

bundle $\mathcal{Y} \rightarrow \mathcal{H}$

$$\underbrace{\mathfrak{h} \times \mathcal{Y} \times \mathcal{H} \triangleleft \mathcal{Y}} = \frac{\varphi: \Phi}{\varphi \in \mathfrak{h} \times \mathcal{Y}: \mathcal{H} \xrightarrow{\Phi} \mathcal{Y}_{\varphi}} \text{ 1-jet bundle}$$

$$\text{dof } \mathcal{Y}_a^i: \mu \mathcal{Y}_a^i \in \mathbb{R}_M^N \times_d \mathbb{R}_M^N$$

$$x^\nu: \mathcal{Y}_a^i: \mu \mathcal{Y}_a^i \in \mathbb{R}^d \times^N \mathbb{R} \times_d^N \mathbb{R} \xrightarrow[\text{Lagrangian}]{\mathcal{L}} \mathbb{R} \ni x \left\{ \begin{array}{l} \mathcal{Y} \\ \mathcal{Y} \end{array} \right.$$

$$x \left\{ \begin{array}{l} \mathcal{Y} \\ \mathcal{Y} \end{array} \right.$$

$$\mu \left\{ \begin{array}{l} a \\ \mathcal{Y} \\ \mathcal{Y} \\ i \end{array} \right.$$

$$x \left\{ \begin{array}{l} a \\ \mathcal{Y} \\ \mathcal{Y} \\ i \end{array} \right.$$

wave bundle $\mathfrak{h} \times \mathcal{Y}_{\mathcal{Y}} = \mathcal{Y}_{\mathfrak{h}\mathcal{Y}}$

$$\text{jet Lagrangian } \mathbb{R} \xleftarrow{\tilde{\mathcal{L}}} \mathfrak{h} \times \mathcal{Y} \times \mathcal{H} \triangleleft \mathcal{Y}$$