

UNIVERSITATEA POLITEHNICA TIMIȘOARA
DEPARTAMENTUL DE MATEMATICĂ

FIȘA DE VERIFICARE

a îndeplinirii standardelor minimale necesare și obligatorii pentru funcția de *profesor universitar/abilitare*, din Anexa nr. 1 – Comisia Matematică, a ordinului O.M. 6129/20.12.2016, publicat în Monitorul Oficial al României nr. 123/15.02.2017

Candidat: Jivulescu Maria Anastasia
Data nașterii: 10.12.1977
Funcția actuală: Conferențiar universitar doctor
Instituția: Universitatea Politehnica Timișoara

(B) ARTICOLE: Punctaje întrunite: $S=7.53$, $S_{recent}=3.27$

LISTA ARTICOLELOR publicate în REVISTE cu factor $S \geq 0.5$

Nr. crt.	Articol, referința bibliografică	Publicat în ultimii 7 ani	S_i	n_i	S_i/n_i
1	T. Heinosaari, M.A. Jivulescu, I. Nechita <i>Random positive operator valued measures</i> , Journal of Mathematical Physics 61, 042202, 2020	x	0.988 (in 2018)	3	0.33
2	M.A. Jivulescu, I. Nechita, P. Gavruta <i>On symmetric decompositions of positive operators</i> , J. Phys. A: Math. Theor. 50, 16, 165303, 2017	x	2.101 (in 2017)	3	0.7

3	S. N. Filippov, K. Yu. Magadov, M.A. Jivulescu <i>Absolutely separating quantum maps and channels</i> , New J. Phys. 19.083010, 2017	x	4.287 (in 2017)	3	1.43
4	M.A. Jivulescu, N. Lupa, I. Nechita, D. Reeb <i>Positive reduction from spectra</i> , Lin. Alg. Appl. 469, 276-304, 2015	x	1.04 (in 2021)	4	0.26
5	M.A. Jivulescu, N. Lupa, I. Nechita <i>Thresholds for reduction-related entanglement criteria in quantum information theory</i> , Quantum Information and Computation, Vol. 15, No. 13/14, 1165-1184, 2015	x	1.644 (in 2017)	3	0.55
6	M.A. Jivulescu, N. Lupa, I. Nechita <i>On the reduction criterion for random quantum states</i> , Journal of Mathematical Physics, Volume: 55, Issue: 11, Article Number: 112203, 2014		0.988 (in 2018)	3	0.33
7	M.A. Jivulescu, A. Messina <i>Exact treatment of operator difference equations with nonconstant and noncommutative coefficients</i> , Journal of Engineering Mathematics, Vol. 82, Issue: 1, Pages: 149-160, Special Issue: SI, DOI: 10.1007/s10665-012-9602-9, 2013		1.081 (in 2017)	2	0.54
8	M. Guccione, M. A. Jivulescu, A. Messina <i>Unitary decoupling treatment of a quadratic bimodal CQED model</i> , Physica Scripta, Volume T153, 014032, 2013		1.053	3	0.35
9	T. Heinosaari, M.A. Jivulescu, D. Reeb, M.M. Wolf <i>Extending quantum operations</i> , Journal of Mathematical Physics		0.988	4	0.25

	Volume: 53 , Issue: 10, Article Number: 102208, DOI: 10.1063/1.4755845, 2012				
10	T. Heinosaari, M.A. Jivulescu , D. Reitzner, M. Ziman, <i>Approximating incompatible von Neumann measurements simultaneously</i> Phys. Rev. A 82, 032328 , 2010		1.88	4	0.47
11	M.A. Jivulescu , R Migliore, A Messina <i>Electromagnetic control of dynamical localization conditions in 1D lattices with long-range intersite interactions</i> International Journal of Quantum Information, Volume 7, 1, 149-154, 2009		0.575 (in 2019)	3	0.19
12	M. A. Jivulescu , E Ferraro, A Napoli, A Messina <i>Exact dynamics of XX central spin models</i> , Physica Scripta, Volume T135, 014049, 2009		1.053	4	0.26
13	E. Ferraro, H.-P. Breuer, A. Napoli, M. A. Jivulescu , and A. Messina, <i>Non-Markovian dynamics of a single electron spin coupled to a nuclear spin bath</i> Phys. Rev. B 78, 064309, 2008		2.17	5	0.43
14	M. A. Jivulescu , A. Messina, A. Napoli, F. Petruccione <i>Exact treatment of linear difference equations with noncommutative coefficients</i> , Mathematical Methods in the Applied Sciences, Volume: 30 , Issue: 16. Pages: 2147-2153, DOI: 10.1002/mma.933, 2007		0.823 (in 2020)	4	0.2

15	R. Messina, M. A. Jivulescu, A. Messina, A. Napoli <i>Riccati equation-based generalization of Dawson's integral function</i> Mathematical Methods in the Applied Sciences Volume: 30, Issue: 16, Pages: 2055-2064, DOI: 10.1002/mma.916, 2007		0.823 (in 2020)	4	0.2
16	M.A. Jivulescu, E. Papp <i>On the dynamic localization conditions for dc-ac electric fields proceeding beyond the nearest-neighbour description</i> , Journal of Physics-Condensed Matter Vol 18, Issue: 29, Pages: 6853-6857, DOI: 10.1088/0953-8984/18/29/022, 2006		2.066 (in 2018)	2	1.03
Total:			S =		7.53
			S _{recent} = 3.27		

Nota: In coloana "Publicat în ultimii 7 ani" se bifeaza cu X articolele din (2015-2021)

Condiții minimale abilitare :

$$S \geq 5$$

$$S_{\text{recent}} \geq 2.5$$

(ii) CITĂRI (selecție) în reviste ISI cu SRI ≥ 0.5 : Punctaj întrunit: C=60

Nr. crt.	Articolul citat	Revista și articolul în care a fost citat	S
1	T. Heinosaari, M.A. Jivulescu, D. Reeb, M.M. Wolf, Extending quantum operations, JOURNAL OF MATHEMATICAL PHYSICS Volume: 53, Issue: 10 Article Number: 102208 DOI: 10.1063/1.4755845	1. International Mathematics Research Notices, Dilations, Inclusions of Matrix Convex Sets, and Completely Positive Maps. Kenneth R. Davidson, Adam Dor-On, Orr Moshe Shalit, Volume 2017, Issue 13, July 2017, Pages 4069-4130, https://doi.org/10.1093/imrn/mw140	2.49
		2. PHYSICAL REVIEW A Compatible quantum correlations: Extension problems for Werner and isotropic states Johnson, Peter D.; Viola, Lorenza Volume: 88 Issue: 3 Article Number: 032323 SEP 27 2013	1.88

		<p>3. Journal Mathematical Phys. Physical transformations between quantum states, Zejun Huang, Chi-Kwong Li, Edward Poon, Nung-Sing Sze, 53, 102209, 2012</p>	0.99
	OCT 2012	<p>4. LINEAR AND MULTILINEAR ALGEBRA</p> <p>An interpolation problem for completely positive maps on matrix algebras: solvability and parametrization</p> <p>Călin-Grigore Ambrozie, Aurelian Gheondea,</p> <p>Volume 63, Issue 4, 2015</p>	2.06
2	<p>M. A. Jivulescu, E. Ferraro, A. Napoli, A. Messina, Dynamical Behaviour of an XX Central Spin Model Through Bethe Ansatz Techniques, REPORTS ON MATHEMATICAL PHYSICS</p> <p>Volume: 64 , Issue: 1-2, Pag: 315-327</p> <p>AUG-OCT 2009</p>	<p>1. PROGRESS OF THEORETICAL AND EXPERIMENTAL PHYSICS Dynamics of an adiabatically effective two-level atom interacting with a star-like system Abdalla, M. Sebawe; Ahmed, M. M. A.; Khalil, E. M.; et al. Issue: 7; Article Number: 073A02, JUL 2014</p>	2.64
		<p>2. PHYSICAL REVIEW A Interaction-free evolving states of a bipartite system, Napoli, A.; Guccione, M.; Messina, A.; et al. Volume: 89 Issue: 6 Article Number: 062104 JUN 5, 2014</p>	1.88
		<p>3. JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL Variance squeezing and entanglement of the XX central spin model By: El-Orany, Faisal A. A.; Abdalla, M. Sebawe Volume: 44 Issue: 3 Article Number: 035302 JAN 21, 2011</p>	2.1

3	<p>M.A. Jivulescu, E. Ferraro, A. Napoli, A. Messina, Exact dynamics of XX central spin models, PHYSICA SCRIPTA Volume: T135 Article Number: 014049 DOI: 10.1088/0031-8949/2009/T135/014049</p> <p>JUL 2009</p>	<p>1. PROGRESS OF THEORETICAL AND EXPERIMENTAL PHYSICS</p> <p>Dynamics of an adiabatically effective two-level atom interacting with a star-like system, Abdalla, MS (Abdalla, M. Sebawe); Ahmed, MMA (Ahmed, M. M. A.); Khalil, EM (Khalil, E. M.); Obada, ASF (Obada, A. -S. F.) Issue: 7, Article Number: 073A02, DOI: 10.1093/ptep/ptu091, JUL 2014</p>	2.64
		<p>2. EUROPEAN PHYSICAL JOURNAL D</p> <p>Non-Markovian dynamics in a spin star system: the failure of thermalisation, Wang, ZH (Wang, Z. H.); Guo, Y (Guo, Y.); Zhou, DL (Zhou, D. L.) Volume: 67, Issue: 11 Article Number: 218 DOI: 10.1140/epjd/e2013-40099-0 NOV 1, 2013</p>	0.89
		<p>3. JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL</p> <p>Variance squeezing and entanglement of the XX central spin model El-Orany, FAA (El-Orany, Faisal A. A.); Abdalla, MS (Abdalla, M. Sebawe) Volume: 44 Issue: 3 Article Number: 035302 DOI: 10.1088/1751-8113/44/3/035302 JAN 21, 2011</p>	2.101
4	<p>Elementary symmetric functions of two solvents of a quadratic matrix equation, M.A. Jivulescu, A Napoli, A Messina – REPORTS on MATHEMATICAL PHYSICS, 2008</p>	<p>1. Aequationes mathematicae</p> <p>On the functional equation $x + f(y + f(x)) = y + f(x + f(y))$, II, Jürg Rätz, September 2014</p>	0.67
5	<p>Non-Markovian dynamics of a single electron spin coupled to a nuclear spin bath E. Ferraro, H.-P. Breuer, A. Napoli, M. A. Jivulescu, and A. Messina, PHYS. REV. B 78, 064309 – August 2008</p>	<p>1. Physical Review E Structure of completely positive quantum master equations with memory kernel HP Breuer, B Vacchini, 2009</p>	1.15
		<p>2. Physical Review A Exact master equations for the non-Markovian decay of a qubit B Vacchini, HP Breuer, 2010</p>	1.88

		<p>3. Physical Review A Initial correlations in open-systems dynamics: the Jaynes-Cummings model A Smirne, HP Breuer, J Piilo, B Vacchini, 2010</p>	1.88
		<p>4. Journal of Physics B: Atomic, Molecular and Optical Physics Foundations and measures of quantum non-Markovianity HP Breuer, 2012</p>	1.28
		<p>5. Physical Review A Non-Markovian dissipative dynamics of two coupled qubits in independent reservoirs: Comparison between exact solutions and master-equation approaches E Ferraro, M Scala, R Migliore, A Napoli, 2009</p>	1.88
		<p>6. Physical review letters Nonperturbative master equation solution of central spin dephasing dynamics E Barrès, Ł Cywiński, SD Sarma, 2012</p>	6.2
		<p>7. Physical Review A Entanglement evolution of two qubits under noisy environments JG Li, J Zou, B Shao, 2010</p>	1.88
		<p>8. Physical Review A Nakajima-Zwanzig versus time-convolutionless master equation for the non-Markovian dynamics of a two-level system A Smirne, B Vacchini, 2010</p>	1.88
		<p>9. Physical Review A Fisher information in a quantum-critical environment Z Sun, J Ma, XM Lu, X Wang, 2010</p>	1.88
		<p>10. Physical Review E Non-Markovian quantum jump with generalized Lindblad master equation XL Huang, HF Sun, XX Yi, 2008</p>	1.15
		<p>11. Physical Review B Master equation approach to the central spin decoherence problem: Uniform coupling model and role of projection operators E Barrès, Ł Cywiński, SD Sarma, 2011</p>	2.17
		<p>12. Physics Letters A Factorization law for entanglement evolution of two qubits in non-</p>	0.93

		Markovian pure dephasing channels JG Li, J Zou, B Shao, 2011	
		13. Journal of Physics B: Atomic, Molecular and Optical Physics Local-in-time master equations with memory effects: applicability and interpretation EM Laine, K Luoma, J Piilo, 2012	1.28
		14. Physical Review A Effective Hamiltonian approach to open systems and its applications XL Huang, XX Yi, C Wu, XL Feng, SX Yu, CH Oh, 2008	1.88
		15. Journal of Physics B: Atomic, Molecular and Optical Physics Non-Markovian dynamics of two qubits driven by classical fields: population trapping and entanglement preservation X Xiao, MF Fang, YL Li, 2010	1.28
		16. Physical Review B Dynamics and decoherence in the central spin model in the low-field limit D Stanek, C Raas, GS Uhrig, 2013	2.17
		17. Journal of Physics: Condensed Matter Parametric resonance-induced time-convolutionless master equation breakdown in finite size exciton-phonon systems V Poethier, 2010	2.07
		18. Physical Review B Excitonic coherence in a confined lattice: A simple model to highlight the relevance of perturbation theory V Poethier, 2011	2.17
		19. Physical Review A Initial correlation in a system of a spin coupled to a spin bath through an intermediate spin V Semin, I Sinayskiy, F Petruccione, 2012	1.88
		20. Physical Review A Genuine tripartite entanglement in a spin-star network at thermal equilibrium B Militello, A Messina, 2011	1.88
		21. New Journal of Physics Dynamics of a driven spin coupled to an antiferromagnetic spin bath XZ Yuan, HS Goan, KD Zhu, 2011	4.28

		<p>22. Journal of Physics A: Mathematical and Theoretical Variance squeezing and entanglement of the XX central spin model FAA El-Orany, MS Abdalla, 2011</p>	1.61
		<p>23. Chinese Physics B Non-Markovian dynamics of a qubit in a reservoir: different solutions of non-Markovian master equation D Bang-Fu, W Xiao-Yun, T Yan-Fang, 2011</p>	0.5
		<p>24. The European Physical Journal D Non-Markovian entanglement dynamics of two spin-1/2 particles embedded in two separate spin star baths with tunable external magnetic fields X Xiac, MF Fang, YL Li, GD Kang, C Wu ,2010</p>	0.89
		<p>25. Physica Scripta Effective Hamiltonian approach to the non-Markovian dynamics in a spin bath E Ferraro, HP Breuer, A Napoli, A Messina, 2010</p>	1.05
		<p>26. Communications in Theoretical Physics Connections of Coherent Information, Quantum Discord, and Entanglement F Hui-Juan, L Jun-Gang, Z Jian et al., 2012</p>	0.64
		<p>27. Proceeding of the National Academy of Sciences of United States Parametric representation of open quantum systems and cross-over from quantum to classical environment Dario Calvania, Alessandro Cuccolia, Nikitas I. Gidopoulos, Paola Verrucchia, 2012</p>	7.3
		<p>28. Open Systems & Information Dynamics On Reduced Time Evolution for Initially Correlated Pure States P Aniello, A Kossakowski, G Marmo et al, 2010</p>	0.56
		<p>29. Physical Review B Conservation laws protect dynamic spin correlations from decay: Limited role of integrability in the central spin model GS Uhrig, J Hackmann, D Stanek, J Stolze, FB Anders, 2014</p>	2.17
		<p>30. Physics Letters A Entanglement backflow under the composite effect of two non-Markovian reservoirs G Li, J Zou, B Shao, 2012</p>	0.93

		<p>31. Physical Review A Rabi oscillations, decoherence, and disentanglement in a qubit–spin-bath system N Wu, A Nanduri, H Rabitz, 2014</p>	1.88
		<p>32. Physica Scripta Non-Markovian dynamics of a three-level Λ-atom coupled to a structured reservoir: comparison between the weak and strong coupling regimes X Xiao, MF Fang, YL Li, 2011</p>	1.05
		<p>33. Progress of Theoretical and Experimental Physics Dynamics of an adiabatically effective two-level atom interacting with a star-like system M. Sebawe Abdalla, M. M. A. Ahmed, E. M. Khalil, A.-S. F. Obada, 2014</p>	2.64
		<p>34. Open Systems & Information Dynamics Dynamics of Open Quantum Systems Using Parametric Representation with Coherent States, D Calvani, A Cuccoli, NI Gidopoulos, 2013</p>	0.56
		<p>35. Science China Physics Long time evolution of a spin interacting with a spin bath in arbitrary magnetic field YK Zhao, MS Zhao, ZB Chen, 2014</p>	1.8
		<p>36. Open system & Information Dynamics, Tripartite entanglement of a spin star model with Dzialoshinski–Moriya interaction X Sen Ma, GX Zhao, JY Zhang, AM Wang, 2013</p>	0.56
6	<p>On the dynamic localization conditions for dc–ac electric fields proceeding beyond the nearest-neighbour description M. A. Jivulescu and E Papp, 2006 <i>J. Phys.: Condens. Matter</i> 18 6853</p>	<p>1. Physical Review A Quasienergies and Floquet states of two weakly coupled Bose-Einstein condensates under periodic driving X Luo, Q Xie, B Wu, 2008</p>	1.88
		<p>2. Physical Review A Nonlinear Floquet solutions of two periodically driven Bose-Einstein condensates Q Xie, 2007</p>	1.88

		3. Journal of Physics B: Atomic, Molecular and Optical Physics , Exact coherent control to two weakly coupled Bose–Einstein condensates H Zhong, W Hai, S Rong, 2008	1.28
		4. Journal of Theoretical and Computational Chemistry , DFT study on gas-phase interaction between histidine and alkali metal ions (Li ⁺ , Na ⁺ , K ⁺); and influence of these ions on histidine acidity E Tavasoli, A Fattahi, 2009	0.52
		5. Journal of Physics: Condensed Matter Many-body dynamic localization of strongly correlated electrons in ac-driven hubbard lattices S Longhi, 2012	2.06
		6. Journal of Physics: Condensed Matter , Dynamic localization in Glauber–Fock lattices S Longhi, A Szameit, 2013	2.06
		7. Physica E: Low-dimensional Systems and Nanonstructure Deriving currents on the one-dimensional lattice in the regime of dynamic localization E Papp, C Micu, 2011	1
		8. Journal of Physics: Condensed Matter Low-frequency anomalies in dynamic localization S Longhi, 2014	2.2
7	Approximating incompatible von Neumann measurements simultaneously T Heinosaari, MA Jivulescu, D Reitzner, M Ziman Physical Review A, 2010	1. Physical Review A Discriminating between the von Neumann and Lüders reduction rule GC Hegerfeldt, RS Mayato, 2012	1.88
		2. Physical Review A Multiple phase estimation for arbitrary pure states under white noise Y Yao, L Ge, X Xiao, X Wang, CP Sun, 2014	1.88
8	Random positive operator valued measures, T. Heinosaari, M.A. Jivulescu, I. Nechita, Journal of	1. PRX Quantum Compressively Certifying Quantum Measurements	6.8

	Mathematical Physics 61, 042202, 2020	I. Granani, Y.S. Teo, V. Cimini, H. Jeong, G. Leuchs, M. Barbieri, and L.L. Sánchez-Soto PRX Quantum 1, 020307 – Published 30 October 2020	
		2. Nature Communications Jordan products of quantum channels and their compatibility, Mark Girard, Martin Plavala, Jamie Sikora Nature Communications volume 12, Article number: 2129 (2021)	8.8
9	Positive reduction from spectra, M.A. Jivulescu , N. Lupa, I. Nechita, D. Reeb Lin. Alg. Appl. 469, 276-304, 2015	1. Quant. Inf. Comput. , Is absolute separability determined by the partial transpose? Srinivasan Arunachalam, Nathaniel Johnston, Vincent Russo, Quant. Inf. Comput. 15(7 & 8):0694-0720, 2015	1.64
Total citari (selectie)		60	

Condiții minimale : $C \geq 12$

Data: 31.10 .2022

Candidat,
Maria Anastasia Jivulescu