

# PUBLICATIONS LIST of A. K. Kolezhuk (dated: March 20, 2011)

## [A] Preprints, papers in press:

– coming soon –

## [B] Refereed papers in research journals:

- [1] K. Rodriguez, A. Argüelles, A. K. Kolezhuk, L. Santos, and T. Vekua, *Field-induced phase transitions of repulsive spin-1 bosons in optical lattices*, arXiv:1009.3875, Phys. Rev. Lett. **106**, 105302 (2011).
- [2] Yu. A. Fridman, O.A. Kosmachev, A.K. Kolezhuk, and B.A. Ivanov, *Spin nematic and antinematic states in a spin- $\frac{3}{2}$  isotropic non-Heisenberg magnet*, Phys. Rev. Lett. **106**, 097202 (2011).
- [3] A. K. Kolezhuk and T. Vekua, *Magnetic phases of spin-3/2 fermions on a spatially anisotropic square lattice*, arXiv:1008.0598, Phys. Rev. B. **83**, 014418 (2011).
- [4] Alexei K. Kolezhuk, *Interactions in low-dimensional spinor bosonic gases*, Low Temp. Phys. (Kharkiv) **36**, 947-951 (2010).
- [5] A. K. Kolezhuk, *Stability of low-dimensional multicomponent Bose gases*, arXiv:0903.1647, Phys. Rev. A **81**, 013601 (2010).
- [6] F. Heidrich-Meisner, I. P. McCulloch, and A. K. Kolezhuk, *Anisotropic frustrated ferromagnetic spin-1/2 chain in a magnetic field*, arXiv:0908.1281, Phys. Rev. B **80**, 144417 (2009); Erratum: **81**, 179902 (2010).
- [7] A. K. Kolezhuk and I. P. McCulloch, *Field-controlled spin current in frustrated spin chains*, arXiv:0905.2157, Condensed Matter Physics **12** (No.3), pp.429-434 (2009).
- [8] A. K. Kolezhuk, *Symmetry breaking in low-dimensional SU(N) antiferromagnets*, arXiv:0808.1993, Phys. Rev. B **78**, 144428 (2008).
- [9] S. A. Zvyagin, J. Wosnitza, A. K. Kolezhuk, V. S. Zapf, M. Jaime, A. Paduan-Filho, V. N. Glazkov, S. S. Sosin, and A. I. Smirnov, *Spin dynamics of NiCl<sub>2</sub>-4SC(NH<sub>2</sub>)<sub>2</sub> in the field-induced ordered phase*, arXiv:0802.0352, Phys. Rev. B **77**, 092413 (2008).
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- [11] B. A. Ivanov, R. S. Khymyn, and A. K. Kolezhuk *Pairing of Solitons in Two-Dimensional S=1 Magnets*, arXiv:0710.4557, PHYS. REV. LETT. **100**, 047203 (2008).
- [12] A. Kolezhuk, *Circulating Current States in Bilayer Fermionic and Bosonic Systems*, arXiv:0704.1644, PHYS. REV. LETT. **99**(2), 020405 (2007).
- [13] R. K. Kaul, A. Kolezhuk, S. Sachdev, M. Levin, and T. Senthil, *Hole dynamics in an antiferromagnet across a deconfined quantum critical point*, cond-mat/0702119, Phys. Rev. B **75**(23), 235122 (2007).
- [14] V. N. Glazkov, A. I. Smirnov, A. Kolezhuk, H. Tanaka, A. Oosawa, *Low-energy dynamics of the spin-gap magnet TlCuCl<sub>3</sub> at the critical field*, J. Magn. Magn. Mater. **310** (Part2), pp. E454-E456 (2007).
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- [16] S. A. Zvyagin, J. Wosnitza, A. K. Kolezhuk, J. Krzystek, and R Feyerherm, *Electron spin resonance in S=1/2 Heisenberg chains with alternating g-tensor and the Dzyaloshinskii-Moriya interaction*, J. Magn. Magn. Mater. **310** (Part2), pp. 1209-1211 (2007).
- [17] A. Friedrich, A. K. Kolezhuk, I. P. McCulloch, and U. Schollwöck, *Edge singularities in high-energy spectra of gapped one-dimensional magnets in strong magnetic fields*, cond-mat/0611772, Phys. Rev. B **75**, 094414 (2007).
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[C] **Book contributions:**

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- [78] B.A.Ivanov and A.K.Kolezhuk. *Macroscopic quantum tunneling in magnetic nanostructures.* – cond-mat/9706292, in *Frontiers in Magnetism of Reduced Dimension Systems*, ed. by V.G.Bar’yakhtar, P.E.Wigen, and N.A.Lesnik, Vol. 49 of *NATO ASI Series 3. High Technology* (Kluwer, Dordrecht, 1998), pp. 279-309.

[D] **Papers in conference proceedings:**

- [79] B.A.Ivanov and A.K.Kolezhuk. *Simple semiclassical approach to quantum 1-D antiferromagnetism.* – In: Proc. of the 8th Int. Workshop “Nonlinear Evolution Equations and Dynamical Systems” NEEDS’92, Dubna, Russia, 6-17 July’92 (Ed. by V.Makhankov, I.Puzynin, and O.Pashaev) – World Scientific, Singapore, 1993. – pp. 313-317.
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