













$Wc$	maximum cell swimming speed
$a_1, a_2, a_3, a_4$	constants
<b>Greek symbols</b>	
$\eta$	dimensionless similarity variable
$\sigma$	electrical conductivity
$\theta$	dimensionless temperature
$\phi$	dimensionless nanoparticle volume fraction
$\mu$	dynamic viscosity
$\nu$	kinematic viscosity
$\rho_f$	nanofluid density
$(\rho c)_f$	heat capacity of the fluid
$(\rho c)_p$	heat capacity of the nanoparticle material

$\lambda$	stretching/shrinking parameter
$\psi$	stream function
$\alpha$	thermal diffusivity of the nanofluid
$\Delta C$	characteristic nanoparticle volume fraction
$\Delta N$	characteristic motile microorganisms density difference
$\tau$	ratio of the effective heat capacity of the nanoparticle to that of the fluid

**Subscripts**

$\infty$	condition at free stream
w	condition at the surface

**Superscripts**

'	differentiation with respect to $\eta$
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