

**Lista de lucrări în domeniul de studii universitare de licență
Amenajări și Construcții Hidrotehnice**

Numele și prenumele: **PASTIA CRISTIAN**

A. Teza de doctorat.

Institutie: Universitatea Tehnică Gh. Asachi din Iași, Facultatea de

Perioada: 2002 - 2006

Coordonator: Prof.dr.ing. Ciongradi Ioan Petru

Titlul tezei: *Sisteme de protecție activă a construcțiilor la acțiuni seismice*

Titlul: DOCTOR în Inginerie Civilă, serie nr. 0001032, Ordinul MEC nr. 632 din 21.03.2007

B. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în străinătate.

C. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în țară, la edituri recunoscute CNCSIS.

D. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe plan local.

1. DISPOZITIVE ADAPTIVE PENTRU CONTROLUL STRUCTURAL AL CONSTRUCȚIILOR, Autori: Cristian PASTIA , Septimiu-George LUCA, Editura Societatii Academice Matei-Teiu Botez ISBN 978-606-582-100-2., 2016

E. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe web.

1. Curs - Dinamică și elemente de inginerie seismică (DEIS) www.didatec.ro
2. Lucrari - Dinamică și elemente de inginerie seismică (DEIS), Autor: Cristian Pastia, www.didatec.ro
3. Curs - Rezistența materialelor 1

F. Lucrări științifice publicate în reviste cotate ISI sau indexate în baze de date internaționale.

1. Florea V., Păuleț-Crăiniceanu F., Luca S.G., **Pastia C.**, Roșca O.V., (2024), The Current Worrying Situation of Technical Expertise and Rehabilitation of Existing Buildings in Romania. *In: Rotaru, A. (eds) Knowledge Transfer in the Sustainable Rehabilitation and Risk Management of the Built Environment. KNOW-RE-BUILT 2021*. Springer Series in Geomechanics and Geoengineering. Springer, Cham. https://doi.org/10.1007/978-3-031-43455-6_33, pag. 367-377.
2. Păuleț-Crăiniceanu F., Florea V., **C. Pastia**, Luca S.G., Roșca O. V., (2024), Analysis of Practical Application Aspects for an Active Control Strategy to Civil Engineering Structures, *16th International Conference on Dynamical Systems - Theory and Applications (DSTA)*, 2021, Perspectives in dynamical systems in

- numerical and analytical approaches, DSTA 2021, Springer Proceedings in Mathematics and Statistics -Vol. 454, pag. 403-425, WOS:001289530700026, http://dx.doi.org/10.1007/978-3-031-56496-3_26 (ISI)
3. Tăranu G., Movilă M., Luca S.G., **Pastia C.**, Toma I.O., (2024), Time History Comparative Analyses of a Thin-Walled Cold-Formed Steel Structure Considering P-D Effect, *IOP Conf. Series: Materials Science and Engineering*, (CCE2023), 24-26 May 2023, Volume 1304, DOI: 10.1088/1757-899X/1304/1/012014.
 4. Alexa-Stratulat, Taranu G., Toma A.M., Olteanu I., **Pastia C.**, Bunea G., Toma, I.O. (2024), Effect of expanded perlite aggregates and temperature on the strength and dynamic elastic properties of cement mortar, *Construction and Building Materials*, <http://dx.doi.org/10.1016/j.conbuildmat.2024.137229> (ISI)
 5. Alexa-Stratulat, S. M., Olteanu, I., Toma, A. M., **Pastia, C.**, Banu, O. M., Corbu, O. C., Toma, I. O., (2024), The Use of Natural Zeolites in Cement-Based Construction Materials—A State of the Art Review, *Coatings* 14.1:18., <https://doi.org/10.3390/coatings14010018> (ISI)
 6. Păuleț-Crăniceanu F., Florea V., **Pastia C.**, Luca S.G., Roșca O.V. (2021), Performance analysis for an improved strategy in optimal control of civil engineering structures, *IOP Conference Series: Materials Science and Engineering*, Volume 1141, Computational Civil Engineering (CCE 2021) 27th-29th May 2021, Iasi, Romania, DOI 10.1088/1757-899X/1141/1/012034.
 7. Florea V., Păuleț-Crăniceanu F., Luca S.G., **Pastia C.**, (2019), 3D Printing of Buildings. Limits, Design, Advantages and Disadvantages. Could This Technique Contribute to Sustainability of Future Buildings?, *In: Rotaru, A. (eds) Critical Thinking in the Sustainable Rehabilitation and Risk Management of the Built Environment. CRIT-RE-BUILT 2019*. Springer Series in Geomechanics and Geoengineering. Springer, Cham. https://doi.org/10.1007/978-3-030-61118-7_26, pag. 298-308.
 8. Păuleț-Crăniceanu F., Luca S.G., **C. Pastia**, Florea V., (2019), Improved Strategy for Optimal Control of Civil Engineering Structures, *IOP Conference Series: Materials Science and Engineering (CCE2019)*, Iasi, Romania, Vol 586.
 9. Pastia M.C., Stătescu F., **Pastia C.**, Balan A., (2017), The Influence Of Some Properties Concerning Water Stable Aggregates Of Saline Soils, *Environmental Engineering and Management Journal*, May 2017, Vol. 16, No. 6, pp. 1063-1069., <http://dx.doi.org/10.30638/eemj.2017.109> (ISI)
 10. **Pastia C.**, Luca S.G., (2017), Passive Viscous Fluid Devices for Seismic Energy Dissipation, *Bul. I.P., Iași*, Tomme 63(67), Fasc. 3, pp. 115-123.
 11. Luca S.G., **Pastia C.**, Păuleț-Crăniceanu F., Florea V., (2017), Design Principles for Yielding Energy Dissipation Devices, *17-th International Multidisciplinary Scientific GeoConference SGEM 2017*, www.sgem.org, *SGEM2017 Conference Proceedings*, ISBN 978-619-7408-00-3 / ISSN 1314-2704, Bulgaria, Vol. 17, Issue 14, pp. 93-103. (ISI)
 12. **Pastia C.**, Luca S.G., Păuleț-Crăniceanu F., Florea V., (2016), Passive, Active and Semi-Active Vibration Control of a Classical Mass-Spring-Dashpot System, *16-th International Multidisciplinary Scientific GeoConference SGEM 2016*, www.sgem.org, *SGEM2016 Conference Proceedings*, ISBN 978-619-7105-57-5 / ISSN 1314-2704, Bulgaria, Book1 Vol. 3, pp. 575-582. (ISI)
 13. Florea V., **Pastia C.**, Luca S.G., Păuleț-Crăniceanu F., (2016), Solutions for the Worrying Situation of External Thermal Insulation of Buildings with Expanded Polystyrene (Eps) in Romania, *16-th International Multidisciplinary Scientific GeoConference*, www.sgem.org, *SGEM2016 Conference Proceedings*, ISBN

978-619-7105-69-8 / ISSN 1314-2704, June 28 - July 6, Bulgaria, 2016, Book6 Vol. 2, pp. 209-216.(ISI)

14. Luca S.G., **Pastia C.**, Budescu M., Teodoru I., Bejan F., (2015), Evaluation of Seismic Energy in Structures using Passive Fluid Dampers, *15-th SGEM GeoConference on Science and Technologies in Geology, Exploration and Mining, SGEM2015 Conference Proceedings*, Bulgaria, Vol.III, 978-619-7105-33-9 / ISSN 1314-2704, June 18-24, pp. 847-854.(ISI)
15. Teodoru I., Bejan F., **Pastia C.**, Luca S.G., (2015), Design Charts for Embedded Earth Retaining Walls According to Eurocode 7, *15-th SGEM GeoConference on Science and Technologies in Geology, Exploration and Mining, SGEM2015 Conference Proceedings*, Bulgaria, Vol.II, 978-619-7105-32-2 / ISSN 1314-2704, June 18-24, pp. 231-238.(ISI)
16. Toma, I.O., Budescu M., Toma A.M., **Pastia C.**, Taranu G., Luca S.G., (2014), Elastic Properties of Mineral Matrices with High Content of Environmentally Sustainable Binder, *Proceedings of the 5rd International Conference on Advanced Materials and Systems, ICAMS Bucharest*, Romania, ISSN 2068-0783, pp. 151-156.
17. Taranu G., Luca S.G., Budescu M., Toma I.O., Florea V., **Pastia C.**, (2014), Experimental Tests and Finite Element Modelling of Glass Fiber Reinforced Mineral Matrix Composites, *Proceedings of the 5rd International Conference on Advanced Materials and Systems, ICAMS Bucharest*, Romania, ISSN 2068-0783, pp. 139-144.
18. Taranu G., Budescu M., Luca S.G., **Pastia C.**, Toma I.O., Florea V., Pleșu-Stroiescu R., (2014), Mechanical Behavior of a Thin Layer Glass Fiber Strengthened Old Masonry, *Proceedings of the 5rd International Conference on Advanced Materials and Systems, ICAMS Bucharest, Romania*, ISSN 2068-0783, pp. 133-138 (spre indexare).
19. **Pastia C.**, Luca S.G., Paulet-Crainiceanu F., Toma I.O., Taranu G., (2014), Design Criteria of Tuned Mass Damper Systems to Control Vibrations of Building Structures, *Proceedings of the 5rd International Conference on Advanced Materials and Systems, ICAMS Bucharest*, Romania, ISSN 2068-0783, pp. 361-366.
20. **Pastia C.**, Luca S.G., Paulet-Crainiceanu F., Taranu G., Luca F., Toma I.O., (2014), Seismic Response of Building Structures with Passive Fluid Dampers, *Proceedings of the 5rd International Conference on Advanced Materials and Systems, ICAMS Bucharest*, Romania, ISSN 2068-0783, pp. 355-360.
21. Toma I.O., Budescu M., Toma A.M., **Pastia C.**, Luca S.G., (2014), Influence of Gypsum-Based Cementitious Materials on the Early Age Strength Characteristics of Mortars, *14-th SGEM GeoConference on Energy and Clean Technologies, SGEM2014 Conference Proceedings, Bulgaria*, Vol.II, ISBN 978-619-7105-16-2, pp. 103-119.(ISI)
22. **Pastia C.**, Luca S.G., Toma, I., (2014), Effect of Semi-Active Tuned Mass Damper to Control Vibrations of a Three-Storey Building, *14-th SGEM GeoConference on Science and Technologies in Geology, Exploration and Mining, SGEM2014 Conference Proceedings, Bulgaria*, Vol.I, ISBN 978-619-7105-07-0/ ISSN 1314-2704, pp. 443-450.(ISI)
23. Luca S.G., **Pastia C.**, Toma I., Budescu M., (2014), Control Strategies for Seismic Energy Dissipation, *14-th SGEM GeoConference on Science and Technologies in Geology, Exploration and Mining, SGEM2014 Conference Proceedings*, Bulgaria, Vol.I, ISBN 978-619-7105-07-0/ ISSN 1314-2704, pp. 435-442.(ISI)

24. Luca S.G, **Pastia C.**, (2013), Passive Tuned Mass Damper (TMD) for Seismic Protection, *Bul. I.P., Iași*, Tomul LIX (LXIII), Fasc. 6, pp. 9-17.
25. **Pastia C.**, S Luca S.G, (2013), Vibration Control of A Frame Structure using Semi-Active Tuned Mass Damper, *Bul. I.P., Iași*, Tomul LIX (LXIII), Fasc. 4, pp. 31-40.
26. **Pastia C.**, Luca S.G, (2012), Seismic Protection of a Realistic Bridge Structure using Passive Friction Devices, *Bul. I.P., Iași*, Tomul LVIII (LXII), Fasc. 1, pp.77-84.
27. Luca S.G, Pastia C., (2009), Case Study of Variable Orifice Damper for Seismic Protection of Structures, *Bul. I.P., Iași*, Tomul LV (LIX), Fasc. 1, pp. 39-47.
28. **Pastia C.**, Luca S.G, Luca F., (2008), Analytical and Numerical Study of Variable Orifice Dampers for Seismic Protection of Structures, *Proceedings of the International Conference Constructions*, 2008, May, Cluj-Napoca, Romania, ISSN 1221-5848, pp. 213-220.
29. Luca S.G., **Pastia C.**, Chira F., (2007), Recent Applications of Some Active Control Systems to Civil Engineering Structures, *Bul. I.P., Iași*, Tomul LIII (LVII), fasc. 1-2, pp. 21-28.
30. **Pastia C.**, Luca S.G., Chira F., (2007), Practical Applications of Semi-Active Control Systems to Civil Engineering Structures, *Bul. I.P., Iași*, Tomul LIII (LVII), fasc. 1-2, pp. 7-13.
31. **Pastia C.**, (2006), Active Protection Systems of Constructions to Seismic Actions, *Intersections/Intersecții, "Young Scientists' Researches"*, Article No.57, Vol.3, No.7, ISSN: 1582-3024, pp. 22-25.
32. Luca F., Luca S.G., **Pastia C.**, (2005), Some Considerations Concerning the Entropy Concept in the Evaluations of Material Properties, *Bul. I.P., Iași*, Tomul LI (LV), fasc. 3-4, pp. 33-38.
33. **Pastia C.**, Luca S.G., Chira F., Roșca V.O., (2005), Structural Control Systems Implemented in Civil Engineering, *Bul. I.P., Iași*, Tomul LI (LV), fasc. 1-2, pp. 41-39.
34. **Pastia C.**, Luca S.G., Chira F., (2004), Considerations in the Design of Passive, Active and Semi-Active Systems of the Structures under Seismic Actions, *"Ovidius" University Annals-Constantza, 2004, Series: Civil Engineering, Romania*, ISSN 12223-7221, pp. 39-46.
35. **Pastia C.**, (2004), Implementarea sistemelor active si semi-active in structurile construcțiilor civile, *Revista de Politică a Științei si Scientometrie*, Grant CNCIS, tip TD, ISSN 1582-1218, Decembrie, Romania, pag. 91.
36. **Pastia C.**, (2004) Passive and Semi-Active Control Systems: Theoretical, Numerical and Experimental Aspects. Final Report, *JRC Special Publication I.04.94, European Commission*, Institute for the Protection and Security of the Citizen Systems, May, Ispra (Italy), pp 134.
37. Covatariu D., **Pastia C.**, (2004), Considerations about Main Features of the Building's Rehabilitations and Modernization, *Bul. I.P., Iași*, Tomul L(LIV), Fascicula Vc, ISSN 1011-2855, pp. 281-284.
38. Luca F., Luca S.G., **Pastia C.**, (2003), Dispersion Effects in Evaluating some Material Characteristics, *Buletinul Științific al Universității Politehnica Timișoara*, Tomul 48 (62), Fasc. 1-2, ISSN 1224-6026, Editura Politehnica, 2003, pp. 98-104.
39. **Pastia C.**, (2003), Comparisons among Passive, Active and Semi-active Control Systems. *Bul. I.P., Iași*, Tomul XLIX (LIII), fasc. 3-4, pp. 41-50.

G. Lucrări științifice publicate în reviste din străinătate.

1. **Pastia C.**, *Passive and Semi-Active Control Systems: Theoretical, Numerical and Experimental Aspects. Final report*, JRC Special Publication , European Commission, Institute for the Protection and Security of the Citizen Systems, may, 2004, ISPRA (Italy), pag 138.

H. Lucrări științifice publicate în reviste din țară, recunoscute CNCSIS.

I. Lucrări științifice publicate în volumele conferințelor.

I.1. Conferințe internaționale din străinătate

1. **Pastia, C.** , S.G. Luca, Florentina Luca, *Vibration Control of a Classical Mass-Spring-Dashpot System*, Proceedings of 14-th International Scientific Conference VSU'2014, Sofia, Bulgaria, Vol.2, ISSN 1314-071X, pp. 131-136.
2. Luca, S.G., **C. Pastia**, Florentina Luca, *Seismic Response of Single Degree Of Freedom Structural Systems with Passive Fluid Dampers*, Proceedings of 14-th International Scientific Conference VSU'2014, Sofia, Bulgaria, Vol.2, ISSN 1314-071X, pp. 350-355.
3. **Pastia C.**, Tobolcea V., Tobolcea C., *Energy Balance Analysis of a Structure Protected with Structural Control System*, Kraftwerkstechnisches Kolloquim, Entwicklungspotentiale für Kraftwerkste mit fossilen Brennstoffen, 2004, Oktober, Dresden, Poster P50, pp. 7.

I.2. Conferințe internaționale din țară

1. S.G. Luca, **Pastia C.**, *Numerical Simulations of a Frame Structure with a Single Passive or Semi-Active Tuned Mass Damper*, "Computational Civil Engineering 2013", International Symposium Iasi, Romania, May 24, 2013, ISSN 2285-2735, pp.58-64.
2. **Pastia, C.** , S.G. Luca - *Passive Friction Dampers for Seismic Protection of Bridges*, Conferința Internațională DEDUCON - "Dezvoltarea durabilă în construcții", Iași, 11 noiembrie 2011, Romania, ISSN 2248-0293, E13-121-12.
3. **Pastia C.**, Luca S.G., Luca Florentina, *Analytical and Numerical Study of Variable Orifice Dampers for Seismic Protection of Structures*, Proceedings of the International Conference Constructions, 2008, May, Cluj-Napoca, Romania, ISSN 1221-5848, pp. 213-220.
4. **Pastia C.**, Covatariu D., *Design Decisions of a Control System for a Single-Degree-Of-Freedom Structure from Energy Balance Point of Views*, Proceedings of the International Symposium "Computational Civil Engineering 2004", June, Iasi, Romania, ISBN 973-7962-50-8, pp. 8.
5. Luca, S.G., **Pastia C.**, *Design Criteria of Tuned Mass Damper for Vibration Control of Multi-Degree of Freedom Structures*, Proceedings of the International Symposium "Computational Civil Engineering 2004", June, Iasi, Romania, ISBN 973-7962-50-8, pp.8.
6. **Pastia C.**, Luca S.G., *Investigation of Semi-Active Tuned Mass Damper on The Bay-Frame Benchmark Structure*, International Conference: Performance Based Engineering for 21st Century, 2004, August, Iasi, Romania, ISBN 973-667-063-5, pp. 283-288.
7. **Pastia C.**, *Some Considerations about Active, Passive, Hybrid and Semi-Active Techniques*, Proceedings of the International Symposium "Computational Civil

Engineering 2003”, October 24, Iași, Romania, Editura Societății Academice “Matei - Teiu Botez”, ISBN 973-7962-27-3, pp.167-174.

J. Invenții.

K. Contracte de cercetare.

1. Contract HPMT-CT-2000-00155, drd. ing. **Pastia Cristian** nr. referință HPMT-GH-00-00155-08, Beneficiar Comisia Europeană, *Instruire experimentală și numerică în Dinamica construcțiilor și Inginerie seismică*, Valoare 15.400,00 EURO, Perioada 03.06.2003-31.05.2004, Beneficiar al unei burse 20 Marie Curie Training Site în cadrul programului: IHP (Human Potential) cuprins în al cincilea program cadru FP5 al Comisiei Europene.
2. Contract Nr. 33371 / 29.06.2004, drd. ing. **Pastia Cristian**, Număr temă 103., Beneficiar CNCSIS, Implementarea sistemelor active și semi-active în structurile construcțiilor civile, Valoare 10.800,00 RON, Perioada 01.06.2004-29.12.2004, director.
3. Proiect MENER, contract nr. 521/2004, **Membru: Pastia C.**, Director: Atanasiu G., *Sistem integrat bazat pe tehnologii românești pentru gestionarea situațiilor de criză în caz de seism*, perioada: 2004 – 2005.
4. Contract CNCSIS 236/aa 217/2006, Colectiv: Director - sef lucrări dr.ing. Chițan V., Membri: Strat L., Amariei C., Ciongradi I., Stefan D., Murarasu V., Anicai C., Scharf F., Luca S.-G., **Cristian C.**; Număr temă 4., Beneficiar CNCSIS, Modele prototip de protecție a structurilor de construcții la acțiuni seismice. *Tehnici de modelare histeretică neliniară a construcțiilor înalte și foarte înalte*, Valoare 87.000,00 lei, Perioada: 2005- 2006.
5. Contract POSDRU/87/1.3/S/60891, contract de participare nr. 7247/7, **Pastia C.**, Beneficiar Univ. Tehnică din Cluj-Napoca, *Proiect: “ Școală universitară de formare inițială și continuă a personalului didactic și a trainerilor din domeniul specializărilor tehnice și ingineresti- DidaTec”*, program de formare în blended-learning, tehnologii educaționale moderne pentru învățământul universitar, durata 01.03.2012 - 29.03.2013, atestat de absolvire nr. 156 din 18.11.2013, responsabil program - as. dr.ing. Șerban Meza.
6. Contract: Nr. 31461/08.09.2022-TUIAȘI, Colectiv: Director - sef lucrări - Luca S.G., **Pastia C.**, Florea V., Roșca O.V., Țăranu G., Crăiniceanu-Păuleț F., Chițan V.E., Movilă M., Teodoru B.I., Alexa-Stratulat S.M., Valoare: 20.200,00 euro, *Optimizarea sistemului structural pentru constructii cu regim de înălțime parter, de tip hala industrială cu suprafață construită mare (~30000 m²), amplasate în zone seismice cu valoarea de vârf a accelerației terenului pentru proiectare 0,25g și o probabilitate de depășire de 20% în 50 de ani.*
7. Contract Nr. 5425/17.02.2023-TUIAȘI, Colectiv: Director - sef lucrări - Țăranu George, Ungureanu Viorel, Nagy Zsolt, Toma Ovidiu-Ionuț, Luca Septimiu-George, **Pastia Cristian**, Florea Vitalie, Alexa-Stratulat Mihai-Sergiu, Țăran Rareș-George, Medvichi Virgil, Popa Vasile; Valoare: 12.495,00 euro; *Cercetare și testare experimentală sisteme de izolare seismică pentru structuri metalice de tip rafturi.*
8. Contract Nr. 31678/06.09.2024-TUIASI, Colectiv: Director – șef de lucrări – LUCA Septimiu-George, **PASTIA Cristian**, FLOREA Vitalie, ROȘCA Victor Octavian, MOVILĂ Mihaela, BUNEA Georgiana, CHIȚAN Violeta Elena, ALEXA-STRATULAT Sergiu-Mihai; Valoare: 31.000,00 euro; *Creșterea siguranței construcțiilor amplasate în zone seismice prin sporirea capacității de disipare energetică folosind contravânturi cu flambaj împiedicat.*

L. Premii, distincții.

M. Alte realizări semnificative.

Data,
Septembrie 2026

Semnatura,