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Corrigendum

Corrigendum to "Pseudofermion dynamical theory for the spin dynamical correlation functions of the half-filled 1D Hubbard model" [Nucl. Phys. B 904 (2016) 39]

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We wish to report the following corrections to the article [1]. A minor misprint is the lack in the first expression given in Eq. (34) of the positive integer number n that should multiply $2\mu_B\,|h|$, the correct expression being $\varepsilon_{sn}(q_j) = \varepsilon^0_{sn}(q_j) + 2n\,\mu_B\,|h|$.

Although the first three expressions given in Eq. (44) for the quantity under consideration in that equation are correct, there is a misprint in its fourth and last expression, as the term $4t$ in it should be given by U, so that it reads $\sqrt{(4t)^2 + U^2} - U$. This misprint was not detected and propagated to some discussions: The first paragraph after Eq. (44) should be removed and in the paragraph above Eq. (126) the sentence part starting as "Due to the charge-spin recombination..." and ending as "...$\sqrt{(4t)^2 + U^2} - 4t$, the PDT..." should be replaced by "At $h = h_c$ the PDT...".

In the second expression given in Eq. (124) there is a sign error: $\xi^1_{s1,s1}/2$ should read $-\xi^1_{s1,s1}/2$, which gives $2\Delta^t_t(q) = (-\xi^1_{s1,s1}/2 + c_0\,\Phi_{s1,s1}(\iota k_{F\downarrow}, q))^2$. In spite of the expression of the exponent $\xi^t(k)$, Eq. (123) for $\tau = t$, being correct, the deviation δJ^F_{s1} in it reading $-1/2$ rather than $1/2$ is behind its negativity for $k > 0$ at any spin density m value. In the corresponding range $k \in [k_t, \pi]$ considered in the article, one thus finds that $k_t = 0$, so that the lower thresh-

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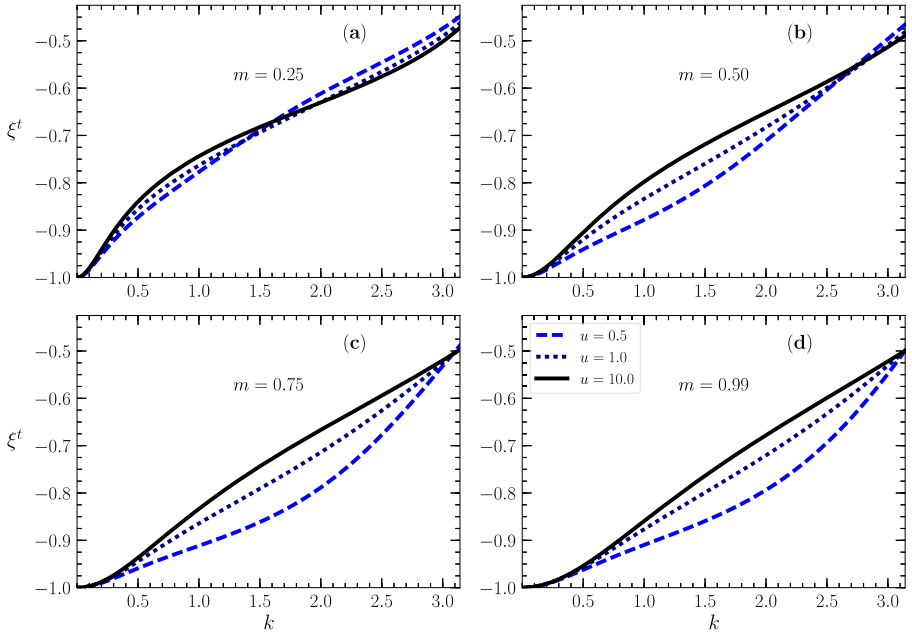

Fig. 1. The k dependence of the exponent $\xi^t(k)$, Eq. (123) with $\delta N^F_{s1} = 0$ and $\delta J^F_{s1} = -1/2$ (rather than $\delta J^F_{s1} = 1/2$), that controls the singularities in the vicinity of the lower thresholds of the transverse spin spectrum $\omega^t(k)$ plotted in Fig. 3 as a function of $k \in]0, \pi[$ for several values of u and spin densities (a) $m = 0.25$, (b) $m = 0.50$, (c) $m = 0.75$, and (d) $m = 0.99$.

old singularity cusps in the transverse spin dynamical structure factor exist for $k \in [0, \pi]$. The exponent ξ^t's plots shown here in Fig. 1 correct those in Fig. 5.

The present corrections do not affect the results presented in the article [1] other than those mentioned here.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] J.M.P. Carmelo, T. Čadež, Nucl. Phys. B 904 (2016) 39.