Pinte.**  
**Valoarea Grantului: 67.775 RON**

#### **11. Coordonări de programe/granturi finanțate din sursă internațională (se menționează și valoarea)**

#### **12. Coordonări de programe/granturi finanțate din sursă națională (se menționează și valoarea)**

CEEX III/P-INT-VIZ proiect “Dezvoltarea unor parteneriate de cercetare în vederea integrării europene a matematicii de varf romanesti in domeniile analizei neliniare, topologiei diferentiale si ale aplicatiilor acestora” 2006 - 2008; contract no. 130/2006. **Valoarea Grantului: 200.000 RON**

### **13. Profesor invitat la universitati de prestigiu, cu titlu oficial**

- Institutul de Matematica Renyi Alfred din Budapesta, 2007, 2008
- Universitatea din Catania, Italia, 2008
- Universitatea Adam Mickiewicz, Poznan, Polonia, 2008
- Central European University, Budapesta, iulie, august, 2009
- Universitatea degli de Studi Perugia, 2009

### **14. Membru în comisii profesionale relevante, cu titlu oficial**

#### **15. Conferințe invitate internaționale**

- Workshop on Nonlinear Analysis and Mathematical Physics, Sibiu, May 14-16, 2009
- ICNODEA 2007, 4-8 iulie, 2007, Cluj-Napoca, Romania

### **16. Membru în comitete de organizare sau științifice ale unor conferințe internaționale**

- ICNODEA 2007, 4-8 iulie, 2007, Cluj-Napoca, Romania
- Scoala de vara „Teoria punctului critic”, 9-13 iulie, 2007, Cluj-Napoca, Romania

## **III. Realizare remarcabilă**

(Descrieți într-o manieră cât mai accesibilă (în maximum 1 pagină) cea mai importantă realizare științifică/tehnică/artistică din ultimii 5 ani și impactul acesteia.)

Pe baza lucrărilor publicate în ultimii cinci ani sau care sunt în curs de publicare, cu colegii Alexandru Kristály și Vicențiu Rădulescu de la IMAR București în ultimii doi ani am scris cartea: „*Variational Principles in Mathematical Physics, Geometry, and Economics*”, **Cambridge, University Press, Cambridge, (2010)**, ISBN-13: 9780521117821, care va apare în acest an și conține 400 pagini. Cartea conține în 80% rezultatele noastre obținute în domeniul matematicii fizicii, ecuații cu derivate parțiale, geometrie diferențială și teoria echilibrului Nash cu aplicații în economie.

**Cartea conține trei părți și 16 capitole:**

**P A R T I: Variational Principles in Mathematical Physics**

1 Variational Principles

2 Variational Inequalities

3 Nonlinear Eigenvalue Problems

4 Elliptic Systems of Gradient Type

5 Systems with Arbitrary Growth Nonlinearities

6 Scalar Field Systems

7 Competition Phenomena in Dirichlet Problems

**P A R T II: Variational Principles in Geometry**

9 Sublinear Problems on Riemannian Manifolds

10 Asymptotically Critical Problems on Spheres

11 Equations with Critical Exponent

12 Problems to Part II

**P A R T III: Variational Principles in Economics**

13 Mathematical Preliminaries

14 Minimization of Cost-functions on Manifolds

15 Best Approximation Problems on Manifolds

17 Problems to Part III

Linkul despre carte este:

<http://www.cambridge.org/catalogue/catalogue.asp?isbn=9780521117821>

Data: 10.03. 2010

Semnătura:

Varga Csaba

**Certific validitatea datelor prezentate**

Sef de catedră,