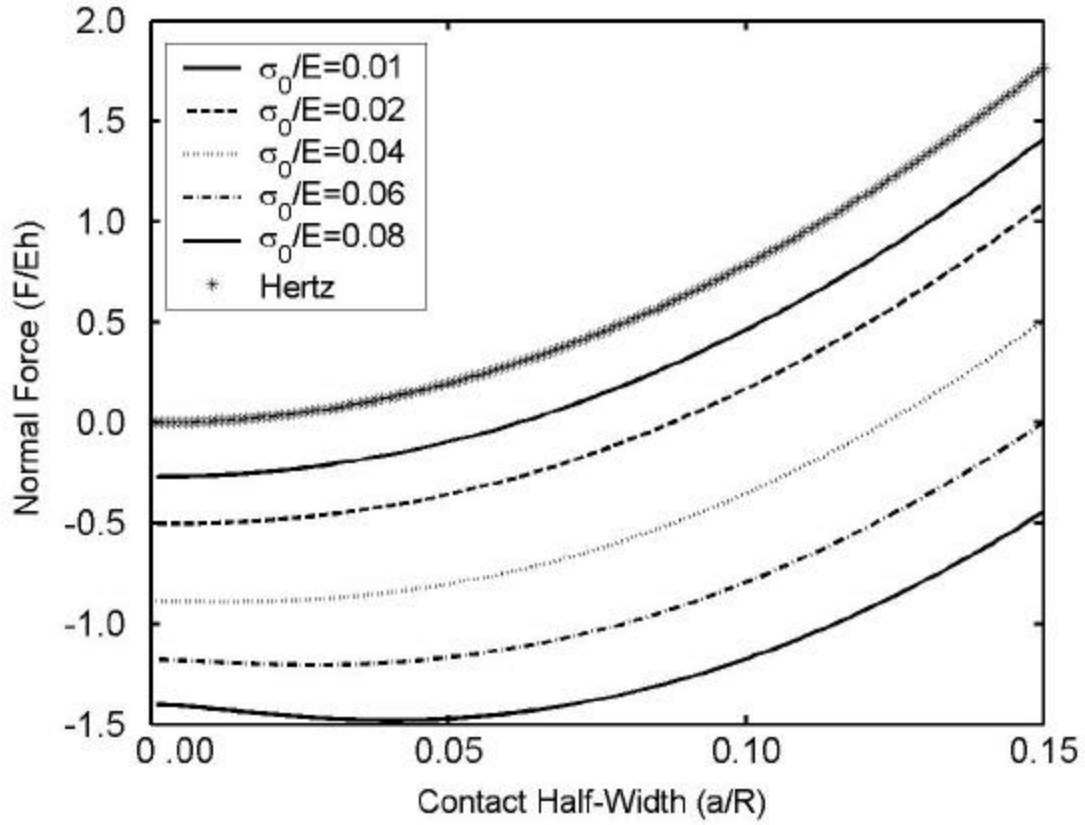
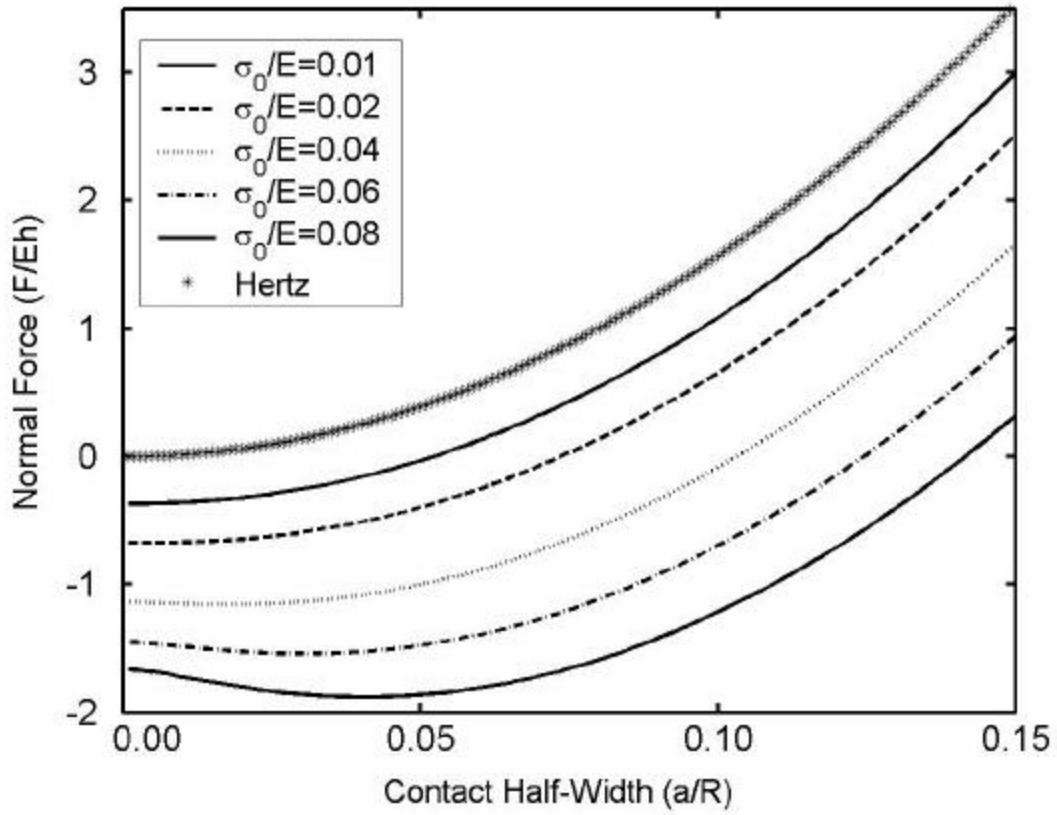


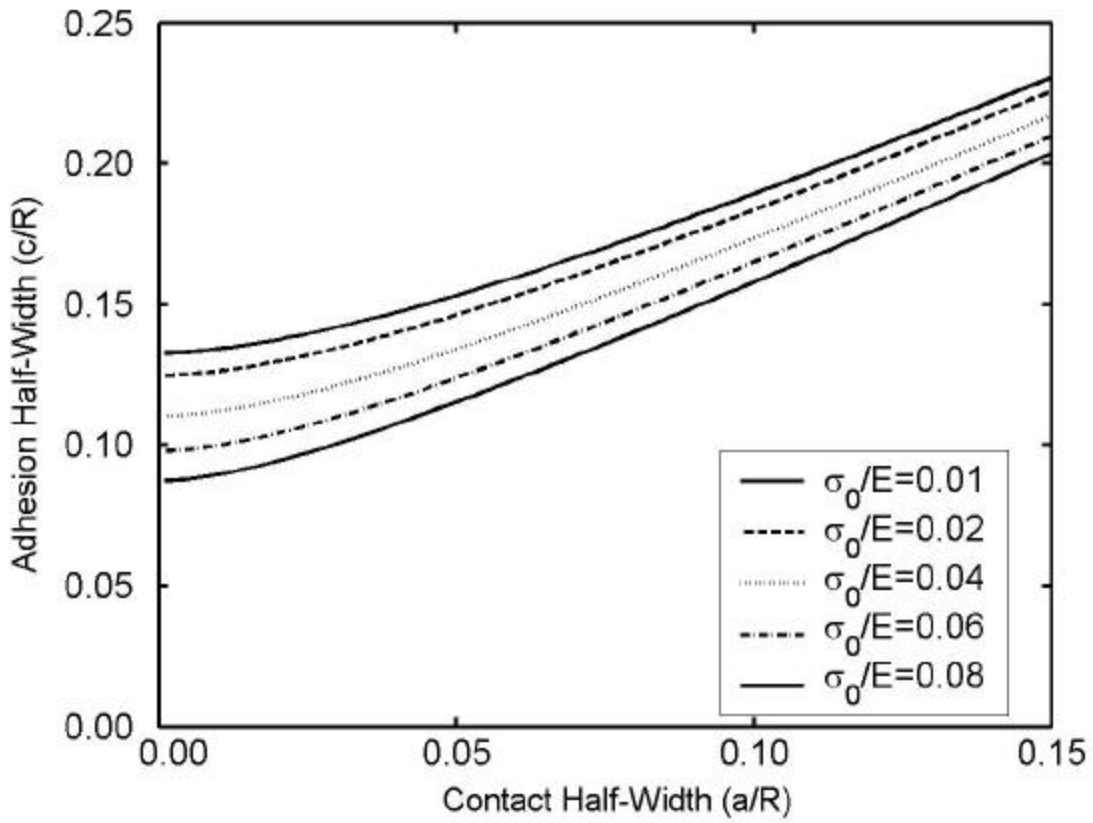
**Figure 1.** Contact width ( $2a$ ) and the adhesion width ( $2c$ ) for the contact of a cylinder with a half-space.



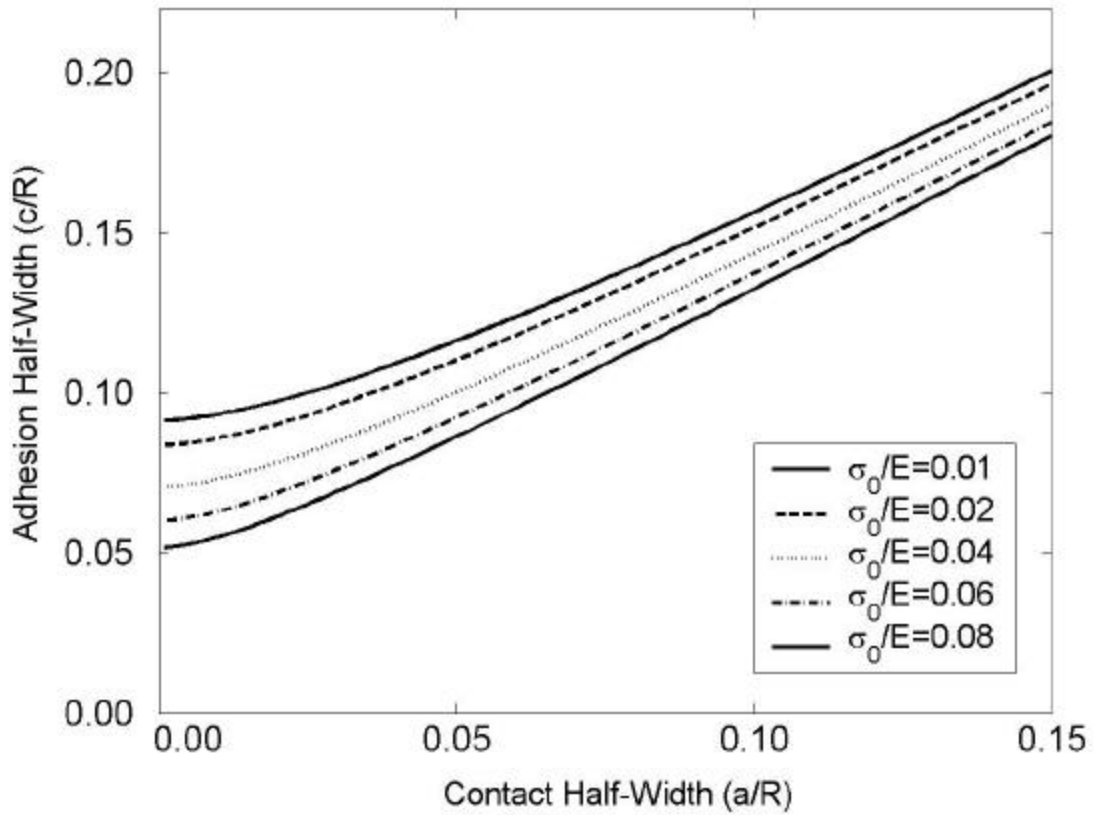
**Figure 2.** The variation of the dimensionless applied normal load ( $F/Eh$ ) with the dimensionless contact half-width ( $a/R$ ) for a dimensionless cylinder radii  $R/h=100$ .



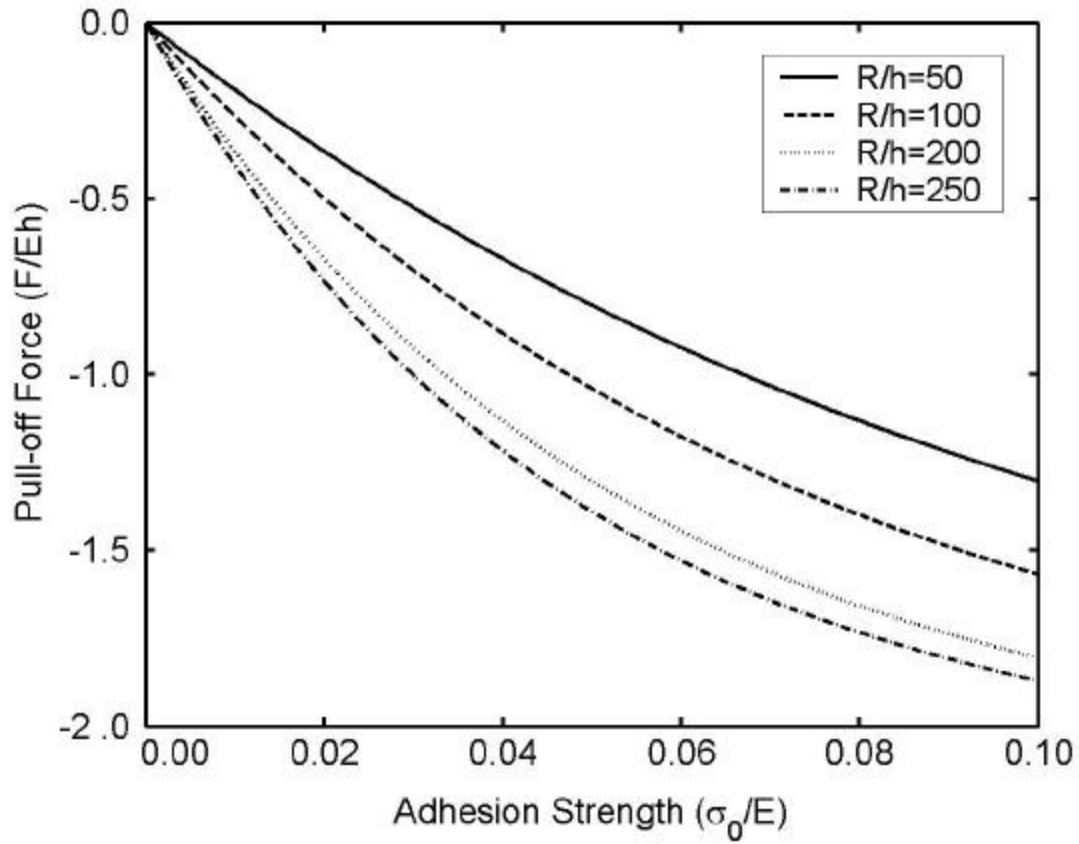
**Figure 3.** The variation of the dimensionless applied normal load ( $F/Eh$ ) with the dimensionless contact half-width ( $a/R$ ) for a dimensionless cylinder radii  $R/h=200$ .



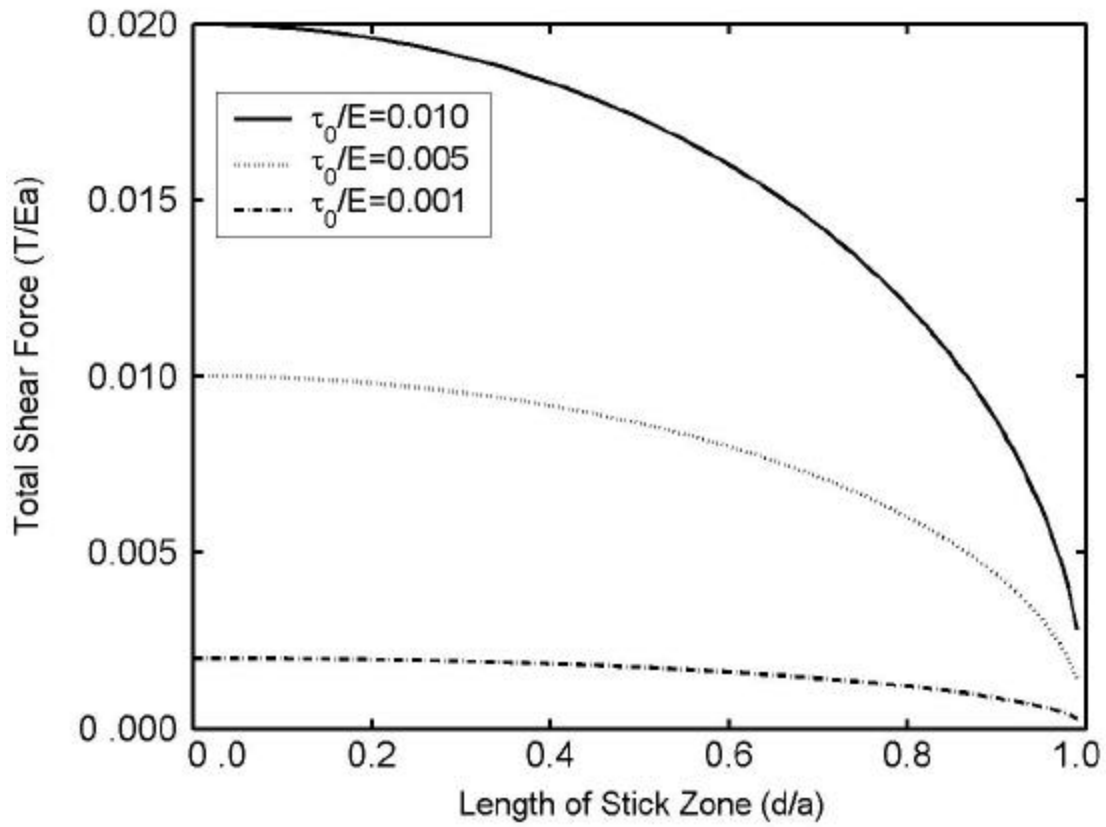
**Figure 4.** The variation of the dimensionless adhesion half-width ( $c/R$ ) with the dimensionless contact half-width ( $a/R$ ) for a dimensionless cylinder radii  $R/h=100$ .



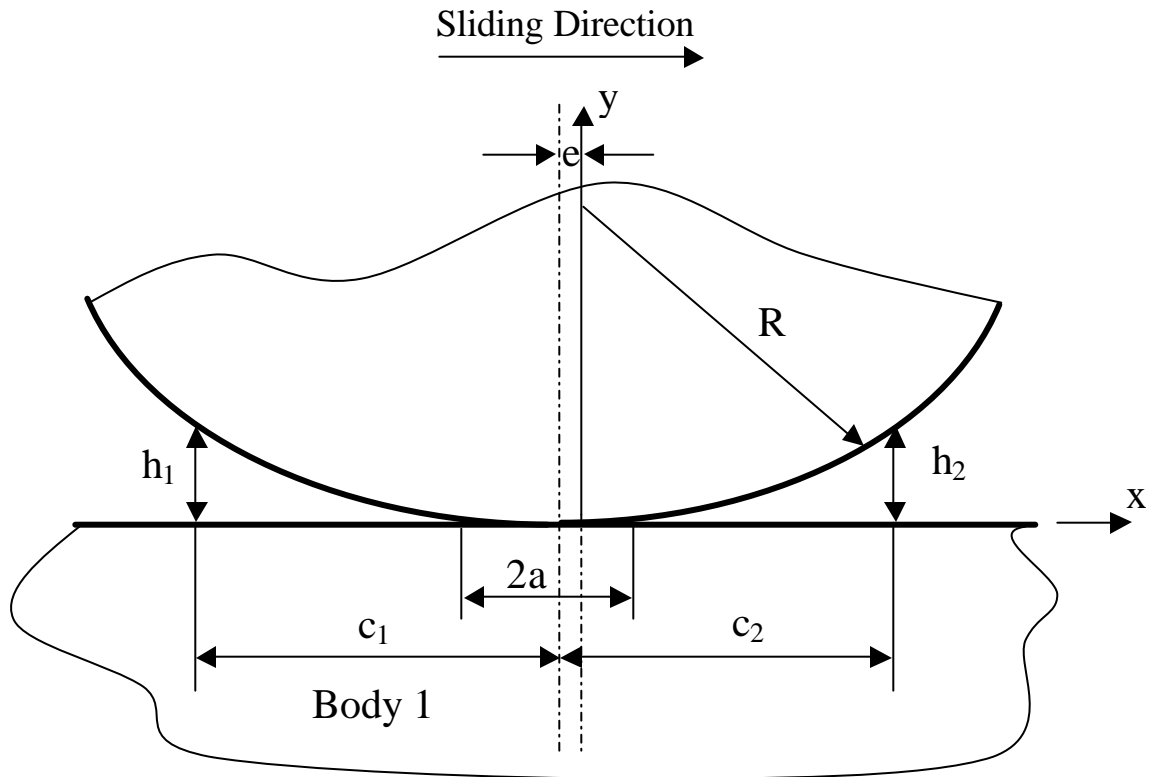
**Figure 5.** The variation of the dimensionless adhesion half-width ( $c/R$ ) with the dimensionless contact half-width ( $a/R$ ) for a dimensionless cylinder radii  $R/h=200$ .



**Figure 6.** The variation of the dimensionless “zero contact length force” ( $F/Eh$ ) with the dimensionless adhesion stress ( $s_0/E$ ).

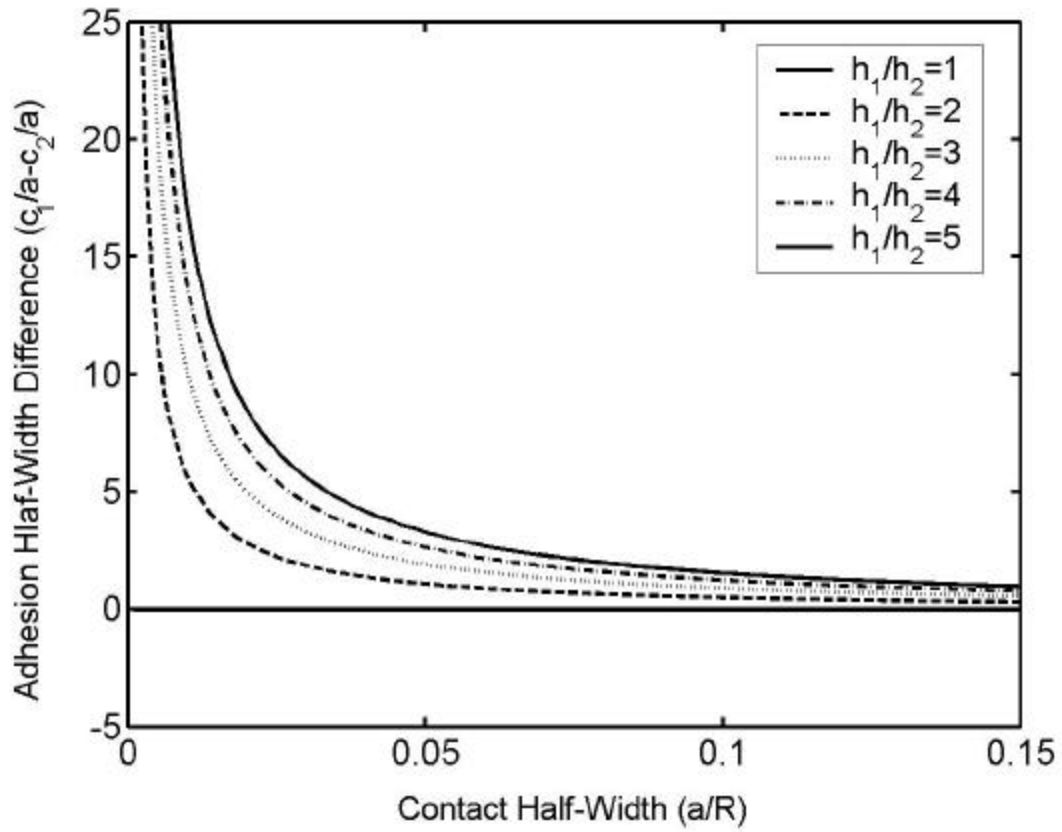


**Figure 7.** The variation of the dimensionless tangential force ( $T/Ea$ ) with the non-dimensional half-length of the stick zone ( $d/a$ ) inside the contact region during the initiation of sliding.

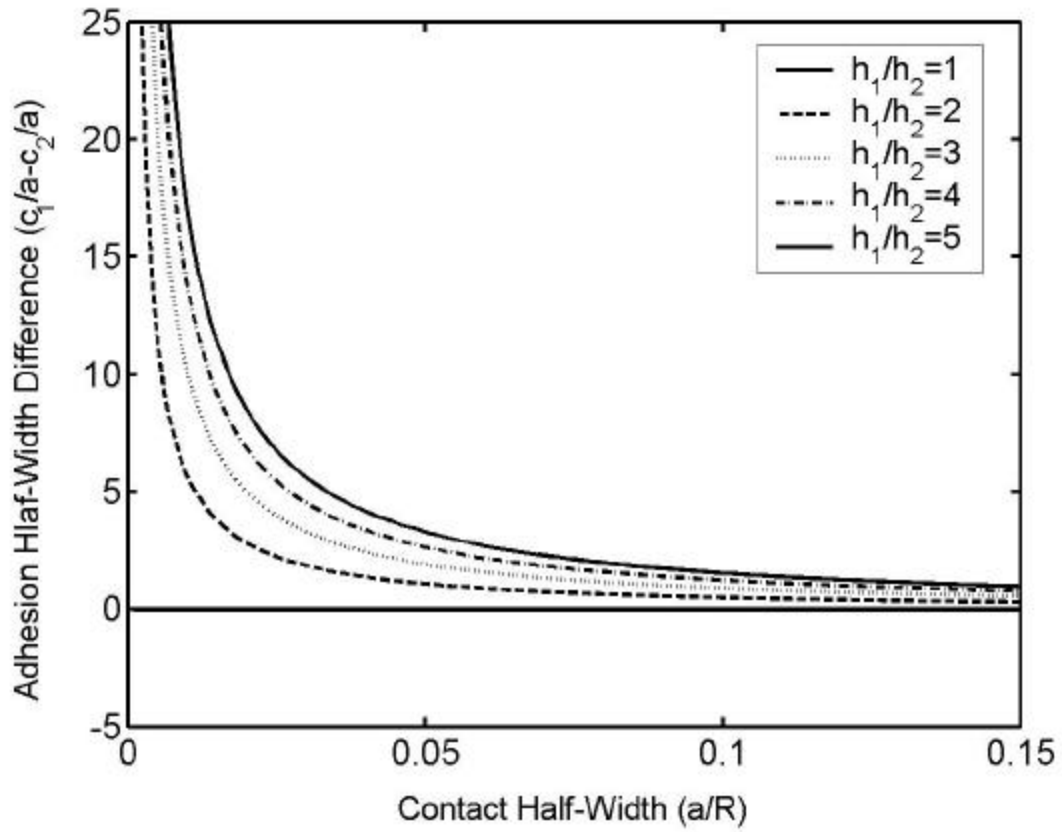


**Figure 8.** Contact width ( $2a$ ) and the adhesion widths in trailing and leading edges for the contact of a cylinder with a half-space in the presence of sliding motion.

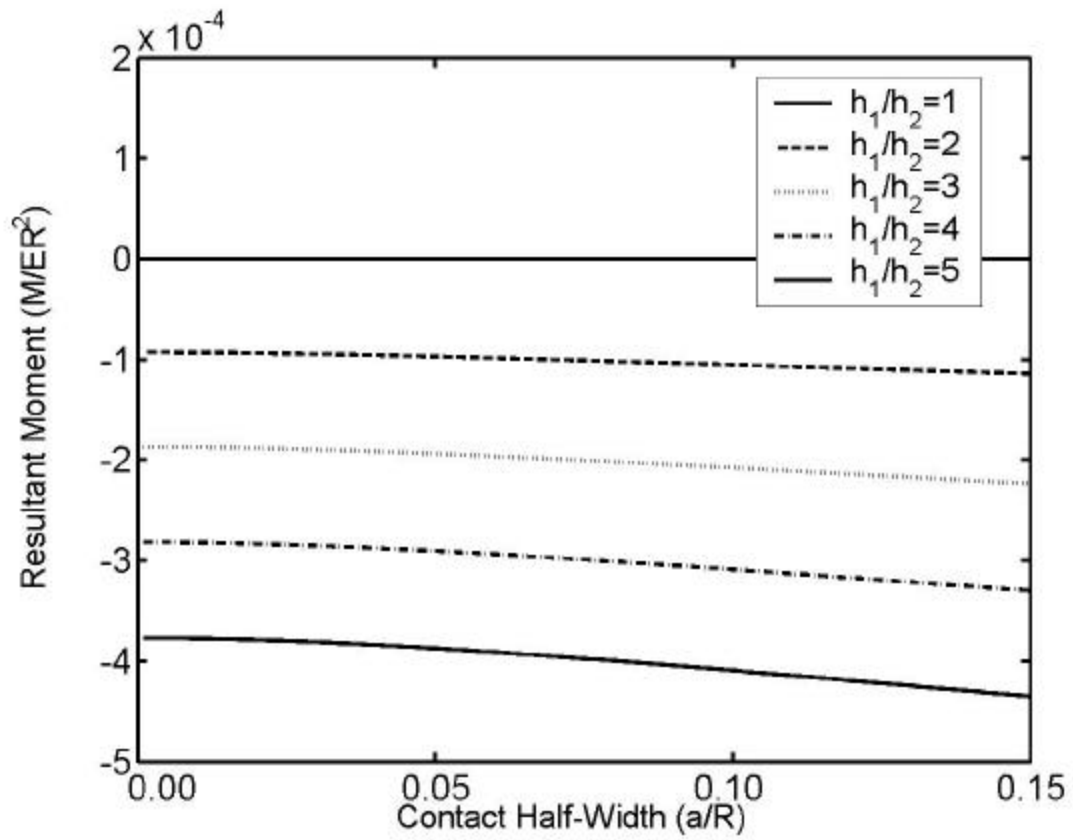




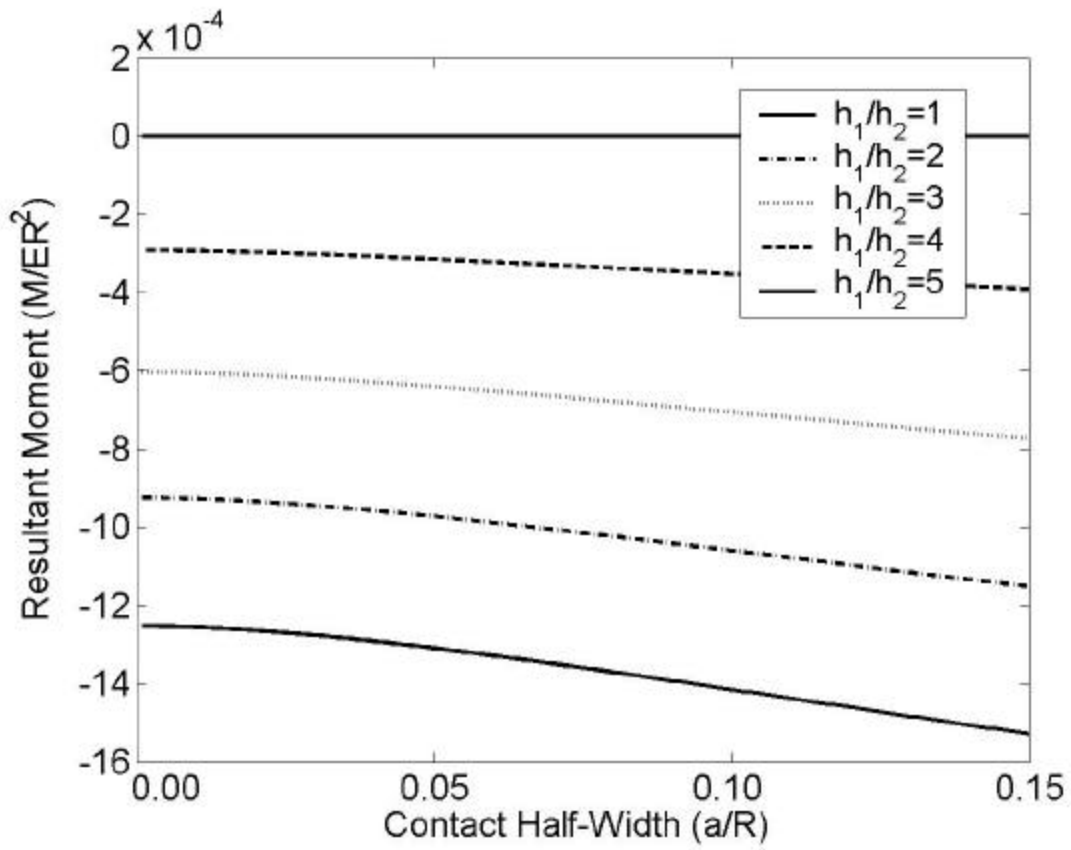
**Figure 9.** The difference between the dimensionless adhesion half-widths of trailing and leading edges vs. dimensionless contact half-width ( $a/R$ ) for  $R/h_2=100$  and  $s_0/E=0.01$ .



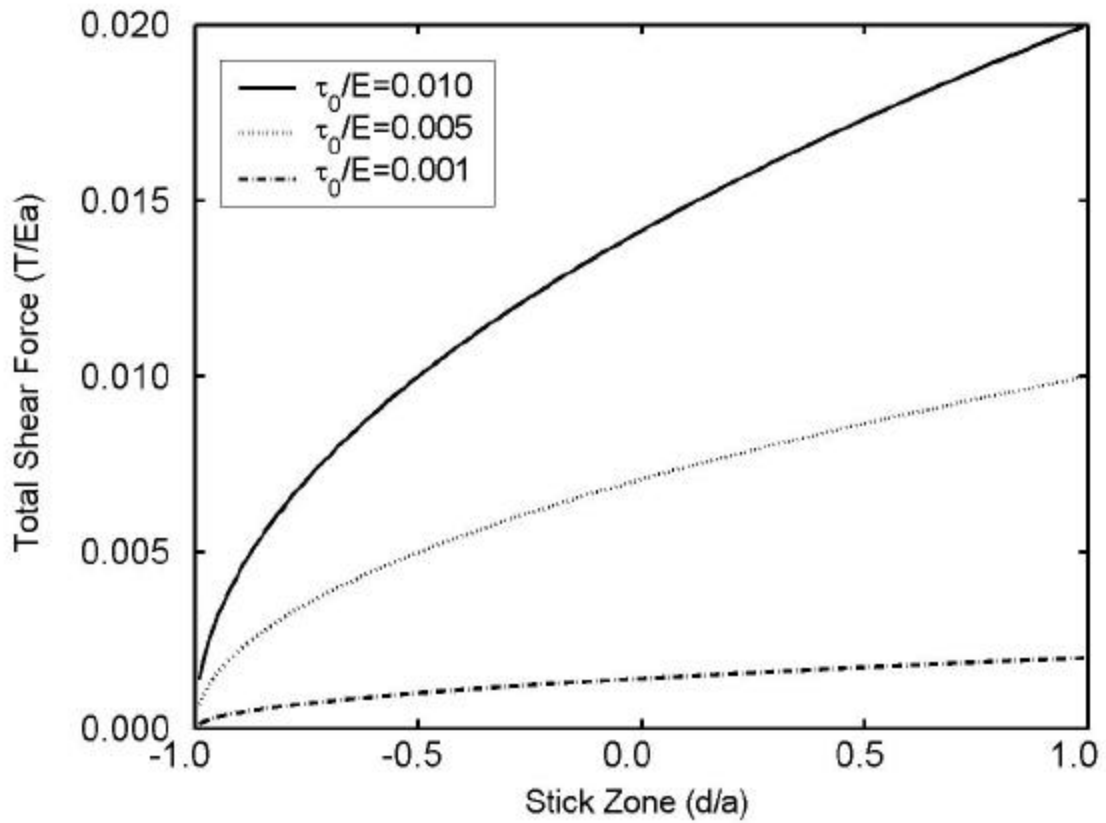
**Figure 10.** The difference between the dimensionless adhesion half-widths of trailing and leading edges vs. dimensionless contact half-width ( $a/R$ ) for  $R/h_2=100$  and  $s_0/E=0.04$ .



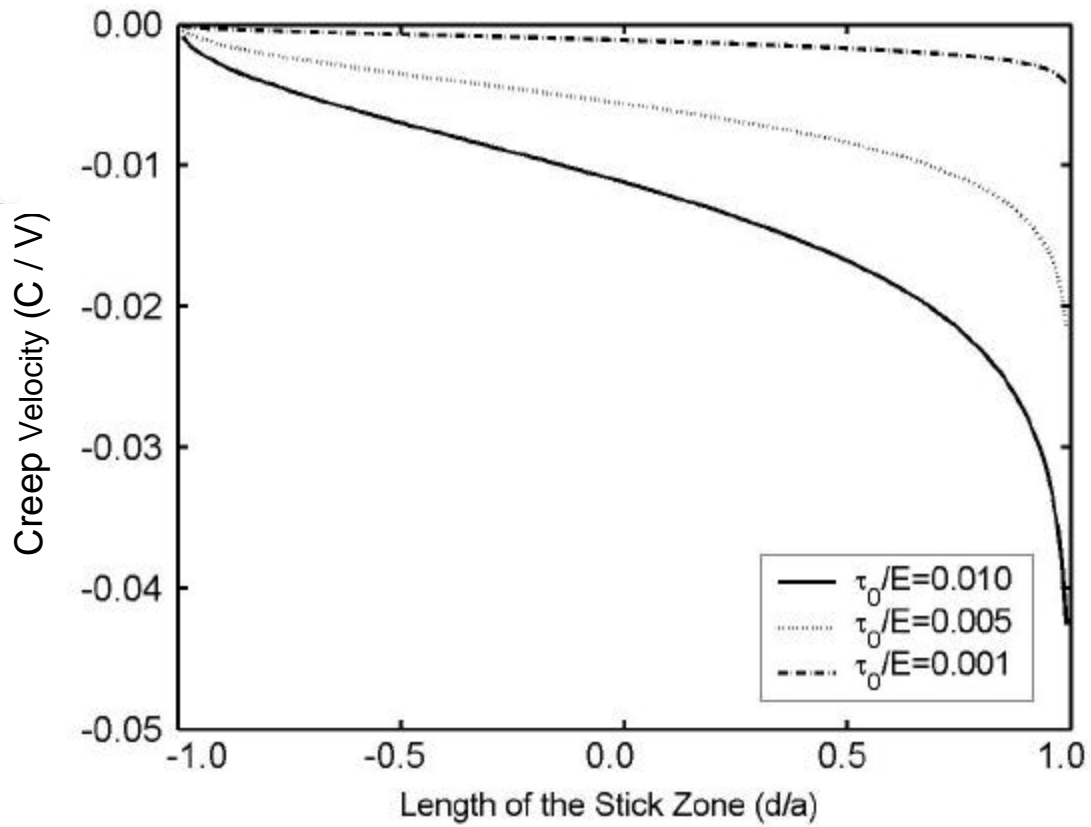
**Figure 11.** The dimensionless resultant moment ( $M/ER^2$ ) vs. dimensionless contact half-width ( $a/R$ ) for  $R/h_2=100$  and  $s_0/E=0.01$ .



**Figure 12.** The dimensionless resultant moment ( $M/ER^2$ ) vs. dimensionless contact half-width ( $a/R$ ) for  $R/h_2=100$  and  $s_0/E=0.04$ .



**Figure 13.** The variation of the dimensionless stick zone parameter ( $d/a$ ) with dimensionless tangential force applied ( $T/Ea$ ) during rolling motion.



**Figure 14.** The variation of the creep dimensionless velocity ( $\dot{C}/V$ ) with the dimensionless stick zone parameter ( $d/a$ ) during rolling motion.