

Autor(es)	Año	Título del artículo	Nombre revista	Estado	ISSN	Link de acceso o medio de verificación electrónico
Álvarez, MA; Rodríguez-Vallarte, MC; Salgado, G	2019	Low Dimensional Contact Lie Algebras	JOURNAL OF LIE THEORY	Publicado	0949-5932	https://www.heldermann.de/JLT/JLT29/JLT293/jlt29035.htm
Álvarez, MA; Hernández, I; Kaygorodov, I	2019	Degenerations of Jordan Superalgebras	BULLETIN OF THE MALAYSIAN MATHEMATICAL SCIENCES SOCIETY	Publicado	0126-6705	https://doi.org/10.1007/s40840-018-0664-3
Álvarez, MA; Cartes, F	2019	Cohomology and deformations for the Heisenberg Hom-Lie algebras	LINEAR & MULTILINEAR ALGEBRA	Publicado	0308-1087	https://doi.org/10.1080/03081087.2018.1487379
L. Medina, H. Nina	2019	Realizable lists via the spectra of block matrices	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2019.07.007
Medina, L; Nina, H	2019	Realizable lists via the spectra of block matrices	LINEAR ALGEBRA AND ITS APPLICATIONS	publicado	0024-3795	https://www.sciencedirect.com/science/article/pii/S0024379519302885
Medina, L; Nina, H; Valero, E	2019	A Note on NIEP for Leslie and Doubly Leslie Matrices	MATHEMATICS	publicado	2227-7390	https://www.mdpi.com/2227-7390/8/4/559
R. C. Díaz, G. Pastén, O. Rojo	2019	New results on the $\mathcal{D}_{\alpha}$ -matrix of connected graphs	Linear Algebra and its Applications	Publicado	0024-3795	http://doi.org/10.1016/j.laa.2019.04.030
Jonnathan Rodríguez	2019	A note on new bounds for the Estrada Index	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2019.06.022
Juan. R Carmona, Jonnathan Rodríguez	2019	An increasing sequence of lower	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2019.06.018

		bounds for the Estrada index of graphs and matrices				
E. A. Martins, E. Lenes, E. Mallea, M. Robbiano, J. Rodríguez	2019	Bounds for different spreads of line and total graphs	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2019.06.007
E. Lenes, E. Mallea, J. Rodríguez	2019	Bilinear Optimal Control Problem for the Stationary Navier–Stokes Equations with Variable Density and Slip Boundary Condition	Bulletin of the Brazilian Mathematical Society, New Series	Publicado	1678-7544	https://doi.org/10.1007/s00574-019-00131-6
Gabbanelli, L.; Ovalle, J.; Sotomayor, A.; Stuchlik, Z.; Casadio, R.	2019	A causal Schwarzschild-deSitter interior solution by gravitational decoupling	EUROPEAN PHYSICAL JOURNAL C	Publicado	1434-6044	https://doi.org/10.1140/epjc/s10052-019-7022-y
León, P.; Sotomayor, A.	2019	Braneworld Gravity under gravitational Decoupling	FORTSCHRITTE DER PHYSIK	Publicado	0015-8208	https://doi.org/10.1002/prop.201900077
Casadio, R; Contreras, E; Ovalle, J; Sotomayor, A.	2019	Isotropization and change of complexity by gravitational decoupling	EUROPEAN PHYSICAL JOURNAL C	Publicado	1434-6044	https://doi.org/10.1140/epjc/s10052-019-7358-3
Echeverría-Vega, A; Morales, P; Sáez, C; Álvarez,	2020	Characterization of the bacteriophage	FRONTIERS IN MICROBIOLOGY	Publicado	1664-302X	https://doi.org/10.3389/fmicb.2020.550979

MA; Gordillo, F; Del-Valle, R; Solís, ME; Araya, R		vB_VorS-PVo5 infection on <i>Vibrio</i> <i>ordalii</i> : a model of phage-bacteria adsorption in aquatic environments				
Álvarez, MA; Rosales- Gómez, J	2020	Cohomology of Lie Superalgebras	SYMMETRY-BASEL	Publicado	2073-8994	https://doi.org/10.3390/sym12050833
Alvarez, MA; Hernández, I.	2020	On degenerations of Lie superalgebras	LINEAR & MULTILINEAR ALGEBRA	Publicado	0308-1087	https://doi.org/10.1080/03081087.2018.1498060
Álvarez, MA; Brondani, AE; Franca, FAM; Medina, CLA	2020	Characteristic Polynomials and Eigenvalues for Certain Classes of Pentadiagonal Matrices	MATHEMATICS	Publicado	2227-7390	https://doi.org/10.3390/math8071056
Álvarez, M.A., Hernández, I.	2020	Varieties of nilpotent Lie superalgebras of dimension ≤ 5	FORUM MATHEMATICUM	Publicado	1435-5337	https://doi.org/10.1515/forum-2019-0244
Álvarez, M.A.	2020	The Betti numbers for Heisenberg Lie algebras	JOURNAL OF ALGEBRAIC COMBINATORICS	Publicado	0925-9899	https://doi.org/10.1007/s10801-019-00909-3
M. A. Álvarez, A. Brondani, F. França, L. Medina	2020	Characteristic polynomials and eigenvalues for certain classes of pentadiagonal matrices	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math8071056
L. Medina, H. Nina, M. Trigo	2020	On Distance Signless Laplacian	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math8050792

		Spectral Radius and Distance Signless Laplacian Energy				
L. Medina, H. Nina, E. Valero	2020	A note on NIEP for Leslie and Doubly Leslie matrices	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math8040559
E. Mallea, L. Medina	2020	Optimal control problem for 3D micropolar fluid equations	Electronic Journal of Qualitative Theory of Differential Equations	Publicado	1417-3875	https://doi.org/10.14232/ejqtde.2020.1.3
Medina, L; Nina, H; Trigo, M	2020	On Distance Signless Laplacian Spectral Radius and Distance Signless Laplacian Energy	MATHEMATICS	publicado	2227-7390	https://www.mdpi.com/2227-7390/8/5/792
Pickmann-Soto, H; Arela-Pérez, S; Nina, H; Valero, E	2020	Inverse maximal eigenvalues problems for Leslie and doubly Leslie matrices	LINEAR ALGEBRA AND ITS APPLICATIONS	publicado	0024-3795	https://www.sciencedirect.com/science/article/pii/S0024379520300239
Nina, H; Callisaya, HF; Pickmann-Soto, H; Rodriguez, J	2020	Nonnegative Inverse Elementary Divisors Problem for Lists with Nonnegative Real Parts	MATHEMATICS	publicado	2227-7390	https://www.mdpi.com/2227-7390/8/10/1662
D. M. Cardoso, G. Pastén, O. Rojo	2020	Graphs with clusters perturbed by regular graphs - A_{α} -spectrum and applications	Discussiones Mathematicae Graph Theory	Publicado	1234-3099	http://doi:10.7151/dmgt.2284

R. C. Díaz, G. Pastén, O. Rojo	2020	On the minimal α -distance index of graphs subject to fixed connectivity	Linear Algebra and its Applications	Publicado	0024-3795	http://doi.org/10.1016/j.laa.2019.09.027
Hans Nina, Hector Flores Callisaya, H. Pickmann-Soto, Jonnathan Rodriguez	2020	Nonnegative Inverse Elementary Divisors Problem for Lists with Nonnegative Real Parts	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math8101662
Eber Lenés, Exequiel Mallea-Zepeda, Jonnathan Rodríguez	2020	New Bounds for the α -Indices of Graphs	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math8101668
A. Jahanbani, J. Rodriguez Zambrano	2020	Koolen-Moulton-Type Upper Bounds on the Energy of a Graph	MATCH Communications in Mathematical and in Computer Chemistry	Publicado	0340-6253	https://match.pmf.kg.ac.rs/content83n3.htm
E. A. Martins, E. Lenés, E. Mallea, M. Robbiano, J. Rodríguez	2020	Extremal graphs for Estrada indices	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2019.10.029
Jorge Olivares and Elvis Valero	2020	Linear Homogeneous Linear Differential Equations of Third and Fourth order through GeoGebra Software for Engineering Students	Diamond Scientific Publishing	publicado		
F.Mass - P. Martin - J.Olivares	2020	Analytic approximation to	Computational and Applied Mathematics	publicado	18070302 22383603	https://link.springer.com/

		Bessel function $J_0(x)$				
Echeverría-Vega, A; Morales, P; Sáez, C; Alvarez, MA; Gordillo, F; Del-Valle, R; Solís, ME; Araya, R	2020	Characterization of the bacteriophage vB_VorS-PVo5 infection on <i>Vibrio ordalii</i> : a model of phage-bacteria adsorption in aquatic environments	FRONTIERS IN MICROBIOLOGY	Publicado	1664-302X	https://doi.org/10.3389/fmicb.2020.550979
Alvarez, MA; Vera, S	2021	On rigid 3- dimensional Hom- Lie algebras	JOURNAL OF ALGEBRA	Publicado	0021-8693	https://doi.org/10.1016/j.jalgebra.2021.08.017
Alvarez, MA; Salgado, G	2021	Semi-invariants of low-dimensional Lie algebras	COMMUNICATIONS IN ALGEBRA	Publicado	0092-7872	https://doi.org/10.1080/00927872.2020.1861619
Alvarez, MA; Rojas, N	2021	On minimal faithful representations of a class of nilpotent Lie algebras	FILOMAT	Publicado	0354- 5180	https://doi.org/10.2298/FIL2105671A
Alvarez, MA; Kaygorodov, I	2021	The algebraic and geometric classification of nilpotent weakly, associative and symmetric Leibniz algebras	JOURNAL OF ALGEBRA	Publicado	0021-8693	https://doi.org/10.1016/j.jalgebra.2021.09.002
Alvarez, MA; Anza, Y	2021	On rigid 2-step nilpotent Lie superalgebras	COMMUNICATIONS IN ALGEBRA	Publicado	0092-7872	https://doi.org/10.1080/00927872.2020.1869244

Alvarez, MA	2021	Degenerations of 8-dimensional 2-step nilpotent Lie algebras	ALGEBRAS AND REPRESENTATION THEORY	Publicado	1572-9079	https://doi.org/10.1007/s10468-020-09987-5
Alvarez, M.A., Rodríguez-Vallarte, M.C., Salgado, G.	2021	Deformation Theory of contact Lie algebras as double extensions	PROCEEDINGS OF THE AMERICAN MATHEMATICAL SOCIETY	Publicado	0002-9939	https://doi.org/10.1090/proc/15040
Martínez-Florez, G; Martínez, E; Tovar-Falon, R; Gómez, HW	2021	A family of bimodal distributions generated by distributions with positive support	Journal of Applied Statistics	Publicado	0266-4763	
G. Pastén, O. Rojo, L. Medina	2021	On the A_{α} -eigenvalues of signed graphs	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math9161990
L. Medina, M. Trigo	2021	Upper bounds and lower bounds for the spectral radius of Reciprocal Distance, Reciprocal Distance Laplacian and Reciprocal Distance signless Laplacian matrices	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2020.09.024
Rodríguez J., Nina H.	2021	A Note on the Estrada Index of the A_{α} -Matrix	MATHEMATICS	publicado	2227-7390	https://www.mdpi.com/2227-7390/9/8/811
G. Pastén, O. Rojo, L. Medina	2021	On the A_{α} -	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math9161990

		Eigenvalues of Signed Graphs				
Jonnathan Rodriguez, Hans Nina	2021	A Note on the Estrada Index of the α -Matrix	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math9080811
Juan R. Carmona a and Jonnathan Rodríguez	2021	On the spectral radius and energy of digraphs	Linear and Multilinear Algebra	Publicado	0308-1087	https://doi.org/10.1080/03081087.2021.1899109
Jonnathan Rodríguez, Juan L. Aguayo, Juan R. Carmona, Akbar Jahanbani	2021	A note lower bounds for the Estrada index	Discrete Mathematics	Publicado	0012-365x	https://doi.org/10.1016/j.disc.2021.112303
Akbar Jahanbani, Hajar Shooshtari, Jonnathan Rodríguez	2021	Estimating the PI-Estrada index of graphs	Discrete Mathematics Letters	Publicado	2664-2557	https://doi.org/10.47443/dml.2020.0057
Baranovskii, E.S.; Lenés, E.; Mallea-Zepeda, E.; Rodríguez, J.; Vásquez, L.	2021	Control Problem Related to 2D Stokes Equations with Variable Density and Viscosity	Symmetry	Publicado	2073-8994	https://doi.org/10.3390/sym13112050
Hajar Shooshtari, Jonnathan Rodríguez, Akbar Jahanbani, and Abbas Shokri	2021	Energy of Nonsingular Graphs: Improving Lower Bounds	Journal of Mathematics	Publicado	2314-4629	https://doi.org/10.1155/2021/4064508
Martin, P., Olivares, J., Rojas, E.; Sotomayor, A.	2021	Quasi-Rational Analytic Approximation for the Modified Bessel Function $I_1(x)$ with High Accuracy	Symmetry	Publicado	2073-8994	https://doi.org/10.3390/sym13050741
León, P.; Sotomayor, A.	2021	Braneworld-Klein-Gordon System in	FORTSCHRITTE DER PHYSIK	Publicado	0015-8208	https://doi.org/10.1002/prop.202100017

		the Framework of Gravitational Decoupling				
Ovalle, J.; Casadio, R.; Contreras, E.; Sotomayor, A.	2021	Hairy black holes by gravitational decoupling	Physics of the Dark Universe	Publicado	2212-6864	https://doi.org/10.1016/j.dark.2020.100744
Pablo Martin , , Eduardo Rojas , Jorge Olivares and Adrián Sotomayor	2021	Quasi-Rational Analytic Approximation for the Modified Bessel Function $I_1(x)$ with High Accuracy	Symmetry	publicado		https://www.mdpi.com/
L. Medina, M. Trigo	2022	Bounds on the Reciprocal Distance energy and Reciprocal Distance Laplacian energies of a graph	Linear and Multilinear Algebra	Publicado	0308-1087	https://doi.org/10.1080/03081087.2020.1825607
E. Lenes, E. Mallea-Zepeda, L. Medina, J. Rodriguez	2022	Generalized Randic Estrada indices of graphs	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math10162932
Arela-Perez S., Nina H., Pantáz J., Pickmann-Soto H., Valero E.	2022	Construction of Lefkovitch and doubly Lefkovitch matrices with maximal eigenvalues and some diagonal elements prescribed	LINEAR ALGEBRA AND ITS APPLICATIONS	publicado	0024-3795	https://www.sciencedirect.com/science/article/pii/S0024379521001944

Arela-Pérez S., Lozano Ch., Nina H., Pickmann-Soto H.	2022	Two Inverse Eigenproblems for Certain Symmetric and	MATHEMATICS	publicado	2227-7390	https://www.mdpi.com/2227-7390/10/17/3054
Andrade, Enide; Bonifácio, Andréa Soares; Robbiano, María; Rodríguez, Jonnathan; Tapia, Katherine	2022	Some families of integral mixed graphs	Linear Algebra and its Applications	Publicado	0024-3795	https://doi.org/10.1016/j.laa.2022.01.022
Jésica Pantáz - Jonnathan Rodríguez	2022	On the Estrada Index of Graphene Graph	Polycyclic Aromatic Compounds	Publicado	1040-6638	https://doi.org/10.1080/10406638.2022.2036779
L. Shahbazi, A. Jahanbani, R. Khoeilar, J. Rodríguez	2022	Sharp upper bounds of F-index among bicyclic graphs	Asian-European Journal of Mathematics	Publicado	1793-557	https://doi.org/10.1142/S1793557122500553
Akbar Jahanbani, Amir Taghi Karimi, Jonnathan Rodríguez	2022	Results on the Estrada Indices of Benzenoid Hydrocarbons	Polycyclic Aromatic Compounds	Publicado	1040-6638	https://doi.org/10.1080/10406638.2020.1823860
Shooshtary, H. Rodríguez, J.	2022	New bounds on the energy of a graph	Communications in Combinatorics and Optimization	Publicado	2538-2128	https://doi.org/10.22049/CCO.2021.26999.1179
Lenes, E., Mallea-Zepeda, E., Medina, L., & Rodríguez, J	2022	Generalized Randić Estrada Indices of Graphs	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math10162932
Jose L.Boldrini;Rogério de Aguiar;Marko A. Rojas-Medar;María D. Rojas-Medar	2022	An Optimal Control Problem for a Generalized Bioconvective Flow	ACTA APPLICANDAE MATHEMATICAE (Acta Appl Math)	PUBLICADA	0167-8019	https://doi.org/10.1007/s10440-022-00491-0
M. A. Alvarez, J. Rosales-Gómez	2023	On S-expansions and other transformations of Lie algebras	Journal of Physics A: Mathematical and Theoretical	Publicado	1751-8113	https://doi.org/10.1088/1751-8121/acd1c5

Kaygorodov, I; Alvarez, MA; de Mello, TC	2023	Central extensions of 3-dimensional Zinbiel algebras	RICERCHE DI MATEMATICA	Publicado en Línea	0035-5038	https://doi.org/10.1007/s11587-021-00604-1
Mallea-Zepeda, E; Medina, L	2023	Control Problem Related to a 2D Parabolic-Elliptic Chemo-Repulsion System with Nonlinear Production	SYMMETRY-BASEL	Publicado	2073-8994	http://dx.doi.org/10.3390/sym15101949
Arela-Pérez S., Lozano Ch., Nina H., Pickmann-Soto H.	2023	The new inverse eigenvalue problems for periodic and generalized periodic Jacobi matrices from their extremal spectral data	LINEAR ALGEBRA AND ITS APPLICATIONS	publicado	0024-3795	https://www.sciencedirect.com/science/article/pii/S0024379522004207
S. Arela-Pérez, J. Egaña, G. Pastén, H. Pickmann-Soto	2023	Extremal realization spectra by two acyclic matrices whose graphs are caterpillars	Linear and Multilinear Algebra	Publicado	0308-1087	https://doi.org/10.1080/03081087.2022.2069222
S. Arela-Pérez; Charlie Lozano; Hans Nina; H. Pickmann-Soto; Jonnathan Rodríguez	2023	The new inverse eigenvalue problems for periodic and generalized periodic Jacobi matrices from their extremal spectral data	Mathematics	Publicado	2227-7390	https://doi.org/10.1016/j.laa.2022.11.014

Restuccia, A.; Sotomayor, A.	2023	Integrability and BRST invariance from BF topological theory	Journal of Physics A: Mathematical and Theoretical	Publicado	1751-8121	https://doi.org/10.1088/1751-8121/acff9b
A. Coronel, A. Tello, E. Fernández- Cara, M. Rojas-Medar:	2023	A priori estimates for the system modelling nonhomogeneous asymmetric fluids	Numerical Functional Analysis and Optimization	Publicado	0163-0563	https://doi.org/10.1080/01630563.2022.2150640
A. Coronel, A. Tello, F. Huancas, M. Rojas-Medar:	2023	Application of Tikhonov fixed point theorem to analyze an inverse problem for a bioconvective flow model	Journal of fixed point theory and applications	Publicado	1661-7738	https://doi.org/10.1007/s11784-023-01079-3
Natalia Ruiz, Eugenio Chandia, Daniza Rojas, Mirian Baeza, Cristián Reyes	2023	Perfiles de conocimiento matemático de estudiantes de pedagogía en educación básica para enseñar geometría	Estudios Pedagógicos (Valdivia), 49(1), 255–280.	Publicado	0718-0705	https://doi.org/10.4067/S071807052023000100255
M. A. Alvarez, S. V. Vera	2024	On 4-dimensional Hom-Lie algebras	Springer Proceedings in Mathematics & Statistics	Publicado	2194-1017	https://doi.org/10.1007/978-3-031-52965-8_6
M. A. Alvarez, M. C. Rodríguez-Vallarte, G. Salgado,	2024	Characterization of contact Lie superalgebras	Journal of Geometry and Physics	Publicado	0393-0440	https://doi.org/10.1016/j.geomphys.2023.105058
L. Medina, J. Rodríguez, M. Trigo	2024	New Spectral Results for Laplacian Harary	Mathematics	Publicado	2227-7390	https://doi.org/10.3390/math12010002

		Matrix and the Harary Laplacian-Energy-like Applying a Matrix Order Reduction				
Hubert Pickmann-Soto, Susana Arela-Pérez, Charlie Lozano, Hans Nina; Hubert Pickmann-Soto	2024	Realization of extemal Spectral Data by Pentadiagonal Matrices	Mathematics	publicado	2227-7390	https://doi.org/10.3390/math12142198
G. Pastén, O. Rojo	2024	The generalized adjacency-distance matrix of connected graphs	Linear and Multilinear Algebra	Publicado	0308-1087	https://doi.org/10.1080/03081087.2022.2069222
A. Coronel, F. Huancas, I. Hess, A. Tello:	2024	The diffusion identification in a SIS reaction-diffusion system	Mathematical Biosciences and Engineering	Publicado	1547-1063	https://doi.org/10.3934/mbe.2024024
N. Murúa, A. Coronel, A. Tello, S. Berres and F. Huancas:	2024	GPU Accelerating Algorithms for Three-Layered Heat Conduction Simulations	Mathematics	Publicado	EISSN	https://doi.org/10.3390/math12223503
Jorge Olivares1, Pablo Martín, Maria T. Veliz	2024	A General Analytic Approximation Technique for the Modified Bessel Functions with Fractional Order $I_\nu(x)$, Applied to $I_{1/6}(x)$ and $I_{1/7}(x)$	Advances in Pure Mathematics	publicado	ISSN/2160-0368	https://www.scirp.org/

Eugenio Chandia, Patricia Fuentes, Natalia Ruiz, Daniza Rojas, Mirian Baeza, Cristián Reyes	2025	Knowledge profiles on numbers for teaching by primary education pedagogy students	International Electronic Journal of Mathematics Education,	Publicado	1306-3030	https://doi.org/10.29333/iejme/16080
Jorge Olivares, Byron Droguett, Pablo Martin	2025	Learning of a certain homogeneous reducible differential equation by means of ChatGpt in engineering students during the second semester of 2024 in Antofagasta-Chile	Advances in Differential Equations and Control Processes	publicado	ISSN 3048-734X	https://ojs.acad-pub.com/
Eber Lenés, Luis Medina, María Robbiano and Jonnathan Rodríguez	2025	On the Spectral Radius of the Maximum Degree Matrix of Graphs	Mathematics	Publicado	EISSN	https://doi.org/10.3390/math13111769