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Errata: On the Rate of Convergence to the Normal Law for Solutions of the Burgers Equation with Singular Initial Data[1]

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The following minor mistakes in our paper should be corrected.

On page 919, Eq. (27),

$$X(a) = -\frac{1}{i}\left[\frac{2}{\Gamma(\alpha+1)\cos(\alpha\Pi/2)}\right]^{1/2}\int_{-\infty}^{+\infty} e^{i\lambda a} g(\lambda)\, W(d\lambda)$$

should be replaced by

$$X(a) = -\frac{1}{i}\left[\frac{\alpha/2}{\Gamma(\alpha+1)\cos(\alpha\Pi/2)}\right]^{1/2}\int_{-\infty}^{+\infty} e^{i\lambda a} g(\lambda)\, W(d\lambda)$$

On p. 919, Eq. (3.1),

$$\Delta_t = \sup_{-\infty < z < +\infty}\left|P\left\{\frac{1}{\sigma}\tilde{X}_t(a) \leqslant z\right\} - \Phi(z)\right|, \qquad \sigma_2 = R(a, a)$$

and the subsequent "where $\tilde{X}_t(a)$, $a \in \mathbb{R}^1$, is defined by (2.5), $\Phi(z)$ is defined by (2.4), and $R(a, b)$ is defined by (2.6)," should be replaced by

$$\Delta_t = \sup\left|P\left\{\frac{1}{\sigma}\tilde{X}_t(a) \leqslant z\right\} - \Phi(z)\right|$$

where $\tilde{X}_t(a)$, $a \in \mathbb{R}^1$, is defined by (2.5), $\Phi(z)$ is defined by (2.4), and

$$\sigma^2 = \sigma_t^2 = (2\mu)^{-1-(\alpha/2)}\int_{A(a,t)}\int_{A(a,t)} \frac{w_1 w_2 \phi(w_1)\,\phi(w_2)\, L(|w_1 - w_2|\sqrt{2\mu t})}{|w_1 - w_2|^\alpha L(\sqrt{t})}\, dw_1\, dw_2$$

$$A(a, t) = \left[\frac{a}{(2\mu)^{1/2}} - \left(\frac{t}{2\mu}\right)^{1/2}, \frac{a}{(2\mu)^{1/2}} + \left(\frac{t}{2\mu}\right)^{1/2}\right]$$

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On p. 924, the find line of (3.9), instead of

$$=\frac{L(\sqrt{t})}{t^{\alpha/2}}K_t\frac{1}{(\sqrt{2\mu})^{\alpha/2}C_1^2}\sum_{k=2}^{\infty}\frac{C_k^2}{k!}$$

one should have

$$=\frac{L(\sqrt{t})}{t^{\alpha/2}}K_t\frac{1}{(2\mu)^{\alpha/2}C_1^2}\sum_{k=2}^{\infty}\frac{C_k^2}{k!}$$

On p. 925, line 4, instead of

$$\times\left[\int_{-\infty}^{\infty}\int_{-\infty}^{\infty}w_1w_2\varphi(w_1)\,\varphi(w_2)\,\frac{dw_1\,dw_2}{|w_1-w_2|^{\alpha}}\right]^{-1}$$

one should have

$$\times\left[\int_{A(a,t)}\int_{A(a,t)}w_1w_2\varphi(w_1)\,\varphi(w_2)\,\frac{L(|w_1-w_2|\sqrt{2\mu t})}{L(\sqrt{t})}\,\frac{dw_1\,dw_2}{|w_1-w_2|^{\alpha}}\right]^{-1}$$

On p. 928, the second line of (3.20), instead of

$$\leqslant\frac{1}{\varepsilon^2}\left\{\frac{\theta^2M_t(\alpha)\,L(\sqrt{t})}{t^{\alpha/2}}+c_4Q_t\right\},\qquad c_4=\text{const}>0$$

one should have

$$\leqslant\frac{1}{\varepsilon^2}\left\{\frac{\theta^2M_t(\alpha)\,L(\sqrt{t})}{t^{\alpha/2+2}(2\mu)^{\alpha/2}}+c_4Q_t\right\},\qquad c_4=\text{const}>0$$

On p. 928, line 10, instead of

$$\varepsilon=\frac{L^{1/3}(\sqrt{t})}{t^{\alpha/6}}\left(1+\frac{1}{\sqrt{2}}\right)^{-1/3}(2\mu)^{-\alpha/6}\left(2c_2K_t+\frac{M_t(\alpha)}{2\mu^2}\right)^{1/3}$$

one should have

$$\varepsilon=\frac{L^{1/3}(\sqrt{t})}{t^{\alpha/6}}\left(1+\frac{1}{\sqrt{2\pi}}\right)^{-1/3}(2\mu)^{-\alpha/6}\theta^{2/3}\left(2c_2K_t+\frac{M_t(\alpha)}{2\mu^2}\right)^{1/3}$$

On p. 928, line 12, instead of

$$\Delta_t\leqslant\frac{L^{1/3}(\sqrt{t})}{t^{\alpha/6}}\left[v_1^{2/3}v_2^{1/3}+\frac{v_1^{2/3}v_2^{1/3}}{2}+\frac{t^{\alpha/2}}{L(\sqrt{t})}(R_tc_5+c_6Q_t)\right]$$

one should have

$$\Delta_t \leqslant \frac{L^{1/3}(\sqrt{t})}{t^{\alpha/6}} \left[v_1^{2/3} \tilde{v}_2^{1/3} + \frac{v_1^{2/3} \tilde{v}_2^{1/3}}{2} + \frac{t^{\alpha/2}}{L(\sqrt{t})} (R_t c_5 + c_6 Q_t) \right]$$

where

$$\tilde{v}_2 = \theta^2 (2\mu)^{2-\alpha/2} \left\{ 2K_t \left[e^{1/(2\mu^2)} - \left(1 + \frac{1}{4\mu^2}\right) e^{1/(4\mu^2)} \right] e^{-1/(4\mu^2)} + \frac{M_t(\alpha)}{8\mu^4} \right\}$$