

## 6.4 Quantenfeldtheorie

$$\mathcal{L}(\psi_r, \psi_{r1k}, \dot{\psi}_r)$$

$$d\mathcal{L} = \frac{\partial \mathcal{L}}{\partial \psi_r} \delta \psi_r + \frac{\partial \mathcal{L}}{\partial \psi_{r1k}} \delta \psi_{r1k} + \frac{\partial \mathcal{L}}{\partial \dot{\psi}_r} \delta \dot{\psi}_r$$

partielle Integration | Randterme vernachlässigen

$$-\sum_{k=1}^3 \frac{\partial}{\partial x_k} \frac{\partial \mathcal{L}}{\partial \psi_{r1k}} \delta \psi_r - \frac{\partial}{\partial t} \frac{\partial \mathcal{L}}{\partial \dot{\psi}_r} \delta \psi_r$$