

Mozgásegyenletek:

Newtoni: $m \cdot \ddot{\vec{r}} = \vec{F}(\vec{r}, \dot{\vec{r}}, t)$

Lagrange-féle másodfajú: $\frac{d}{dt} \frac{\partial L}{\partial \dot{q}_v} - \frac{\partial L}{\partial q_v} = 0 \quad (v=1, \dots, f)$

Hamiltoni: $\dot{q}_v = \frac{\partial H}{\partial p_v}; \quad \dot{p}_v = -\frac{\partial H}{\partial q_v} \quad (v=1, \dots, f)$

Variációs elv: $\delta S = 0$