scientific reports

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Author Correction: Radiation effects on 3D rotating flow of Cu-water nanoliquid with viscous heating and prescribed heat flux using modified Buongiorno model

Published online: 11 November 2021

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Correction to: *Scientific Reports* https://doi.org/10.1038/s41598-021-00107-x, published online 19 October 2021

The original version of this Article contained errors.

Firstly, the original version of this Article contained an error in Affiliation 2, which was incorrectly given as 'Department of Mathematics, Center for Mathematical Needs, CHRIST (Deemed to be University), Bangalore, Karnataka 560029, India.'

The correct affiliation is listed below:

Center for Mathematical Needs, Department of Mathematics, CHRIST (Deemed to be University), Bangalore, Karnataka 560029, India.

Additionally, the original version of this Article contained errors in the equations.

In the Mathematical formulation section,

$$\left.\begin{aligned} &w = v = 0, u = u(x) = ax, -k_{nl}\left(\frac{\partial T}{\partial z}\right) = q_w, C = C_w \; at \; z = 0, \\ &v = 0, u = 0, T = T_\infty, C = C_\infty \; as \; z \to \infty \end{aligned}\right\} \tag{9}$$

now reads:

$$\left.\begin{aligned} &w = v = 0, u_w = u(x) = ax, -k_{nl}\left(\frac{\partial T}{\partial z}\right) = q_w, C = C_w \; at \; z = 0, \\ &v = 0, u = 0, T = T_\infty, C = C_\infty \; as \; z \to \infty \end{aligned}\right\} \tag{9}$$

$$\begin{aligned} &\zeta = z\sqrt{\frac{u}{xv_l}}, u = axf'(\zeta), v = axg(\zeta), w = -\sqrt{v_l a} f(\zeta) \\ &T = \left(T_w - T_\infty\right)\theta(\zeta) + T_\infty, C = \left(C_w - C_\infty\right)\Theta(\zeta) + C_\infty \end{aligned} \tag{13}$$

now reads:

$$\begin{aligned} &\zeta = z\sqrt{\frac{u_w}{xv_l}}, u = axf'(\zeta), v = axg(\zeta), w = -\sqrt{v_l a} f(\zeta) \\ &T = \left(T_w - T_\infty\right)\theta(\zeta) + T_\infty, C = \left(C_w - C_\infty\right)\Theta(\zeta) + C_\infty \end{aligned} \tag{13}$$

$$\frac{\Psi_4 + Rd}{Pr}\theta'' + \Psi_3 f\theta' + Nb\Theta'\theta' + Nt\theta'^2 + \Psi_2 Ec\left(\left(f''\right)^2 + \left(g'\right)^2\right) = 0, \tag{16}$$

now reads:

$$\frac{\Psi_4 + Rd}{Pr}\theta'' + \Psi_3 f\theta' + Nb\Theta'\theta' + Nt\theta'^2 + \Psi_2 Ec\left[\left(f''\right)^2 + \left(g'\right)^2\right] = 0, \tag{16}$$

$$\left.\begin{array}{l} f = 0, g = 0, f' = 1, \theta' = \frac{-1}{\Psi_4}, \Theta = 1 \; at \; \zeta = 0 \\ f' = 0, f = 0, \theta = 0, \Theta = 0 \; as \; \zeta \to \infty. \end{array}\right\} \tag{18}$$

now reads:

$$\left.\begin{array}{l} f = 0, g = 0, f' = 1, \theta' = \frac{-1}{\Psi_4}, \Theta = 1 \; at \; \zeta = 0 \\ f' = 0, g = 0, \theta = 0, \Theta = 0 \; as \; \zeta \to \infty. \end{array}\right\} \tag{18}$$

"The expressions of dimensionless local friction factors (Sf_x&Sf_y), local Nusselt number $\left(Nu_x\right)$ and local Sherwood number $\left(Sh_x\right)$ are

$$\begin{aligned} Re_x^{0.5} Sf_x &= \Psi_2 f''(0), \\ Re_x^{0.5} Sf_y &= \Psi_2 g'(0), \\ Re_x^{-0.5} Nu_x &= -\frac{\Psi_4(1 + Rd)}{\theta(0)}, \\ Re_x^{-0.5} Sh_x &= -\Theta'(0) \end{aligned} \tag{19}$$

where $Re_x = \frac{ux}{\nu_l}$ is local Reynolds number."

now reads:

"The expressions of dimensionless local friction factors (Sf_x&Sf_y), local Nusselt number $\left(Nu_x\right)$ and local Sherwood number $\left(Sh_x\right)$ are

$$\begin{aligned} Re_x^{0.5} Sf_x &= \Psi_2 f''(0), \\ Re_x^{0.5} Sf_y &= \Psi_2 g'(0), \\ Re_x^{-0.5} Nu_x &= -\frac{\Psi_4(1 + Rd)}{\theta(0)}, \\ Re_x^{-0.5} Sh_x &= -\Theta'(0) \end{aligned} \tag{19}$$

where $Re_x = \frac{xu_w}{\nu_l}$ is local Reynolds number."

$$y_5' = -\frac{\Psi_2}{\Psi_1}\left(2Roy_2 + y_2 y_4 - y_1 y_5\right), \tag{24}$$

now reads:

$$y_5' = \frac{\Psi_2}{\Psi_1}\left(2Roy_2 + y_2 y_4 - y_1 y_5\right), \tag{24}$$

$$y_7' = \frac{-\Pr\left\{\Psi_3 y_1 y_7 + Nby_7 y_9 + Nt\left(y_7\right)^2 + \Psi_2 Ec\left(x_3^2 + x_2^2\right)\right\}}{\Psi_4 + Rd}, \tag{26}$$

now reads:

$$y_7' = \frac{-\Pr\left\{\Psi_3 y_1 y_7 + Nby_7 y_9 + Nt\left(y_7\right)^2 + \Psi_2 Ec\left(y_3^2 + y_5^2\right)\right\}}{\Psi_4 + Rd}, \tag{26}$$

$$y_9' = -LePry_1 y_{10} + \left(\frac{Nt}{Nb}\right)\left(\frac{\Pr\left\{\Psi_3 y_1 y_7 + Nby_7 y_9 + Nt\left(y_7\right)^2 + \Psi_2 Ec\left(x_3^2 + x_2^2\right)\right\}}{\Psi_4 + Rd}\right), \tag{28}$$

now reads:

$$y_9' = -LePry_1 y_9 + \left(\frac{Nt}{Nb}\right)\left(\frac{\Pr\left\{\Psi_3 y_1 y_7 + Nby_7 y_9 + Nt\left(y_7\right)^2 + \Psi_2 Ec\left(y_3^2 + y_5^2\right)\right\}}{\Psi_4 + Rd}\right), \tag{28}$$

Finally, in the Numerical technique section, under the subheading 'Interpretation of the Outcomes',

"A diminishing trend of nanoparticle concentration ($\Theta(\zeta)$) is perceived for advanced values of Nb, while, an opposite trend is observed for temperature ($\theta(\zeta)$) profile."

now reads:

"A diminishing trend of nanoparticle volume fraction ($\Theta(\zeta)$) is perceived for advanced values of Nb, while, an opposite trend is observed for temperature ($\theta(\zeta)$) profile."

The original Article has been corrected.