

# List of publications in 2023

## Papers in peer review journals (only Scopus or MathSciNet)

1. Ayar, O., Fernandes, C., Ferrás, L.L., Alves, M.A., Numerical simulations of suspensions of rigid spheres in shear-thinning viscoelastic fluids, *Physics of Fluids*, 35, 113327, 2023. (SJR=4.6 Q1)
2. Azevedo, A., Azevedo, D., Asymptotics for generating functions of the Fuss-Catalan numbers, *Math. Inequal. Appl.* 26 no. 4, 841–850, 2023 (SJR=0,5 Q2, MCQ=0,67)
3. Azevedo, A., Azevedo, D., Santos, L., Convex sets with obstacle and gradient constraints, *J. Differential Equations* 356, 111–126, 2023. (SJR=1,98 Q1, MCQ=2,07)
4. Baraviera, A., Duarte, P., Torres, M.J., Synchronization of coupled map lattices, *Proceedings of the Edinburgh Mathematical Society*, 66(1), 143–163, 2023. (SJR=0.7 Q1, MCQ=0.69)
5. Barón, L., Faria, S., Sousa, E., Freitas, E., Analysis of Pedestrians'Road Crossing Behavior, in *Social Groups.Transportation Research Record*, 6, 2023 (SJR=0.62 Q2)
6. Barros, A., Geluykens, M., Pereira, F., Freitas, E., Faria, S., Goubert, L., Vuye, C., Beyond noise levels: vehicle classification using psychoacoustic indicators from pass-by road traffic noise and their correlations with speed and temperature. *Applied Acoustics*, 214, 2023 (SJR=0.86 Q1)
7. Bento, A., Oliveira, J.J., Silva, C., Existence and stability of a periodic solution of a general difference equation with applications to neural networks with a delay in the leakage terms, *Communications in Nonlinear Science and Numerical Simulation*, 126, 107429, 2023 (SJR=0.967 Q1, MCQ=0.55)

8. Bertoco, J., Castelo, A., Ferrás, L.L., Fernandes, C., Numerical Simulation of Three-Dimensional Free Surface Flows Using the K–BKZ–PSM Integral Constitutive Equation, *Polymers*, 15, 3705, 2023. (SJR=5.0 Q1)
9. Brito, I., A portfolio stock selection model based on expected utility, entropy and variance, *Expert Systems with Applications*, 213, A, 118896, 2023. (SJR=1.87 Q1)
10. Brito, I., Almeida, J.J., Machado, G.J., Automatic exercise generation for exploring connections between Mathematics and Music, *Open Education Studies*, 5 (1), 20220183, 2023. (SJR=0.34 Q2)
11. Cação, I., Malonek, H.R., Falcão, M.I., Tomaz, G., Intrinsic Properties of a Non-Symmetric Number Triangle, *Journal of Integer Sequences*, 26 (4) 23.4.8, 2023. (SJR=0.44 Q3 MCQ=0.34)
12. Castro, C., Leiva, V., Lourenço-Gomes, M.dC., Amorim, A.P., Advanced Mathematical Approaches in Psycholinguistic Data Analysis: A Methodological Insight, *Fractal and Fractional*, 7, 670, 2023. (SJR=0.627 Q2)
13. Clain, S., Machado, Gaspar J., Malheiro, M. T., Compact schemes in time with applications to partial differential equations, *Computers and Mathematics with Applications*, 140, 107–125, June 2023 (SJR=0.984 Q1, MCQ=1.03)
14. Clain, Stéphane; Lopes, Diogo; Pereira, Rui M.S. and Pereira, Paulo A. . - Very high-order finite difference method on arbitrary geometries with Cartesian grids for non-linear convection diffusion reaction equations. - *Journal of Computational Physics* - Volume 498. (SJR=1.753 Q1)
15. Clain, Stéphane; Pereira, Rui M.S.; Pereira, Paulo A. and Lopes, Diogo. - Structural schemes for one dimension stationary equations. - *Applied Mathematics and Computation* - Volume 457. (SJR=0.962 Q1)
16. de Oliveira, J.S.C., Ospina, R., Leiva, V., Figueroa-Zúñiga, J., Castro, C., Quasi-Cauchy Regression Modeling for Fractiles Based on Data Supported in the Unit Interval, *Fractal and Fractional*, 7, 667, 2023. (SJR=0.627 Q2)
17. Domingues, J. C., Geometry and analysis in Anastácio da Cunha's calculus, *Archive for History of Exact Sciences*, 77, 579 – 600, 2023. (SJR=0.24 Q3)

18. Elshafei, A., Ferreira, A.C., Reis, H., Geodesic completeness of pseudo and holomorphic-Riemannian metrics on Lie groups, *Nonlinear Anal.* 232 (2023), Paper No. 113252, 37 pp. (SJR=1.35 Q1, MCQ=1.44)
19. Espírito Santo, J., Fraude, M. J., Pinto, L., Variations and interpretations of naturality in call-by-name lambda-calculi with generalized applications, *Journal of Logical and Algebraic Methods in Programming*, 131:100830, 2023 (SJR=0.465 Q2, MCQ=0.32)
20. Fahd, H., Zhang, Y., New algorithm for solving pentadiagonal CUPL-Toeplitz linear systems, 42, article number 122, (2023) (SJR=0.581 Q2, MCQ=0.48)
21. Fakhari, A., Fernandes, C., Single–Bubble Rising in Shear–Thinning and Elastoviscoplastic Fluids Using a Geometric Volume of Fluid Algorithm, *Polymers*, 15, 3437, 2023. (SJR=5.0 Q1)
22. Falcão, M.I., Miranda, F., Severino, R., Soares, M.J., Dynamics of the coquaternionic maps  $x^2 + bx$ , *Rend. Circ. Mat. Palermo*, Series 2, 72, 959 – 975, 2023. (SJR=0.44 Q2, MCQ=0.5)
23. Falcão, M.I., Miranda, F., Severino, R., Soares, M.J., Dynamics of the coquaternionic maps  $x^2 + bx$ , *Rendiconti Del Circolo Matematico Di Palermo* Series 2, 72, 959 – 975, 2023. (SJR=0.4 Q2, MCQ=0.5)
24. Fernandes, C., Faroughi, S.A., Particle–level Simulation of Magnetorheological Fluids: A Fully–Resolved Solver, *International Journal of Multiphase Flow*, 169, 104604, 2023. (SJR=3.8 Q1)
25. Fernandes, C., Ferrás, L.L., Afonso, A., A Primer on CFD–DEM for Polymer–Filled Suspensions, *Applied Sciences*, 13, 2466, 2023. (SJR=2.7 Q2)
26. Ferreira, G., Faria, S., Carvalho, A., Pereira, M.G., Relaxation intervention to improve diabetic foot ulcer healing: Results from a pilot randomized controlled study. *Wound Repair and Regeneration*, 31(4), 528—541, 2023 (SJR=0.74 Q1)
27. Ferreira, J. B., Cabral, M., Santos, R., Ferreira, M., Fonseca-Pinto, R., Antunes, A., Januário, F., Hybrid Cardiac Telerehabilitation After Acute Coronary Syndrome: Self-selection Predictors and Outcomes. *International Journal of Telerehabilitation*, 15(1), e6475, 2023. (SJR=0.9 Q1)
28. Giraldo, R., Leiva, V., Castro, C., An Overview of Kriging and Cokriging Predictors for Functional Random Fields, *Mathematics*, 11, 3425, 2023. (SJR=0.446 Q2)

29. Hamoun, S., Rami, Y., Vandembroucq, L., On the rational topological complexity of coformal elliptic spaces, *Journal of Pure and Applied Algebra*, 227, 2023 (SJR=0.89 Q1)
30. Hartwig, R. E.; Patrício, P., Divisibility of finite geometric series, *Bull. Malays. Math. Sci. Soc.*, 46(5), Paper No. 161, 2023 (SJR=0.531 Q2).
31. Hartwig, R. E.; Patrício, P., The GCD for finite geometric series, *Filomat* 37, no. 29, 9973 – 9979, 2023 (SJR=0.368 Q3).
32. Henriques, E., Local Hölder continuity to a class of doubly singular nonlinear evolutionary equations, *J. Math. Anal. Appl.*, 518(1), Paper No. 126676, 2023 (SJR=0.83 Q1, MCQ=0.95)
33. Henriques, E., Ciani, S., A brief note on Harnack-type estimates for singular parabolic nonlinear operators, *Bruno Pini Mathematical Analysis Seminar*, 14(2), 56 – 76, 2023 (SJR=0.17 Q4)
34. Jerónimo, J., Azevedo, A., Neves, P.C., Thompson, M., Interactions between financial constraints and economic growth, *North American Journal of Economics and Finance*, 67, 101943, 2023. (SJR=0.81 Q2)
35. Johnson,C., Zhang Y., Qiu,F., Ferreira,C., Inseparable Gershgorin discs and the existence of conjugate complex eigenvalues of real matrices, Published online: 14 Feb 2023 (SJR=0.631 Q2, MCQ=0.88)
36. Johnson, C., Zhang, Y., Qiu, F., Ferreira, C., Inseparable Gershgorin discs and the existence of conjugate complex eigenvalues of real matrices, *Linear and Multilinear Algebra*, 2023, DOI: 10.1080/03081087.2023.2177581. (SJR=0.631 Q2, MCQ=0.88)
37. Kahl, T., On the homology language of HDA models of transition systems, *Journal of Applied and Computational Topology*, 2023. (SJR=1.15 Q1)
38. Leiva, V., Alcudia, E., Montano, J., Castro, C., An Epidemiological Analysis for Assessing and Evaluating COVID-19 Based on Data Analytics in Latin American Countries, *Biology*, 12, 887, 2023. (SJR=0.779 Q1)
39. Menale, M., Soares, A.J., A kinetic model with time-dependent proliferative/destructive rates, *Mathematical Methods in the Applied Sciences*, online, 2023 (SJR=0.63 Q2)

40. Mishchenko, A., Oliveira, J., Whitney–Sullivan Constructions for Transitive Lie Algebroids – Smooth Case, *Russian Journal of Mathematical Physics*, 30(3), 360 – 374, 2023. (SJR=0.755 Q2)
41. Moreira, G.A., Menezes, R., Wise, L. Presence-Only for Marked Point Process Under Preferential Sampling, *Journal of Agricultural, Biological, and Environmental Statistics*, 2023, <https://doi.org/10.1007/s13253-023-00558-x>. (SJR=0.711 Q1)
42. Novais, L., Faria, S., Variable selection using the EM and CEM algorithms in mixtures of linear mixed models. *Journal of Statistical Computation and Simulation*, 93(13), 2196—2231, 2023 (SJR=0.53 Q2)
43. Nunes, P. S., Catarino, P., Martins, P., Nascimento, M. N., Plickers to support similarities learning: An experience on 7th grade Portuguese basic education, *Contemporary Educational Technology*, 15(3), ep436, 2023. (SJR=0.77 Q1)
44. Oliveira, A., Faria, S., Gonçalves, N., Martins, A., Leão, P., Surgical approaches to colonic and rectal anastomosis: systematic review and meta-analysis. *International Journal of Colorectal Disease*, 38, 52, 2023 (SJR=0.81 Q2)
45. Ospina, R., Baltazar, S.G., Leiva, V., Figueroa-Zúñiga, J., Castro, C., Robust semi-parametric inference for two-stage production models: A beta regression approach, *Symmetry*, 15, 1362, 2023. (SJR=0.483 Q2)
46. Ospina, R., Ferreira, A.G.O., de Oliveira, H.M., Leiva, V., Castro, C., On the Use of Machine Learning Techniques and Non-Invasive Indicators for Classifying and Predicting Cardiac Disorders, *Biomedicines*, 11, 2604, 2023. (SJR=0.897 Q1)
47. Ospina, R., Gondim, J.A., Leiva, V., Castro, C., An Overview of Forecast Analysis with ARIMA Models during the COVID-19 Pandemic: Methodology and Case Study in Brazil, *Mathematics*, 11, 3069, 2023. (SJR=0.446 Q2)
48. Pereira, F.C., Gonçalves, A.M., Marco Costa, M. Short-term forecast improvement of maximum temperature by state-space model approach: the study case of TO CHAIR project. *Stochastic Environmental Research & Risk Assessment*, 37, 219–231 (SJR=0.814 Q1)
49. Pereira, M.G., Vilaça, M., Pedras, S., Carvalho, A.C., Vedhara, K., Dantas, M.J., Meira-Machado, L., Wound Healing and Healing Process in Patients with Diabetic Foot Ulcers:

A Survival Analysis Study, Diabetes Research and Clinical Practice, 128, 2023. (SJR=1.09 Q1)

50. Rahman, M.Z.U., Leiva, V., Ghaffar, A., Martin-Barreiro, C., Waleed, A., Cabezas, X., Castro, C., Fractional Transformation-Based Decentralized Robust Control of a Coupled-Tank System for Industrial Applications, Fractal and Fractional, 7, 590, 2023. (SJR=0.627 Q2)
51. Rodrigues, J., Castro, C., Costa e Silva, E., Pereira, D.I., Geoscientists' views about science communication: predicting willingness to communicate geoscience, Geoscience Communication, 6, 15-25, 2023. (SJR=0.382 Q2)
52. Rufino, J., Baquero, C., Frey, D., Glorioso, C., Ortega, A., Rescic, N., Roberts, J., Lillo, R., Menezes, R., Champati, J., Fernández-Anta, A., Using survey data to estimate the impact of the omicron variant on vaccine efficacy against COVID-19 infection. Sci Rep 13, 900, 2023. (SJR=0.973 Q1)
53. Sanchez, J.D., Rêgo, L.C., Ospina, R., Leiva, V., Chesneau, C., Castro, C., Similarity-based predictive models: Sensitivity analysis and a biological application with multi-attributes, Biology, 12, 959, 2023. (SJR=0.779 Q1)
54. Silva, D., Menezes, R., Serra-Pereira, B., Azevedo, M., Figueiredo, I., Adapting the sampling design of research surveys to improve the biomass estimation of secondary species—the case study of *Raja clavata*, ICES Journal of Marine Science, 80 (10), 2567–2578, 2023. (SJR=0.94 Q1)
55. Silva, D., Menezes, R., Moreno, A., Teles-Machado, A., Garrido, S., Environmental Effects on the Spatiotemporal Variability of Sardine Distribution Along the Portuguese Continental Coast, Journal of Agricultural, Biological, and Environmental Statistics, 2023. <https://doi.org/10.1007/s13253-023-00577-8>. (SJR=0.711 Q1)
56. Silva, G., Leite, A., Ospina, R., Leiva, V., Figueroa-Zúñiga, J., Castro, C., Biased Random-Key Genetic Algorithm with Local Search Applied to the Maximum Diversity Problem, Mathematics, 11, 3072, 2023. (SJR=0.446 Q2)
57. Soutinho, G., Meira-Machado, L., Nonparametric estimation of the distribution of gap times for recurrent events, Statistical Methods & Applications, 32(1), 103-128, 2023. (SJR=0.405 Q3)

58. Soutinho, G., Meira-Machado, L. markovMSM: An R package for checking the Markov condition in multi-state survival data. *R Journal*, 15(1), 195–211, 2023. (SJR=0.68 Q2)
59. Spreafico, E. V. P., Catarino, P. M. C., Vasco, P., On Hybrid Hyper k-Pell, k-Pell–Lucas, and Modified k-Pell Numbers, *Axioms*, 12(11), 1047, 2023. (SJR=0.39 Q3)
60. Spolaôr, N., Lee, H.D., Mendes, A., Nogueira, C. et al., Fine-tuning pre-trained neural networks for medical image classification in small clinical datasets, *Multimedia Tools and Applications*, 2023. (SJR=0.72 Q1)
61. T.G. da Silva, A., Fernandes, C., Organista, J., Souza, L., Castelo, A., Validation of HiG–Flow Software for Simulating Two–Phase Flows with a 3D Geometric Volume of Fluid Algorithm, *Mathematics*, 11, 3900, 2023. (SJR=2.4 Q1)
62. Umapathy, K., Palanivelu, B., Leiva, V., Dhandapani, P.B., Castro, C., On fuzzy and crisp solutions of a novel fractional pandemic model, *Fractal and Fractional*, 7, 528, 2023. (SJR=0.627 Q2)
63. Veloso, S.R.S., Azevedo, A.G., Teixeira, P.F., Fernandes, C., Cellulose Nanocrystal (CNC) Gels: A Review, *Gels*, 9, 574, 2023. (SJR=4.6 Q1)
64. Vieira, R.P.M., Alves, F.R.V., Catarino, P.M.M.C., A Combinatorial Interpretation of the Padovan Generalized Polynomial Sequence, *Armenian Journal of Mathematics*, 15(11), 1–9, 2023. (SJR=0.13 Q4)
65. Vieira, R. P. M., Alves, F. R. V., Catarino, P. M. M. C., The Construction of Definitions through Padovan’s Combinatorial Model: an Investigation with Didactic Engineering in an Initial Education Course for Mathematics Teachers, *Acta Scientiae (Canoas)*, 25(6), 366 – 395, 2023. (SJR=0.29 Q2)
66. Vieira, R. P. M., Mangueira, M. C. dos S., Alves, F. R. V., Catarino, P. M. M. C., The generalization of gaussians and Leonardo’s octonions, *Annales Mathematicae Silesianae*, 37(1), 117 – 137, 2023. (SJR=0.21 Q4).
67. Vieira, R., Alves, F. R., Catarino, P., The sequence of the hyperbolic k-Padovan quaternions, *Malaya Journal of Matematik (MJM)*, 11(3), 324 – 331, 2023 (MCQ=0.03).
68. Wojtak, W., Coombes, S., Avitabile, D., Bicho, E., Erlhagen, W. (2023). Robust working memory in a two-dimensional continuous attractor network. *Cognitive Neurodynamics*, 1-17 (SJR=0.68 Q3)

69. Wojtak, W., Ferreira, F., Louro, L., Bicho, E., Erlhagen, W. (2023). Adaptive timing in a dynamic field architecture for natural human–robot interactions. *Cognitive Systems Research*, 82, 101148 (SJR=1.07 Q1)

## Book chapters

1. Freitas, Luís Miguel, Malheiro, Teresa, Gonçalves, A.M., Vicente, J., Pereira, F., Morais, F., Bessa, J., Machado, J.M., Vision Inspection for Systematic Production of Needle Beds: an industrial application, *Flexible Automation and Intelligent Manufacturing: Establishing Bridges for More Sustainable Manufacturing Systems*, Springer Nature Switzerland, 2024.
2. Macedo, Â., "The Quadratic Decomposition of the normalized derivatives of the Classical Orthogonal Polynomials", K. Castillo and A. J. Durán (eds.), *Orthogonal Polynomials and Special Functions. In Memory of José Carlos Petronilho*, Coimbra Mathematical Texts, to appear.

## Proceedings in meetings with referee

1. Abdelmagid, A., Tošić, Z., Mirani, A., Hussein, A., Elshafei, A., Design Model for Block-Based Structures from Triply Orthogonal Systems of Surfaces, *Proceedings of Advances in Architectural Geometry 2023*, 165–176, De Gruyter.
2. Albuquerque, L. , Coelho, C., Costa, M. Fernanda P., Ferrás, L.L., Soares, A.J., Improving public parking by using artificial intelligence, *AIP Conference Proceedings-Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021 (ICNAAM-2021)*, 2849, 220003-1–220003-4. AIP Publishing, 1 September 2023.
3. Azevedo, A., Rodrigues, J. F., Santos, L., On a class of nonlocal problems with fractional gradient constraint. *Proceedings of the 8th European Congress of Mathematics 2023*, 885–906. EMS Press, Berlin, 20–26 June 2021.
4. Brito, I., Machado, G.J., Performance Evaluation of Portfolio Stocks Selected with the EU-EV Risk Model. In: , et al. *Computational Science and Its Applications - ICCSA 2023 Workshops*. ICCSA 2023. *Lecture Notes in Computer Science*, 14105, 69 – 83, Springer, Cham, 2023.

5. Cação, I., Falcão, M.I., Malonek, H.R., Miranda, F., Tomaz, G., Remarks on the Vietoris Sequence and Corresponding Convolution Formulas, International Conference on Computational Science and Its Applications – ICCSA 2023, Lecture Notes in Comput. Sci., 14104, 677 – 692, Springer, Cham. Athens, Greece, 3–6 July 2023.
6. Cação, I., Malonek, H.R., Falcão, M.I., Tomaz, G., Generalized Vietoris' Number Sequences from Real and Hypercomplex Points of View, Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021, 2849(1), 060012, AIP Conference Proceedings, 1 September 2023.
7. Cação, I., Malonek, H.R., Falcão, M.I., Tomaz, G., Starting with the Differential: Representation of Monogenic Functions by Polynomials of Non-monogenic Variables, Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021, 2849(1), 060013, AIP Conference Proceedings, 1 September 2023.
8. Campos, P., Lopes, P., Meira-Machado, L., Soutinho, G., "Survival Analysis of Organizational Network – An exploratory study", Lecture Notes in Computer Science, Computational Science and its Applications - ICCSA 2023 Workshops, volume 14112, 117-128, Springer, 2023.
9. Carrilho, D.S., Coelho, C., Costa, M. Fernanda P., Ferrás, L.L., Soares, A.J., Optimization of traffic lights using Supervised Learning, AIP Conference Proceedings-Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021 (ICNAAM-2021), 2849, 2849, 220001-1–220001-4. AIP Publishing, 1 September 2023.
10. Catarino, P., Nascimento, M., Two Experiences of Including Critical Thinking in Mathematics Courses, Proceedings of Innovative Technologies, and Learning - ICITL 2023, Lecture Notes in Computer Science, vol 14099, 375 - - 384, Springer, Cham, 28-30 August 2023.
11. Catarino, P., Morais, E., Campos, H., A Note on k-Telephone and Incomplete k-Telephone Numbers. Proceedings of International Conference on Mathematics and its Applications in Science and Engineering – ICMASE 2022, Proceedings in Mathematics & Statistics, vol 414, 225 – 238, Springer, Cham, 4-7 July 2022 (published in 2023).
12. Catarino, P., Ricardo, S., A Note on Special Matrices Involving k-Bronze Fibonacci Numbers. Proceedings of International Conference on Mathematics and its Applications in Science and Engineering – ICMASE 2022, Proceedings in Mathematics & Statistics, vol 414, 135 – 145, Springer, Cham, 4-7 July 2022 (published in 2023).

13. Chivai, C., Soares, A., Catarino, P., Bibliographic Review on Teaching Orthogonal Projections with 3D Technology, Proceedings of INTED 2023 – 17th annual International Technology, Education and Development Conference, 1145 - - 1154, Valencia (Spain) - 6th, 7th, and 8th of March 2023.
14. Coelho, C., Costa, M. Fernanda P. , Ferrás , L.L., Prior knowledge meets neural odes: a two stage training method for improved explainability, Proceedings of 11th International Conference on Learning Representations - ICLR 2023, 6 pages. 1-5 may 2023.
15. Coelho, C., Costa, M. Fernanda P., Ferrás, L.L., The influence of the optimisation algorithm in the solution of the Fractional Laplacian Equation by neural networks, AIP Conference Proceedings-Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021 (ICNAAM-2021), 2849, 220002-1–220002-4. AIP Publishing, 1 September 2023.
16. Costa, M. Fernanda P., Rocha, Ana Maria A. C., Fernandes, Edite M.G.P. , Sequential Adding Clustering Algorithm, AIP Conference Proceedings-Proceedings of the International Conference on Numerical Analysis and Applied Mathematics 2021 (ICNAAM-2021), 2849, 230004-1–230004-4. AIP Publishing, 1 September 2023.
17. Correia, J., Louro, L., Monteiro, S., Erlhagen, W., Bicho, E., Navigation and docking maneuvers control of an autonomous omnidirectional platform in a dynamic internal logistics environment. In 2023 IEEE International Conference on Autonomous Robot Systems and Competitions (ICARSC), 118—125, IEEE, Tomar (Portugal), 26-27 April 2023
18. Espírito Santo, J. Mendes, F., The logical essence of compiling with continuations, Proceedings of the 8th International Conference on Formal Structures for Computations and Deduction, Schloss-Dagstuhl - Leibniz Zentrum für Informatik, 19:1 – 19:21, 28 June 2023
19. Falcão, M.I., Miranda, F., Severino, R., Soares, M.J., A Two-step Quaternionic Root-finding Method, International Conference on Computational Science and Its Applications – ICCSA 2023, Lecture Notes in Comput. Sci., 14104, 708 – 721, Springer, Cham. Athens, Greece, 3–6 July 2023.
20. Falcão, M.I., Miranda, F., Severino, R., Soares, M.J., The Stability of Complex Dynamics for Two Families of Coquaternionic Quadratic Polynomials, International Conference on Computational Science and Its Applications – ICCSA 2023, Lecture Notes in Comput. Sci., 14104, 722 – 734, Springer, Cham. Athens, Greece, 3–6 July 2023.

21. Ferreira, F., Barrios, J., Barbosa, P., Gago, M. F., Bicho, E., Erlhagen, W., Impact of Variable Transformations on Multiple Regression Models for Enhancing Gait Normalization. In Proceedings of the 2023 6th International Conference on Mathematics and Statistics, 103–107, ACM Press, Leipzig (Germany), July 14 - 16, 2023
22. Forjaz, M. A., Almeida, M. J., Almeida-Aguiar, C., Pediu Ciência?!(Asking for Science?!...). Experimental Activities in non-formal contexts and their impacts on participants, 2023, 4144, ICERI2023 Proceedings, Seville, Spain, 13-15 November, 2023.
23. Gonçalves, A.M., Pereira, F.C., Costa, M., Leão, C.P. Meteorological Time Series: An Exploratory Statistical and Critical Analysis. In: Machado, J., Soares, F., Trojanowska, J., Ivanov, V., Antosz, K., Ren, Y., Manupati, V.K., Pereira, A. (eds) Innovations in Industrial Engineering II. Icieng: International Conference Innovation in Engineering 2022. Lecture Notes in Mechanical Engineering. Pages 197-208, Springer.
24. Magalhães, V., Costa, M. Fernanda P. , Ferreira, M. J. Oliveira, Pinto, T., Figueiredo V., Application of a Self-Supervised Learning Technique for Monitoring Industrial Spaces, Editors Gervasi O. et al. Computational Science and Its Applications – ICCSA 2023 Workshops. Lecture Notes in Computer Science, volume 14104, 407–420. Springer, Cham, 29 June 2023.
25. Mansouri, M., Abdelmagid, A., Tošić, Z., Orszt, M., Elshafei, A., Corresponding Principal and Asymptotic Patches for Negatively-Curved Gridshell Designs, Proceedings of Advances in Architectural Geometry 2023, 55–67, De Gruyter.
26. Matos, A. S., Forjaz, M. A., Almeida, M. J., Almeida-Aguiar, C., Red Alert Biodiversity in Danger – An Awareness Science Communication Activity for Environmental Conservation, 2023, 7508, ICERI2023 Proceedings, Seville, Spain, 13-15 November, 2023.
27. Meira-Machado, L., "The Kaplan-Meier estimator: new insights and applications in multi-state survival analysis," Lecture Notes in Computer Science, Computational Science and its Applications - ICCSA 2023 Workshops, volume 14112, 129-139, Springer, 2023.
28. Mina, I. A. P., Correia Neves, I., Forjaz, M. A., Pamplona, J., Almeida, M., Transformar o olhar: Vis(i)tas com Ciência, 2023, 26, SciCom Editors, Bragança, 3-5 May, 2023. Almeida Aguiar, C., Forjaz, M. A., Almeida, J., Scientia das Coisas: mais do que uma exposição, 2023, SciCom Editors, 36, Bragança, 3-5 May, 2023.

29. Miranda, C., Tereso, Gonçalves, A.M., Sousa, P., Engrácia, P. Study on project management in Portugal within the scope of the Portuguese Project Management Observatory. Procedia Computer Science, 219, 1885—1892.
30. Nascimento, M. M., Catarino, P., Touch the Future: Applets in Training Teachers, Proceedings of International Antalya Scientific Research and Innovative Studies Congress, 450 - - 460, IKSAD INSTITUTE, Antalya, Turkiye, IKSAD Publications, 13 and 14 February 2023.
31. Silva, M. de O., Catarino, Aires, A. P., Nascimento, M. M., Algebraic Thinking in Students from Communication and Multimedia, Proceedings of ICERI 2023 - 16th annual International Conference of Education, Research and Innovation, 3079 - - 3088, Seville, (Spain) – 13th, 14th and 15th November 2023. ICERI2023 Proceedings - Browsing Publication (iated.org)
32. Vieira, R. P. M., Barros, F. E. B., Vieira Alves, F. R. V., Catarino, P. M. M. C., O ensino de Matemática por meio da Teoria das Situações Didáticas: um estudo do modelo combinatório da sequência de Fibonacci, Proceedings of II Simpósio de Ensino em Ciências e Matemática (II SECMAT) 2022, 164 - -171, Editora CRV, Curitiba-Brasil, 30 November 2022 – 2 December 2022 (published in 2023).
33. Vieira, R.P.M., Alves, F.R.V., Catarino, P.M.M.C., Uma análise preliminar com a Engenharia Didática Diante das abordagens combinatóricas da sequência de Padovan, Proceedings of III Seminário Internacional Formação Pedagógica & Pensamento Nômade, (8 pp.), 20, 21 and 22 November 2023. Evento - III Seminário Internacional e IV Seminário Nacional Formação Pedagógica e Pensamento Nômade: ensino, docência e criação e I Seminário Internacional de Pesquisa em Ensino (univates.br)

## Other publications

1. Alves, F. R. V., Pinheiro, C. P. S. R., De Sousa, R. T., Catarino, P. M. M. C., Recurrence and linear sequences: a three-dimensional visualization with support of GeoGebra software, Acta Didactica Napocensia, 16(1), 140 – 156, 2023.
2. Alves, F.R.V., Vieira, R.P.M., Catarino, P.M.M.C., A note on telephone numbers and their matrix generators, Notes on Number Theory and Discrete Mathematics, 29 (2), 195 – 203, 2023.

3. Alves, F. R. V., Vieira, R. P. M., Catarino, P. M. M. C., Spreafico, E. V. P., Abordagem combinatória para a sequência Fibonacci, Tribonacci, Tetranacci, Pentanacci, ... etc e a noção de tabuleiro, C.Q.D.-Revista Eletrônica Paulista de Matemática, Edição Inciação Científica, Bauru, 23(1), 182 – 204, 2023.
4. Andrade, M. A. P. M., Soares, A., Catarino, P., Impressão Lumen como recurso educacional e interdisciplinar, APEDuC Revista/ APEDuC Journal, 04(01), 184 - - 191, 2023.
5. Barrios, J., Araújo. B., Bicho, E., Gago, M.F., Erlhagen, W., Ferreira, F., Enhancing gait analysis through transformation-based multiple linear regression normalization, SPE 2023, XXVI Congresso da Sociedade Portuguesa de Estatística, 177–177, 2023.
6. Bastos, J., Ferreira, F., Silva, D., Erlhagen, W., Bicho, E., Clustering analysis for household week-daily water consumption profiles characterization, JOCLAD 2023, XXX Jornadas de Classificação e Análise de Dados, 91–92, 2023.
7. Carrascal, G., Barrios, J., Plaza, J., Ferreira, F., Big Data analysis of solar radiation patterns in the Colombian Caribbean region, SPE 2023, XXVI Congresso da Sociedade Portuguesa de Estatística, 146–146, 2023.
8. Cunha, T., Costa e Silva, E., Ferreira, F. Modeling of hourly water consumption of residential clients in the north of Portugal, JOCLAD 2023, XXX Jornadas de Classificação e Análise de Dados, 163-164, 2023.
9. Dişkaya, O., Menken, H., Catarino, P. M. M. C., On the bivariate Padovan polynomials matrix, Notes on Number Theory and Discrete Mathematics, 29(3), 407 – 420, 2023.
10. Domingues, J. C., "José Anastácio da Cunha", Dicionário Biográfico de Cientistas, Engenheiros e Médicos em Portugal, CIUHCT, 2023.
11. Fernandes, C., Ferrás, L.L., Afonso, A., Numerical Simulation of the Production of Core-Shell Microparticles, SEMINA - Ciências Exatas e Tecnológicas, 44, 1–9, 2023.
12. Ferreira M., Measuring Extremal Clustering in Time Series. Engineering Proceedings 39(1), 64, 2023.
13. Mangueira, M., Vieira, R., Alves, F., Catarino, P., The sequences of the hyperbolic k-Perrin and k-Leonardo quaternions, Journal of Mathematical Extension, 17(4), 16p., 2023.

14. Martalò, G., Travaglini R., A reaction-cross-diffusion model derived from kinetic equations for gas mixtures, *Physica D: Nonlinear Phenomena*, 459,134029, 2024.
15. Pereira, F.C., Gonçalves, A.M., Marco Costa, M. Improving Predictive Accuracy in the Context of Dynamic Modelling of Non-Stationary Time Series with Outliers. *Engineering Proceedings*, 39(1):36.
16. Sousa, R. T. de, Alves, F. R. V., Aires, A. P., Catarino, P. M. M. C., O ensino da cônica parábola: uma abordagem via Categorias Intuitivas e Teoria das Situações Didáticas, *Indagatio Didatica*, 15(3), 207 – 233, 2023.
17. Vieira, R. P. M., Alves, F. R. V., Bezerra, A. A., Catarino, P. M. M. C., Estudando a sequência de Padovan no Laboratório de Ensino de Matemática: relato de experiência, *Revista Docência do Ensino Superior*, Belo Horizonte, v. 13, e041558, 1 – 18, 2023.
18. Vieira, R.P.M., Alves, F.R.V., Catarino, P.M.M.C, A sequência diferencial de k-Padovan e k-Perrin, *Revista Sergipana de Matemática e Educação Matemática*, 8(1), 108 – 117, 2023.
19. Vieira, R.P.M., Alves, F.R.V., Catarino, P.M.M.C., A study of the complexification process of the (s, t) – Perrin sequence, *Notes on Number Theory and Discrete Mathematics*, 29 (1), 40 – 47, 2023.
20. Vieira, R. P. M., Alves, F. R. V., Catarino, P. M. M. C., Estudo de sequências numéricas para o ensino de Matemática: publicações em periódicos de 2017 a 2022, *Revista Contrapontos*, 23(1), 20 – 32, 2023.
21. Vieira, R. P. M., Alves, F. R. V., Catarino, P. M. M. C., O aplicativo Caminho Certo como ferramenta de auxílio à locomoção de pessoas com deficiência: uma experiência na eletiva de informática, *Docentes*, 8(22), 11 - - 18, 2023.
22. Vieira, R. P. M., Alves, F. R. V., Catarino, P. M. M. C., O estado da arte da sequência de Perrin: uma análise dos aspectos evolutivos, *Tear: Revista de Educação Ciência e Tecnologia*, 12(1), 1 – 10, 2023.
23. Vieira, R. P. M., Alves, F. R. V., Catarino, P. M. M. C., O estudo do modelo combinatório de Padovan por meio da Engenharia Didática, *Revista Binacional Brasil Argentina: diálogo entre as ciências*, 12(1), 397 – 416, 2023.

24. Vieira, R.P.M., Mangueira, M.C. dos S., F.R.V, Catarino, P.M.M.C., Um estudo das sequências derivadas de Fibonacci vinculado ao fractal de Barnsley, Boletim GEPEM (Grupo de Estudos e Pesquisas em Educação Matemática, Rio de Janeiro), 82, 83 – 102, 2023.