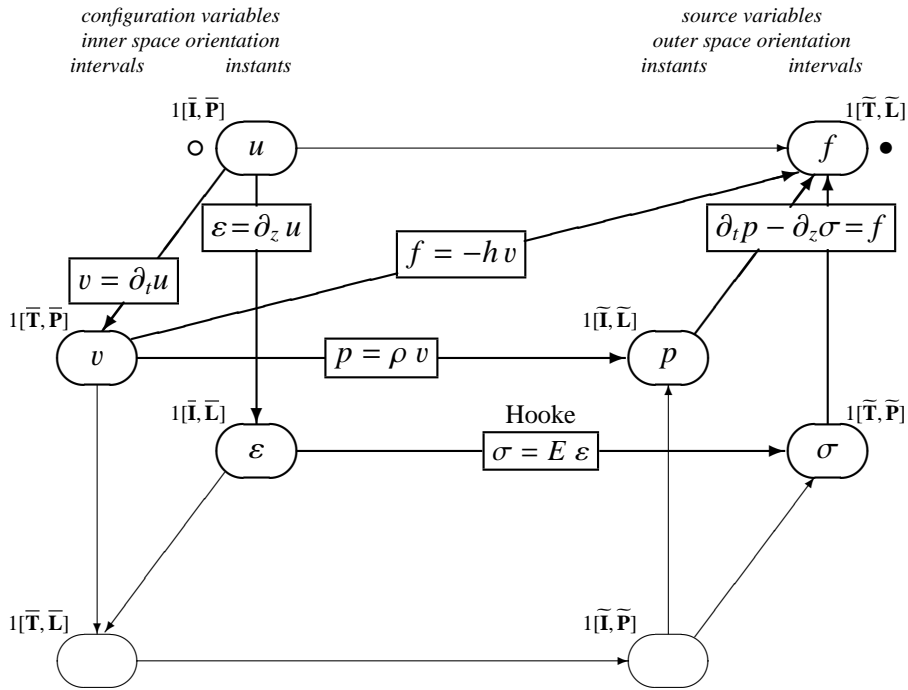


Longitudinal vibrations of rods

variables: t, z



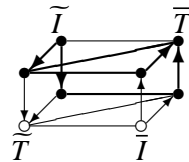
D'Alembert

$$\frac{1}{c^2} \frac{\partial^2 u}{\partial t^2} - \frac{\partial^2 u}{\partial z^2} = -\frac{h}{E} \frac{\partial u}{\partial t}$$

$$c \triangleq \sqrt{\frac{E}{\rho}}$$

| | |
|----------------------|-----------------------|
| u displacement | σ stress |
| v velocity | p momentum / length |
| ε strain | f force length |

E elastic modulus
 ρ mass / length
 c sound velocity
 h damping coefficient



C'è una figura congelata da mettere nella spiegazione della tavola.