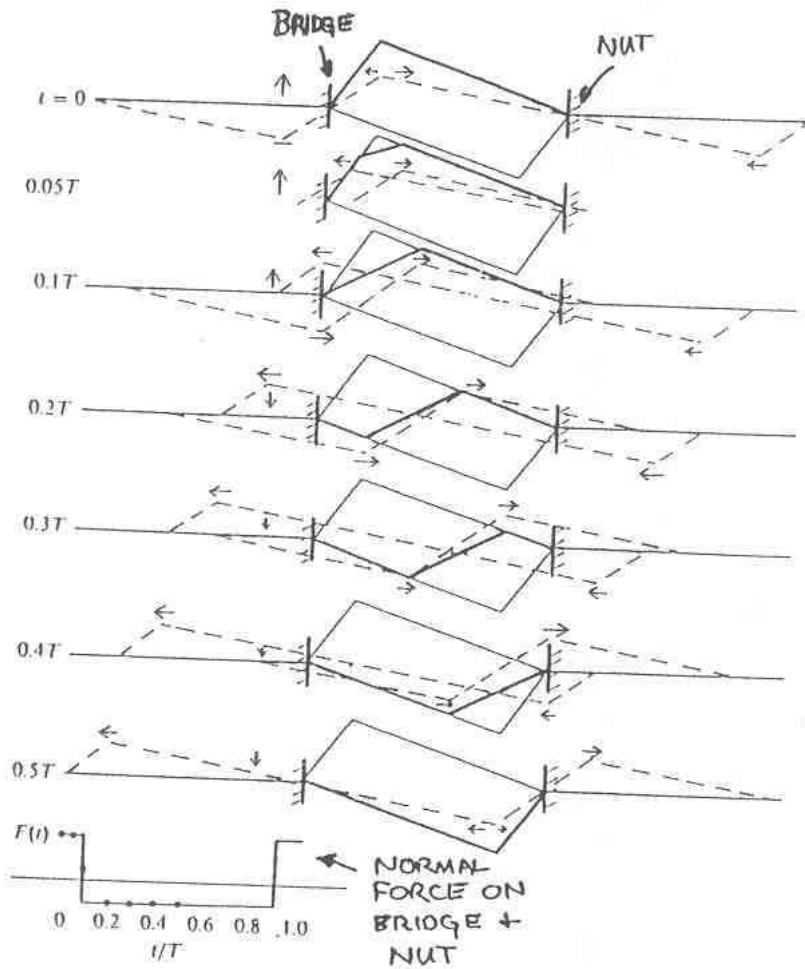# PICKING/PLUCKING A GUITAR STRING

FIGURE 2.8. Time analysis through one half cycle of the motion of a string plucked one-fifth of the distance from one end. The motion can be thought of as due to two pulses [representing the two terms in Eq. (2.5)] moving in opposite directions (dashed curves). The resultant motion consists of two bends, one moving clockwise and the other counterclockwise around a parallelogram. The normal force on the end support, as a function of time, is shown at the bottom.

$$y_{string}(t,x) = y_R(vt - x) + y_L(vt + x) = \text{"standing" wave}$$

right-moving   left-moving
traveling   traveling
wave   wave