

**Corrections to “Lévy Processes in Euclidean Spaces  
and Groups” - by D.Applebaum *May 2005***

8,+ 2 Change  $C_0(\mathbb{R}^d)$  to  $C_c(\mathbb{R}^d)$ .

9, +14 and 15 Change  $\sum_{n=0}^{\infty} e$  to  $\sum_{n=0}^{\infty} \mathbb{E}$

10,-8 Change  $\{e\}$  to  $\{0\}$ .

11, +17 Insert i.i.d. between “real-valued” and “random”.

14, +8 Note that this is the correct formula only in the rotationally invariant case. For the general case see Sato, p. 78 - equation (14.4).

23,+2 The right hand side should be

$$\exp \left[ -t \int_0^{\infty} (1 - e^{-ux}) ax^{-1} e^{-bx} dx \right].$$

24,+11 Replace  $-s(-\eta_X(u))$  with  $s\eta_X(u)$ .

24,+12 Replace  $\eta_X(u)$  with  $(-\eta_X(u))$ .

26,+12 Delete “on  $B_b(\mathbb{R}^d)$ ” and replace with “from  $B_b(\mathbb{R}^d)$  to the Banach space (under the supremum norm) of all bounded functions on  $\mathbb{R}^d$ .”

26,+16 After “ $B_b(\mathbb{R}^d)$ .”, insert “We say that the Markov process  $X$  is *normal* if  $T_{s,t}(B_b(\mathbb{R}^d)) \subseteq B_b(\mathbb{R}^d)$ , for each  $0 \leq s \leq t < \infty$ .”

26,+17 After Theorem 4.2., insert “If  $X$  is a normal Markov process, then”

27,+4 Delete “We say that a Markov process is normal if” and replace with “It follows that a Markov process is normal if and only if”.

30,-15 Delete “ $\hat{f} \in L^1(\mathbb{R}^d, \mathbb{C})$ ” and replace with “ $\hat{f} \in C_0(\mathbb{R}^d, \mathbb{C})$ ”.

30,-12, Change “on” to “from”.

30,-11 Insert “to  $C_0(\mathbb{R}^d, \mathbb{C})$  before “which”.

- 41, -5 Replace  $(\mathbb{R}^d \times \mathbb{R}^d) - D$  with  $\mathbb{R}^d \times (\mathbb{R}^d - \{0\})$ .
- 42,-7 Replace  $\eta(u)$  with  $\text{Re}(\eta(u))$ .
- 49,+8 On rhs, replace  $\int_A (e^{i(u,x)} - 1)\mu_f(dx)$  with  $\int_{\mathbb{R}^d} (e^{i(u,x)} - 1)\mu_{f,A}(dx)$
- 49,+9 Replace “ $\mu_f = \mu \circ f^{-1}$ ” with “ $\mu_{f,A}(B) = \mu(A \cap f^{-1}(B))$ , for each  $B \in \mathcal{B}(\mathbb{R}^d)$ .”
- 50, +12 rhs of (8.2), replace  $\int_A$  with  $\int_{\mathbb{R}^d}$  and  $\mu_f$  with  $\mu_{f,A}$ .
- 56,-11 Replace  $\mu$  with  $\nu$ .
- 62,+4 In the final term, replace  $t \wedge W(T_{n-1}^A)$  with  $W(t \wedge T_{n-1}^A)$ .
- 67,-12 Change  $M(t)$  to  $M(t) - M(s)$  on left hand side.