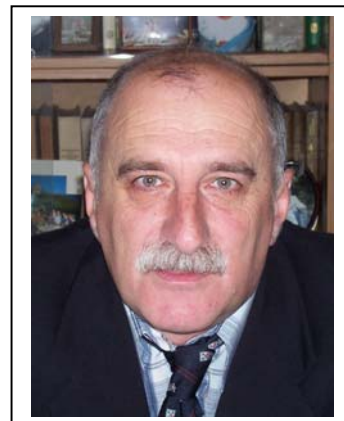


George I. Japaridze

Full Member of the
Georgian National
Academy of Sciences



CV

Date of birth: 29 July 1953, Tbilisi, Georgia.
Nationality: Georgian

Work address: Ilia State University, Faculty of Natural Sciences
And Engineering,
Cholokashvili Ave. 3-5, 0162, Tbilisi Georgia
Email: gia_japaridze@iliauni.edu.ge

Andronikashvili Institute of Physics
Tamarashvili str. 6, 0177 Tbilisi, Georgia
Phone: +995-32-2294619
Email: giajaparidze@gmail.com

Education: Graduated from the Tbilisi State University in 1975
PhD in Theoretical Condensed Matter Physics - 1983
Institute of Physics of the Georgian Academy of Sciences
Scientific Degree: Doctor of Sciences – 1998
Institute of Physics of the Georgian Academy of Sciences

Academic record: 1978-82 - Junior Researcher, Institute of Physics, GAoS.
1982-98 - Senior Researcher, Institute of Physics GAoS.
1998-05 - Principal Researcher, Institute of Physics, GNAS
From 2005 - Head of the Condensed Matter Department,
Andronikashvili Institute of Physics.
From 2010 - Full Professor, Ilia State University, Tbilisi, Georgia
From 2001 - Corresponding-member of the Georgian National
Academy of Sciences
From 2013 - Full member of the Georgian National Academy
of Sciences

Research Interests:

1. Theory of low-dimensional strongly correlated electron systems.
2. Low-dimensional magnetism.
3. Theory of metal-insulator transitions.
4. High temperature superconductivity.
5. Unconventional mechanisms of superconductivity.
6. New materials for modern electronics.

Membership of Professional Organizations:

Member of the Georgian National Academy of Sciences
Member of the Georgian Health Physics Society.
Member of the Italian Physical Society.

Journal referee

European Journal of Physics Letters
European Journal of Physics B
Physical Review B
Journal of Physics C; Condensed Matter
Physica Scripta
International Journal of Physics A
Physica B

List of main publications

1. D. C. Cabra, G. L. Rossini, A. Ferraz, G. I. Japaridze and H. Johannesson, “*Half-metal phases in a quantum wire with modulated spin-orbit interaction*”, Phys. Rev. B 96, 205135 (2017).
2. Michael Sekania, Dionys Baeriswyl, Luka Jibuti, and G.I. Japaridze „*The Mass-Imbalanced Ionic Hubbard Chain*“, Phys. Rev. B 96, 035116 (2017).
3. Mariana Malard, George I. Japaridze and Henrik Johannesson, “*Synthesizing Majorana zero-energy modes in a periodically gated quantum wire*”, Phys. Rev. B 94, 115128 (2016).

4. Inna Grusha, Micheil Menteshashivi and G.I. Japaridze, “*Effective Hamiltonian for a half-filled asymmetric ionic Hubbard chain with alternating on-site interaction*”, International Jour of Mod . Phys. B 30, 1550260 (2016).
5. M. Di Liberto, D. Malpetti, G.I. Japaridze C. Morais Smith, “*Ultracold fermions in a one-dimensional bipartite optical potential: metal-insulator transitions driven by shaking*” Phys. Rev. A 90, 023634 (2014).
6. G. I. Japaridze, Henrik Johannesson and Mariana Malard. “*Synthetic helical liquid in a quantum wire*” Phys. Rev. B 89, 201403 (2014).
7. M. Eliashvili, G.I. Japaridze, G. Tsitsishvili, and G. Tukhashvili, “*Edge states in 2D lattices with hopping anisotropy and Chebyshev polynomials*”, Jour. of Phys. Soc. Japan 83, 044706 (2014).
8. M. Di Liberto, C. E. Creffield, G. I. Japaridze C. Morais Smith. “*Quantum simulation of correlated-hopping models with fermions in optical lattices*” Phys. Rev. A 89, 013624 (2014).
9. Bernd Braunecker, Anders Stroem and G.I. Japaridze, “*Magnetic-field switchable metal-insulator transition in a quasi-helical conductor*”, Phys. Rev. B 87, 075151 (2013).
10. Mariana Malard, Inna Grusha, G. I. Japaridze and Henrik Johannesson, “*Modulated Rashba interaction in a quantum wire: Spin and charge dynamics*” Phys. Rev. B 84, 075466 (2011).
11. Bernd Braunecker, G. I. Japaridze, J. Klinovaja, and Daniel Loss, “*Spin-selective Peierls transition in interacting one-dimensional conductors with spin-orbit interaction*”, PRB 82, 045127 (2010).
12. Anders Ström, Henrik Johannesson, G. I. Japaridze, “*Edge Dynamics in a Quantum Spin Hall State: Effects from Rashba Spin-Orbit interaction*” Phys. Rev. Lett. 104, 256804 (2010).
13. Zoran Ristivojevic, G. I. Japaridze and Thomas Nattermann, “*Spin-filtering by field dependent resonant tunnelin*” Phys. Rev. Lett. 104, 076401 (2010)
14. G.I. Japaridze, Henrik Johannesson, and Alvaro Ferraz “*Metal-insulator transition in a quantum wire driven by a modulated Rashba spin-orbit coupling*”, Phys. Rev. B 80, 041308 (R) (2009).

15. G.I. Japaridze, R.M. Noack, D. Baeriswyl and L. Tincani, "*Phases and phase transitions in the half-filled t - t' Hubbard chain*", Phys. Rev. B 76, 115118 (2007).
16. G.I. Japaridze, R. Hayn, P. Lombardo and E. Mueller-Hartmann, "*Band-Insulator-Metal-Mott-Insulator transition in the half-filled t - t' ionic-Hubbard chain*", Phys. Rev. B 75, 245122 (2007).
17. G.I. Japaridze and E. Pogosyan "*Magnetization plateau in the spin $S=1/2$ ladder with alternating rung exchange*" Jour. Phys. C: Cond. Matt. v. 18, 9297-9306 (2006).
18. P. Lombardo, R. Hayn and G.I. Japaridze, "*Insulator-metal-insulator transition and selective spectral weight transfer in a disordered strongly correlated system*", Phys. Rev. B 74, 085116 (2006).
19. M.E. Torio, A.A. Aligia, G.I. Japaridze and B. Normand, "*Quantum phase diagram of the generalized ionic Hubbard model for AB_n chains*", Phys. Rev. B 73, 115109 (2006).
20. V. Gritsev, G.I. Japaridze, M. Pletyukhov, and D. Baeriswyl "*Competing Effects of Interactions and Spin-Orbit Coupling in a Quantum Wire*" Phys. Rev. Lett. 94, 137207 (2005).
21. T.Vekua, G.I. Japaridze and H.J. Mikeska, "*Phase diagrams of spin ladders with ferromagnetic legs in a magnetic field*" Phys. Rev. B v. 70, 014425 (2004).
22. P. Kakashvili and G.I. Japaridze, "*Effective Hamiltonian for a half-filled Hubbard chain with alternating interactions*" Jour. Phys. C: Cond. Matt. v. 16, 5815-5823 (2004).
23. C. Dziurzik, G.I. Japaridze, A. Schadschneider, and J. Zittartz, "*Triplet superconductivity vs easy-plane Ferromagnet in a 1D itinerant electron system with trasverse spin anisotropy*" Eur.Phys.J.B37, 453 (2004).
24. H. Johannesson and G.I. Japaridze, "*Pairing and Density Correlations of Stripe Electrons in a Two-Dimensional Antiferromagnet*" Phys. Rev. B 68, 214507 (2003) .
25. A.P. Kampf, M. Sekania, G.I. Japaridze, and Ph. Brune, "*Nature of the insulating phases in the half-filled ionic Hubbard model*" Jour. Phys. C: Cond. Matt. v. 15, 5895-5907 (2003).
26. T. Vekua, G.I. Japaridze and H.J. Mikeska, "*Phase diagrams of spin ladders with ferromagnetic legs*" Phys. Rev. B . v. 67, 064419-064429 (2003).

27. G.I. Japaridze, A.P. Kampf, M.Sekania, P. Kakashvili and Ph. Brune "*Local pair superconductivity in one-dimensional electron system with pair hopping interaction*" Phys. Rev. B v. 65, 014518-014527 (2002).
28. G.I. Japaridze and E. Mueller-Hartmann, "*Triplet superconductivity in a one-dimensional ferromagnetic t-J model*" Phys. Rev. B v. 61, 9019-9027 (2000).
29. G.I. Japaridze and A.P. Kampf, "Phase diagram of the extended Hubbard model with correlated-hopping interactions" Phys. Rev. B v. 59, 12822-12829 (1999).
30. G. Bouzerar, A.P. Kampf and G.I. Japaridze, "*Elementary excitation in dimerized and frustrated Heisenberg chains*" Phys. Rev. B v. 58, 3117-3123 (1998).
31. G.I. Japaridze "The bond--located antiferromagnetism in the One--Dimensional interacting electron system" Physics Letters A, v.201, 239-246 (1995).
32. G.I. Japaridze and E.Mueller-Hartmann, "*Electrons with correlated hopping interaction on one dimension*", Annalen der Physik, v.3, 163 (1994).
33. A.A. Nersesyan, G.I. Japaridze and I.G. Kimeridze, "*Low-temperature magnetic properties of the two-dimensional spin nematic*", Jour. of Phys. C: Cond.Matt., v.3, 3353 (1991).
34. G.I. Japaridze, A.A. Nersesyan and P.B. Wiegmann, "*Exact results in two-dimensional U(1)-Thirring model*", Nuclear Physics B, v.230, FS10, 511, (1984).
35. G.I. Japaridze, A.A. Nersesyan and P.B. Wiegmann, "Crossover from strong-coupling regime to the weak-coupling regime in the SU(2)-symmetric Thirring model", Phys.Letters A, v.94, 254 (1983).
36. G.I. Japaridze and A.A. Nersesyan, "Excitation spectrum and low-temperature thermodynamics of one-dimensional interacting Fermi system", Phys.Letters A, v.94, 224 (1983).
37. G.I. Japaridze and A.A. Nersesyan, "*Low-temperature thermodynamics of one-dimensional interacting fermions*", Jour. Low Temp. Phys. v.47, 91 (1982).
38. G.I. Japaridze and A.A. Nersesyan, "*Magnetic properties of one-dimensional interacting fermions*", Phys.Letters A, v.87, 23 (1981).
39. G.I. Japaridze and A.A. Nersesyan, "*One dimensional electron system with attraction in magnetic field*", Jour. Low Temp. Phys., v.37, 95 (1979).
40. G.I. Japaridze and A.A. Nersesyan, "*Phase transition with respect to magnetic field in one-dimensional electron system*", Pis'ma ZhETF, v.27, 356 (1978).