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CORRECTION Open Access

Correction to: Renormalized self-intersection local time of bifractional Brownian motion

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1 Correction

In the publication of this article [1], there are five errors. They have now been corrected in this correction.

The error:

1. Page 2, line -2–Page 3, line 1 : "The Dirac delta function is formally

$$\delta(x) = \lim_{\varepsilon \to 0} p_\varepsilon(x) = (2\pi)^{-d} \int_{\mathbb{R}^d} \exp\{i\langle \xi, x\rangle\}\, d\xi, \tag{1.6}$$

where"

Should instead read:

"In order to give a rigorous meaning to $L(H, K, T)$, we approximate the Dirac delta function by the heat kernel".

Remark: equation number "(1.6)" in line 3 of Page 3 and line 10 of Page 4 isn't affected by the error.

The error:

2. Page 8, line 7: "$\lambda = \lambda_1 := (a+b)^{2HK}, \rho = \rho_1 := (b+c)^{2HK}$"

Should instead read:

$2^{-K}(a+b)^{2HK} \le \lambda = \lambda_1 \le 2^{1-K}(a+b)^{2HK}, 2^{-K}(b+c)^{2HK} \le \rho = \rho_1 \le 2^{1-K}(b+c)^{2HK}$.

The error:

3. Page 8, line 12: "$\lambda = \lambda_2 := (a+b+c)^{2HK}, \rho = \rho_2 := b^{2HK}$,"

Should instead read:

$2^{-K}(a+b+c)^{2HK} \le \lambda = \lambda_2 \le 2^{1-K}(a+b+c)^{2HK}, 2^{-K}b^{2HK} \le \rho = \rho_2 \le 2^{1-K}b^{2HK}$.

The error:

4. Page 8, line 18: "$\lambda = \lambda_3 := a^{2HK}, \rho = \rho_3 := c^{2HK}$"

Should instead read:

$2^{-K}a^{2HK} \le \lambda = \lambda_3 \le 2^{1-K}a^{2HK}, 2^{-K}c^{2HK} \le \rho = \rho_3 \le 2^{1-K}c^{2HK},$.

The error:

5. Page 10, Line -4–Page 11, line 6. Should instead read:

Since

$$\lambda_1 \bar{c} + \rho_1 \bar{a} \ge \frac{1}{2}(\bar{a}\bar{b} + \bar{b}\bar{c} + \bar{a}\bar{c}),$$

when k is small enough, we have

$$\begin{aligned}\delta_1 &\geq k\big[(\bar{a}+\bar{b})\bar{c}+(\bar{b}+\bar{c})\bar{a}\big]\\ &\geq k\big[\big(a^{2HK}+b^{2HK}\big)c^{2HK}+\big(b^{2HK}+c^{2HK}\big)a^{2HK}\big]\\ &\geq k\big[(a+b)^{2HK}c^{2HK}+(b+c)^{2HK}a^{2HK}\big],\end{aligned}$$

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References

1. Chen, Z., Sang, L., Hao, X.: Renormalized self-intersection local time of bifractional Brownian motion. J. Inequal. Appl. **2018**, 326 (2018). https://doi.org/10.1186/s13660-018-1916-3