

## Bernstein Functions: Theory and Applications (1st edition)

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by

*René Schilling, Renming Song, Zoran Vondraček*

List of misprints and smaller additions for the 1st edition. Date: June 29, 2017.

PAGE, LINE	READS	SHOULD READ
<b>p. 20, l. 14 below</b>	$(1 - e^{-\lambda t})/\lambda = \int_0^1 e^{-\lambda s} ds$	$(1 - e^{-\lambda t})/\lambda = \int_0^t e^{-\lambda s} ds$
<b>p. 32, l. 16 below</b>	Lemma 4.6	Corollary 4.6
<b>p. 40, l. 9 below</b>	$\alpha \in [0, 1]$	$\alpha \in (0, 1]$
<b>p. 40, l. 2 below</b>	$\alpha \in [0, 1]$	$\alpha \in (0, 1]$
<b>p. 41, l. 15 above</b>	$\alpha \in [0, 1]$	$\alpha \in (0, 1]$
<b>p. 42, l. 8 above</b>	$\alpha \in \mathbb{R}$	$\alpha \in \mathbb{R} \setminus \{0\}$
<b>p. 42, l. 15 above</b>	$0 < \alpha \leq 1$	$0 < \alpha < 1$
		<i>An additional comment:</i> If $\alpha = 1$ the two integrations lead to $f(\lambda) = f''(1)(\lambda \log \lambda - \lambda) + f''(1)C\lambda$ . Since this function grows faster than any linear function, this is not a Bernstein function, ruling out the case $\alpha = 1$ .
<b>p. 42, l. 13 below</b>	$f(\lambda) := \log g(\lambda)$	$f(\lambda) := -\log g(\lambda)$
		<i>continues on next page</i>

PAGE, LINE	READS	SHOULD READ
p. 53, l. 2 above (6.2)	$\frac{2}{\pi} \int_{-\infty}^{\infty} \cdots ds$	$-\frac{2}{\pi} \int_{-\infty}^{\infty} \cdots ds$
p. 54, l. 6 above	$\frac{2}{\pi} \int_{-\infty}^{\infty} \cdots ds$	$-\frac{2}{\pi} \int_{-\infty}^{\infty} \cdots ds$
p. 54, l. 15 above	$\int_{-\infty}^{\infty} \cdots \rho(ds)$	$-\int_{-\infty}^{\infty} \cdots \rho(ds)$
p. 59, l. 11 below	and $\rho'$ is a measure on $(0, \infty)$ such that $\rho'[1, \infty) < \infty$ .	and $\rho'$ is a measure on $[0, \infty)$ such that $\rho'[0, \infty) < \infty$ .
p. 60, l. 10 above	$\mathcal{CBF} \cap \{f : f(0+) > 0\} = e^{\mathbb{R} + \mathcal{CBF}} = (0, \infty) \times e^{\mathcal{CBF}}$ .	$\mathcal{CBF} \cap \{f : f(0+) > 0\} \subset e^{\mathbb{R} + \mathcal{CBF}} = (0, \infty) \times e^{\mathcal{CBF}}$ .
p. 60, l. 15 above	whereas $k \in \mathcal{CM}$ if $f \in \mathcal{CBF}$ .	whereas $k \in \mathcal{BF}$ if $f \in \mathcal{CBF}$ .
p. 64, l. 18 below	$m(t) = \mathcal{L}(s\sigma(s); dt)$	$m(t) = \mathcal{L}(s\sigma(s); t)$
p. 79, l. 4 above	Bonedesson	Bondesson
p. 89, l. 6 above	$\log\left(1 + \frac{\lambda}{a_n}\right) - \log\left(1 + \frac{\lambda}{b_n}\right)$	$\log\left(1 + \frac{\lambda}{b_n}\right) - \log\left(1 + \frac{\lambda}{a_n}\right)$ (i.e. sign error)
p. 116, l. 4 above	$f(-A)$	$f(-A)u$
p. 129, l. 6 above	matrix monotone function $f$	matrix monotone functions $f$
p. 140, l. 5 below	$T_{t-s}^B(B - A)T_s^A$	$T_{t-s}^B(A - B)T_s^A$
p. 150, l. 16 below,	$\Im[(f(z) - f_k(z))/f(z)]$	$\Im[(f(z) - f_k(z))/f_k(z)]$
p. 155, l. 7 above	$= f(s) \int_0^{1/s} u(t) dt + \int_{1/s}^{\infty} (u(t - 1/s) - u(t)) dt$	$= f(s) \left[ \int_0^{1/s} u(t) dt + \int_{1/s}^{\infty} (u(t - 1/s) - u(t)) dt \right]$

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PAGE, LINE	READS	SHOULD READ
<b>p. 157, l. 4 above</b>	$f, g \in \mathcal{BF}$	$f, g \in \mathcal{SBF}$
<b>p. 161, l. 9 below</b>	$\mathcal{E}_\beta(u, v) := \mathcal{E}(u, v) + \langle u, v \rangle_{L^2}$	$\mathcal{E}_\beta(u, v) := \mathcal{E}(u, v) + \beta \langle u, v \rangle_{L^2}$
<b>p. 168, l. 7 above</b>	$h \in L^\infty(D, \mathcal{C}, m)$	$h \in L^1(D, \mathcal{C}, m)$
<b>p. 168, l. 9–13 below</b>	<p>On the other hand, for every <math>x \in D</math>, we have</p> $\left( P_{t/2}^{f,D} g(x) - P_{t/2}^{f,D} g_{n_j, K}(x) \right)^2 = \left( \int_D p^{f,D}(t/2, x, y) (g(y) - g_{n_j, K}(y)) m(dy) \right)^2 \leq 4K^2.$ <p>Thus by the weak convergence of the sequence <math>(g_{n_j, K})_{j \in \mathbb{N}}</math> and the dominated convergence theorem we get that <math>P_{t/2}^{f,D} g_{n_j, K}(x) \xrightarrow{j \rightarrow \infty} P_{t/2}^{f,D} g(x)</math> for every <math>x \in D</math>.</p>	<p>On the other hand, for every <math>x \in D</math>, we have</p> $P_{t/2}^{f,D} g(x) - P_{t/2}^{f,D} g_{n_j, K}(x) = \int_D p^{f,D}(t/2, x, y) (g(y) - g_{n_j, K}(y)) m(dy).$ <p>Thus by the weak convergence of the sequence <math>(g_{n_j, K})_{j \in \mathbb{N}}</math> and the fact that <math>p^{f,D}(t/2, x, \cdot)</math> is integrable, we get that <math>P_{t/2}^{f,D} g_{n_j, K}(x) \xrightarrow{j \rightarrow \infty} P_{t/2}^{f,D} g(x)</math> for every <math>x \in D</math>.</p>
<b>p. 179, l. 5 above</b>	harmonic function	harmonic functions
<b>pp. 201–2, header of table</b>	$A = \frac{d}{dm} \frac{d}{dx}$	$A = \frac{d}{dm} \frac{d}{ds}$
<b>p. 201, before table</b>	<i>insert the following text before the table</i> $\longrightarrow$	<p>Let <math>Y = (Y_t)_{t \geq 0}</math> be a reflected diffusion on <math>[0, \infty)</math> with the speed measure <math>m</math> and the scale function <math>s</math> normalized such that <math>s(0) = 0</math>. The infinitesimal generator of <math>Y</math> is <math>\frac{d}{dm} \frac{d}{ds}</math>. The process <math>s(Y) = (s(Y_t))_{t \geq 0}</math> is also a reflected diffusion on <math>[0, \infty)</math> having the same local time at 0 as <math>Y</math>. Therefore, the Laplace exponents of the inverse local times coincide. Let <math>\tilde{m} = m \circ s^{-1}</math>. The generalized diffusion <math>X</math> corresponding to the string <math>\tilde{m}</math> and the process <math>s(Y)</math> have the same infinitesimal generator <math>A = \frac{d}{d\tilde{m}} \frac{d}{dx}</math>. This shows that functions in the left column of the table below are densities of Lévy measures of the inverse local time at zero of generalized diffusions.</p>
<b>p. 252, entry 78</b>	Theorem 1.3 of [211], 5.15(9) of [91]	Theorem 1.3 of [211], 5.15(8), (9) of [91]

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<b>p. 302, item [193]</b>	On sojurn times, ...	On sojourn times, ...

We would like to thank the following readers for their comments and their contributions to this list:

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