

CURRICULUM VITAE

PERSONAL DATA

Name	SMAIL BOUGOUFFA.
Nationality	Algerian
Position	Professor
E-Mail	sbougouffa@imamu.edu.sa
Phone	+966 507670489

EDUCATION

Year	Academic Degree	Institution
1978-1982	DES (bachelor's degree)	University of Constantine, Algeria.
1982-1986	Magister (MSc)	University of Constantine, Algeria.
1986-1990	Doctorate of Science (DSc) (PhD)	University of Constantine, Algeria.

WORK EXPERIENCE

Period	Position	Address
1990-1996	Assistant Professor	University of Omar El-Mukhtar., Libya University of Al-Tahady., Libya.
1996-2000	Associate Professor	University of Sana'a., Yemen.
2000-2005	Associate Professor	King Khalid University, Abha, KSA
2005-2008	Associate Professor	Taibah University, Madina., KSA
2008-2016	Professor	Taibah University, Madina., KSA
2016 to present	Professor	Imam Mohammad ibn Saud Islamic University., KSA

RESEARCH INTEREST

Quantum Optics, Entanglement, Optomechanical cavities, Orbital Angular Momentum, Mathematical Physics, Nonlinear sciences, Differential Equations**PUBLICATIONS**

1. Lazhar Bougoffa, Smail Bougouffa, and Ammar Khanfer, "An analysis of the one-phase Stefan problem with variable thermal coefficients of order p ", Submitted to Results in Physics, April 2023
2. Haya Al-Dosary and Smail Bougouffa "Atomic dipole transitions in the vicinity of vacuum-clad ultra-thin optical fibers", Submitted to Results in Physics, March 2023
3. Smail Bougouffa and M Babiker, "Absorption of hybrid fibre modes by Cs atoms in quadrupole transitions", Submitted to J. Physics B: Atomic, Molecular, and Optical Physics, Mar- 2023.
4. Ammar Khanfer, Lazhar Bougoffa, and Smail Bougouffa, "Analytic Approximate Solution of the Extended Blasius Equation with Temperature-Dependent Viscosity", Journal of Nonlinear Mathematical Physics 30 (1), (2023) 287-302.
5. L Bougoffa, A Khanfer, S Bougouffa, " New Explicit and Approximate Solutions of the Newton- Schrödinger System", J. Nonlinear Math Phys (2023).
<https://doi.org/10.1007/s44198-023-00106-8>
6. L Bougoffa, S Bougouffa, A Khanfer, " Generalized Thomas-Fermi equation: existence, uniqueness, and analytic approximation solutions", AIMS Mathematics 8 (5), (2023)10529-10546
7. Lazhar Bougoffa, Smail Bougouffa, and Ammar Khanfer, "On a generalization of a coupled integrable dispersion less system", Results in Physics 39, (2022)105761
8. Smail Bougouffa, Mohannad Al-Hmoud, and Jabir Wali Hakami "Probing Quantum correlations in the hybrid optomechanical system", International Journal of Theoretical Physics 61 (190) 2022.
9. Smail Bougouffa, Ammar Khanfer, and Lazhar Bougoffa "On The Approximation of The Modified Error Function", to be published in Mathematical Methods in the Applied Sciences, 2022. <https://doi.org/10.1002/mma.8480>
10. Smail Bougouffa, "Quadrupole absorption rate for atoms in circularly-polarized optical vortices", Results in Physics, Volume 27, August 2021, 104541.
11. Mohannad Al-Hmoud and Smail Bougouffa "Diamond slot-bridge nano-beam cavities with ultra-small mode volumes for applications in quantum information processing", Results in Physics, Volume 26, Jul 2021, 104314.
12. Smail Bougouffa and M Babiker, "Quadrupole absorption rate including transfer of orbital angular momentum with quadrupole-active transitions". PHYSICAL REVIEW A 102, 063706 (2020). Published 8 December 2020
13. Smail Bougouffa and Zbigniew Ficek, "Delayed transfer of entanglement to initially populated qubits", Phys. Rev. A 102, 043720 – Published 30 October 2020.
14. Lazhar Bougoffa and Smail Bougouffa, "Solutions of the two-wave interactions in quadratic nonlinear media", Mathematics 2020, 8(11), 1867; <https://doi.org/10.3390/math8111867> - 26 Oct 2020.
15. Smail Bougouffa and M Babiker "Atom trapping and dynamics in the interaction of optical vortices with quadrupole-active transitions ". PHYSICAL REVIEW A 101, 043403 (2020).
16. Smail Bougouffa, Mohannad Al-Hmoud, "Stationary Bipartite Entanglement in Hybrid Optomechanical cavities", arXiv:1904.12205 [quant-ph], International Journal of Theoretical Physics (2020) 59:1699–1716. <https://doi.org/10.1007/s10773-020-04437-w>
17. Lazhar Bougoffa and Smail Bougouffa "Solvability of the Caldeira-Leggett Model", Can. J. Phys. (2019), doi.org/10.1139/cjp-2018-0538

18. Saud Al-Awfi and Smail Bougouffa "Quadrupole Interaction of Non-diffracting Beams and Their Influence on Atoms". Results in Physics 12 (2019) 1357–13621
19. Saud Al-Awfi, Mohannad Al-Hmoud, and Smail Bougouffa, "Ground-state cooling in cavity optomechanics with unresolved sidebands" EPL (Europhysics Letters) 123, 14005(2018).
20. Adel Al Rehaily, Saleh Assahaly, Mohannad Al Hmoud, and Smail Bougouffa " Ground-state cooling in cavity optomechanics with and without rotating-wave approximation", AIP Conference Proceedings 1976, 020024 (2018)
21. Lazhar Bougouffa, Saud Al-Awfi, and Smail Bougouffa, " A complete and partial integrability technique of the Lorenz system", Results in Physics, 9, (2018), p 712.
22. Smail Bougouffa and L. Bougouffa, "Solvability of the generalized system of stochastic differential equations in driven cavity single mode". Acta Physica Polonica B, 48(5), (2017) 869.
23. Adel AL Rehaily and Smail Bougouffa "Entanglement Generation between Two Mechanical Resonators in Two Cavity Optomechanics". Int J Theor Phys 56 (2017)1399. doi:10.1007/s10773-017-3280-3
24. Smail Bougouffa and Zbigniew Ficek, "Evidence of indistinguishability and entanglement determined by the energy-time uncertainty principle in a system of two strongly coupled bosonic modes". Phys. Rev. A 93, 063848 (2016).
25. Khalid Aloufi, S. Bougouffa and Z Ficek "Dynamics of entangled states in correlated reservoirs" Phys. Scr, 90, 074020 (2015).
26. Lazhar Bougouffa and Smail Bougouffa, "New Parametric Approach for the General Lorenz System", Phys. Scr. 89 (2014) 075203.
27. S. Bougouffa and Z Ficek "Effect of retardation in the atom-field interaction on entanglement in a double Jaynes-Cummings system", J. Phys. B: At. Mol. Opt. Phys. 46 224006 (2013)
28. S. Bougouffa and Z Ficek "Atoms versus photons as carriers of entanglement" Phys. Rev.A. 88, 022317 (2013)
29. Smail Bougouffa and Zbigniew Ficek," Transfer of quantum states in a four-qubit system", Conference on Coherence and Quantum Optics Rochester, New York United States, June 17-20, 2013.
30. S. Al-Awfi, S. Bougouffa "Generation of Surface Optical Vortices by Evanescent Bessel Beams" Int. J. Phys. Sci. Vol.7 (25),pp.4043-4048, 2012.
31. S. Bougouffa and Z Ficek "Entanglement transfer between bipartite systems" Phys. Scr. T 147 (2012) 014005.
32. S. Bougouffa "Negativity dynamics of a bipartite system in squeezed vacuum reservoirs" AIP Proceedings Conference 1370, 192(2011).
33. Smail Bougouffa and A. Hindi, "Entanglement dynamics of a bipartite system in squeezed vacuum reservoirs", Phys. Scr. T 143 (2011) 014006.
34. Smail Bougouffa, "Entanglement dynamics of the two-bipartite system under the influence of dissipative environments", Optics Communications 283(2010) 2989-2996.
35. R. Tahira, M. Ikram, S. Bougouffa, and M. S. Zubairy, "Entanglement dynamics of high dimensional bipartite field states inside the cavities in dissipative environments", J. Phys. B: At. Mol. Opt. Phys. 43 (2010) 035502.
36. S. Al-Awfi, S. Bougouffa, and M. Babiker, "Optical manipulation at planar dielectric surfaces using evanescent Hermite- Gaussian light" Opt. Communications 283 (2010) 1022-1025
37. Smail Bougouffa and Saud Al-Awfi," Transient Dynamics of Atoms Between Parallel Conducting Plates" Applied Mathematics & Information Sciences— An International Journal, 3(3) (2009), 355–365.
38. Saud Al-Awfi, Smail Bougouffa, and Mohammed Bawa'aneh, " Dipole emission rate inside a nano quantum dot resonator " International Journal of Nanomanufacturing 2009 - Vol. 4, No.1/2/3/4 pp. 92 - 98
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