

This pages lists all current corrections to the submitted version of my PhD thesis, “Slip boundary layer flow stability analysis and micro-plasma jet end flow modelling.” Corrections of mathematical consequence, equation explanations are listed, including typos in the content which could cause confusion, and typos in the references.

Location	Error	Correction
Page 9, Eqn. 1.5	$\bar{c}_j, \bar{c}_k, \bar{c}_0, \bar{c}_n, \bar{c}_N$	c_j, c_k, c_0, c_n, c_N
Page 19, Eqn. 2.5	missed equation for G	add “ $G(\eta) = e^{-\text{Pr} \int_0^\eta f(\epsilon) d\epsilon}$, <i>where the f is the non-dimensional expression of velocity, g is the non-dimensional expression of temperature, K_1 is the slip coefficient, K_2 is the temperature jump coefficient, ρ is the fluid/gas density, ξ is the non-dimensional similarity variable, $g_w = 1 + r \frac{U_e^2}{2T_e C_p}$, C_p is the specific heat at constant pressure, $r = 2\text{Pr} \int_0^\infty G \left(\int_0^\eta \frac{f'^2}{G} d\psi \right) d\xi$.”</i>
Page 19, Eqn. 2.6	missed equation description	add “ <i>where $\eta = y\sqrt{U_e^*/2\nu^*x^*}$, $*$ stands for dimensional parameters, the subscript “e” represents the properties at the BL edge, U_e^* is the edge u-velocity, ν^* is the kinematic viscosity, and x^* is the streamwise observation location.</i> ”
Page 22, Eqn. 2.15	repeated definition of G	$G(\eta) = e^{-\text{Pr} \int_0^\eta f(\epsilon) d\epsilon}$
Page 30	... instabilities may happen instabilities may <i>have higher chances to appear</i> ...
Page 53	The last five rows of the matrix $[M]$ are ...	<i>Similarly, BCs of $\tilde{v}, \tilde{p}, \tilde{T}, \tilde{w}$ are in the next four rows in matrix $[M]$. At the free stream,</i> the last five rows of the matrix $[M]$ are ...
Page 54	\tilde{N} i.e., $\hat{u}(e) = \hat{v}(e) = \hat{T}(e) = \hat{w}(e) = 0$.	$[N]$ i.e., $\hat{u}(\infty) = \hat{v}(\infty) = \hat{T}(\infty) = \hat{w}(\infty) = 0$.

Continued

Location	Error	Correction
Page 76	$\Omega = [1.75, 2.12]$, and $\Omega = [1.50, 2.18]$	$\Omega \in [1.75, 2.12]$, and $\Omega \in [1.50, 2.18]$
Page 78	For micro-plasmas adopted in space propulsion ...	For <i>many plasma plume flows from Electric Propulsion (EP) devices</i> ...
Page 84	...second problem of a quasi-neutral and collisionless jet second problem of a <i>dilute micro-plasma jet</i> ...
Page 90	$\nabla(n_e k T_e) = e \nabla \phi$... as well to compute temperature field, <u>Method A.</u> The potential and temperature ...	$\nabla(n_e k T_e) = e n_e \nabla \phi$ as well to compute <i>electron</i> temperature field, <u>Method A.</u> The potential and <i>electron</i> temperature ...
Page 93	... and chain rule for derivations, and chain rule <i>partial derivatives</i> , ...
Page 103	... adopted as for granted (e.g., [117]).	... adopted as for granted (e.g., <i>the Simons plume model</i> [117]).
Page 108	... is almost the same as $E_x \alpha_0$, ... at large <i>alpha</i> ₀ is very strong	... is almost the same as $E_x(\alpha_0)$, ... at large α_0 is very strong
Page 123, [4]	pp. 115, 2018	<i>vol. 57, no. 4, pp. 1552-1565</i> , 2018
Page 123, [8]	freeman scholar lecture	<i>Freeman Scholar Lecture</i>
Page 137, [101]	... of a gaussian plasma of a G aussian plasma ...
Page 139, [112]	... taylor cone-jet T aylor cone-jet ...