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## NOMENCLATURE

$a$	thermal diffusivity, $\text{m}^2.\text{s}^{-1}$
$C_p$	specific heat at constant pressure, $\text{J.kg}^{-1}.\text{K}^{-1}$
$g$	gravitational acceleration, $\text{m.s}^{-2}$
$\tilde{Gr}$	Grashof number

$k$	thermal conductivity, $\text{W.m}^{-1}.\text{K}^{-1}$
$H$	channel width, m
$L$	channel length, m
$Nu$	Nusselt number
$\overline{Nu}$	average Nusselt number
$p$	pressure, Pa
$P$	dimensionless pressure
$Pr$	Prandtl number
$Re$	Reynolds number
$Ri$	Richardson number
$T$	Temperature, K
$U, V$	dimensionless velocity components
$u, v$	velocity components, m
$x, y$	cartesian coordinates, m
$X, Y$	dimensionless coordinates

## Greek symbols

$\beta$	thermal expansion coefficient, $\text{K}^{-1}$
$\theta$	dimensionless temperature
$\nu$	kinematic viscosity, $\text{m}^2.\text{s}^{-1}$
$\mu$	dynamic viscosity, $\text{Kg. m}^{-1}.\text{s}^{-1}$
$\rho$	density, $\text{kg.m}^{-3}$
$\emptyset$	nanoparticles volume fraction

## Subscripts

1	left wall
2	right wall
0	inlet conditions
$nf$	nanofluid
$f$	base fluid
$s$	solid particles
$w$	value at the wall
1	left wall
2	right wall