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RECTORATUL

Universitatea Babeș-Bolyai Competiția Excelenței 2010

Dosar individual

Notă: Toate datele se referă la perioada 2005-2009

| | |
|------------------------------|------------------------------------------------------------------------------------------------------------------|
| Nume, prenume, grad did. | KRISTALY ALEXANDRU, CONFERENȚIAR UNIVERSITAR |
| Facultatea, Catedra | Facultatea de Științe Economice și Gestiunea Afacerilor, Catedra de Administrarea Afacerilor |
| Domeniul științific | MATEMATICA |
| Adresa paginii web personale | http://econ.ubbcluj.ro/cv.php?id=240 (pe site-ul Facultatii) |
| Adresa e-mail | alexandrukristaly@yahoo.com |

Criteriul I – Output

1. Articole științifice publicate în reviste indexate ISI (cu factorul de impact): **27 articole ISI**

- ISI-1. **Kristály Alexandru**, Asymptotically critical problems on higher-dimensional spheres, *Discrete Cont Dyn Systems* 23(3), 2009, p. 919-935. [doi: 10.3934/dcds.2009.23.919](https://doi.org/10.3934/dcds.2009.23.919). IF: **0.889**
- ISI-2. **Kristály Alexandru**, Varga Csaba, Multiple solutions for a degenerate elliptic equation involving sublinear terms at infinity, *J Math Anal Appl* 352(1), 2009, p. 139-148. [doi:10.1016/j.jmaa.2008.03.025](https://doi.org/10.1016/j.jmaa.2008.03.025) IF: **1.046**
- ISI-3. **Kristály Alexandru**, Papageorgiou Nikolaos, Multiplicity theorems for semilinear elliptic problems depending on a parameter, *P Edinburgh Math Soc* 52(1), 2009, p. 171-180. [doi:10.1017/S0013091507000665](https://doi.org/10.1017/S0013091507000665). IF: **0.607**
- ISI-4. **Kristály Alexandru**, Radulescu Vicentiu, Sublinear eigenvalue problems on compact Riemannian manifolds with applications in Emden-Fowler equations, *Studia Mathematica* 191(3), 2009, p. 237-246. [doi:10.4064/sm191-3-5](https://doi.org/10.4064/sm191-3-5). IF: **0.398**
- ISI-5. **Kristály Alexandru**, Mihăilescu Mihai, Radulescu Vicentiu, Two nontrivial solutions for a non-homogeneous Neumann problem: an Orlicz-Sobolev space setting, *P Royal Soc Edinb – Section A* 139, 2009, p. 367-379. [doi:10.1017/S030821050700025X](https://doi.org/10.1017/S030821050700025X) IF: **0.770**
- ISI-6. **Kristály Alexandru**, Lazar Ioana, Papageorgiou Nikolaos, A variational inequality on the half line, *Nonlinear Analysis-TMA* 71(10), 2009, p. 5003-5009. [doi:10.1016/j.na.2009.03.077](https://doi.org/10.1016/j.na.2009.03.077) IF: **1.295**

- ISI-7. Filippakis Michael, **Kristály Alexandru**, Papageorgiou Nikolaos, Existence of five nonzero solutions with exact sign for a p-Laplacian equation, *Discrete Cont Dyn Systems* 24(2), 2009, p. 405-440. [doi: 10.3934/dcds.2009.24.405](https://doi.org/10.3934/dcds.2009.24.405) IF: **0.889**
- ISI-8. **Kristály Alexandru**, Detection of arbitrarily many solutions for perturbed elliptic problems involving oscillatory terms, *J Differential Equations* 245(12), 2008, p. 3849-3868. [doi:10.1016/j.jde.2008.05.014](https://doi.org/10.1016/j.jde.2008.05.014) IF: **1.349**
- ISI-9. **Kristály Alexandru**, Lisei Hannelore, Varga Csaba, Multiple solutions for p-Laplacian type equations, *Nonlinear Anal-TMA* 68(5), 2008, p. 1375-1381. [doi:10.1016/j.na.2006.12.031](https://doi.org/10.1016/j.na.2006.12.031) IF: **1.295**
- ISI-10. **Kristály Alexandru**, Marzantowicz Waclaw, Multiplicity of symmetrically distinct sequences of solutions for a quasilinear problem in \mathbb{R}^N , *NoDEA-Nonlinear Diff Equations Appl* 15(1-2), 2008, p. 209-216. [doi: 10.1007/s00030-007-7015-7](https://doi.org/10.1007/s00030-007-7015-7) IF: **0.424**
- ISI-11. **Kristály Alexandru**, Morosanu Gheorghe, Roth Agoston, Optimal placement of a deposit between markets: Riemann-Finsler geometrical approach, *J Optimiz Theory Appl* 139(2), 2008, p. 263-276. [doi: 10.1007/s10957-008-9421-3](https://doi.org/10.1007/s10957-008-9421-3) IF: **0.860**
- ISI-12. **Kristály Alexandru**, Perturbed Neumann problems with many solutions, *Numer Funct Anal Optim* 29(8/9), 2008, p.1114-1127. [doi: 10.1080/01630560802418383](https://doi.org/10.1080/01630560802418383) IF: **0.586**
- ISI-13. **Kristály Alexandru**, Varga Csaba, Varga Viorica, A nonsmooth principle of symmetric criticality and variational-hemivariational inequalities, *J Math Anal Appl* 325(2), 2007, p. 975-986. [doi:10.1016/j.jmaa.2006.02.062](https://doi.org/10.1016/j.jmaa.2006.02.062) IF: **1.046**
- ISI-14. **Kristály Alexandru**, Varga Csaba, Multiple solutions for elliptic problems with singular and sublinear potentials, *Proc Amer Math Soc* 135(7), 2007, p. 2121-2126. [doi: 10.1090/S0002-9939-07-08715-1](https://doi.org/10.1090/S0002-9939-07-08715-1) IF: **0.584**
- ISI-15. **Kristály Alexandru**, Multiple solutions of a sublinear Schrodinger equation, *Nodea-Nonlinear Diff Equations Appl* 14(3-4), 2007, p. 291-302. [doi: 10.1007/s00030-007-5032-1](https://doi.org/10.1007/s00030-007-5032-1) IF: **0.424**
- ISI-16. **Kristály Alexandru**, Motreanu Dumitru, Nonsmooth Neumann-type problems involving the p-Laplacian, *Numer Func Anal Opt* 28(11-12), 2007, p. 1309-1326. [doi: 10.1080/01630560701749698](https://doi.org/10.1080/01630560701749698) IF: **0.586**
- ISI-17. **Kristály Alexandru**, Faraci Francesca, On an open question of Ricceri concerning a Neumann problem, *Glasgow Math J* 49: (2) 189-195 (2007). [doi:10.1017/S0017089507003515](https://doi.org/10.1017/S0017089507003515) IF: **0.276**
- ISI-18. **Kristály Alexandru**, Faraci Francesca, One-dimensional scalar field equations involving an oscillatory nonlinear term, *Discrete Cont Dyn Systems* 18(1), 2007, p. 107-120. [Website:http://aimScience.org](http://aimScience.org) IF: **0.889**
- ISI-19. **Kristály Alexandru**, Morosanu Gheorghe, Tersian Stepan, Quasilinear elliptic problems in involving oscillatory nonlinearities, *J Differential Equations* 235(2), 2007, p. 366-375. [doi:10.1016/j.jde.2007.01.012](https://doi.org/10.1016/j.jde.2007.01.012) IF: **1.349**
- ISI-20. **Kristály Alexandru**, Kozma Laszlo, Metric characterization of Berwald spaces of non-positive flag curvature, *J Geom Phys* 56, 2006, p. 1257-1270. [doi:10.1016/j.geomphys.2005.06.014](https://doi.org/10.1016/j.geomphys.2005.06.014) IF: **0.683**

- ISI-21. **Kristály Alexandru**, Existence of nonzero weak solutions for a class of elliptic variational inclusions systems in \mathbb{R}^N , *Nonlinear Anal-TMA* 65(8), 2006, p. 1578-1594. [doi:10.1016/j.na.2005.10.033](https://doi.org/10.1016/j.na.2005.10.033) IF: **1.295**
- ISI-22. **Kristály Alexandru**, Infinitely many solutions for a differential inclusion problem in \mathbb{R}^N , *J Differential Equations* 220(2), 2006, p. 511-530. [doi:10.1016/j.jde.2005.02.007](https://doi.org/10.1016/j.jde.2005.02.007) IF: **1.349**
- ISI-23. **Kristály Alexandru**, Varga Csaba, Varga Viorica, An eigenvalue problem for hemivariational inequalities with combined nonlinearities on an infinite strip, *Nonlinear Anal-TMA* 63(2), 2005, p. 260-277. [doi:10.1016/j.na.2005.05.011](https://doi.org/10.1016/j.na.2005.05.011) IF: **1.295**
- ISI-24. **Kristály Alexandru**, Existence of two nontrivial solutions for a class of quasilinear elliptic variational systems on strip-like domain, *P Edinburgh Math Soc* 48(2), 2005, p. 465-477. [doi:10.1017/S0013091504000112](https://doi.org/10.1017/S0013091504000112) IF: **0.607**
- ISI-25. **Kristály Alexandru**, Infinitely many radial and non-radial solutions for a class of hemivariational inequalities, *Rocky Mountain J Math* 35(4), 2005, p. 1173-1190. <http://projecteuclid.org/DPubS?service=UI&version=1.0&verb=Display&handle=euclid.rmjm/1181069682> IF: **0.354**
- ISI-26. **Kristály Alexandru**, Multiplicity results for an eigenvalue problem for hemivariational inequalities in strip-like domains, *Set-Valued Anal.* 13(1), 2005, p. 85-103. [doi: 10.1007/s11228-004-6565-7](https://doi.org/10.1007/s11228-004-6565-7) IF: **0.714**
- ISI-27. **Kristály Alexandru**, Varga Csaba, On a class of a quasilinear elliptic problem in \mathbb{R}^N , *Mathematische Nachrichten* 275(15), 2005, p. 1756-1765. [doi: 10.1002/mana.200510339](https://doi.org/10.1002/mana.200510339) IF: **0.537**

2. Articole științifice publicate în ISI proceedings Nu este cazul.

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

- BDI-1. **Kristály Alexandru**, O'Regan Donal, Varga Csaba, Parametrized nonlinear equations on Dirichlet forms, *Communication on Applied Analysis*, 13(3), 2009, p. 317-326. **MR2562307** <http://www.scimagojr.com/journalsearch.php?q=28633&tip=sid>
- BDI-2. **Kristály Alexandru**, A double eigenvalue problem for Schrodinger equations involving sublinear nonlinearities at infinity, *Electr. J. Differential Equations* 42(42), 2007, p. 1-11. **MR2299596** <http://ejde.math.unt.edu/index.html>
- BDI-3. **Kristály Alexandru**, Motreanu Viorica, Varga Csaba, A minimax principle with general Palais-Smale conditions, *Communication on Applied Analysis*, 9(2), 2005, p. 285-299. **MR2168763, Zbl pre05017140** <http://www.scimagojr.com/journalsearch.php?q=28633&tip=sid>

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

- 1. Kristály Alexandru**, Elliptic eigenvalue problems on unbounded domains involving sublinear terms, 5th ISAAC Conference, 2005, Proceedings of the 5th International ISAAC Congress, Catania, Italy 25 - 30 July 2005, More Progress in Analysis, World Scientific, H. G. W. Begehr & F. Nicolosi (Editors), ISBN-13 978-981-283-562-8, pp. 805-814.

2. Kristály Alexandru, Papageorgiou Nikolaos, Three nontrivial solutions for a semilinear elliptic problem depending on a parameter, *Analele Univ. de Vest, Seria Matematica-Informatica*, Timisoara, Vol. XLV, Fasc. 2, pp. 13-21, 2007. ISSN 1841-3293.

5. Cărți științifice publicate în edituri internaționale Nu este cazul (numai in 2010 la Cambridge Univ. Press)

6. Cărți științifice publicate în edituri naționale acreditate *3 carti*

C-1. **Kristály Alexandru**, *A Set-Valued Approach to Critical and Equilibrium Points*, Casa Cărții de Știință, Cluj-Napoca, 2009, 140 p. ISBN 978-973-133-616-9.

C-2. **Kristály Alexandru**, *Introducere în matematica economică și financiară*, Casa Cărții de Știință, Cluj-Napoca, 2006, 148 p. ISBN 973-686-965-2.

C-3. **Kristály Alexandru**, *Bevezetés a gazdasági és pénzügyi matematikába*, Casa Cărții de Știință, Cluj-Napoca, 2006, 148 p. ISBN 973-686-966-0.

7. Editor de volume publicate în edituri naționale și internaționale *1 volum editat*

EV-1. *Critical Point Theory and its Applications*, Editors: Varga Csaba, **Kristály Alexandru**, Blaga Paul, Casa Cărții de Știință, Cluj-Napoca, 2007, 145 p. ISBN 978-973-133-093-8.

8. Brevete internaționale Nu este cazul.

9. Brevete naționale Nu este cazul.

10. Impact tehnologic al brevetelor: resurse financiare extrabugetare atrase în relație cu economia Nu este cazul.

11. Realizări artistice naționale și internaționale (Domeniul Arte)

(Expoziții, spectacole, concerte, publicații, filme, înregistrări) Nu este cazul.

Criteriul II – Prestigiu profesional

Scurt table scientometric (perioada 2005-2009):

| Tipul citării | Numar citari |
|---------------------------------------------------------------------------------|--------------|
| Citari straine in reviste ISI ale lucrarilor ISI (punctul 1) | 66 |
| Citari straine in reviste BDI ale lucrarilor mele ISI si BDI (punctul 2) | 16 |
| Citari straine in monografii (Springer, Elsevier, Cambridge Univ. Press) | 9 |
| Citari straine in teze de doctorat (national+international) | 7+6 |
| Citări în perioada 2005-2009 ale articolelor anterioare anului 2005 (punctul 3) | 22 |
| Total | 126 |

Lista detaliata a acestor citari se afla in punctele 1-3 (cf. criteriilor cerute):

1. Citări ale articolelor ISI listate la Criteriul I (numai in reviste ISI): 66 citari

ISI-2. **Kristály Alexandru**, Varga Csaba, Multiple solutions for a degenerate elliptic equation involving sublinear terms at infinity, *J Math Anal Appl* 352(1), 2009, p. 139-148. [doi:10.1016/j.jmaa.2008.03.025](https://doi.org/10.1016/j.jmaa.2008.03.025) IF: **1.046**.

1. Chen C, Wang H, Ground state solutions for singular p-Laplacian equation in \mathbb{R}^N , *Journal of Mathematical Analysis and Applications*, 351: (2) 773-780 (2009).

ISI-4. **Kristály Alexandru**, Radulescu Vicentiu, Sublinear eigenvalue problems on compact Riemannian manifolds with applications in Emden-Fowler equations, *Studia Mathematica* 191(3), 2009, p. 237-246. [doi:10.4064/sm191-3-5](https://doi.org/10.4064/sm191-3-5) IF: **0.398**

1. Ricceri B, A three critical points theorem revisited, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (9) 3084-3089 (2009).

ISI-5. **Kristály Alexandru**, Mihailescu Mihai, Radulescu Vicentiu, Two nontrivial solutions for a non-homogeneous Neumann problem: an Orlicz-Sobolev space setting, *P Royal Soc Edinb – Section A* 139, 2009, p. 367-379. [doi:10.1017/S030821050700025X](https://doi.org/10.1017/S030821050700025X) IF: **0.770**

1. Ricceri B, A three critical points theorem revisited, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (9) 3084-3089 (2009).

ISI-8. **Kristály Alexandru**, Detection of arbitrarily many solutions for perturbed elliptic problems involving oscillatory terms, *J Differential Equations* 245(12), 2008, p. 3849-3868. [doi:10.1016/j.jde.2008.05.014](https://doi.org/10.1016/j.jde.2008.05.014) IF: **1.349**

1. Dai G, Arbitrarily many solutions for a perturbed p(x)-Laplacian equation involving oscillatory terms, *Appl Math Comput*, 215: (7) 2544-2556 (2009).

ISI-9. **Kristály Alexandru**, Lisei Hannelore, Varga Csaba, Multiple solutions for p-Laplacian type equations, *Nonlinear Anal-TMA* 68(5), 2008, p. 1375-1381. [doi:10.1016/j.na.2006.12.031](https://doi.org/10.1016/j.na.2006.12.031) IF: **1.295**

1. Papageorgiou NS, Rocha EM, Staicu V, A multiplicity theorem for hemivariational inequalities with a p-Laplacian-like differential operator, *Nonlinear Analysis, Theory, Methods and Applications*, 69: (4) 1150-1163 (2008).

2. Ricceri B, Minimax theorems for functions involving a real variable and applications, *Fixed Point Theory*, 9: (1) 275-291 (2008).
3. Bonanno G, Candito P, Non-differentiable functionals and applications to elliptic problems with discontinuous nonlinearities, *Journal of Differential Equations*, 244: (12) 3031-3059 (2008).
4. Wang W, Zhao P, Nonuniformly nonlinear elliptic equations of p-biharmonic type, *Journal of Mathematical Analysis and Applications*, 348: (2) 730-738 (2008).
5. Li C, Tang CL, Three solutions for a class of quasilinear elliptic systems involving the (p,q)-Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 69: (10) 3322-3329 (2008).
6. Ricceri B, A three critical points theorem revisited, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (9) 3084-3089 (2009).
7. Chen C, Wang H, Ground state solutions for singular p-Laplacian equation in \mathbb{R}^N , *Journal of Mathematical Analysis and Applications*, 351: (2) 773-780 (2009).
8. Deng Y, Pi H, Multiple solutions for p-harmonic type equations, *Nonlinear Analysis, Theory, Methods and Applications* 71: (10) 4952-4959 (2009).

ISI-13. **Kristály Alexandru**, Varga Csaba, Varga Viorica, A nonsmooth principle of symmetric criticality and variational-hemivariational inequalities, *J Math Anal Appl* 325(2), 2007, p. 975-986. [doi:10.1016/j.jmaa.2006.02.062](https://doi.org/10.1016/j.jmaa.2006.02.062) IF: **1.046**

1. Chen C, Wang H, Ground state solutions for singular p-Laplacian equation in \mathbb{R}^N , *Journal of Mathematical Analysis and Applications*, 351: (2) 773-780 (2009).
2. Dai G, Infinitely many solutions for a differential inclusion problem in \mathbb{R}^N involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 71: (3-4) 1116-1123 (2009).
3. Dai G, Three symmetric solutions for a differential inclusion system involving the $(p(x),q(x))$ -Laplacian in \mathbb{R}^N , *Nonlinear Analysis, Theory, Methods and Applications*, 71: (5-6) 1763-1771 (2009).
4. Chang G, Shen Z, Three solutions for an obstacle problem for a class of variational-hemivariational inequalities, *Appl Math Comput*, 215:(6) 2063-2069 (2009).
5. Carl S, Winkert P, General Comparison Principle for Variational-Hemivariational Inequalities, *J Inequal Appl* 2009:(2009) 1-29 (2009). DOI: 10.1155/2009/184348; Article ID 184348.

ISI-14. **Kristály Alexandru**, Varga Csaba, Multiple solutions for elliptic problems with singular and sublinear potentials, *Proc Amer Math Soc* 135(7) , 2007, p. 2121-2126. [doi: 10.1090/S0002-9939-07-08715-1](https://doi.org/10.1090/S0002-9939-07-08715-1) IF: **0.584**

1. Ricceri B, Minimax theorems for functions involving a real variable and applications, *Fixed Point Theory* , 9: (1) 275-291 (2008).
2. Ricceri B, A three critical points theorem revisited, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (9) 3084-3089 (2009).
3. Deng Y, Pi H, Multiple solutions for p-harmonic type equations, *Nonlinear Analysis, Theory, Methods and Applications* 71: (10) 4952-4959 (2009).

ISI-15. **Kristály Alexandru**, Multiple solutions of a sublinear Schrodinger equation, *Nonlinear Diff Equations Appl* 14(3-4), 2007, p. 291-302. [doi: 10.1007/s00030-007-5032-1](https://doi.org/10.1007/s00030-007-5032-1) IF: **0.424**

1. Faraci F, Iannizzotto A, Lisei H, Varga C, A multiplicity result for hemivariational inequalities, *Journal of Mathematical Analysis and Applications*, 330: (1) 683-698 (2007).
2. Cammaroto F, Chinni A, Di Bella B, Multiplicity results for a perturbed nonlinear Schrödinger equation, *Glasgow Mathematical Journal*, 49: (3) 423-429 (2007).
3. Ricceri B, Minimax theorems for functions involving a real variable and applications, *Fixed Point Theory*, 9: (1) 275-291 (2008).
4. Ricceri B, A three critical points theorem revisited, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (9) 3084-3089 (2009).

ISI-16. **Kristály Alexandru**, Motreanu Dumitru, Nonsmooth Neumann-type problems involving the p-Laplacian, *Numer Func Anal Opt* 28(11-12), 2007, p. 1309-1326. [doi: 10.1080/01630560701749698](https://doi.org/10.1080/01630560701749698) IF: **0.586**

1. Dai G, Infinitely many solutions for a hemivariational inequality involving the p(x)-Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 71: (1-2) 186-195 (2009).
2. Lisei H, Varga Cs, Multiple solutions for a differential inclusion problem with nonhomogeneous boundary, *Numerical Functional Analysis and Optimization* 30: (5-6) 566-581 (2009).

ISI-19. **Kristály Alexandru**, Morosanu Gheorghe, Tersian Stepan, Quasilinear elliptic problems involving oscillatory nonlinearities, *J Differential Equations* 235(2), 2007, p. 366-375. [doi:10.1016/j.jde.2007.01.012](https://doi.org/10.1016/j.jde.2007.01.012) IF: **1.349**

1. Chen C, Wang H, Ground state solutions for singular p-Laplacian equation in \mathbb{R}^N , *Journal of Mathematical Analysis and Applications*, 351: (2) 773-780 (2009).
2. Dai G, Infinitely many solutions for a p(x)-Laplacian equation in \mathbb{R}^N , *Nonlinear Analysis, Theory, Methods and Applications*, 71: (3-4) 1133-1139 (2009).
3. Dai G, Arbitrarily many solutions for a perturbed p(x)-Laplacian equation involving oscillatory terms, *Appl Math Comput*, 215: (7) 2544-2556 (2009).

ISI-21. **Kristály Alexandru**, Existence of nonzero weak solutions for a class of elliptic variational inclusions systems in \mathbb{R}^N , *Nonlinear Anal-TMA* 65(8), 2006, p. 1578-1594. [doi:10.1016/j.na.2005.10.033](https://doi.org/10.1016/j.na.2005.10.033) IF: **1.295**

1. Breckner BE, Varga Cs, A multiplicity result for gradient-type systems with non-differentiable term, *Acta Mathematica Hungarica*, 118: (1-2) 85-104 (2007).
2. Breckner BE, Horvath A, Varga Cs, A multiplicity result for a special class of gradient-type systems with non-differentiable term, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (2) 606-620 (2009).
3. Zhang G, Liu S, Multiplicity result for a class of elliptic problems with non-differentiable terms in \mathbb{R}^N , *Nonlinear Analysis, Theory, Methods and Applications*, 71: (5-6) 1611-1619 (2009).

ISI-22. **Kristály Alexandru**, Infinitely many solutions for a differential inclusion problem in \mathbb{R}^N , *J Differential Equations* 220(2), 2006, p. 511-530. [doi:10.1016/j.jde.2005.02.007](https://doi.org/10.1016/j.jde.2005.02.007) IF: **1.349**

1. Zhang G, Liu S, Three symmetric solutions for a class of elliptic equations involving the p -Laplacian with discontinuous nonlinearities in \mathbb{R}^N , *Nonlinear Analysis, Theory, Methods and Applications*, 67: (7) 2232-2239 (2007).
2. Dai G, Infinitely many solutions for a differential inclusion problem in \mathbb{R}^N involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 71: (3-4) 1116-1123 (2009).
3. Dai G, Infinitely many solutions for a hemivariational inequality involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 71: (1-2) 186-195 (2009).
4. Dai G, Infinitely many solutions for a Neumann-type differential inclusion problem involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (6) 2297-2305 (2009).
5. Dai G, Infinitely many solutions for a $p(x)$ -Laplacian equation in \mathbb{R}^N , *Nonlinear Analysis, Theory, Methods and Applications*, 71: (3-4) 1133-1139 (2009).
6. Dai G, Three solutions for a Neumann-type differential inclusion problem involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 70: (10) 3755-3760 (2009).
7. Dai G, Arbitrarily many solutions for a perturbed $p(x)$ -Laplacian equation involving oscillatory terms, *Appl Math Comput*, 215: (7) 2544-2556 (2009).
8. Dai G, Nonsmooth version of Fountain theorem and its application to a Dirichlet-type differential inclusion problem, *Nonlinear Analysis, Theory, Methods and Applications*, 72: (3-4) 1454-1461 (2010).
9. Bonanno G, D'Agui G, On the Neumann problem for elliptic equations involving the p -Laplacian, *Journal of Mathematical Analysis and Applications* 358: (2) 223-228 (2009).
10. Dai G, Liu W, Three solutions for a differential inclusion problem involving the $p(x)$ -Laplacian, *Nonlinear Analysis, Theory, Methods and Applications*, 71: (11) 5318-5326 (2009).

ISI-24. **Kristály Alexandru**, Existence of two nontrivial solutions for a class of quasilinear elliptic variational systems on strip-like domain, *P Edinburgh Math Soc* 48(2), 2005, p. 465-477. [doi:10.1017/S0013091504000112](https://doi.org/10.1017/S0013091504000112) IF: **0.607**

1. Cammaroto F, Chinni A, Di Bella B, Multiple solutions for a quasilinear elliptic variational system on strip-like domains, *P Edinburgh Math Soc*, 50: (3) 597-603 (2007).
2. Ricceri B, Minimax theorems for functions involving a real variable and applications, *Fixed Point Theory*, 9: (1) 275-291 (2008).
3. Zographopoulos NB, On the principal eigenvalue of degenerate quasilinear elliptic systems, *Mathematische Nachrichten*, 281: (9) 1351-1365 (2008).
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4. Distincții, premii și alte recunoașteri naționale și internaționale

1. Premiul Cercetării Stiintifice, Universitatea Babeș-Bolyai, Nr. 21.121/14.12.2009
2. Diploma Pentru Excelența Stiintifică, Universitatea Babeș-Bolyai, Nr. 20.418/21.12.2007.

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

- Îndrumare lucrari de licență (număr lucrări susținute): 2 (in 2008) + 8 (in 2009)=10
- Îndrumare lucrări de disertație (număr lucrări susținute): 2 (in 2009)
- Doctoranzi (lista nominală a doctoranzilor înmatriculați resp. lista nominală a tezelor susținute) : 0
- Post-doctoranzi (lista nominală) : 0

6. Studenți internaționali atrași (activități de coordonare științifică și didactică)

- Îndrumare lucrari de licență (număr lucrări susținute) : 0
- Îndrumare lucrări de disertație (număr lucrări susținute) : 0
- Doctoranzi (lista nominală a doctoranzilor înmatriculați resp. lista nominală a tezelor susținute) : 0
- Post-doctoranzi (lista nominală) : 0

7. Membru in comitetul de redacție la reviste ISI -.

8. Membru in comitetul de redacție la reviste BDI:

1. Studia Universitatis Babes-Bolyai Mathematica (din 2009).

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)

- Pnp-1. Membru in Grantul CEEEX-M3-C3-12441-CRT-130, 2006-2008. Titlul proiectului: *Dezvoltarea unor parteneriate de cercetare în vederea integrării europene a cercetării matematice de vârf românești în domeniile analizei neliniare, topologiei diferențiale și ale aplicațiilor acestora*. Director proiect: prof. univ. dr. Csaba Varga. Valoare proiect: 200.000 RON.
- Pnp-2. Membru in Grantul PN II IDEI PCE 2008 nr. 501, ID 2162 (2009,2010,2011) Titlul proiectului: *Nonsmooth Phenomena in Nonlinear Elliptic Problems*. Director proiect: conf. univ. dr. Hannelore Lisei. Valoare proiect : 876.000 RON
- Pnp-3. CNCSIS proiect A 1467/2007-2008. Titlul proiectului: *Puncte critice si categorii Lusternik-Schnirelmann. Probleme variationale*. Director proiect: conf. univ. dr. Cornel-Sebastian Pinte. Valoarea grantului: 67.775 RON

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

- Pi-1. *Professori visitatori*, INDAM (Istituto Nazionale di Alta Matematica), Universita di Catania, Catania, Italia, 2 saptamani (1-16 septembrie 2009). Valoare proiect: 1.100 Euro. A se vedea: [http://gruppi.altamatematica.it/gnampa/Professori visitatori](http://gruppi.altamatematica.it/gnampa/Professori%20visitatori)
- Pi-2. *Bursa de Cercetare "János Bolyai"*, Academia Maghiara, Budapesta, Ungaria, 2009-2012. Valoare proiect: 4.180.000 HUF (aprox. 15.500 Euro). A se vedea: http://www.mta.hu/fileadmin/Bolyai_osztondij/Felvhirdet2009.pdf
- Pi-3. *Bursa "Domus Hungarica"*, Academia Maghiara, Debrecen, Ungaria, 3 luni in 2005 si 2006. Valoare proiect: 250.000 HUF (aprox. 920 euro). A se vedea: <http://www.domus.mtaki.hu/>
- Pi-4. *Professori visitatori*, INDAM (Istituto Nazionale di Alta Matematica), Universita di Catania, Catania, Italia, 2 luni (1 iunie - 31 iulie 2005). Valoare proiect: 2.600 Euro. A se vedea: [http://gruppi.altamatematica.it/gnampa/Professori visitatori](http://gruppi.altamatematica.it/gnampa/Professori%20visitatori)

Pi-5. *Junior Visiting Research Fellowship*, Central European University, Special and Extension Programs, Budapesta, Ungaria, 3 luni (1 noiembrie 2005 - 31 ianuarie 2006). Valoare proiect: 2400 \$. A se vedea: <http://www.ceu.hu/math>

Pi-6. "*Two weeks on Global Analysis*", Centro di Ricerca Matematica Ennio De Giorgi, Scuola Normale Superiore, Pisa, Italia, 13 - 23 februarie 2005. Valoare proiect: 750 Euro. A se vedea: http://www.crm.sns.it/download/report/report2001_2005.pdf

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

Pnc-1. Grant CNCSIS Tip PN 2, IDEI_527, 2007-2010. Titlul proiectului: *Aplicarea unor metode variationale recente la studiul ecuatiilor eliptice neliniare si al problemelor de optimizare*. **Director proiect: conf. univ. dr. Alexandru Kristály**. Valoare proiect: 777.630 RON. A se vedea: <http://idei.527.googlepages.com>

Pnc-2. Grant CNCSIS Tip AT 8/70, 2006-2007. Titlul proiectului: *Studiul unor probleme eliptice cu ajutorul teoriei punctelor critice*. **Director proiect: conf. univ. dr. Alexandru Kristály**. Valoare proiect: 59.000 RON.

Pnc-3. Proiect de cercetare în cadrul Institutului Programelor de Cercetare al Fundației Sapientia, Cluj-Napoca, 2005. Nr. de înregistrare: 1291/2005.10.25. Titlul proiectului: *Studiul și modelarea punctelor critice ale unor funcționale de tip Ricceri*. **Director proiect: conf. univ. dr. Alexandru Kristály**. Valoare proiect: 1.150 euro.

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

1. University of Messina, Messina, Italy, 12 June, 2005 (Presented: Multiple solutions of certain elliptic problems on unbounded strips).
2. University of Reggio Calabria, Reggio Calabria, Italy, 13 June, 2005 (Presented: Infinitely many homoclinic solutions for an elliptic problem in \mathbb{R}^N).
3. Central European University, Budapest, Hungary, 7 December, 2005 (Presented: Multiple solutions of sublinear elliptic problems in \mathbb{R}^N).
4. Central European University, Budapest, Hungary, Mini-workshop: Recent advances in calculus of variations, 30 April – 7 May, 2006. (Presented: One-dimensional scalar field equations involving an oscillatory nonlinear term).
5. Adam Mickiewicz University, Poznan, Poland, 20 June, 2006. (Presented: Infinitely many solutions for an one-dimensional scalar field equation).
6. University of Rousse, Rousse, Bulgaria, 1 August, 2006. (Presented: Nonradial sign changing solutions for quasilinear elliptic equations).
7. Central European University, Budapest, Hungary, Mini-workshop: Some Advances in Applied Mathematics, 25-29 September, 2006. (Presented: Quasilinear elliptic problems with oscillatory nonlinearities).
8. University of Perpignan, Perpignan, France, 27 March, 2007. (Presented: Sublinear eigenvalue problems on compact Riemannian manifolds).
9. Universita di Messina, Italy, 26 June 2007. (Presented: Sublinear eigenvalue problems on compact Riemannian manifolds).
10. Universita di Catania, Italy, 28 June 2007. (Presented: Asymptotically critical problems on spheres).
11. Central European University, Department of Mathematics and its Applications, Budapest, 2 October, 2008. (Presented: Best approximation problems on Finsler-Riemann manifolds).

12. Universita di Messina, Italy, 10 September 2009. (Presented: Arbitrary many solutions for a perturbed problem).
13. Universita di Catania, Italy, 14 September 2009. (Presented: On a new class of elliptic systems with nonlinearities of arbitrary growth).
14. Universitatea Eotvos Lorant, Budapesta, Ungaria, 21 November 2009 (Presented : Metric projections and Nash equilibria on Riemann-Finsler manifolds).

14. Membru în comisii profesionale relevante, cu titlu oficial

1. Expert evaluator la CNCSIS (2008, 2009): PN II IDEI; RP.

15. Conferințe invitate internaționale

1. The 22th IFIP TC 7 Conference on System Modelling and Optimization, 18-22 July, 2005, Politecnico di Torino, Italy. (Presented: Infinitely many solutions for a differential inclusion problem in \mathbb{R}^N)
2. *Invited main speaker* at The 5th ISAAC Congress, 25-30 July, 2005, University of Catania, Italy. (Presented: Elliptic eigenvalue problems on unbounded domains involving sublinear terms).
3. Workshop "Topological and variational methods for differential equations", University of Rousse, Rousse, Bulgaria, 7-11 May, 2007. (Presented: Sublinear eigenvalue problems on compact Riemannian manifolds with applications in Emden-Fowler equations).
4. "International Workshop on Applied Evolution Equations", Central European University, Budapesta, Ungaria, 21-25 May, 2007. (Presented: Homoclinic solutions for an elliptic problem in \mathbb{R}^N with oscillatory terms).
5. International Conference in Nonlinear Differential Equations and Applications (ICNODEA), Cluj-Napoca, 3-8 July 2007. (Presented: Elliptic problems in \mathbb{R}^N involving oscillatory nonlinearities).
6. Workshop on "Critical Point Theory and its Applications", Babes-Bolyai University, Cluj-Napoca, 9-14 July, 2007. (Presented: Asymptotically critical problem on higher dimensional spheres).
7. Spring School in Nonlinear Partial Differential Equations, Louvain-la-Neuve, Belgium, 26-30 May, 2008. (Presented: Detection of arbitrarily many solutions for perturbed elliptic problems involving oscillatory terms).

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

1. Organizator al școlii de vară "*Critical point theory and its applications*", care a avut loc în perioada de 9-13 iulie 2007, Cluj-Napoca, Facultatea de Matematică și Informatică.

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.)

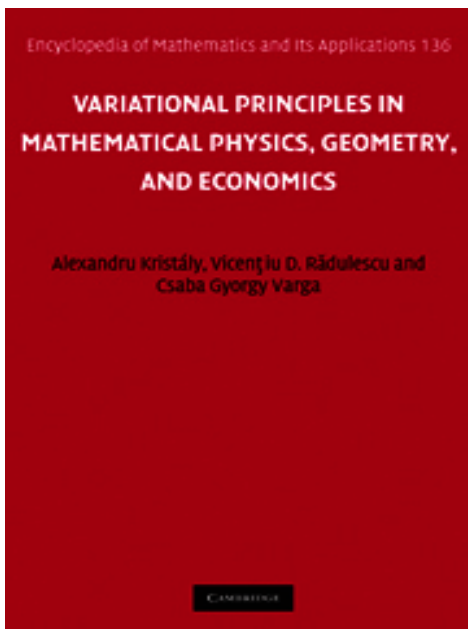
1. Realizare științifică (teoretică): În 1952, H. Busemann și F. Pedersen au formulat următoarea problemă: *Să se caracterizeze acele varietăți Finsler cu curbura nepozitivă unde este valabilă convexitatea funcției $t \mapsto d_F(c_1(t), c_2(t))$ care măsoară distanța între geodezicele c_1 și c_2 .* Problema era deschisă până în 2006, când **Lászlo Kozma** (Debrecen, Ungaria) și **Alexandru Kristály** au arătat că *spatiile Berwald complete* (o clasă specială de varietăți Finsler) cu curbura nepozitivă au această proprietate; mai mult, extensia acestui rezultat *nu este posibilă* pentru spații generale Finsler, a se vedea lucrarea:

- **Kristály Alexandru**, Kozma Laszlo, Metric characterization of Berwald spaces of non-positive flag curvature, *J Geometry and Physics* 56, 2006, p. 1257-1270. doi:10.1016/j.geomphys.2005.06.014 IF: **0.683**

2. Impactul rezultatului (aplicații): Rezultatul menționat mai sus nu numai că a rezolvat parțial o problemă de 50 de ani, ci și a deschis calea **aplicațiilor în optimizarea economică**. Alexandru Kristály a obținut individual sau în colaborare **mai multe rezultate complet inovative în existența și localizarea unor puncte de echilibru economic** modelate pe spații curbate care descriu în mod autentic fenomene economice cu un caracter neliniar. Au fost elaborate și programe soft pentru simularea acestor procese. A se vedea lucrările:

- **Kristály Alexandru**, Morosanu Gheorghe, Roth Agoston, Optimal placement of a deposit between markets: Riemann-Finsler geometrical approach, *J Optimiz Theory Appl* 139(2), 2008, p. 263-276. doi: 10.1007/s10957-008-9421-3 IF: **0.860**
- **Kristály Alexandru**, Location of Nash equilibria: a Riemannian geometrical approach, *Proc Amer Math Soc*, 138(5), 2010, p. 1803-1810. IF: **0.584**

3. Producție științifică prestigioasă: Aceste rezultate geometrice și de optimizare economică sunt publicate la prestigioasa editură **Cambridge University Press, Cambridge, UK**, autorii fiind **Alexandru Kristály, Vicențiu Radulescu (IMAR, București) și Csaba Varga (UBB)**, titlul monografiei fiind *Variational Principles in Mathematical Physics, Geometry, and Economics*, ce apare în octombrie 2010 în seria *Encyclopedia of Mathematics and its Applications*, No. 136, ISBN-10: 0521117828 | ISBN-13: 9780521117821. Partea a III-a a monografiei tratează probleme economice cu un caracter neliniar (echilibru Nash, probleme de tip Weber, etc), folosind elemente din geometria Riemann-Finsler, analiza nenetădă pe varietăți, sisteme dinamice, etc. Deși monografia este în curs de apariție, ea a fost deja citată de specialiști în domeniu.



Data: 12.03.2010

Semnătura: **Kristály Alexandru**

Certific validitatea datelor prezentate

Sef de catedră,