
List of publications of Vít Jakubský

1. V. Jakubský, K. Zelaya, "Lieb lattices and pseudospin-1 dynamics under barrier- and well-like electrostatic interactions," *Physica E* **152**, 115738 (2023).
2. V. Jakubský, K. Zelaya, "Landau levels and snake states of pseudo-spin-1 Dirac-like electrons in gapped Lieb lattices," *J. Phys.: Condens. Matter* **35**, 025302 (2023).
3. V. Jakubský, K. Zelaya, "Coupled system of Dirac fermions with different Fermi velocities via composites of SUSY operators," *Phys. Lett. A* **435**, 128053 (2022).
4. V. Jakubský, S. Kuru, J. Negro, "Dirac fermions in armchair graphene nanoribbons trapped by electric quantum dots," *Phys. Rev. B* **105**, 165404 (2022).
5. M. Castillo-Celeita, V. Jakubský, K. Zelaya, "Form-preserving Darboux transformations for 4×4 Dirac equations," *Eur. Phys. J. Plus* **137**, 389 (2022).
6. M. Castillo-Celeita, V. Jakubský, K. Zelaya, "Confinement in bilayer graphene via intra- and inter-layer interactions," *J. Phys. A* **55**, 035202 (2022).
7. M. Castillo-Celeita, V. Jakubský, "Reduction scheme for coupled Dirac systems," *J. Phys. A* **54**, 455301 (2021).
8. A. Contreras-Astorga, F. Correa and V. Jakubský, "Super-Klein tunneling of Dirac fermions through electrostatic gratings in graphene," *Phys. Rev. B* **102**, 115429 (2020).
9. A. Contreras-Astorga, V. Jakubský, A. Raya, "On the propagation of Dirac fermions in graphene with the strain-induced inhomogeneous Fermi velocity," *J. Phys.: Condens. Matter* **32**, 295301 (2020).
10. Alonso Contreras-Astorga, Vít Jakubský, "Multimode Two-Dimensional PT-Symmetric Waveguides," *Journal of Physics Conference Series* 1540, 012018 (2020).
11. Alonso Contreras-Astorga, Vít Jakubský, "Photonic systems with two-dimensional landscapes of complex refractive index via time-dependent supersymmetry," *Phys. Rev. A* **99**, 053812 (2019).
12. M. Fialová, V. Jakubský and M. Tušek, "Qualitative analysis of magnetic wave guides for two-dimensional Dirac fermions," *Annals of Physics* **395**, 219 (2018)
13. A. Ishkhanyan, V. Jakubský, "Two-dimensional Dirac fermion in presence of an asymmetric vector potential," arXiv:1801.05045 [hep-th]
14. V. Jakubský, A. Pérez-Obiol, "Spontaneous twisting and shrinking of carbon nanotubes," *Phys. Rev. B* **95**, 245431 (2017)
15. F. Correa, V. Jakubský, "Confluent Crum-Darboux transformations in Dirac Hamiltonians with PT-symmetric Bragg gratings," *Phys. Rev. A* **95**, 033807 (2017)
16. V. Jakubský, M. Tušek, "Dispersionless wave packets in Dirac materials," *Annals Phys.* **378**,171 (2017)
17. F. Correa, V. Jakubský, M. S. Plyushchay, "PT-symmetric invisible defects and confluent Darboux-Crum transformations," *Phys. Rev. A* **92**, 023839 (2015)
18. V. Jakubský, "Spectrally isomorphic Dirac systems: Graphene in an electromagnetic field," *Phys. Rev. D* **91**, 045039 (2015)
19. A. Arancibia, F. Correa, V. Jakubský, J. M. Guilarte and M. S. Plyushchay, "Soliton defects in one-gap periodic system and exotic supersymmetry," *Phys. Rev. D* **90**, 125041 (2014)
20. V. Jakubský and D. Krejčířík, "Qualitative analysis of trapped Dirac fermions in graphene," *Annals Phys.* **349**, 268 (2014); see also *Annals Phys.* **353**, 340-341 (2015)
21. F. Correa and V. Jakubsky, "Twisted kinks, Dirac transparent systems and Darboux transformations," *Phys. Rev. D* **90**, no. 12, 125003 (2014)
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26. V. Jakubský and M. S. Plyushchay, "Supersymmetric twisting of carbon nanotubes," *Phys. Rev. D* **85**, 045035 (2012)
27. V. Jakubský, L. -M. Nieto and M. S. Plyushchay, "Klein tunneling in carbon nanostructures: A Free particle dynamics in disguise," *Phys. Rev. D* **83**, 047702 (2011)
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36. J. Smejkal, V. Jakubský and M. Znojil, "Relativistic vector bosons and PT-symmetry," *J. Phys. Stud.* **11**, 45 (2007)
37. V. Jakubský and J. Smejkal, "A positive-definite scalar product for free Proca particle," *Czech. J. Phys.* **56**, 985 (2006)
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46. Jakubský V, *PT-symmetric Calogero-type model*, *Czech. J. Phys.* **54**, 67 (2004)