The figure of Appendix 1 and the three equations should read as follows:

1. $F_{ax} = \text{max} - F_x$
2. $F_{ay} = ay - F_y + mg$
3. $\Sigma M = Ia$

$$Ma + (Fx\cdot R) + (Fy\cdot Q) - (Fay\cdot L) - (Fay\cdot N) = I\alpha$$

$$\therefore Ma = -(Fx\cdot R) - (Fy\cdot Q) + (Fay\cdot L) + (Fay\cdot N) + I\alpha$$

$F_{ax}, F_{ay}$ = joint reaction force
$Ma$ = moment of the joint
$Fx, Fy$ = ground reaction force
$ax, ay$ = acceleration of the center of segment
$m$ = segment mass
$g$ = gravity due to acceleration
$I$ = inertia moment of the segment
$\alpha$ = angular acceleration of the segment
$L, N, Q, R$ = distance