



**Figure 3:** when  $R_0 = 3.3030, R_1 = 3.2098, (\mu_T R_0)^2 > \max \{ \kappa_1, \kappa_2 \}, D \geq 0, z_1 > 0$ ,  
and  $F_2(z_1) > 0$ , numerical solution of system (1)