The Annals of Applied Probability
2011, Vol. 21, No. 5, 2050–2051
DOI: 10.1214/11-AAP775

CORRECTIONS

OCCUPATION AND LOCAL TIMES FOR SKEW BROWNIAN MOTION WITH APPLICATIONS TO DISPERSION ACROSS AN INTERFACE

Ann. Appl. Probab. **21** (2011) 183–214

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The nonnegative parameter $\gamma = |(2\alpha - 1)v|$ appearing in the formula for the transition probabilities for α-skew Brownian motion with drfit v in Theorem 1.3 should be replaced by the parameter $\gamma = (2\alpha - 1)v \in (-v, v)$. The formula is then correct, as can be checked by (tedious) differentiations for the backward equation and interface condition in the backward variable x. However, it is only in the cases when $(2\alpha - 1)v \geq 0$ that the probabilistic interpretation of γ as a skew-elasticity parameter applies.

In addition, the corrected display to Corollary 3.3 that follows from integration of the formula in Corollary 1.2 giving the trivariate density is as follows:

COROLLARY 3.3. *If $x \geq 0$ we have*

$$P_x\left(B_t^{(\alpha)} \in dy, \ell_t^{(\alpha)} \in d\ell\right)$$

$$= \begin{cases} \dfrac{2(1-\alpha)(l-y+x)}{\sqrt{2\pi t^3}} \exp\left\{-\dfrac{(l-y+x)^2}{2t}\right\} dy\,dl, & \\ & \text{if } y \leq 0, l \geq 0, \\ \dfrac{2\alpha(l+y+x)}{\sqrt{2\pi t^3}} \exp\left\{-\dfrac{(l+y+x)^2}{2t}\right\} dy\,dl & \\ \quad + \dfrac{1}{\sqrt{2\pi t}}\left[\exp\left\{-\dfrac{(y-x)^2}{2t}\right\}\right. & \\ \qquad \left. - \exp\left\{-\dfrac{(y+x)^2}{2t}\right\}\right]\delta_0(dl)\,dy, & \text{if } y \geq 0, l \geq 0, \end{cases}$$

Received March 2011.
MSC2010 subject classifications. Primary 60K35, 60K35; secondary 60K35.
Key words and phrases. Skew Brownian motion, advection-diffusion, local time, occupation time, elastic skew Brownian motion, stochastic order, first passage time.

whereas if $x \le 0$, *then*

$$P_x\big(B_t^{(\alpha)} \in dy, \ell_t^{(\alpha)} \in d\ell\big)$$

$$= \begin{cases} \dfrac{2\alpha(l+y-x)}{\sqrt{2\pi t^3}} \exp\left\{-\dfrac{(l+y-x)^2}{2t}\right\} dy\, dl, & \\ & \text{if } y \ge 0, l \ge 0, \\ \dfrac{2(\alpha-1)(l-y-x)}{\sqrt{2\pi t^3}} \exp\left\{-\dfrac{(l-y-x)^2}{2t}\right\} dy\, dl & \\ \quad + \dfrac{1}{\sqrt{2\pi t}}\left[\exp\left\{-\dfrac{(y-x)^2}{2t}\right\}\right. & \\ \qquad \left. - \exp\left\{-\dfrac{(y+x)^2}{2t}\right\}\right]\delta_0(dl)\, dy, & \text{if } y \le 0, l \ge 0. \end{cases}$$

Acknowledgments. The authors are grateful to Pierre Etoré and Miguel Martinez for sharing their preprint Etoré and Martinez (2011), who pointed out these mistakes. In particular, the formula with $(2\alpha - 1)v$ in place of $|(2\alpha - 1)v|$ is given in Proposition 4.1 of their paper.

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