

**Fișa de verificare a îndeplinirii standardelor minime
necesare și obligatorii pentru conferirea titlurilor didactice din
învățământul superior și a gradelor profesionale de cercetare-dezvoltare**
Drd. BĂLĂUCĂ Ștefan-Răzvan

Perspectiva b): 26.33 puncte > 0 puncte (standard minimal Asistent perioadă determinată conform Anexa 1b)

Titlu	Conferința/ Jurnal	Clasificare	Workshop/ Poster	Număr autori	Punctaj
Balauca, S., & Arusoai, A. (2022, June). <i>Efficient constructions for simulating multi controlled quantum gates</i> . In International Conference On Computational Science (pp. 179-194). Cham: Springer International Publishing. URL: https://link.springer.com/chapter/10.1007/978-3-031-08760-8_16	ICCS 2022 [CORE 2021]	A		2	8,00
Balauca, S., Mueller, M. N., Mao, Y., Baader, M., Fischer, M., & Vechev, M. <i>Gaussian Loss Smoothing Enables Certified Training with Tight Convex Relaxations</i> . Transactions on Machine Learning Research. 07/2025 URL: https://openreview.net/forum?id=iknvxcjuos	TMLR 2025 [Q2 Scopus]	Q2		6	1,00
Mao, Y., Balauca, S., & Vechev, M. (2025, October). <i>CTBench: A Library and Benchmark for Certified Training</i> . In International Conference on Machine Learning (pp. 42984-43010). PMLR. URL: https://proceedings.mlr.press/v267/mao25a.html	ICML 2025	A*		3	12,00
Balauca, A. A., Garai, S., Balauca, S., Shetty, R. U., Agrawal, N., Shah, D. S., ... & Van Gool, L. (2025). <i>Understanding Museum Exhibits using Vision-Language Reasoning</i> . In Proceedings of the IEEE/CVF International Conference on Computer Vision (pp. 2227-2238). URL: https://openaccess.thecvf.com/content/ICCV2025/html/Balauca_Understanding_Museum_Exhibits_using_Vision-Language_Reasoning_ICCV_2025_paper.html	ICCV 2025	A*		11	1,33
Dékány, C., Balauca, S., Dimitrov, D. I., Staab, R., & Vechev, M. (2025). <i>Mixat: Combining continuous and discrete adversarial training for llms</i> . Advances in Neural Information Processing Systems, 38, 86727-86760. URL: https://proceedings.neurips.cc/paper_files/paper/2025/hash/7d767bab4b3baa37cb14133eb089ba3d-Abstract-Conference.html	NeurIPS 2025	A*		5	4,00
Total Puncte					26,33

Perspectiva c): 107.78 puncte > 0 puncte (standard minimal Asistent perioadă determinată conform Anexa 1b)

Lucrare Citată	Număr autori	Lucrare care Citează	Conferinta/Jurnal	Clasificare	Punctaj
Balauca, S., & Arusoai, A. (2022, June). <i>Efficient constructions for simulating multi controlled quantum gates</i>. In International Conference On Computational Science (pp. 179-194). Cham: Springer International Publishing. URL: https://link.springer.com/chapter/10.1007/978-3-031-08760-8_16	2	Gluza, M., Son, J., Tiang, B. H., Zander, R., Seidel, R., Suzuki, Y., ... & Ng, N. H. (2026). Double-bracket quantum algorithms for quantum imaginary-time evolution. <i>Physical review letters</i> , 136(2), 020601.	Physical Review Letters	Q1	8,00
		Arsoski, V. V. (2024). Implementing multi-controlled X gates using the quantum Fourier transform. <i>Quantum Information Processing</i> , 23(9), 305.	Quantum Information Processing	Q1	8,00
		Seidel, R., Zander, R., Petric, M., Steinmann, N., Liu, D., Tcholtchev, N., & Hauswirth, M. (2024). Quantum backtracking in qrisp applied to sudoku problems. <i>ACM Transactions on Quantum Computing</i> .	ACM Transactions on Quantum Computing	Q1	8,00
		Khandelwal, A., Kurniawan, H., Aangiras, S., Salehi, Ö., & Glos, A. (2024). Classification and transformations of quantum circuit decompositions for permutation operations: A. Khandelwal et al. <i>Quantum Information Processing</i> , 23(9), 322.	Quantum Information Processing	Q1	8,00
		Zindorf, B., & Bose, S. (2025). Efficient implementation of multicontrolled quantum gates. <i>Physical Review Applied</i> , 24(4), 044030.	Physical Review Applied	Q2	4,00
		Arsoski, V. V. (2025). Multi-controlled single-qubit unitary gates based on the quantum Fourier transform and deep decomposition: VV Arsoski. <i>The Journal of Supercomputing</i> , 81(11), 1202.	Journal of Supercomputing	Q2	4,00
		Silva, J. D., Azevedo, T. M. D., Araujo, I. F., & da Silva, A. J. (2024). Linear decomposition of approximate multicontrolled single qubit gates. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 44(4), 1304-1312.	IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems	Q2	4,00

	Jeng, M., Nobel, A., Jha, V., Levy, D., Kneidel, D., Chaudhary, M., ... & El-Araby, E. (2024). Leveraging data locality in quantum convolutional classifiers. Entropy, 26(6), 461.	Entropy	Q2	4,00
	Jeng, M., Nobel, A., Jha, V., Levy, D., Kneidel, D., Chaudhary, M., ... & El-Araby, E. (2023). Generalized quantum convolution for multidimensional data. Entropy, 25(11), 1503.	Entropy	Q2	4,00
	Vale, R., Azevedo, T. M. D., Araújo, I. C., Araujo, I. F., & Da Silva, A. J. (2023). Circuit decomposition of multicontrolled special unitary single-qubit gates. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 43(3), 802-811.	IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems	Q2	4,00
	Cantone, D., Faro, S., Pavone, A., & Viola, C. (2025). Quantum Algorithms for Longest Common and Palindromic Substrings in the Circuit Model. Theoretical Computer Science, 115716.	Theoretical Computer Science	Q3	2,00
	Cantone, D., Faro, S., & Pavone, A. (2023, July). Quantum string matching unfolded and extended. In International Conference on Reversible Computation (pp. 117-133). Cham: Springer Nature Switzerland.	ICRC 2023	C	2,00
	Kole, A., Datta, K., Niemann, P., Sengupta, I., & Drechsler, R. (2023, July). Exploiting the Benefits of Clean Ancilla Based Toffoli Gate Decomposition Across Architectures. In International Conference on Reversible Computation (pp. 232-244). Cham: Springer Nature Switzerland.	ICRC 2023	C	2,00
	Bennakhi, A., Byrd, G. T., & Franzon, P. (2024, September). Analyzing quantum circuit depth reduction with ancilla qubits in mcx gates. In 2024 IEEE International Conference on Quantum Computing and Engineering (QCE) (Vol. 2, pp. 510-511). IEEE.	QCE 2024	D	1,00

		Zander, R., Seidel, R., Inajetovic, M., Steinmann, N., & Petrič, M. (2024, September). Solving the product breakdown structure problem with constrained qaoa. In 2024 IEEE International Conference on Quantum Computing and Engineering (QCE) (Vol. 2, pp. 462-463). IEEE.	QCE 2024	D	1,00
		Zander, R., Seidel, R., Xiaoyue, L., & Gluza, M. (2025, October). Role of Riemannian geometry in double-bracket quantum imaginary-time evolution. In International Conference on Geometric Science of Information (pp. 105-114). Cham: Springer Nature Switzerland.	ICGSI 2025	D	1,00
		Cantone, D., Caudullo, C., Faro, S., Marino, F. P., Pavone, A., & Viola, C. (2024, November). Practical quantum combinatorial string matching. In Proceedings of the Future Technologies Conference (pp. 653-669). Cham: Springer Nature Switzerland.	FTC 2024	D	1,00
		Cantone, D., Faro, S., Pavone, A., & Viola, C. (2024, June). Quantum circuits for fixed matching substring problems. In Science and Information Conference (pp. 667-686). Cham: Springer Nature Switzerland.	SIC 2024	D	1,00
		Pavone, A., & Viola, C. (2024, August). A Quantum Circuit for the Cyclic String Matching Problem. In Prague Stringology Conference (pp. 50-70).	PSC 2024	D	1,00
		Qasymeh, M., Eisa, A. M., Zidan, M., Shoman, M. A. I., & Eleuch, H. (2025, May). Quantum Algorithm for Handling Large-Scale Image Data in Quantum Random Access Memory. In 2025 Photonics & Electromagnetics Research Symposium-Spring (PIERS-Spring) (pp. 1-10). IEEE.	PIERS 2025	D	1,00
		Marino, F. P., Faro, S., & Scardace, A. (2024, June). Practical implementation of a quantum string matching algorithm. In Proceedings of the 2024 Workshop on Quantum Search and Information	Workshop QSIR 2024	D	1,00

		Retrieval (pp. 17-24).			
		Dutta, S. (2025). Analysis of a few Quantum Algorithms and Circuits related to Boolean Functions (Doctoral dissertation, INDIAN STATISTICAL INSTITUTE, KOLKATA).	Doctoral Dissertation	D	1,00
		Bennakhi, A. (2025). The Bounds of Quantum Computing in the Context of the B-SAT Problem and Optimizing FPGA-based State Vector Simulation. North Carolina State University.	Doctoral Dissertation	D	1,00
		Jandura, S. (2024). Optimized quantum gates for neutral atom quantum computers (Doctoral dissertation, Université de Strasbourg).	Doctoral Dissertation	D	1,00
		Srivastava, V. (2024). Génération d'intrication et portes quantiques avec des émetteurs quantiques dans une cavité (Doctoral dissertation, Université de Strasbourg).	Doctoral Dissertation	D	1,00
		Guido, P. P. (2024). Entanglement Generation and Quantum Gates with Quantum Emitters in a Cavity (Doctoral dissertation, Université de Strasbourg).	Doctoral Dissertation	D	1,00
		HONTOIR, J. B., & SERVAIS, A. Discrete Optimization in Quantum Computing.	Doctoral Dissertation	D	1,00
Balauca, S. , Mueller, M. N., Mao, Y., Baader, M., Fischer, M., & Vechev, M. <i>Gaussian Loss Smoothing Enables Certified Training with Tight Convex Relaxations</i> . Transactions on Machine Learning Research. 07/2025 URL: https://openreview.net/forum?id=lknvxcjuos	6	Smati, I., Khalsi, R., Ghorbel, F., & Mziou-Sallami, M. (2026). AI3D: Multimodal Verification System against Projective Attacks for Deep Learning Classifiers. Pattern Recognition, 113036.	Pattern Recognition	Q1	2,00
Mao, Y., Balauca, S. , & Vechev, M. (2025, October). <i>CTBench: A Library and Benchmark for Certified Training</i> . In International Conference on Machine Learning (pp. 42984-43010). PMLR. URL: https://proceedings.mlr.press/v267/mao25a.html	3	Sun, C., Mao, Y., Mueller, M. N., & Vechev, M. (2025, October). Average Certified Radius is a Poor Metric for Randomized Smoothing. In International Conference on Machine Learning (pp. 57651-57666). PMLR.	ICML 2025	A*	12,00

		Lorenz, T., Kwiatkowska, M., & Fritz, M. (2026). MIBP-Cert: Certified Training against Data Perturbations with Mixed-Integer Bilinear Programs. <i>Advances in Neural Information Processing Systems</i> , 38, 98193-98216.	NeurIPS 2025	A*	12,00
		Singh, G., Laurel, J., Misailovic, S., Banerjee, D., Singh, A., Xu, C., ... & Zhang, H. (2025). Safety and trust in artificial intelligence with abstract interpretation. <i>Foundations and Trends in Programming Languages</i> , 8(3-4), 250-408.	Foundations and Trends in Programming Languages	Q4	1,00
		Kaulen, K., & Hoos, H. H. (2025, July). CTRAIN-A Training Library for Certifiably Robust Neural Networks. In <i>International Symposium on AI Verification</i> (pp. 238-249). Cham: Springer Nature Switzerland.	SAIV 2025	D	1,00
		Durand, S. (2025). Over-Approximating Neural Networks for Verification, Robustness, and Explainability (Doctoral dissertation, Université Paris-Saclay).	Doctoral Dissertation	D	1,00
Balauca, A. A., Garai, S., Balauca, S. , Shetty, R. U., Agrawal, N., Shah, D. S., ... & Van Gool, L. (2025). <i>Understanding Museum Exhibits using Vision-Language Reasoning</i> . In <i>Proceedings of the IEEE/CVF International Conference on Computer Vision</i> (pp. 2227-2238). URL: https://openaccess.thecvf.com/content/ICCV2025/html/Balauca_Understanding_Museum_Exhibits_using_Vision-Language_Reasoning_ICCV_2025_paper.html	11	Zhao, Y., Yu, H., Chen, L., & Zhao, Q. (2026, February). A Semantic–Visual Reasoning Framework for Guangdong Temple Fairs. In <i>2025 5th International Conference on Culture, Design and Social Development (CDSD 2025)</i> (pp. 657-663). Atlantis Press.	CDSD 2025	D	0,11
Dékány, C., Balauca, S. , Dimitrov, D. I., Staab, R., & Vechev, M. (2025). <i>Mixat: Combining continuous and discrete adversarial training for llms</i> . <i>Advances in Neural Information Processing Systems</i> , 38, 86727-86760. URL: https://proceedings.neurips.cc/paper_files/paper/2025/hash/7d767bab4b3baa37cb14133eb089ba3d-Abstract-Conference.html	5	Das, N., Raff, E., Chadha, A., & Gaur, M. (2025). Human-readable adversarial prompts: An investigation into LLM vulnerabilities using situational context. <i>ACM Transactions on Intelligent Systems and Technology</i> .	ACM Transactions on Intelligent Systems and Technology	Q1	2,67

		Hu, C. M., Dornbusch, J., Lüdke, D., Günnemann, S., & Schwinn, L. Closing the Distribution Gap in Adversarial Training for LLMs. In ICLR 2026 Workshop on Principled Design for Trustworthy AI-Interpretability, Robustness, and Safety across Modalities.	Workshop Trustworthy AI ICLR 2026	D	0,33
Total Punkte					107,78