

Lucas Chibebe Céleri *July 05th, 1976*

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• QPequi Group, Institute of Physics, Federal University of Goiás, Goiânia, Goiás, 74.690-900, Brazil

Summary

I obtained my undergraduate degree in Physics from the Universidade Estadual Paulista (UNESP), graduating with the award for best academic performance in my class, and completed my Master's degree at the Universidade de São Paulo (USP), where I worked on non-symmetric extensions of general relativity and quantum field theory in curved spacetime. I earned my PhD in Physics from the Universidade Federal de São Carlos (UFSCar) in 2008, developing research on open quantum systems and the dynamical Casimir effect, with emphasis on quantum vacuum phenomena in time-dependent settings. After a postdoctoral period at the Universidade Federal do ABC (UFABC), focused on quantum information theory and its connections to

the foundations of quantum mechanics, relativity, and thermodynamics, I joined the Universidade Federal de Goiás (UFG) in 2012, where I hold a permanent faculty position and lead the Quantum Pequi Group. My research is centered on the structural interplay between quantum information, relativistic thermodynamics, and quantum field theory in curved spacetime, aiming at a coherent and geometric understanding of thermodynamic and informational principles in relativistic quantum systems. Moreover, I have interest in other fields, such as dynamics of complex systems, quantum computation and quantum communication. I am a member of the Foundational Questions Institute (FQXi) and serve on the Quantum Information Sciences and Technologies committee of the Sociedade Brasileira de Física.

Employment

Federal University of Goiás

Professor

My attributions in the University include teaching physics at both under-graduation and graduation levels, performing research in physics and also supervising students. I am the head of the Quantum Pequi research group (QPequi)

GOIÂNIA, BRAZIL

Since Nov 2012

Federal University of ABC

Postdoctoral fellow

As part of the Quantum Information Group (QIG) at the University, my attribution was mainly to pursue research, both theoretical and experimental

SANTO ANDRÉ, BRAZIL

Aug 2008 – Oct 2012

Administrative positions

Federal University of Goiás

Coordinator of the Physics Graduate Program

GOIÂNIA, BRAZIL

March 2021 - March 2025

Some Institutions I visited

International Institute of Physics

NATAL, BRAZIL
June — August, 2025

Basque Center for Applied Mathematics

BILBAO, SPAIN
September — December, 2024

Zhejiang Normal University	JINHUA, CHINA October, 2023
University of Basque Country	BILBAO, SPAIN June, 2023
Universidad de Concepción	CONCEPCIÓN, CHILE May, 2023
University of Basque Country	BILBAO, SPAIN November, 2021 — January, 2022
University of Basque Country	BILBAO, SPAIN July, 2019 — September, 2020
Oak Ridge National Laboratory	OAK RIDGE, USA October — October, 2019
International Institute of Physics	NATAL, BRAZIL January — March, 2019
University of Basque Country	BILBAO, SPAIN September — December, 2018
Federal University of Santa Catarina	FLORIANÓPOLIS, BRAZIL August — September, 2018
Universidad de Concepción	CONCEPCIÓN, CHILE July, 2018
University of Warsaw	WARSAW, POLAND March, 2017
Brazilian Center for Research in Physics	RIO DE JANEIRO, BRAZIL June — July, 2016
Monash University	MELBOURNE, AUSTRALIA August — September, 2015
National University of Singapore	SINGAPORE August — September, 2013

Education

Federal Univeristy of São Carlos	SÃO CARLOS, BRAZIL
PhD degree in Theoretical Physics	2003 – 2008
Focused on quantum optics (open quantum systems) and the dynamical Casimir effect. Supervisor: Prof. Dr. Miled Hassan Youssef Moussa.	
São Carlos Institute of Physics, São Paulo University	SÃO CARLOS, BRAZIL
MSc degree in Theoretical Physics	2001 – 2003
Focused on non-symmetric gravity and quantum field theory in curved space-times. Supervisor: Prof. Dr. Silvertre Ragusa.	
São Paulo State University	RIO CLARO, BRAZIL
Bachelor degree in physics.	1997 – 2000

Awards and Fellowships

2025: Certificate of Legislative Merit (Certificado do Mérito Legistalivo) in recognition of dedication and excellence in research.

2014: Since 2014 I hold the CNPq research fellow, which is awarded by CNPq (a major funding agency in the country) to the researchers that stand out among their peers.

2000: Best academic performance in the graduating class.

Skills

Theoretical skills: Strong experience in quantum optics, quantum theory of open systems and quantum information. General theory of relativity and quantum field theory in curved space-times are also among my skills.

Experimental skills: Some knowledge in Nuclear Magnetic Resonance and Quantum Optics techniques developed due to long-term collaboration with experimental groups.

Natural languages: Portuguese (*mother language*), English (*full professional proficiency*)

Professional Services

- Referee for many scientific journals such as Reviews of Modern Physics, Physical Review Letters, Physical Review X, Physical Review X Quantum, Quantum Journal, Nature Communications, Physical Review A, Physical Review E, npj Quantum Information, among others.
 - Referee for the brazilian funding agencies CNPq (National Council for Research and Development, Brazilian funding agency), FAPEG (Goiás state funding agency, Brazil), National Research and Development Agency - ANID (Chile) and Austrian Science Fund (Austria), among others.
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Teaching

More than 10 years of teaching experience, including the following courses:

- Undergrad courses — Quantum Mechanics, Electrodynamics, Experimental Physics, Thermodynamics, Quantum Information.
 - Graduate courses — Quantum Information, Quantum Thermodynamics, Relativistic Quantum Mechanics, General Relativity, Classical Electrodynamics.
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Supervision

Currently:

- 1 Postdoctoral
- 4 PhD
- 1 MsC
- 7 Undergrad
- 1 High-School

Concluded:

- 5 PhD
 - 11 MSc (10 in Brazil and 1 in Spain)
 - 21 Undergrad (20 in Brazil and 1 in Spain)
 - 2 Post-Doc Researchers
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Research Support

- Member of the National Institute for Science and Technology for Applied Quantum Computing (INCT - CQA, CNPq grant number 408884/2024-0) since 2025. The Institute provides regular financial support for research.
 - FAPEG (grant number 2025261000024) — Total amount R\$ 700.000,00 (2025-2028)
 - CNPq (grant number 308065/2022-0) — Total amount R\$ 47.800,00 (2023-2026)
 - CNPq (grant number 304546/2019-4) — Total amount R\$ 47.800,00 (2020-2023)
 - FAPEG (grant number 201710267000503) — Total amount R\$ 120.000 (2018 - 2022)
 - CNPq (grant number 305740/2016-4) — Total amount R\$ 47.800,00 (2018-2020)
 - CNPq (grant number 445516/2014-3) — Total amount R\$ 47.800,00 (2014-2018)
 - CNPq (grant number 314710/2014-0) — Total amount R\$ 338.157,55 (2014-2018)
 - Member of the National Institute for Science and Technology of Quantum Information (INCT - IQ) from 2012 to 2025. The Institute provides regular financial support for research.
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Full Publication List

Published articles

1. G. Oliveira, T. H. Moreira and L. C. Céleri. Dynamical Casimir effect under the action of gravitational waves. *Entropy* **28**, 177 (2026).
2. R. L. S. Costa, M. L. W. Basso, J. Maziero and L. C. Céleri. Work distribution of quantum fields in static curved spacetimes. *Phys. Rev. D* **113**, 025010 (2026).
3. D. S. Starke, M. L. W. Basso, L. C. Céleri and Jonas Maziero. Entanglement swapping for partially entangled qudits and the role of quantum complementarity. *Adv Quantum Technol.* **2025**, e00674 (2025).
4. G. Oliveira, R. F. Costa, L. C. Céleri and R. Rougemont. Mutual information and holographic entanglement entropy for strongly-coupled R-charged plasmas. *Phys. Rev. D* **112**, 066010 (2025).
5. G. F. Ferrari, Ł. Rudnicki and L. C. Céleri. Quantum thermodynamics as a gauge theory. *Phys. Rev. A* **111**, 052209 (2025).
6. M. L. W. Basso, J. Maziero and L. C. Céleri. Quantum detailed fluctuation theorem in curved spacetimes: The observer dependent nature of entropy production. *Phys. Rev. Lett.* **134**, 050406 (2025).
7. T. H. Moreira and L. C. Céleri. Entropy production due to spacetime fluctuations. *Class. Quantum Grav.* **42**, 025022 (2025).
8. Z. Peng, L. C. Céleri, A. Basit and G. Xianlong. Effects of reservoir squeezing on the amplification of quantum correlation and the quantum speed limit. *Phys. Rev. A* **110**, 052433 (2024).
9. A. B. Nascimento and L. C. Céleri. Speedup of thermodynamic entropy production via quantum dynamical criticality. *Phys. Rev. A* **110**, 052223 (2024).
10. T. M. Mendonça, L. C. Céleri, M. Paternostro and D. O. Soares-Pinto. System-environment quantum information flow. *Phys. Rev. A* **110**, L040401 (2024).
11. Y. J. Alvim and L. C. Céleri. Landauer principle and the second law in a relativistic communication scenario. *Entropy* **26**, 613 (2024).
12. P. H. S. Bento, A. del Campo and L. C. Céleri. Krylov complexity and dynamical phase transition in the quenched LMG model. *Phys. Rev. B* **109**, 224304 (2024).
13. R. C. Souza Pimenta, G. H. dos Santos, A. B. Barreto, L. C. Céleri and P. H. Souto Ribeiro. Photonic entanglement with accelerated light. *Quantum* **8**, 1317 (2024).
14. L. C. Céleri and Ł. Rudnicki. Gauge invariant quantum thermodynamics: consequences for the first law. *Entropy* **26**, 111 (2024).
15. G. Oliveira and L. C. Céleri. Thermodynamic entropy production in the dynamical Casimir effect. *Phys. Rev. A* **109**, 012807 (2024).

16. T. H. Moreira and L. C. Céleri. Decoherence of a composite particle induced by a weak quantized gravitational field. *Class. Quantum Grav.* **41**, 015006 (2023).
17. D. Ma, C. Jia, E. Solano and L. C. Céleri. Analogue gravitational lensing in optical Bose-Einstein condensates. *Universe* **9**, 443 (2023).
18. M. L. W. Basso, J. Maziero and L. C. Céleri. The irreversibility of relativistic time-dilation. *Class. Quantum Grav.* **40**, 195001 (2023).
19. L. C. Céleri, D. Huerga, F. Albarrán-Arriagada, E. Solano and M. Sanz. Digital-analog quantum simulation of fermionic models. *Phys. Rev. Applied* **19**, 064086 (2023).
20. M. Capela, H. Verma, F. Costa and L. C. Céleri. Reassessing thermodynamic advantage from indefinite causal order. *Phys. Rev. A* **107**, 062208 (2023).
21. J. Maziero, M. L. W. Basso and L. C. Céleri. Local predictability and coherence versus distributed entanglement in entanglement swapping from partially entangled pure states. *Phys. Lett. A* **457**, 128576 (2023).
22. G. H. Aguilar, T. L. Silva, T. E. Guimarães, R. S. Piera, L. C. Céleri and G. T. Landi. Two-point measurement of entropy production from the outcomes of a single experiment with correlated photon pairs. *Phys. Rev. A* **106**, L020201 (2022).
23. M. Capela, L. C. Céleri, R. Chaves and K. Modi. Quantum Markov monogamy inequalities. *Phys. Rev. A* **106**, 022218 (2022).
24. T. Gonzalez-Raya, R. Asensio-Perea, A. Martin, L. C. Céleri, M. Sanz, P. Lougovski, E. F. Dumitrescu. Digital-analog quantum simulations using the cross-resonance effect. *Phys. Rev. X Quant.* **2**, 020328 (2021).
25. D. P. Pires, K. Modi and L. C. Céleri. Bounding generalized relative entropies: non-asymptotic quantum speed limits. *Phys. Rev. E* **103**, 032105 (2021).
26. A. G. de Oliveira, R. M. Gomes, V. C. C. Brasil, N. Rubiano da Silva, L. C. Céleri and P. H. Souto Ribeiro. Full thermalization of a photonic qubit. *Phys. Lett. A* **384**, 126933 (2020).
27. B. O. Goes, G. T. Landi, E. Solano, M. Sanz and L. C. Céleri. Wehrl entropy production rate across a dynamical quantum phase transition. *Phys. Rev. Res.* **2**, 033419 (2020).
28. T. Häffner, G. L. Zanin, R. M. Gomes, L. C. Céleri and P. H. Souto Ribeiro. Remote preparation of single photon vortex thermal states. *The European Physical Journal Plus* **135**, 601 (2020).
29. P. H. Souto Ribeiro, T. Häffner, G. L. Zanin, N. Rubiano da Silva, R. Medeiros de Araújo, W. C. S. Silva, R. J. de Assis, L. C. Céleri and A. Forbes. Experimental study of the generalized Jarzynski's fluctuation relation using entangled photons. *Phys. Rev. A* **101**, 052113 (2020).
30. M. Capela, L. C. Céleri, K. Modi and R. Chaves. Monogamy of temporal correlations: Witnessing non-Markovianity beyond data processing. *Phys. Rev. Research* **2**, 013350 (2020).
31. T. Gonzalez-Raya, J. M. Lukens, L. C. Céleri and M. Sanz. Quantum memristors in frequency-entangled optical fields. *Materials* **13**, 864 (2020).
32. G. L. Zanin, T. Häffner, M. A. A. Talarico, E. I. Duzzioni, P. H. Souto Ribeiro, G. T. Landi and L. C. Céleri. Experimental quantum thermodynamics with linear optics. *Braz. J. Phys.* **49**, 783 (2019).
33. G. H. Aguilar, M. A. de Souza, R. M. Gomes, J. Thompson, M. Gu, L. C. Céleri and S. P. Walborn. Experimental investigation of linear-optics-based quantum target detection. *Phys. Rev. A* **99**, 053813 (2019).
34. J. P. Santos, L. C. Céleri, G. T. Landi and M. Paternostro. The role of quantum coherence in non-equilibrium entropy production. *npj Quant. Inf.* **5**, 23 (2019).
35. M. Capela, M. Sanz, E. Solano and L. C. Céleri. Kolmogorov-Sinai entropy and dissipation in driven classical Hamiltonian systems. *Phys. Rev. E* **98**, 052109 (2018).
36. E. G. Arrais, D. A. Wisniacki, L. C. Céleri, N. G. de Almeida, A. J. Roncaglia and F. Toscano. Quantum work for sudden quenches in Gaussian random Hamiltonians. *Phys. Rev. E* **98**, 012106 (2018).
37. L. C. Céleri and V. I. Kiosses. Unruh effect as a result of quantization of spacetime. *Phys. Lett. B* **781C**, 611 (2018).
38. J. P. Santos, L. C. Céleri, F. Brito, G. T. Landi and M. Paternostro. Spin-phase-space-entropy production. *Phys. Rev. A* **97**, 052123 (2018).
39. R. Medeiros de Araújo, T. Häffner, R. Bernardi, D. S. Tasca, M. P. J. Lavery, M. J. Padgett, A. Kanaan, L. C. Céleri and P. H. Souto Ribeiro. Experimental study of quantum thermodynamics using optical vortices. *J. Phys. Commun.* **2**, 035012 (2018).

40. F. Campaioli, F. A. Pollock, F. C. Binder, L. C. Céleri, J. Goold, S. Vinjanampathy and K. Modi. Enhancing the charging power of quantum batteries. *Phys. Rev. Lett.* **118**, 150601 (2017).
41. L. C. Céleri, V. Kiosses and D. R. Terno. Spin, localization and uncertainty of relativistic fermions. *Phys. Rev. A* **94**, 062115 (2016).
42. M. A. A. Talarico, P. B. Monteiro, E. C. Mattei, E. I. Duzzioni, P. H. Souto Ribeiro, L. C. Céleri. Work distribution in a photonic system. *Phys. Rev. A* **94**, 042305 (2016).
43. D. P. Pires, M. Cianciaruso, L. C. Céleri, G. Adesso and D. O. Soares-Pinto. Generalized geometric quantum speed limits. *Phys. Rev. X* **6**, 021031 (2016).
44. J. P. P. Silva, R. S. Sarthour, A. M. Souza, I. S. Oliveira, J. Goold, K. Modi, D. O. Soares-Pinto and L. C. Céleri. Experimental demonstration of information to energy conversion in a quantum system at the Landauer limit. *Proc. R. Soc. A* **472**, 20150813 (2016).
45. G. H. Aguilar, S. P. Walborn, P. H. Souto Ribeiro and L. C. Céleri. Experimental determination of multipartite entanglement with incomplete information. *Phys. Rev. X* **5**, 031042 (2015).
46. T. M. Carrijo, A. T. Avelar and L. C. Céleri. Quantum uncertainty in critical systems with three spins interaction. *J. Phys. B: At. Mol. Opt. Phys.* **48**, 125501 (2015).
47. D. P. Pires, L. C. Céleri and D. O. Soares-Pinto. Geometric lower bound for quantum coherence measure. *Phys. Rev. A* **91**, 042330 (2015).
48. K. Micadei, D. A. Rowlands, F. A. Pollock, L. C. Céleri, R. M. Serra and K. Modi. Coherent measurements in quantum metrology. *New J. Phys.* **17**, 023057 (2015).
49. L. C. Céleri, R. M. Gomes, R. Ionicioiu, T. Jennewein, R. B. Mann and D. R. Terno. Quantum control in foundational experiments. *Found. Phys.* **44**, 576 (2014).
50. J. G. Filgueiras, R. S. Sarthour, A. M. Souza, I. S. Oliveira, R. M. Serra and L. C. Céleri. Quantum delayed-choice experiment in an environment with arbitrary white noise. *J. Phys. A: Math. Theor.* **46**, 245301 (2013).
51. J. Maziero, R. Auccaise, L. C. Céleri, D. O. Soares-Pinto, E. R. deAzevedo, T. J. Bonagamba, R. S. Sarthour, I. S. Oliveira and R. M. Serra. Quantum discord in nuclear magnetic resonance systems at room temperature. *Braz. J. Phys.* **43**, 86 (2013).
52. K. Micadei, R. M. Serra and L. C. Céleri. Thermodynamic cost of acquiring information. *Phys. Rev. E* **88**, 062123 (2013).
53. R. Auccaise, R. M. Serra, J. G. Filgueiras, R. S. Sarthour, I. S. Oliveira and L. C. Céleri. Experimental analysis of the quantum complementarity principle. *Phys. Rev. A* **85**, 032121 (2012).
54. J. Maziero, L. C. Céleri, R. M. Serra and M. S. Sarandy. Long-range quantum discord in critical spin systems. *Phys. Lett. A* **376**, 1540 (2012).
55. M. A. Silva Jr., R. M. Serra and L. C. Céleri. Observer invariance of the collapse postulate of quantum mechanics. *Int. J. Mod. Phys. B* **27**, 1345013 (2012).
56. D. O. Soares-Pinto, R. Auccaise, J. Maziero, A. Gavini-Viana, R. M. Serra and L. C. Céleri. On the quantumness of correlations in nuclear magnetic resonance. *Phil. Trans. R. Soc. A* **370**, 4821 (2012).
57. R. Auccaise, L. C. Céleri, D. O. Soares-Pinto, E. R. deAzevedo, J. Maziero, A. M. Souza, T. J. Bonagamba, R. S. Sarthour, I. S. Oliveira and R. M. Serra. Environment-induced sudden transition in quantum discord dynamics. *Phys. Rev. Lett.* **107**, 140403 (2011).
58. D. O. Soares-Pinto, M. H. Y. Moussa, J. Maziero, E. R. deAzevedo, T. J. Bonagamba, R. M. Serra and L. C. Céleri. Equivalence between Redfield and master equation approaches for a time-dependent quantum system and coherence control. *Phys. Rev. A* **83**, 062336 (2011).
59. R. Auccaise, J. Maziero, L. C. Céleri, D. O. Soares-Pinto, E. R. deAzevedo, T. J. Bonagamba, R. S. Sarthour, I. S. Oliveira and R. M. Serra. Experimentally witnessing the quantumness of correlations. *Phys. Rev. Lett.* **107**, 070501 (2011).
60. L. C. Céleri, J. Maziero and R. M. Serra. Theoretical and experimental aspects of quantum correlations beyond entanglement. *Int. J. Quant. Inf.* **9**, 1837 (2011).
61. D. O. Soares-Pinto, L. C. Céleri, R. Auccaise, F. F. Fanchini, E. R. deAzevedo, J. Maziero, T. J. Bonagamba and R. M. Serra. Nonclassical correlation in NMR quadrupolar systems. *Phys. Rev. A* **81**, 062118 (2010).
62. J. Maziero, H. C. Guzman, L. C. Céleri, M. S. Sarandy and R. M. Serra. Quantum and classical thermal correlations in the XY spin-1/2 chain. *Phys. Rev. A* **82**, 012106 (2010).
63. L. C. Céleri, A. G. S. Landulfo, R. M. Serra and G. E. A. Matsas. Sudden change in quantum and classical correlations and the Unruh effect. *Phys. Rev. A* **81**, 062130 (2010).

64. J. Maziero, T. Werlang, F. F. Fanchini, L. C. Céleri and R. M. Serra. System-reservoir dynamics of quantum and classical correlations. *Phys. Rev. A* **81**, 022116 (2010).
65. L. C. Céleri, F. Pascoal and M. H. Y. Moussa. Action of the gravitational field on the dynamical Casimir effect. *Class. Quant. Grav.* **26**, 105014 (2009).
66. J. Maziero, L. C. Céleri, R. M. Serra and V. Vedral. Classical and quantum correlations under decoherence. *Phys. Rev. A* **80**, 044102 (2009).
67. F. Pascoal, L. C. Céleri, S. S. Mizrahi, M. H. Y. Moussa, C. Farina. Dynamical Casimir effect for a massless scalar field between two concentric spherical shells with mixed boundary conditions. *Phys. Rev. A* **80**, 012503 (2009).
68. L. C. Céleri, F. Pascoal, M. A. de Ponte and M. H. Y. Moussa. Number of particle creation and decoherence in the nonideal dynamical Casimir effect at finite temperature. *Ann. Phys.* **324**, 2057 (2009).
69. F. Pascoal, L. C. Céleri, S. S. Mizrahi and M. H. Y. Moussa. Dynamical Casimir effect for a massless scalar field between two concentric spherical shells. *Phys. Rev. A* **78**, 032521 (2008).
70. L. C. Céleri, M. A. de Ponte, C. J. Villas-Boas and M. H. Y. Moussa. Switching off the reservoir through nonstationary quantum systems. *J. Phys. B: At. Mol. Opt. Phys.* **41**, 085504 (2008).
71. S. Ragusa and L. C. Céleri. Ghost free analysis of a nonsymmetric theory of gravitation. *Braz. J. Phys.* **33**, 821 (2003).
72. S. Ragusa and L. C. Céleri. Solar gravitational deflection of a graviton. *Gen. Relat. Gravit.* **35**, 1125 (2003).

Preprints

1. N. E. Comar, L. C. Céleri, M. Stamatova, V. Vedral, A. V. Iyer, R. Chaves. Using spatiotemporal Born rule for testing macroscopic realism: some applications to the pseudo-density matrices and nonclassical temporal correlations. <https://arxiv.org/abs/2603.21793> (2026).
2. T. H. Moreira and L. C. Céleri. Gravitational decoherence and recoherence of a composite particle: the interplay between gravitons and a classical Newtonian potential. <https://arxiv.org/abs/2602.22517> (2026).
3. T. Pernambuco and L. C. Céleri. Geometry of restricted information: the case of quantum thermodynamics. <https://arxiv.org/abs/2602.06716> (2026).
4. A. B. Nascimento and L. C. Céleri. Asymmetry and dynamical criticality. <https://arxiv.org/abs/2602.00900> (2025).
5. T. Pernambuco and L. C. Céleri. Geometric quantum thermodynamics: A fibre bundle approach. <https://arxiv.org/abs/2512.14383> (2025).
6. D. Ma, E. Solano, C. Jia and L. C. Céleri. Analogue Penrose process in rotating acoustic black hole. <https://arxiv.org/abs/2205.01454> (2022).
7. D. Borim, L. C. Céleri and V. I. Kiosses. Precision in estimating Unruh temperature. <https://arxiv.org/abs/2001.09085> (2020).
8. L. C. Céleri and V. I. Kiosses. Accelerated quantum fields: quantization of space-time due to acceleration. <https://arxiv.org/abs/1712.05206> (2017).
9. K. Modi, L. C. Céleri, J. Thompson and M. Gu. Fragile states are better for quantum metrology. <http://arxiv.org/abs/1608.01443> (2016).
10. J. Maziero, L. C. Céleri and R. M. Serra. Suitability of symmetric and asymmetric versions of the quantum discord. <http://arxiv.org/abs/1004.2082> (2010).
11. A. V. Dodonov, L. C. Céleri, F. Pascoal, M. D. Lukin and S. F. Yelin. Photon generation from vacuum in non-stationary circuit QED. <http://arxiv.org/abs/0806.4035> (2008).

Other productions

1. A. Dodonov and L. C. Céleri (Eds.), *Proceedings — QNS III International Workshop on Quantum Nonstationary Systems* (LF Editorial, São Paulo, 2025).
2. T. H. Moreira and L. C. Céleri. Graviton induced decoherence of a composite particle, in A. Dodonov and L. C. Céleri (Eds.), *Proceedings of the Third International Workshop on Quantum Nonstationary Systems*, pp. 53-70 (LF Editorial, São Paulo, 2025).
3. M. Basso, J. Maziero and L. C. Céleri. Relativistic approach to thermodynamic irreversibility, in A. Dodonov and L. C. Céleri (Eds.), *Proceedings of the Third International Workshop on Quantum Nonstationary Systems*, pp. 89-104 (LF Editorial, São Paulo, 2025).

4. G. de Oliveira and L.C. Céleri. Thermodynamics of the dynamical Casimir effect, in A. Dodonov and C. C. H. Ribeiro (Eds.), *Proceedings of the Second International Workshop on Quantum Nonstationary Systems*, pp. 299-326 (LF Editorial, São Paulo, 2024).
5. L. C. Céleri and J. Maziero. The sudden change phenomenon of quantum discord. Contribution to "Lectures on general quantum correlations and their applications", edited by F. F. Fanchini, D. O. Soares-Pinto and G. Adesso (Springer, 2017). <https://arxiv.org/abs/1610.02882> (2017).

Citations — 15/01/2026

1. *Google Scholar* - 4.323 (h index: 25).
 2. *Web of Science* - 2.942 (h index: 20).
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Scientific Events

I have presented invited talks in several universities both in Brazil and overseas. Beyond this, I organized and attended many scientific events. Bellow I present a list of some of them.

Organization

1. III International Workshop on Quantum Nonstationary Systems. Brasilia, Brazil (2024).
2. Workshop on Quantum Speed Limits and Thermodynamics. Bilbao, Spain (2020).
3. II Workshop on Quantum Information and Thermodynamics. Natal, Brazil (2019).
4. Workshop on Quantum Information and Thermodynamics. São Carlos, Brazil (2015).
5. NMR Quantum information processing. Rio de Janeiro, Brazil (2013).
6. Workshop on quantum correlations: Entanglement, discord and beyond. Natal, Brazil (2012).

Participation

1. III Workshop on Thermodynamics and Information. Lavras, Brazil (2023).
2. II International Workshop on Quantum Nonstationary Systems. Brasilia, Brazil (2023).
3. VIII Paraty Quantum Information School and Workshop. Paraty, Brazil (2023).
4. 13th KCIK-ICTQT Symposium on Quantum Information. Gdąnski, Poland (2022).
5. Workshop on Quantum Thermodynamics. Curitiba, Brazil (2019).
6. Modern Topics in Quantum Information. Natal, Brazil (2018).
7. Autumn Meeting of the Brazilian Physical Society. Foz do Iguaçu, Brazil (2018).
8. Nanyang Quantum 2017 - Workshop on Quantum Resources and Correlations Beyond Entanglement. Singapore (2017).
9. Fifth conference on quantum thermodynamics. Oxford, England (2017).
10. Third conference on quantum thermodynamics. Porquerolles, France (2015).
11. ENFMC. Foz do Iguaçu, Brazil (2015).
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