



Erratum

Erratum to “Triangular array limits for continuous time random walks” [Stochastic Process. Appl. 118 (9) (2008) 1606–1633]

Mark M. Meerschaert^{a,*}, Hans-Peter Scheffler^b

^a Department of Statistics & Probability, Michigan State University, East Lansing, MI 48824, USA

^b Fachbereich Mathematik, Universität Siegen, 57068 Siegen, Germany

Received 23 August 2010; accepted 23 August 2010

Available online 9 September 2010

The CTRW limit process should be $M(t) = A(E(t)-)$ throughout the paper [2], not $A(E(t))$. Unless $A(t)$ and $D(t)$ are independent, this is a different process. To clarify the argument in Lemma 3.7, note that (here $q_h(s, t) = P\{A(s) \in S | s < E(t) \leq s + h\}$)

$$\lim_{h \downarrow 0} q_h(s, t) = P\{A(s-) \in S | E(t) = s\} \quad \text{for } \lambda^1\text{-almost every } s \geq 0$$

since $s < E(t)$ in the conditioning event, and hence in (3.33) one should write (here $f(s, t)$ is the density of $E(t)$)

$$\begin{aligned} \frac{1}{h} P\{A(s) \in S, s < E(t) \leq s + h\} &= q_h(s, t) \frac{1}{h} P\{s < E(t) \leq s + h\} \\ &\rightarrow P\{A(s-) \in S | E(t) = s\} f(s, t) \end{aligned} \quad (1)$$

and not $P\{A(s) \in S | E(t) = s\} f(s, t)$ as stated in the paper. For example, consider the case $A(t) = D(t)$, a stable subordinator, and $E(t) = \inf\{x > 0 : A(x) > t\}$, its inverse or first-passage-time process. Then $A(E(t)-) < t$ and $A(E(t)) > t$ almost surely for any $t > 0$, by Bertoin [1, III, Theorem 4], and it is clear from (3.24) that $M(t) < t$ almost surely.

DOI of original article: [10.1016/j.spa.2007.10.005](https://doi.org/10.1016/j.spa.2007.10.005).

* Corresponding author.

E-mail addresses: mcubed@stt.msu.edu (M.M. Meerschaert), scheffler@mathematik.uni-siegen.de (H.-P. Scheffler).

URLs: <http://www.stt.msu.edu/~mcubed/> (M.M. Meerschaert), <http://www.stat.math.uni-siegen.de/~scheffler/> (H.-P. Scheffler).

References

- [1] J. Bertoin, Lévy Processes, Cambridge University Press, 1996.
- [2] M.M. Meerschaert, H.P. Scheffler, Triangular array limits for continuous time random walks, *Stochastic Process. Appl.* 118 (9) (2008) 1606–1633. doi:[10.1016/j.spa.2007.10.005](https://doi.org/10.1016/j.spa.2007.10.005).