

REFEREED ISI JOURNAL PAPERS

- J1. **H. Bahlouli**, "Temperature dependence of nuclear spin-lattice relaxation in heavy-fermion superconducting state", Physics Letters A, Vol.118, pp.209-212 (1986).
- J2. **H. Bahlouli** and B. Arfi, "Thermal conductivity and thermally induced charge imbalance in heavy fermion systems" Journal of Low Temperature Physics Vol. 69, pp.327-347 (1987).
- J3. B. Arfi, **H. Bahlouli**, C.J. Pethick, and D. Pines, "Usual transport effects in anisotropic superconductors", Physical Review Letters Vol. 60, pp.2206-2209 (1988).
- J4. B. Arfi, **H. Bahlouli**, C.J. Pethick, "Transport properties of anisotropic superconductors: influence of arbitrary electron-impurity phase shifts", Physical Review B, Vol.39, pp.8959-8983 (1989).
- J5. **H. Bahlouli**, "Anisotropic nuclear spin relaxation rate", Physics Letters A, Vol.139, pp.261-264 (1989).
- J6. **H. Bahlouli**, "Gap relaxation and its effect on sound attenuation near Tc", Physical Review B, Vol. 40, pp.6538-6547 (1989).
- J7. **H. Bahlouli**, "Thermally generated magnetic fields in heavy fermion superconductors", Physical Review B, Vol. 41, pp.10972-10977 (1990).
- J8. **H. Bahlouli**, "Effect of strong potential scattering on the local moment relaxation in anisotropic superconductors", Physics Letters A, Vol.146, pp.265-268 (1990).
- J9. **H. Bahlouli**, "Ruderman-kittel-kasuya-yosida interaction in dirty superconductors", Physical Review B, Vol. 44, pp. 5328-5331 (1991).
- J10. **H. Bahlouli**, "Nuclear spin relaxation rate in disordered superconductors", Physics Letters A, Vol. 164, pp. 206-210 (1992).
- J11. S.W. Pierson, O.T. Valls and **H. Bahlouli**, "Critical behavior of a layered superconductor model", Physical Review B, Vol. 45, pp. 13035-13046 (1992).
- J12. **H. Bahlouli**, "Particle hole asymmetry in anisotropic superconductors", Physics Letters A, Vol. 175, pp. 361-365 (1993).
- J13. D.E., Ephron, M.R. Beasley, **H. Bahlouli** and K.A. Matveev, "Correlated hopping through thin disordered insulators", Phys. Rev. B, Vol. 49, pp. 2989-2992 (1994).
- J14. **H. Bahlouli**, K.A. Matveev, D. Ephron and M.R. Beasley, "Coulomb coorelations in hopping through a thin layer", Phys. Review B, Vol. 49, pp. 14496-14503 (1994).

- J15. **H. Bahlouli**, "The effect of coulomb blockade on resonant tunneling", Phys. Letters A, Vol. 193, pp. 485 -490 (1994).
- J16. **H. Bahlouli**, "Hopping contribution to tunneling in nis junction", Physics Letters A, Vol.194, pp.210-214 (1994).
- J17. **H. Bahlouli**, "Coulomb correlations of resonant tunneling in nis junctions", Supercond. Sci. Technol. Vol. 8,pp. 900-903 (1995).
- J18. **H. Bahlouli**, "Hopping transport through amorphous junctions", Solid State Communications Vol. 98, pp. 457-461 (1996).
- J19. **H. Bahlouli**, "The nuclear spin-lattice relaxation time in d-wave superconductors", Supercond. Sci. Technol. Vol. 9, pp. 145-148 (1996).
- J20. **H. Bahlouli**, "Density of states effect on resonant tunneling", Solid State Communications, Vol. 102, pp. 883-886 (1997).
- J21. N. Zekri, **H. Bahlouli**, and F. Brouers, "Filtering of light in randomly layered media", Physics Letters A, Vol. 234, pp. 391-395 (1997).
- J22. N. Zekri and **H. Bahlouli**, "Nonlinearity effect on a 1D periodic lattice", J. of Phys. Stat. Sol. B, Vol. 205, pp. 5 11-517 (1998).
- J23. N. Zekri, **H. Bahlouli** and A. Sen, "Amplification and disorder effects in Kronig-Peney chains of active potentials", J. of Phys. Condensed Matter, Vol. 10, pp. 2405-2416 (1998).
- J24. N. Zekri, **H. Bahlouli**, "Crossover between localization and delocalization in a random Non-integer n-Mer chain", Modern Phys. Lett. B, Vol. 12, pp. 743-751 (1998).
- J25. **H. Bahlouli** and N. Zekri, "Coulomb correlations in resonant tunneling", Modern. Phys. Lett. B, Vol. 12, 839-848 (1998).
- J26. K. Senouci, N. Zekri, **H. Bahlouli**, and A.K. Sen, "The effect of non-linearity on 1d periodic and disordered lattices", J. Phys. Cond. Matt. Vol. 11, Issue 7, pp. 1823 - 1832 (1999).
- J27. N. Zekri and **H. Bahlouli**, "Nonlinearity interaction effect on the phase distribution in 1D disordered lattices", Journal of Physics: Cond. Matt. Vol. 11, pp. 6197 - 6206 (1999).
- J28. **H. Bahlouli**, " The I-V Characteristic of Resonant tunneling Junctions

- “, Phys. Stat. Sol. Vol. A179, 475-483 (2000).
- J29. E. Abu-Azzah, N. Zekri and **H. Bahlouli**, "Propagating modes in chains with arbitrary n-Mer", Alg. Rev. Nucl. Sci. Vol.3, issue 1& 2, 71-78 (2001).
- J30. **H. Bahlouli**, “ Transport Through a Small Interacting System “, Arabian Journal of Science and Engineering Vol. 26, 1A, 43-52 (2001).
- J31. M. Molina and **H. Bahlouli**, “ Conductance through a single nonlinear magnetic impurity “ , Physics Letters Vol. A 294, 87-94 (2002).
- J32. **H. Bahlouli** and A. Al-Sunaidi, “Magnetoconductance Through a Small Nonlinear 1D System “, Journal of Physics : Cond. Matter Vol. 14, 12477 (2002).
- J33. U. Al-Khawaja, **H. Bahlouli**, S. Al-Amoudi, and A. AlSunaidi, “ Collisional Damping and Resonance Behavior of Coupled Scissors Modes of a Bose-Einstein Condensate “, Journal of Low Temperature Physics Vol. 131, issue1/2 , 113 (2003).
- J34. A. Berkane-Krachai, N. Zekri, and **H. Bahlouli**, "Absorption effect on light filtering", Waves in Random Media Vol.13, 303 (2003).
- J35. S. Marouf, N. Zekri and **H. Bahlouli**, “ Non-Hermiticity and its Dual Role in Double Barrier Structures “, (2004).
- J36. E. Abu-Azzah, S. Al-Amoudi and **H. Bahlouli**, “ Charging Effect on Transport Through a Nonlinear Impurity “, Physics Letters Vol.330, 181(2004).
- J37. A. Al-Sunaidi and **H. Bahlouli**, “Transport and resonance phenomena through a single nonlinear magnetic impurity “, AJSE Vol.30, 237 (2005).
- J38. **H. Bahlouli**, A.D. Alhaidari, A. Al Zahrani and E.N. Economou, “ Study of electromagnetic wave propagation in active medium and the equivalent Schrodinger equation with energy-dependent complex potential”, Physical Review B Vol.72, 094304 (2005).
- J39. A. D. Alhaidari, **H. Bahlouli** and A. Al-Hasan, „ The Dirac and Klein Gordon equations with equal scalar and vector potentials “, Physics Letters A Vol.349, 87 (2006).
- J40. A.D. Al-Haidari, **H. Bahlouli**, M.S. Abdelmonem, F. Al-Ameen and T.

Al-Abelaal, “ Scattering Theory with Special Regularization: Rediscovering the J-Matrix Method”, Physics Letters A 364, 372-377 (2007).

- J41. A.D. Al-Haidari, **H. Bahlouli**, A. Alhassan and M.S. Abdelmonem, “ Relativistic Scattering with Spatially Dependent Effective Mass in the Dirac Equation”, Physical Review A75 , 062711 (2007).
- J42. **H. Bahlouli**, A.D. Al-Haidari and M. S. Abdelmonem, “ Density of States Extracted from Modified Recursion Relations”, Physics Letters A 367, 162 (2007).
- J43. I. Nasser, S. Abelmonbem, **H. Bahlouli** and A.D.H. Al Haidari,, “Bound States for Rotating Morse Potential using Tridiagona Representation”, Journal of Physics B: Atomic, Molecular and Optical Physics 40, 4245-4257 (2007).
- J44. A.D. Al-Haidari and **H. Bahlouli**, “ Electron in the Field of a Molecule with an Electric Dipole Moment”, Physical Review Letters 100, 110401-1, (2008).
- J45. A.D. Al-Haidari, **H. Bahlouli** and S. Abdelmonem,” Taming the Yukawa potential singularity: improved evluation of bound states and resonance energies”, Journal of Physics A: Mathematical and Theoretical Vol.41, 032001 (2008).
- J46. H. Al-Aaoud, **H. Bahlouli** and A.D. Al-Haidari, “Solution of the Wave Equation in a Tridiagonal Representation Space”, International Reviews of Modern Physics Vol. 2, 271 (2008).
- J47. A.D. Al-Haidari, **H. Bahlouli** and S. Abdelmonem,” The one Dimensional J-Matrix of Scattering ”, Annals of Physics Vol.324, 2561 (2009).
- J48. I. M. Nasser, M. S. Abdelmonem, **H. Bahlouli** and A. D. Alhaidari, “ The Rotating Morse Potential in the J-Matrix Representation: II The S- Matrix Approach”, Journal of Physics B: Atomic, Molecular and Optical Physics Vol. 41, 215001 (2008).
- J49. A. D. Alhaidari and **H. Bahlouli**, “ Extending the class of solvable potentials”, Journal of Mathematical Physics Vol. 49, 082102 (2008).
- J50. A. D. Alhaidari and **H. Bahlouli**, “ Two new solvable potentials” Journal of Physics A: Mathematical and Theoretical Vol. 42, 262001 (2009).

- J51. I. M. Nasser, M. S. Abdelmonem, **H. Bahlouli** and U. Al-Khawaja, “Singular short Range Potentials in the J-Matrix Approach”, Phys. Lett. A 373, 2408 (2009).
- J52. I. Nasser, U. Al-Khawaja, M. S. Abdelmonem, A. D. Alhaidari and **H. Bahlouli**, “Computations of Resonances and Bound States Using the J-Matrix Approach”, Applied Mathematics & Information Science Vol. 3 (3), 213 (2009).
- J53. A. Jellal, A. D. Alhaidari, and **H. Bahlouli**, “Confined Dirac fermions in a constant magnetic field”, Physical Review A 80, 012109 (2009)
- J54. **H. Bahlouli** and A. D. Alhaidari, “Extending the class of solvable potentials.III.The single hyperbolic wave”, Physica Scripta. 81 , 025008 (2010).
- J55. **H. Bahlouli**, M. S. Abdelmonem and I. Nasser, “Analytical treatment of the Yukawa potential”, Physics Scripta 82, 065005 (2010).
- J56. S. M. Al-Marzoug, S. M. Al-Amoudi, U. Al Khawaja, **H.Bahlouli** and B. B. Baizakov, “Scattering of a matter-wave single soliton and two-soliton molecule by an attractive potential”, Physical Review A 83, 026603 (2010).
- J57. **H. Bahlouli**, M. S. Abdelmonem and S. Al-Marzoug, “Analytical treatment of the oscillating Yukawa potential”, Chemical Physics Vol. 393, 153 (2011).
- J58. A. D. Alhaidari, A. Jellal, E. B. Choubabi, and **H. Bahlouli**, "Dynamical mass generation via space compactification", Quantum Matter 2.2 (2013) 140-143.
- J59. Shishan Dong, Shi-Hai Dong, **H. Bahlouli** and V. B. Bezerra, “Algebraic approach to the Klein-Gordon equation with hyperbolic Scarf Potential”, International Journal of Modern Physics E 20, 55 (2011).
- J60. U. Al Khawaja, S. M. Al-Marzoug, and **H. Bahlouli**,’ Spontaneous formation and resonant scattering of soliton molecules”, Journal of Physics B: Atomic, Molecular and Optical Physics **44**, 115304 (2011).
- J61. H. **Bahlouli**, E.B. Choubabiand A. Jellal,” Solution of One-dimensional Dirac Equation via Poincare Map”, Europhys Letters 95 (2011) 17009, arXiv:1105.4741.
- J62. **H. Bahlouli**,E.B. Choubabi, A. Mouhafid and A. Jellal, “Transmission through Biased Graphene Strip”, Solid State Communications. 151 (2011)

- 1309, arXiv:1105.5279.
- J63. H. Eleuch and H. **Bahlouli**, "Analytical Solution to the Dirac equation in 3+1 Space-Time Dimensions", Applied Mathematics & Information Sciences 6, No. 1, 153–156 (2012).
- J64. H. Eleuch, A. D. Alhaidari and H. **Bahlouli**, Analytical Solutions to the Dirac equation in 1+1 Space-Time Dimension, Applied Mathematics & Information Sciences 6, Volume 6, No. 1, 149–151 (2012).
- J65. **H. Bahlouli**; Abdullah Aljaafari; Abdullah Aljaafari; choubabi el bouazzaoui"Transport Properties through Double Barrier Structure in Graphene", Journal of Low Temperature Physics Vol. 168, 1-17 (2012).
- J66. A. D. Alhaidari, **H. Bahlouli** and A. Jellal, Advance in Mathematics Physics, "Relativistic Double Barrier Problem with Three Transmission Resonance Regions", Advances in Mathematical Physics (2012)762908/13.
- J67. **H. Bahlouli**, E. B. Choubabi, A. Jellal and M. Mekkaoui, "Tunneling of Graphene Massive Dirac Fermions through a Double Barrier", Journal of Low Temperature Physics Volume 169, 1-19 (2012).
- J68. A. D. Alhaidari1, **H. Bahlouli** Y. Benabderahmane and A. Jellal1, "Full transmission within a wide energy range and super-criticality in relativistic barrier scattering", PHYSICAL REVIEW A 86, 052113 (2012)
- J69. M.E.H. Ismail, A. D. Alhaidari and **H. Bahlouli**, " Mathematical Revisit of the Dirac Coulomb Problem", Journal of Physics A: Mathematical and Theoretical 45, 36520 (2012).
- J70. Avinash Khare, S.M. Al-Marzoug and Hocine **Bahlouli**, Solitons in PT-symmetric potential with competing nonlinearity, Physics Letters, Section A: General, Atomic and Solid State Physics, 376 (45), pp. 2880-2886 (2012).
- J71. A. D. Alhaidari, H. Bahlouli, Y. Benabderahmane, and A. Jellal, "Full transmission within a wide energy range and super-criticality in relativistic barrier scattering", Physical Review. A 86.05 (2012) 052113/6p.
- J72. Saeed Almarzoug, Hocine **Bahlouli**, and Saad Eddine Abdelmonem, "Computations of bound states for 2D Potentials using discrete basis", (2013) Molecular Physics, 111 (8), pp. 968-974.

- J73. A. D. Alhaidari, H. Bahlouli, A. El Mouhafid, and A. Jellal, "Graphene nanoribbon in sharply localized magnetic fields", *The European Physical Journal B* 86.3 (2013) 73/12p.
- J74. H. Eleuch, **H. Bahlouli** and Y. V. Rostovtsev, "A fast converging method for generating solutions to the Riccati equation", *Applied Mathematics and Computations* 222, 548 (2013).
- J75 U. Al Khawaja, M. Asad-uz-zaman, and S. M. Al-Marzoug, H. Bahlouli, Modulational Instability of the Peregrine Soliton, *Communication Nonlinear Science and Numerical Simulations* 19, 2706–2714 (2014).
- J76. U. Al Khawaja, S. M. Al-Marzoug, **H. Bahlouli**, and Yuri S. Kivshar, "Unidirectional soliton flows in PT -symmetric potentials", *Physical Review A* 88, 023830 (2013).
- J77. A. Jellal, M. Mekkaoui, E.B. Choubabi and **H. Bahlouli**, "Tunneling of Massive Dirac Fermions in Graphene through Time-periodic Potential", *European Physical Journal B*, 87 (6), art. no. 123 (2014).
- J78. **H. Bahlouli**, A. Jellal and Y. Zahidi, "Factorization of Dirac Equation in two Space Dimensions", *International Journal of Geometric Methods in Modern Physics* 11, 1450036-1 (2014).
- J79. Jellal, A., Redouani, I., Zahidi, Y., **Bahlouli, H.**, "Goos-Hänchen like shifts in graphene double barriers", *Physica E: Low-Dimensional Systems and Nanostructures*, 58, pp. 30-37 (2014).
- J80. **H. Bahlouli**, A. D. Alhaidari, S. M. Al-Marzoug, M. S. Abdelmonem and I. A. Olumegbon, "The J-matrix method of scattering in two dimensions", *Annals of physics* (2015).
- J81. Zahidi, Y., Jellal, A., **Bahlouli, H.**, El Bouziani, M., "Factorization of the Dirac equation and a graphene quantum dot", *Journal of Statistical Mechanics: Theory and Experiment*, 2014 (10), art. no. P10027 (2014).
- J82. Jellal, A., Redouani, I., **Bahlouli, H.**, "Electrostatic and magnetic fields in bilayer graphene", *Physica E: Low-Dimensional Systems and Nanostructures*, 72, pp. 149-159 (2015).
- J83. Alhaidari, A.D., **Bahlouli**, H., Al-Marzoug, S.M., Abdelmonem, M.S., "J-matrix method of scattering for potentials with inverse square singularity: The real representation", *Physica Scripta*, 90 (5), art. no. 055205 (2015).

- J84. Alhaidari, A.D., **Bahlouli, H.**, Jellal, A., “Confined Dirac particles in a constant and tilted magnetic field”, International Journal of Geometric Methods in Modern Physics, 12 (5), art. no. 1550062 (2015).
- J85. Berdiyorov, G.R., **Bahlouli, H.**, Peeters, F.M., “Theoretical study of electronic transport properties of a graphene-silicene bilayer”, Journal of Applied Physics, 117 (22), art. no. 225101 (2015) .
- J86. Redouani, I., Jellal, A. and Bahlouli, H., "Double Barriers and Magnetic Field in Bilayer Graphene", Journal of Low Temperature Physics 181, 197–210 (2015).
- J87. Berdiyorov, G.R., Bahlouli, H. and Peeters, F., “Effect of substitutional impurities on the electronic transport properties of graphene”, Physica E: Low-dimensional Systems and Nanostructures 84, 22 (2016).
- J88. Miloud Mekkaoui, Ahmed Jellal and Hocine Bahlouli;
“Transmission and Goos-Hanchen like Shifts through a Graphene Double Barrier in an Inhomogeneous Magnetic Field”, The European Physical Journal B 89, 23 (2016)
- J89. Al Khawaja, U., Al-Marzoug, S.M. and **Bahlouli, H.**,
“All-optical switches, unidirectional flow, and logic gates with discrete solitons in waveguide arrays”, Optics Express 24, issue 10, 11062 (2016).
- J90. A. D. Alhaidari, **H. Bahlouli** and I. A. Assi, “ Solving Dirac equation using the tridiagonal matrix representation approach”, Physics Letters A 380 1577–1581 (2016).
- J91. H. M. Abdullah, M. Zarenia, **H. Bahlouli**, F. M. Peeters and B. Van Duppen, “Gate tunable layer selectivity of transport in bilayer graphene Nanostructures”, Europhysics Letters 113, 17006 (2016).
- J92. Usama Al Khawaja, Saeed Al-Marzoug, **Hocine Bahlouli** and Fatkhulla Abdullaev, Modulational instability of the Kuznetsov-Ma breather in optical fibers with constant and periodic dispersion, Communications in Nonlinear Science and Numerical Simulation Vol. 32, 1-9 (2016).
- J93. R. Berdiyorov, H. Abdullah, M. Al Ezzi, G.V. Rakhmatullaeva, **H. Bahlouli** and N. Tit.,, “CO₂ adsorption on Fe-doped graphene nanoribbons: first principles electronic transport calculations”, AIP Advances **6**, 125102 (2016).
- J94. I. A. Assi, **H. Bahlouli** and A. D. Alhaidari, “Solvable potentials for the 1D Dirac equation using the tridiagonal matrix representations”, AIP Conference Proceeding 1742, 030003 (2016); <http://dx.doi.org/10.1063/1.4953124>.
- J95. U. Al Khawaja, S.M. Al-Marzoug and **H. Bahlouli**, “Interaction potential

- between discrete solitons in waveguide arrays”, Optics Express Vol. 24, Issue 16, pp. 18148-18162 (2016).
- J96. Hasan M. Abdullah, B. Van Duppen, M. Zarenia, **H. Bahlouli** and F. M. Peeters, “Quantum Transport Across Van der Waals Domain Walls in Bilayer Graphene”, J. Phys. : Cond. Mat. 29, 425303 (2017).
- J97. U. Al Khawaja, S.M. Al-Marzoug and H. Bahlouli, “Peierls-Nabarro potential profile of discrete nonlinear Schrodinger equation”, Communications in Nonlinear Science and Numerical Simulation **46**, 74 (2017).
- J98. N. Tit , M. Al Ezzi, H. Abdullah, M. Yusupov, S. Kousser, **H. Bahlouli** and Z. H. Yamani, “ Detection of Co₂ using CNT-based sensors: Role of Fe catalyst on the sensitivity and selectivity”, Materials Chemistry and Physics **186**, 353 (2017).
- J99. Miloud Mekkaoui, Ahmed Jellal and Hocine **Bahlouli**, “Controllable Goos-Hanchen Shift in Graphene Triangular Double Barrier”, Physica E **87**, 266 (2017).
- J100. W. M. Moslem, A. S. El-Said, R. Sabry, A. Shalouf, S. K. El-Labany and **H. Bahlouli**, “ Nonlinear phenomenon in nanostructures creation by fast cluster ions”, Physics Letters A **381**, 102 (2017).
- J101. Hasan M Abdulla, Abderrahim El Mouhafid, **H Bahlouli** and Ahmed Jellal, “Band tunneling through double barrier in biased graphene bilayer”, Mater. Res. Express 4 (2017) 025009.
- J102. Mourad Djebli, Amina Kiouche, Ayman S. El-Said and Hocine Bahlouli, On the formation of surface nanostructures induced by slow highly charged ions, PHYSICS OF PLASMAS **24**, 072115 (2017).
- J103. Sadig A. Al-Buradah, Hocine Bahlouli, and Abdulaziz D. Alhaidari, Energy spectrum of a generalized Scarf potential using the asymptotic iteration method and the tridiagonal representation approach, JOURNAL OF MATHEMATICAL PHYSICS **58**, 083501 (2017)
- J104. E. Assi and H. Bahlouli, Analytical solutions of the 1D Dirac equation using the Tridiagonal Representation Approach, J. Appl. Math. Phys. 5, 2072 (2017).
- J105. Hasan M. Abdullah, B. Van Duppen, M. Zarenia, H. Bahlouli, and F. M. Peeters, “Quantum transport across van der Waals domain walls in bilayer graphene”, Journal of Physics : Condensed Matter 29, 425303 (2017). This paper has been selected in the annual journal highlights (2017).

- J106. Mohammed Al-Ezzi, Nacir Tit, Golibjon Berdiyorov, Hocine Bahlouli and Zain H. Yamani, Adsorption of H₂ on Graphitic ZnO: First-principle Analysis, "Energy & Environment Focus" (ASP), Materials Focus 7 (2018) 273-283.
- J107. Hasan. M. Abdullah, M. Van der Donck, H. Bahlouli, F. M. Peeters, and B. Van Duppen, "Graphene quantum blisters: a tunable system to confine charge carriers", Applied Physics Letters 112, (2018). This Article has been chosen as an Editor's Pick.
- J108. Hasan M. Abdullah and Hocine Bahlouli, "Substrate effects on transport properties of a biased AA-stacked bilayer graphene", Journal of Computational Science 26, 135 (2018).
- J109. Hasan. M. Abdullah, H. Bahlouli, F. M. Peeters, and B. Van Duppen, "Confined states in graphene quantum blisters", Journal of Physics: Condensed Matter 30, 385301 (2018).
- J110. Hasan. M. Abdullah, Mohammed Al Ezzi and H. Bahlouli, "Electronic transport and Klein tunneling in gapped AA-stacked bilayer graphene", Journal of Applied Physics 124, 204303 (2018).
- J111. Hasan. M. Abdullah, D. R. da Costa, H. Bahlouli, F. M. Peeters and B. Van Duppen, "Electron collimation at van der Waals domain walls in bilayer graphene", Phys. Rev. B 100, 045137 (2018).
- J112. Abdelhadi Belouad, Youness Zahidi, Ahmed Jellal and Hocine Bahlouli, "Electron scattering in gapped graphene quantum dots", EPL 123, 28002 (2018).
- J.113 I. A. Assi, A. J. Sous and H. Bahlouli, "A new class of Poschl-Teller potentials with inverse square singularity and their spectra using the asymptotic iteration method", Modern Physics Letters A 33, 1850128 (2018).
- J.114 I. A. Assi, H. Bahlouli and A. Hamdan, "Exact solvability of two new 3D and 1D nonrelativistic potentials within the TRA framework", Modern Physics Letters A, 33 (32), 1850187 (2018).
- J.115 I. A. Assi, A. D. Alhaidari, and H. Bahlouli, Solution of the spin and pseudo-spin symmetric Dirac equation in 1+1 space-time using the tridiagonal representation approach. Commun. Theor. Phys. 69, 241–256 (2018).
- J.116 Ilham Redouani, Ahmed Jellal, Abdelhadi Bahaoui and Hocine Bahlouli, "Multibands tunneling in AAA-stacked trilayer graphene", Superlattices and Microstructurees 116, 44 (2018).

- J.117 Usama Al Khawaja and Hocine Bahlouli, "Integrability conditions and solitonic solutions of the nonlinear Schrödinger equation with generalised dual-power nonlinearities, PT-symmetric potentials, and space- and time-dependent coefficients", Communications in Nonlinear Science and Numerical Simulation, **69**, 248-260 (2019).
- J.118 U Al Khawaja, H Eleuch, H Bahlouli, "Analytical analysis of soliton propagation in microcavity wires", Results in Physics **12**, 471-474 (2019).
- J.119 M. O. D. Alotaibi, S. M. Al-Marzoug, H. Bahlouli, and U. Al Khawaja, "Unidirectional flow of solitons with nonlinearity management", Phys. Rev. E **100**, 042213 (2019).
- J.120 H. D. Alhaidari, and H. Bahlouli, "Tridiagonal Representation Approach in Quantum Mechanics", Physica Scripta **94**, 125206 (2019).
- J.121 Hasan. M. Abdullah, D. R. da Costa, H. Bahlouli, A. Chaves, F. M. Peeters and B. Van Duppen, "Electron collimation at van der Waals domain walls in bilayer graphene", Phys. Rev. B **100**, 045137 (2019).
- J.122 A. D. Alhaidari and H. Bahlouli, "Electric dipole and quadrupole contributions to valence electron binding in a charge-screening environment", Eur. Phys. J. D **73**.04 (2019).
- J.123 Miloud Mekkaoui, Ahmed Jellal and Hocine Bahlouli, "Effect of magnetic field on Goos-Hanchen shifts in gaped graphene traingular barrier", Physica E **111**, 218 (2019).
- J.124 W. M. Moslem, A. S. El-Said, S. A. Morsi, R. Sabry, M. E. Yahia, K. El-Labany, and H. Bahlouli, "On the formation of nanostructures by inducing confined plasma expansion", Results in Physics Vol. 15, 102696 (2019).
- J.125 Youness Zahidi, Ilham Redouani, Ahmed Jellal and Hocine Bahlouli, "Magnetic Field Effect on Strained Graphene Junctions", Physica E: Low-dimensional Systems and Nanostructures, Volume 115, 113672 (2020).
- J.126 M.O.D.Alotaibi, B.B.Baizakov, S.M.Al-Marzoug and H.Bahlouli, " Splitting of coupled bright solitons in two-component Bose-Einstein condensates under parametric perturbation", Physics Letters A Volume 384, Issue 11,126243 (2020).
- J.127 Abdelhadi Belouad, Bouhaib Lemaalem, Ahmed Jellal and Hocine Bahlouli, "Energy Levels of Graphene Magnetic Circular Quantum Dot", Materials Research Express **7**, 015090 (2020).

- J.128 U. Al Khawaja , S. Al-Marzoug and H. Bahlouli, "Unidirectional flow of discrete solitons in optical waveguide arrays with nonlinearity", Physics Letters A 384 (2020) 126625 (2020).
- J.129 A.D. Alhaidari and H. Bahlouli, "Bound states and the potential parameter Spectrum", J. Math. Phys. 61, 062103 (2020).
- J.130 Bouchaib Lemaalem, Miloud Mekkaoui, Ahmed Jellal and Hocine Bahlouli, "Time-dependent Goos-Hanchen shifts in gapped graphene", EPL, 129 (2020) 27001.
- J.131 Morsi, Sara; Moslem, Waleed; El-Said, Ayman; Bahlouli, Hocine, Creation of surface nanometer-scale plasma region by irradiation with slow highly charged ions, Phys. Scr. 95, 095602 (2020).
- J.132 Choubabi, Jellal, Kamal, Bahlouli, "Tunneling through Double Electrostatic Barriers in Strained Graphene", Physica Status Solidi b 257, 1900414 (2020).
- J.133 H. S. Qasem, H. M. Abdullah, M. A. Shukri, H. Bahlouli, and U. Schwingenschlögl, "Quantum dots in AA-stacked bilayer graphene", Phys. Rev. B102, 075429 (2020).
- J.134 Miloud, Jellal, Bahlouli, "Goos-Hanchen shift in Gapped Graphene subject to External Fields", submitted June (2020).
- J.135 Belouad, Jellal, Bahlouli, "Energy Levels of Graphene Quantum Ring with Wedge Disclination", EPL Vol. 129 (2020) 27001.
- J.136 I. Ibsal, A. Sous andH. Bahlouli, "The energy spectrum of a new exponentially confining potential", The European Physical Journal Plus, 135, 937 (2020).
- J.137 Bouhlal-Belouad-Jellal-Bahlouli, " Density of States Analysis of Electrostatic Confinement in Gapped Graphene", Solid State Communications 333, 114335 (2021).
- J.138 A.D. Alhaidari and H. Bahlouli, "Series solutions of Bessel-type differential equation in terms of orthogonal polynomials and physical applications," submitted to Physica Scripta, Reports on Mathematical Physics 87, 313 (2021).
- J.139 Bouchaib, Miloud, Jellal, Bahlouli, "Time-dependent Goos-Hanchen Shifts in Gapped Graphene", Submitted, (2020).

- J.140 Amaria Javed, T. Uthayakumar, M. O. D. Alotaibi, S. Al-Marzoug, H. Bahlouli and U. AlKhawaja, “ Unidirectional flow of composite bright-bright solitons through asymmetric double potential barriers and wells”, Communications in Nonlinear Science and Numerical Simulation, in press (2021).
- J.141 A. Ibsal, A.D. Alhaidari and H. Bahlouli, “Bound states of a deformed Morse-like potential”, *J. Math. Phys.* 62, 093501 (2021).
- J.142 K. Harrabi, A.K. Mekki, H. Bahlouli and F. R. Ladan, "Current-Induced Metastable States in Superconducting NbTi Bridges" , accepted for publication in *Journal of Superconductivity and Novel Magnetism* (2021).
- J.143 I.A. Assi, A.J. Sous, H. Bahlouli, Treatment of a three-dimensional central Potential with cubic singularity, *The European Physical Journal Plus* 136 (1), 1-12 (2021).
- J.144 K. Harrabi, A.K. Mekki, H. Bahlouli and P Mathieu, Characterization of Resistive Hotspots Induced in Superconducting NbTi Thin Film by an Electrical Current Pulse, *Mater. Res. Express* 8 (2021) 056001.
- J.145 A.D. Alhaidari and H. Bahlouli, "Reply to 'comment on "Bound states and the potential parameter spectrum." *J. Math. Phys.* 61, 062103 (2020)" *Journal of Mathematical Physics* 62, 064102 (2021).
- J.146 K. Harrabi, A.K. Mekki, H. Bahlouli and P. Mathieu, Phase Slip Center Temperatures attained in Superconducting NbTi Filaments using an electrical pulse close to T_c , *Physica C: Superconductivity and its applications* 589, 1353933 (2021).
- J.147 Ahmed Bouhlal, Ahmed Jellal, Hocine Bahlouli and Michael Vogl, *Annals of Physics* Volume 432 (2021), 168563.
- J.148 Assi, I. A., LeBlanc, J. P. F., Rodriguez-Vega, M., Bahlouli, H., & Vogl, M. Floquet engineering and nonequilibrium topological maps in twisted trilayer graphene. *Physical Review B*, 104(19), 195429 (2021).