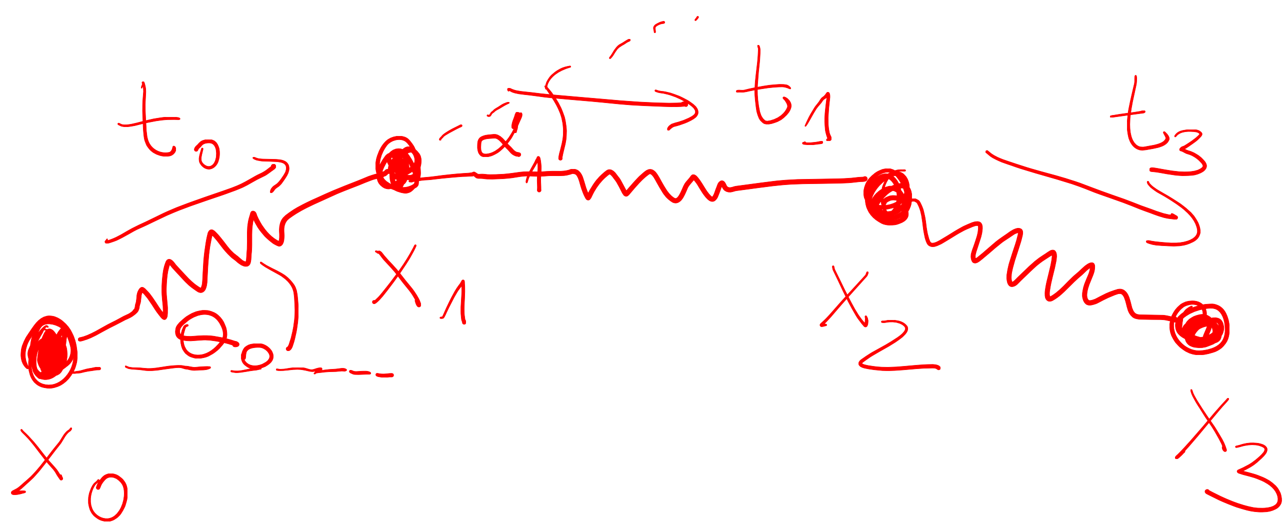
1

Equilibrium Stat Mech

of Semiflexible Fibers / Worm-like chains

(e.g. polymers, DNA, actin, microtubules)



(2D)

$$\ell_j = \| x_{j+1} - x_j \| \qquad t_j = \frac{x_{j+1} - x_j}{\ell_j}$$

② Energy due to stretching

$$E = \frac{k}{2} \sum_{j=0}^{N-1} l_j^2$$

spring constant

called "freely-jointed chain"

Statistical Mechanics dic