Corrigendum

Corrigendum to "Semigroup Maximal Functions, Riesz Transforms, and Morrey Spaces Associated with Schrödinger Operators on the Heisenberg Groups"

Hua Wang

School of Mathematics and Systems Science, Xinjiang University, Urumqi 830046, China

Correspondence should be addressed to Hua Wang; wanghua@pku.edu.cn

In the article titled "Semigroup Maximal Functions, Riesz Transforms, and Morrey Spaces Associated with Schrödinger Operators on the Heisenberg Groups" [1], there were errors in the Introduction, Definitions and Main Theorems, Boundedness of the Semigroup Maximal Functions, and Boundedness of the Riesz Transforms sections. The corrected errors are shown below:

"where $Q \coloneqq 2_n + 2$ is the homogeneous dimension of" should read "where $Q \coloneqq 2n + 2$ is the homogeneous dimension of".

"$|B(0, 1)| = 2\pi^{n+1/2\Gamma(n/2)}/(n + 1)\Gamma((n + 1)/2)$" should read "$|B(0, 1)| = 2\pi^{n+1/2}\Gamma(n/2)/(n + 1)\Gamma(n)\Gamma((n + 1)/2)$".

"we will always assume that $0 \equiv V \in B_q$ with $q \in [Q/2, \infty)$" should read "we will always assume that $0 \backslash \text{ not} \equiv V \in B_q$ with $q \in [Q/2, \infty)$".

"$L \coloneqq -\Delta_H n + V$" should read "$L \coloneqq -\Delta_{H^n} + V$".

"$(1/|B|\int_B V(w)^q dw)^{1/q} \leq C(1/|B|\int_B (w)dw)$" should read "$(1/|B|\int_B V(w)^q dw)^{1/q} \leq C(1/|B|\int_B V(w)dw)$".

"$\rho(u) \coloneqq \{r \in (0, \infty): 1/r^{Q-2}\int_{B(u,r)} V(w)dw \leq 1\}$" should read "$\rho(u) \coloneqq \sup \{r \in (0, \infty): 1/r^{Q-2}\int_{B(u,r)} V(w)dw \leq 1\}$".

"If $r = \rho(u0)$, then" should read "If $r = \rho(u_0)$, then".

"In fact, the function $H_t(u)$ stated the above exists as a solution to" should read "In fact, the function $H_t(u)$ stated above exists as a solution to".

"$R_j = X_j L^{-1/2}, R_{j+1} = Y_j L^{-1/2}, j = 1, 2, \cdots, n$" should read "$R_j = X_j L^{-1/2}, R_{j+n} = Y_j L^{-1/2}, j = 1, 2, \cdots, n$".

"$R^*_j = L^{-1/2}X_j, R^*_{j+1} = L^{-1/2}Y_j, j = 1, 2, \cdots, n$" should read "$R^*_j = L^{-1/2}X_j, R^*_{j+n} = L^{-1/2}Y_j, j = 1, 2, \cdots, n$".

"Now define the functional $\|\cdot\|_{a\bullet}$ by" should read "Now define the functional $\|\cdot\|_*$ by".

"(c) it satisfies the triangle inequality:
(ii) In view of (45)"
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(ii) In view of (45)".

"$\leq C \cdot 1/|B|^{\kappa/p}(\int_{H^n}\|f_1(u)\|^p du)^{1/p}$" should read "$\leq C \cdot 1/|B|^{\kappa/p}(\int_{H^n}|f_1(u)|^p du)^{1/p}$".

"$I_1 = (1/|B(u_0, r)|^\kappa \int_{B(u_0,r)} |T^*_L(f)(u)|^p du)^{1/p}$" should read "$I_1 = (1/|B(u_0, r)|^\kappa \int_{B(u_0,r)} |T^*_L(f_1)(u)|^p du)^{1/p}$".

"$(1/|B(u_0, r)|^\kappa) \sup_{\lambda>0} \lambda \cdot |\{u \in B(u_0, r)|T^*_L(f)(u)| > \lambda\}|$" should read "$(1/|B(u_0, r)|^\kappa) \sup_{\lambda>0}\lambda \cdot |\{u \in B(u_0, r): |T^*_L(f)(u)| > \lambda\}|$".

"$1/\|v^{-1}u^{Q-1}$" should read "$1/|v^{-1}u|^{Q-1}$".

"whenever $|h| \leq |v^{-1}u|/4/.$" should read "whenever $|h| \leq |v^{-1}u|/4.$".

"Lemma 32 was obtained by Pengtao and Lizhong in [19]," should read "Lemma 32 was obtained by Li and Peng in [19],".

"$1/\|v^{-1}u^{Q-1}$" should read "$1/|v^{-1}u|^{Q-1}$".

"$b_i\|_{L^1} \leq C\sigma|B_i|$" should read "$\|b_i\|_{L^1} \leq C\sigma|B_i|$".

"$+ |\{ u \in H^n : |R_L(b)(u)| > \sigma/2 \}| := I + II$" should read "$+ |\{ u \in H^n : |R_L(b)(u)| > \sigma/2 \}| := I + II$".

"$= 1/\sigma \sum_i r_i^{\vartheta} |b_i|_{L^1}$" should read "$= 1/\sigma \sum_i r_i^{\vartheta} \|b_i\|_{L^1}$".

"where a large enough N is chosen satisfying" should read "where N is chosen large enough satisfying".

"where $s = p_0/p$ and $1/p_0 = 1/p - 1/Q$" should read "where $s = p_0/p$ and $1/p_0 = 1/q - 1/Q$".

"where a large enough N is chosen such that" should read "where N is chosen large enough such that".

"We recall the relation $1/p_0 = 1/p - 1/Q$" should read "We recall the relation $1/p_0 = 1/q - 1/Q$".

References

[1] H. Wang, "Semigroup Maximal Functions, Riesz Transforms, and Morrey Spaces Associated with Schrödinger Operators on the Heisenberg Groups," *Journal of Function Spaces*, vol. 2020, Article ID 8839785, 22 pages, 2020.