Domenii de cercetare

C*-algebre, module Hilbert

Reprezentari (proiective) de grupuri; reprezentari de C*-algebre

Aplicatii complet (multi-) pozitive (covariante proiective)

Lista lucrari stiintifice

1.T.-L. Costache *, KSGNS type representations on Krein C*-modules associated with projective J-covariant α-completly positive maps* acceptat spre publicare in U.P.B. Sci. Bull.

2. . T.-L. Costache *, The KSGNS construction associated with a projective u-covariant completely positive linear map,* U.P.B. Sci. Bull., Series A, Vol. 75, Iss. 2, ISSN 1223-7027, pp. 11-20, 2013.

3. T.-L. Costache *, Different versions of the imprimitivity theorem*, Surveys in Mathematics and its Applications, Vol. 7 , ISSN 1842-6298 (electronic), 1843-7265 (print), pp.69-103, 2012.

4. T.-L. Costache *, Equivalent projective representations on Hilbert C*-modules and their multipliers,* BSG Proceedings 19, Proceedings of the International Conference of Differential Geometry and Dynamical Systems (DGDS-2011) , October 6-9, 2011, Bucharest, ROMANIA, Geometry Balkan Press 2012**,** pp. 27-31.

5. . T.-L. Costache , M. Zamfir, *A note on Morita equivalence of twisted crossed products*, Applied Sciences, Vol. 14,pp. 28-38, 2012.

6. T.-L. Costache *,* M. Zamfir, Mircea Olteanu, *On projective regular representations of discrete groups and their infinite tensor products,* Applied Sciences, Vol. 13, ISSN 1454-5101, pp. 22-27, 2011.

7. T.-L. Costache *, On the projective covariant representations of C* - dynamical systems associated with completely multi-positive projective u-covariant maps*, UPB Sci. Bull., Series A, Vol.72, Iss.4, ISSN 1223-7027, pp. 185-196, 2010.

8. T.-L. Costache *, Multilinear Completely Bounded Projective u-Covariant Maps Extended on Twisted Crossed Products ,* Recent Advances in Mathematics and Computer in Business, Economics, Biology & Chemistry, Proceedings of the 11th WSEAS International Conference on Mathematics and Computers in Biology and Chemistry (MCBC'10), "G. Enescu" University, Iasi, Romania, June 13-15, 2010, ISSN 1790-2769, ISBN 978-960-474-194-6, pp. 54-61, 2010.

9. Andreea Udrea, **Tania-Luminita Costache,** Mircea Olteanu, Dumitru Popescu*, On the Relevance of Nonlinear   Analysis of Time Series Associated to CT Kidney Images,* Proceedings of the 2010 IEEE International Conference on Automation, Quality and Testing, Robotics , AQTR 2010, THETA 17-th edition, May 28-30, 2010, Cluj-Napoca, Romania, Vol. 2, ISBN: 9781-4244-6724-2, pp. 304-309,2010. (IEEE Xplore)

10. T.-L. Costache, *Projective version of Stinespring type theorems,* Bulletin Mathematique de la Societe des Sciences Mathematiques de Roumanie, Vol. 53, No.2, pp. 109-124, 2010.

11**.** T.-L. Costache*, Extensions on twisted crossed products of completely positive invariant projective u-covariant multi-linear maps,* BSG Proceedings 17, Proceedings of the International Conference "Differential Geometry – Dynamical Systems 2009"(DGDS-2009), October 8 – 11, 2009, Bucharest, Romania, Geometry Balkan Press, ISSN 1843-2654 (printed version), ISSN 1843-2859 (online version), pp. 56-67, 2010.

12. T.-L. Costache *, On irreducible projective representations of finite groups,* Surveys in Mathematics and its Applications, Vol. 4, ISSN 1842-6298 (electronic), 1843-7265 (print), pp. 191-214, 2009.

13. . M. Joita, T.-L. Costache *, .*M. Zamfir *, On the order structure on the set of completely multi-positive linear maps on C* -algebras,* Glasnik Matematicki, vol. 44 (64) , pp. 187-193, 2009.

14. . M. Olteanu, T.-L. Costache *,* M. Zamfir *, The spectra of a class of convolution operators,* BSG Proceedings 16, Proceedings of the International Conference of Differential Geometry and Dynamical Systems (DGDS-2008) and The the V-th International Colloquium of Mathematics in Engineering and Numerical Physics (MENP-5), August 29- September 2, 2008, Mangalia, Romania, Geometry Balkan Press, ISSN 1843-2654 (printed version), ISSN 1843-2859 (online version), pp. 108-113, 2009.

15. T.-L. Costache *, A survey on dilations of projective isometric representations,* Surveys in Mathematics and its Applications, ISSN 1842-6298 (electronic), 1843-7265 (print), Vol. 3, pp. 195-209, 2008.

16. M. Joita, T.-L. Costache *, .*M. Zamfir *, Characterization of the order relation on the set of completely n-positive linear maps between C* -algebras,* Surveys in Mathematics and its Applications, ISSN 1842-6298 (electronic), 1843-7265 (print), Vol. 2, pp. 113-122, 2007.

17. M. Olteanu, T.-L. Costache *,* M. Zamfir *, A MathCAD application for computing the spectra of a class of convolution operators*, Proceedings of The International Conference "Trends and Challenges in Applied Mathematics" - ICTCAM 2007, Technical University of Civil Engineering Bucharest, Romania, 20-23 June 2007, Matrix Rom, Bucharest, ISBN 978-973-755-283-9, pp. 374-377, 2007.

18. M. Olteanu, T.-L. Costache *, . M. Zamfir **, An algorithm for computing the spectra of multiplication systems**; BSG Proceedings 14, Proceedings of the 4-th International Colloquium of "Mathematics in Engineering and Numerical Physics" (MENP-4), October 6-8, 2006, University Politehnica of Bucharest, Bucharest, Romania, Geometry Balkan Press, ISSN 1843-2654 (printed version), ISSN 1843-2859 (online version), pp.126-130, 2007.

19. M. Joita, T.-L. Costache *, . M. Zamfir **, Dilations on Hilbert C* -modules for dynamical C* -systems**; BSG Proceedings 14, Proceedings of the 4-th International Colloquium of "Mathematics in Engineering and Numerical Physics" (MENP-4), October 6-8, 2006, University Politehnica of Bucharest, Bucharest, Romania, Geometry Balkan Press, ISSN 1843-2654 (printed version), ISSN 1843-2859 (online version), pp. 81-86, 2007.

20. M. Joita, T.-L. Costache *, . M. Zamfir **, Representations associated with completely n - positive linear maps between C* -algebras**, Studii si Cercetari Stiintifice, Seria Matematica, Proceedings of International Conference of Mathematics & Informatics, ICMI45, Bacau, September 18-20, 2006, Nr. 16 Supplement, ISSN 1224-2519, pp. 111-122, 2006.

21. M. Olteanu, T.-L. Costache, **An algorithm for computing the spectra of discrete time-invariant systems** BSG Proceedings 12, Proceedings of the 3-rd International Colloquium of Mathematics in Engineering and Numerical Physics (MENP-3), October 7-9, 2004, Bucharest, Romania, Geometry Balkan Press , ISBN 973-8381-11-8, pp. 115-119, 2005.

Lucrari didactice

1. **Tania-Luminita Costache,** *Ecuatii si Sisteme de Ecuatii Diferentiale, capitolele MD 0.1.ED de ordinul intai, MD 0.2.Ecuatii liniare de ordinul n, MD.0.3.Ecuatii diferentiale cu coeficienti constanti, MD0.4. Ecuatia Euler, MD 0.7. Sisteme de ED liniare,MD. 15. Autoevaluare* elaborate in cadrul Proiectului POSDRU/86/1.2/S/62485 "Sistem de formare si evaluare centrat pe student, online, la discipline fundamentale de licenta si masterat din invatamantul superior tehnic", Proiect cofinantat din Fondul Social European prin Programul Operational Sectorial pentru Dezvoltarea Resurselor Umane 2007-2013.

2. **Tania-Luminita Costache,** *Matematici 3 (Matematici avansate)* , curs elaborat in cadrul Proiectului Nr. 154/323, Cod SMIS- 4428, "Platforma de e-learning si curricula e-content pentru invatamantul superior tehnic" (2012) http://cs.curs.pub.ro/2011/

3. Paul Flondor, Radu Gologan, Gavriil Paltineanu, Mircea Olteanu**,** Antonela Toma**, Tania-Luminita Costache**, Jenica Cranganu, Marcel Roman, Monica Burlica, Vilhelm Kecs, *Calcul diferential si integral*, curs elaborat in cadrul Proiectului POSDRU/56/1.2/S/32768 « Formarea cadrelor didactice universitare si a studentilor in domeniul utilizarii unor instrumente moderne de predare-invatare-evaluare pentru disciplinele matematice, in vederea crearii de competente performante si practice pentru piata muncii », 2012.

4. Mircea Olteanu, Gavriil Paltineanu, Gigel Paraschiv, Antonela Toma, Marcel Roman, Gabriela Grosu, **Tania-Luminita Costache**, *Lectii de analiza functionala cu aplicatii in teoria sistemelor,* curs elaborat in cadrul Proiectului POSDRU/56/1.2/S/32768 « Formarea cadrelor didactice universitare si a studentilor in domeniul utilizarii unor instrumente moderne de predare-invatare-evaluare pentru disciplinele matematice, in vederea crearii de competente performante si practice pentru piata muncii », 2012.

5. Mircea Olteanu, **Tania-Luminita Costache** , *Notiuni de teoria functiilor si ecuatiilor Booleene*, curs elaborat in cadrul Proiectului POSDRU/56/1.2/S/32768 « Formarea cadrelor didactice universitare si a studentilor in domeniul utilizarii unor instrumente moderne de predare-invatare-evaluare pentru disciplinele matematice, in vederea crearii de competente performante si practice pentru piata muncii », 2012.

6. Radu Gologan, **Tania-Luminita Costache** , *Probleme pentru examenul de analiza matematica*, curs elaborat in cadrul Proiectului POSDRU/56/1.2/S/32768 « Formarea cadrelor didactice universitare si a studentilor in domeniul utilizarii unor instrumente moderne de predare-invatare-evaluare pentru disciplinele matematice, in vederea crearii de competente performante si practice pentru piata muncii », 2012.

7. **Tania-Luminita Costache**, *Curs de Analiza Matematica 2,* Ed. Printech, ISBN 978-606-521-484-2, 226 pg., 2010

8. **Tania-Luminita Costache**, *Analiza matematica. Culegere de probleme*, Ed.Printech, ISBN 978-606-521-391-3, 249 pg., 2009

9. **Tania-Luminita Costache,** Mircea Olteanu, *Subiecte examen. Analiza matematica*, Ed.Printech , ISBN 978-606-521-095-0, 127 pg., 2008

10. **Tania-Luminita Costache** , *Matematici speciale. Culegere de probleme.*, Ed. Printech, ISBN 978-973-718-927-1, 258 pg., 2008

11. Alina Nita, **Tania-Luminita Costache,** Raluca Dumitrache, *Matematici speciale. Notiuni teoretice. Aplicatii.*, Ed. Printech, ISBN 978-973-718-704-8, 194 pg., 2007.

12. **Tania-Luminita Costache,** *Analiza matematica. Notiuni teoretice. Aplicatii.*, Ed. Printech, ISBN 978-973-718-556-3, 312 pg., 2006

13. **Tania-Luminita Costache,** *Culegere de teoria probabilitatilor si statistica matematica*, Ed. Printech, ISBN 978-973-718-426-9, 137 pg., 2006

14. **Tania-Luminita Costache** , Mariana Zamfir, *Analiza matematica*, Ed. Printech, ISBN 973-718-279-0, 243 pg., 2005

15. **Tania-Luminita Costache**, Gheorghe Oprisan, *Transformari integrale*, Ed. Printech, ISBN 973-718-049-6, 89 pg., 2004

Prezentari

1. *Equivalent projective representations on Hilbert C*-modules and their multiplier* and *A note on Morita equivalence of twisted crossed products*, The V-th International Conference of Differential Geometry and Dynamical Systems (DGDS-2011) 6-9 October 2011, University Politehnica of Bucharest, Romania

2. *Multilinear Completely Bounded Projective u-Covariant Maps Extended on Twisted Crossed Products*, 11th WSEAS International Conference on MATHEMATICS AND COMPUTERS IN BIOLOGY AND CHEMISTRY (MCBC'10), "G. Enescu" University, Iasi, Romania, June 13-15, 2010.
Premiu : Best Paper for the 11th WSEAS International Conference on MATHEMATICS AND COMPUTERS IN BUSINESS AND ECONOMICS (MCBE '10)
(http://www.wseas.us/reports/2010/best2010.htm)

3. *Extensions on twisted crossed products of completely positive invariant projective u-covariant multi-linear maps*, The International Conference of Differential Geometry and Dynamical Systems, University Politehnica of Bucharest, Romania, October 8 – 11, 2009.

4. *A note on the spectrum of convolution operators*, The International Conference of Differential Geometry and Dynamical Systems (DGDS-2008) and The V-th International Colloquium of Mathematics in Engineering and Numerical Physics (MENP-5), August 29 – September 2, 2008, Callatis High School, Mangalia, ROMANIA.

5. *On the computation of a class of convolution operators*, The Fifth International Conference of Applied Mathematics and Computing, August 2008, Technical University, Plovdiv, BULGARIA.

6. *Characterization of the order relation on the set of completely n-positive linear maps between C*-algebras*, 22nd. Summer Conference on Topology and its Applications, July 24-27, 2007, Universitat Jaume I, Castellon, SPANIA.

7. *On the order structure on the set of completely n-positive linear maps on C* -algebras* and *A MathCAD application for computing the spectra of a class of convolution operators*, The International Conference "Trends and Challenges in Applied Mathematics" - ICTCAM 2007, Technical University of Civil Engineering Bucharest, June 20-23, 2007, ROMANIA.

8. ***Covariant representations associated with covariant completely n –positive linear maps between C* -algebras***, III Workshop on Coverings, Selections and Games in Topology, Faculty of Sciences and Mathematics, Nis, Technical Faculty, Cacak, April 25-29, 2007, SERBIA.

9. ***Dilations on Hilbert C* -modules for dynamical C* -systems*** and ***An algorithm for computing the spectra of multiplication systems*** , The 4-th International Colloquium Mathematics in Engineering and Numerical Physics, MENP-4, Universitatea Politehnica Bucharest, October 6-8, 2006, ROMANIA.

10. ***Representations associated with completely n- positive linear maps between C* -algebras***, International Conference on Mathematics and Informatics, ICMI 45, University of Bacau, September 18-20, 2006, ROMANIA.

11. ***An algorithm for computing the spectra of discrete time-invariant systems***, The 3-rd International Colloquium Mathematics in Engineering and Numerical Physics, MENP-3, University Politehnica of Bucharest, October 7-9, 2004, ROMANIA.

Cursuri

Matematica 1 (anul 1, ACS)

Analiza matematica 1 (anul 1, ETTI)

Matematici speciale (anul 1, ETTI)

Seminarii

Matematica 1 (anul 1, ACS)

Matematica 3 (anul 1, ETTI)