

## Lista de lucrari

(a) lista celor maximum 10 lucrări considerate de candidat a fi cele mai relevante pentru realizările profesionale proprii, care sunt incluse în format electronic în dosar și care se pot regăsi și în celelalte categorii de lucrări prevăzute de prezentul articol

1. **D. Otrocol**, I. A. Rus, *Functional-differential equations with "maxima" via weakly Picard operators theory*, Bull. Math. Soc. Sci. Math. Roumanie, 51(99) (2008), No. 3, pp. 253-261.
2. **D. Otrocol**, I. A. Rus, *Functional-differential equations with maxima of mixed type*, Fixed Point Theory, 9 (2008), No. 1, pp. 207-220.
3. **D. Otrocol**, *Abstract Volterra operators*, Carpathian J. Math., 24 (2008), No. 3, pp. 370-377.
4. **D. Otrocol**, V. A. Ilea, C. Revnic, *An iterative method for a functional-differential equation with mixed type argument*, Fixed Point Theory, 11 (2010), No. 2, pp. 327-336.
5. **D. Otrocol**, *Ulam stabilities of differential equation with abstract Volterra operator in a Banach space*, Nonlinear Functional Analysis and Applications, 15 (2010), no. 4, 613-619.
6. V. Ilea, **D. Otrocol**, M.-A. Șerban and D. Trif, *Integro-differential equation with two time lags*, Fixed Point Theory, 13 (2012), No. 1, pp. 85-97.
7. T. Cătinăș, **D. Otrocol**, *Iterates of Bernstein type operators on a square with one curved side via contraction principle*, Fixed Point Theory, 14 (2013), No. 1, 97-106.
8. V.A. Ilea, **D. Otrocol**, *Some properties of solutions of a functional-differential equation of second order with delay*, The Scientific World Journal, Volume 2014 (2014), Article ID 878395, 8 pages.
9. **D. Otrocol**, *Systems of functional-differential equations with maxima, of mixed type*, Electronic Journal of Qualitative Theory of Diff. Eq, 2014, No. 5, 1-9.
10. **D. Otrocol**, V.A. Ilea, *Ulam stability for a delay differential equation*, Central European Journal of Mathematics, 11(7) (2013), 1296-1303.

(b) teza de doctorat;

Teza de doctorat cu titlul: Contributii la teoria sistemelor Lotka-Volterra cu argument intarziat

(c) brevete de invenție și alte titluri de proprietate industrială;-

(d) carti si capitole din carti:

**D. Otrocol**, *Sisteme Lotka-Volterra cu argument întârziat*, Editura Presa Universitară Clujeană, 2007.

Capitole in carti:

Lucrările

1. **D. Otrocol**, I. A. Rus, *Functional-differential equations with "maxima" via weakly Picard operators theory*, Bull. Math. Soc. Sci. Math. Roumanie, 51(99) (2008), no. 3, 253-261 și

2. **D. Otrocol**, I. A. Rus, *Functional-differential equations with maxima of mixed type*, Fixed Point Theory, 9 (2008), no. 1, pp. 207-220 –

reprezintă capitole în cartea

- D.D. Bainov, S.G. Hristova, *Differential equations with maxima*, Chapman & Hall/CRC Pure and Applied Mathematics, 302 pp., 2011.

e) articole/studii in extenso, publicate în reviste din fluxul științific internațional principal;

**Articole în jurnale ISI (17)**

1.V.A. Ilea, **D. Otrocol**, An application of the Picard operator technique to functional integral equations, 18 (2017), No.3, 405-413.

2.**D. Otrocol**, On the asymptotic equivalence of a differential system with maxima, Rend. Circ. Mat. Palermo, 65 (2016), No. 3, 387-393

3.T. Cătinăș, **D. Otrocol**, I.A. Rus, The iterates of positive linear operators with the set of constant functions as the fixed point set, Carpathian J. Math., 32 (2016), No. 2, 165-172.

4.V.A. Ilea, **D. Otrocol**, *Some properties of solutions of a functional-differential equation of second order with delay*, The Scientific World Journal, Volume 2014 (2014), Article ID 878395, 8 pages.

5.**D. Otrocol**, *Systems of functional-differential equations with maxima, of mixed type*, Electronic Journal of Qualitative Theory of Diff. Eq, 2014, No. 5, 1-9.

6.**D. Otrocol**, V.A. Ilea, *Qualitative properties of functional differential equation*, Electronic Journal of Qualitative Theory of Diff. Eq, 2014, No. 47, 1-8.

- 7.D. Otrocol, V.A. Ilea, *Ulam stability for a delay differential equation*, Central European Journal of Mathematics, 11(7) (2013), 1296-1303.
- 8.D. Otrocol, V.A. Ilea, C. Revnic, *An iterative method for a functional-differential equation of second order with mixed type argument*, Fixed Point Theory, 14 (2013), No.2, 427-434.
- 9.T. Cătinăș, D. Otrocol, *Iterates of Bernstein type operators on a square with one curved side via contraction principle*, Fixed Point Theory, 14 (2013), No. 1, 97-106.
- 10.T. Cătinăș, D. Otrocol, *Iterates of multivariate Cheney-Sharma operators*, Journal of Computational Analysis and Applications, 15 (2013), No. 7, 1240-1246.
- 11.V. Ilea, D. Otrocol, M.-A. Șerban and D. Trif, *Integro-differential equation with two time lags*, Fixed Point Theory, 13 (2012), No. 1, pp. 85-97.
- 12.D. Otrocol, V. Ilea, *Integro-differential equation with two times modifications*, Carpathian Journal of Math., 27 (2011), No. 2, 209-216.
- 13.D. Otrocol, V. A. Ilea, C. Revnic, *An iterative method for a functional-differential equation with mixed type argument*, Fixed Point Theory, 11 (2010), No. 2, pp. 327-336.
- 14.V. A. Ilea, D. Otrocol, *On a D.V. Ionescu's problem for functional-differential equations*, Fixed Point Theory, 10 (2009), No. 1, 125-140.
- 15.D. Otrocol, I. A. Rus, *Functional-differential equations with "maxima" via weakly Picard operators theory*, Bull. Math. Soc. Sci. Math. Roumanie, 51(99) (2008), No. 3, pp. 253-261.
- 16.D. Otrocol, I. A. Rus, *Functional-differential equations with maxima of mixed type*, Fixed Point Theory, 9 (2008), No. 1, pp. 207-220.
- 17.D. Otrocol, *Abstract Volterra operators*, Carpathian J. Math., 24 (2008), No. 3, pp. 370-377.

f) publicații în extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate;

**Articole în jurnale ale unor conferințe (2)**

1. V.A. Ilea, D. Otrocol, *On a D.V. Ionescu's problem for functional-differential equations of second order*, Proceedings of the 10th IC-FPTA, 131 – 142, July 9-18, 2012, Cluj-Napoca, Romania
2. D. Otrocol, *Data dependence of the fixed points set for a Lotka-Volterra system*, Proceedings of the International Conference on Numerical Analysis and Approximation Theory, Cluj-Napoca, Romania, July 5-8, 331-336, 2006.

g) alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice.

#### **Articole BDI/strainatate (16)**

1. **D. Otrocol**, Hybrid differential equations with maxima via Picard operators theory, Stud. Univ. Babeș-Bolyai Math., 61 (2016) no. 4, pp. 421-428.
2. V. Ilea, **D. Otrocol**, I.A. Rus, Some properties of solutions of the homogeneous nonlinear second order differential equations, *Mathematica (Cluj)*, 57 (80) (2015) no. 1-2
3. **D. Otrocol**, Properties of the solutions of a system of differential equations with maxima, *Communications in Applied Analysis*, 17 (2013), no.1, 99-108.
4. **D. Otrocol**, Ulam stabilities of differential equation with abstract Volterra operator in a Banach space, *Nonlinear Functional Analysis and Applications*, 15 (2010), no. 4, 613-619.
5. **D. Otrocol**, A differential equation with delay from biology, *J. Appl. Math. & Informatics*, 26 (2008), no. 5-6, 1037-1048.
6. **D. Otrocol**, Differentiability with respect to delays for a Lotka-Volterra system, *Creative Math. & Inf.*, 16 (2007), 36-41.
- 7.Ș. M. Șoltuz, **D. Otrocol**, Classical results via Mann-Ishikawa iteration, *Rev. Anal. Numér. Théor. Approx.*, 36 (2007), no. 2, 195-199
8. Ș. M. Șoltuz, **D. Otrocol**, The convergence of Mann iteration with delay, *Mathematical Sciences Research*, 2007, Vol. 11, no. 3, pp. 390-393
9. **D. Otrocol**, Differentiability with respect to delays for a Lotka-Volterra system, *Creative Math. and Inf.*, 2007, Vol. 16, pp. 36-41
10. **D. Otrocol**, Differentiability with respect to a parameter for a Lotka-Volterra system with delays, via step method, *Rev. Anal. Numér. Théor. Approx.*, 35 (2006), no. 1, 83-86.
11. **D. Otrocol**, Data dependence for the solution of a Lotka-Volterra system with two delays, *Mathematica*, 48 (71) (2006), no. 1, 61-68.
12. **D. Otrocol**, Numerical solution of Lotka-Volterra system with delay by spline functions of even degree, *Studia Univ. "Babes-Bolyai", Mathematica*, 51 (2006), no. 4, 167-180.
13. **D. Otrocol**, A numerical method approximating the solution of a Lotka-Volterra system with two delays, *Studia Univ. "Babes-Bolyai", Mathematica*, 50 (2005), no.1, 99-110.

14. **D. Otrocol**, Smooth dependence on parameters for some Lotka-Volterra system with delays, *Analele Universității din Timișoara, Seria Matematică-Informatică*, Vol. XLIII, fasc. 1, 2005, 109-114.
15. **D. Otrocol**, A numerical method approximating the solution of a Lotka-Volterra system with two delays, *Studia Univ. Babeș-Bolyai, Mathematica*, Vol L. No.1, 2005, 99-110.
16. **D. Otrocol**, Lotka-Volterra system with two delays, via weakly Picard operators, *Nonlinear Analysis Forum*, 10 (2), pp. 193-199, 2005.

**Conferinte nationale si internationale:**

- “Ulam-Hyers stability of differential equation with maxima”, Conference on Ulam’s Type Stability, CUTS 2016, July 4-9, 2016, Cluj-Napoca, Romania, <http://cuts.up.krakow.pl/2016/>
- (with V. Ilea), “Properties of functional differential equation in Banach spaces”, *11-th Joint Conference on Mathematics and Computer Science, MaCS 2016*, May 20-22, 2016, Eger, Hungary, <http://www.cs.ubbcluj.ro/11th-joint-conference-on-mathematics-and-computer-science/>
- (with V. Ilea), “On the qualitative properties of functional integral equations with abstract Volterra operators”, *Function Spaces, Differential Operators and Nonlinear Analysis, FSDONA 2016*, Prague, Czech Republic, 4-9 July, 2016, <http://fsdona.karlin.mff.cuni.cz/>
- “Step method for a system of differential equations with delay”, Academic Days of Cluj-Napoca, May 18-20, 2016, Cluj-Napoca, Romania
- “Hybrid differential equations with maxima via Picard operators theory”, International Conference on Nonlinear Operators, Differential Equations and Applications, July 14-17, 2015, Cluj-Napoca, Romania, <http://www.cs.ubbcluj.ro/~icnodeacj/>
- “Qualitative properties of solutions of functional-differential equations with maxima, of mixed type”, The Sixth International Workshop-2015, Miskolc, Hungary
- ”Integral equations with maxima”, Academic Days of Cluj-Napoca, June 5-6, 2014, Cluj-Napoca, Romania.
- (with V.A. Ilea), ”On a functional-integral equation, via Picard operators technique”, Theodor Angheluta Seminar, The Fourteenth International Conference on Applied Mathematics and Computer Science, August 29-31, 2013, Cluj-Napoca, Romania.

- (with V.A. Ilea), "Qualitative properties of functional differential systems", 9th International Conference on Applied Mathematics (ICAM9), September 25-28, 2013, Baia Mare, Romania.
- (with V.A. Ilea), "On a D.V. Ionescu's problem for functional-differential equations of second order", Fixed Point Theory and its Applications, 10th edition of ICFPTA, July 9-15, 2012, Cluj-Napoca, Romania.
- "On the asymptotic equivalence of a differential system with maxima", Fixed Point Theory and its Applications, 10th edition of ICFPTA, July 9-15, 2012, Cluj-Napoca, Romania.
- "The properties of a solutions of a differential system with maxima", Academic Days of Cluj-Napoca, Simpozion "Metode numerice si aproximate", May 22-25, 2012, Cluj-Napoca, Romania.
- (with V.A. Ilea), "An iterative method for a functional-differential equation of second order with mixed type argument", International Conference on Nonlinear Operators, Differential Equations and Applications (ICNODEA 2011), July 5-8, 2011, Cluj-Napoca, Romania.
- (with V.A. Ilea, M.A. Serban, D. Trif), "Step method for some integral equations", 13th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2011), September 26-29, 2011, Timisoara, Romania.
- "A differential equation with delay from biology", International Conference on Nonlinear Operators, Differential Equations and Applications, July 4-8, 2006, Cluj-Napoca.
- "Data dependence of the fixed points set for a Lotka-Volterra system", International Conference on Numerical Analysis and Approximation Theory (NAAT 2006), July 5-8, 2006, Cluj-Napoca, Romania.
- "Numerical solutions of Lotka-Volterra system with delay by spline functions of even degree", International Congress of Mathematicians (ICM 2006), August 22-30, 2006, Madrid.
- "Differentiability with respect to delays for a Lotka-Volterra system", International Conference on Applied Mathematics, September 21-24, 2006, Baia-Mare, Romania.
- "Differentiability with respect to parameters of a differential system with delay", Academic Days of Cluj-Napoca, June 26-July 14, 2006, Cluj-Napoca, Romania.
- "A numerical method approximating the solution of a Lotka-Volterra system with two delays", International Conference on Nonlinear Operators, Differential Equations and Applications, August 24-27, 2004, Cluj-Napoca, Romania.

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Semnatura  
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