

**Coordinate System of the Classical Mechanics  
for a Point Particle**

$\chi: \mathbb{R} \mapsto \mathbb{R}^3$  ..... a function

$$t \xrightarrow{\chi} \chi(t) = (x^1(t), x^2(t), x^3(t))$$

$M_c$



$M_c(\chi)$  ..... a history

$\forall t;$

**[ The position of the particle is  $D(\chi(t))$   
at the time  $clock(t)$ . ]**