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# CORRECTION



# 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

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

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

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



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when k is small enough, we have

$$\begin{split} \delta_{1} &\geq k \big[ (\bar{a} + \bar{b}) \bar{c} + (\bar{b} + \bar{c}) \bar{a} \big] \\ &\geq k \big[ (a^{2HK} + b^{2HK}) c^{2HK} + (b^{2HK} + c^{2HK}) a^{2HK} \big] \\ &\geq k \big[ (a + b)^{2HK} c^{2HK} + (b + c)^{2HK} a^{2HK} \big], \end{split}$$

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### References

 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