

$$X_c^{1/2} \ni v \mapsto v_{\mathcal{A}} \in \text{Aut } X$$

$${}_i \mathcal{L} \text{ Basis von } X_c^{0|1} \Rightarrow v_{\mathcal{A}} = {}_i \mathcal{L} v_{\mathcal{A}} \text{ Basis von } X_v^{0|1}$$

$$\begin{aligned} v_{\mathcal{A}}^1 | \cdot | v_{\mathcal{A}}^p | v_{\mathcal{A}}^1 | \cdot | v_{\mathcal{A}}^q &= v_{\mathcal{A}}^1 \cdot v_{\mathcal{A}}^{pv} | v_{\mathcal{A}}^1 | \cdot | \dots | v_{\mathcal{A}}^1 \cdot v_{\mathcal{A}}^{pv} | v_{\mathcal{A}}^1 | \cdot | v_{\mathcal{A}}^q \\ \det \frac{v_{\mathcal{A}}^1}{v_{\mathcal{A}}^p} &= \sum_{1 \leq \ell_1 < \dots < \ell_q \leq n} (-1)^{k|\ell} \det \frac{v_{\mathcal{A}}^1}{k_1} | \cdot | \frac{v_{\mathcal{A}}^1}{k_p} \det \frac{v_{\mathcal{A}}^1}{\ell_1} | \cdot | \frac{v_{\mathcal{A}}^1}{\ell_q} \\ &\quad \frac{v_{\mathcal{A}}^1}{\cdot} \quad \frac{v_{\mathcal{A}}^p}{k_1} | \cdot | \frac{v_{\mathcal{A}}^p}{k_p} \quad \frac{v_{\mathcal{A}}^1}{\cdot} | \cdot | \frac{v_{\mathcal{A}}^1}{\cdot} \\ &\quad \frac{v_{\mathcal{A}}^1}{\cdot} \quad \frac{v_{\mathcal{A}}^q}{\ell_1} | \cdot | \frac{v_{\mathcal{A}}^q}{\ell_q} \end{aligned}$$

$$-_{\mathcal{A}} = {}_i \mathcal{L} -_{\mathcal{A}}$$

$$\partial_{\xi}^i e^{x\xi} = x^i e^{x\xi}$$

$$-_{\mathcal{A}} \partial_{\xi} e^{x\xi} = -_{\mathcal{A}} \partial_{\xi}^i e^{x\xi} = {}_i \mathcal{L} -_{\mathcal{A}} x^i e^{x\xi} = \underbrace{x^i \mathcal{L}}_{=x} -_{\mathcal{A}} e^{x\xi} = x -_{\mathcal{A}} e^{x\xi}$$

$$\det \frac{v_{\mathcal{A}}}{\partial_{\xi}} e^{x\xi} = \det \frac{v_{\mathcal{A}}}{x -_{\mathcal{A}}} e^{x\xi}$$

$$x -_{\mathcal{A}} = x \underbrace{\mathcal{L}^j}_{\mathcal{L}^j} = \mathcal{L}^j \underbrace{x}_{x_j}$$

$$v_{\mathcal{A}} = \overbrace{\mathcal{L}^j}^v = \frac{\partial_{\mathcal{A}}^i}{\partial v^j} = \mathcal{L}^j \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} = \mathcal{L}^j \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} = \mathcal{L}^j \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} \in \mathfrak{g}(X)$$

$$v_{\mathcal{A}} \partial_{\xi} e^{x\xi} = v_{\mathcal{A}} \partial_{\xi}^i e^{x\xi} = \mathcal{L}^j \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} x^i e^{x\xi} = \underbrace{x^i \mathcal{L}^j}_{=x} \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} e^{x\xi} = x \underbrace{\mathcal{L}^i}_{\mathcal{L}^i} e^{x\xi}$$

$$\det \frac{\begin{matrix} v_1 \\ \vdots \\ v_g \\ \vdots \\ v_q \end{matrix}}{\begin{matrix} 1 \\ \vdots \\ \gamma \\ \vdots \\ \gamma \end{matrix}} = \gamma^1 \times \gamma^g \det \frac{\begin{matrix} v_1 \\ \vdots \\ v_g \\ \vdots \\ v_q \end{matrix}}{\begin{matrix} 1 \\ \vdots \\ 1 \\ \vdots \\ q \end{matrix}}$$

$$\det \frac{\begin{matrix} \gamma^1 v_1 \\ \vdots \\ \gamma^g v_g \\ \vdots \\ \gamma^q v_q \end{matrix}}{\begin{matrix} \gamma^1 \\ \vdots \\ \gamma^g \\ \vdots \\ \gamma^q \end{matrix}} = \det \begin{matrix} \gamma^1 & & \\ & \ddots & \\ & & \gamma^g \end{matrix} \cdot \det \frac{\begin{matrix} v_1 \\ \vdots \\ v_g \\ \vdots \\ v_q \end{matrix}}{\begin{matrix} 1 \\ \vdots \\ q \end{matrix}} = \gamma^1 \times \gamma^g \det \frac{\begin{matrix} v_1 \\ \vdots \\ v_g \\ \vdots \\ v_q \end{matrix}}{\begin{matrix} 1 \\ \vdots \\ q \end{matrix}}$$

$$L | t \quad {}^x T_v = L \quad {}^v \gamma + x t \quad {}^v \gamma$$

$${}^x T_v = \frac{\begin{matrix} \gamma^1 v_1 \\ \vdots \\ \gamma^p v_p \\ \vdots \\ \gamma^q v_q \end{matrix}}{\begin{matrix} \gamma^1 \\ \vdots \\ \gamma^p \\ \vdots \\ \gamma^q \end{matrix}}$$

$$L^1 | \cdot | L^p | t^1 | \cdot | t^q \quad T_x = L | t \quad T_x = L \quad {}^v \gamma + x t \quad {}^v \gamma$$

$$= L^i \quad \gamma^i v_i + t^j \quad \gamma^j v_j = L^1 | \cdot | L^p | t^1 | \cdot | t^q \quad \frac{\begin{matrix} \gamma^1 v_1 \\ \vdots \\ \gamma^p v_p \\ \vdots \\ \gamma^q v_q \end{matrix}}{\begin{matrix} \gamma^1 \\ \vdots \\ \gamma^p \\ \vdots \\ \gamma^q \end{matrix}}$$

$$\det \frac{\frac{v_{\mathcal{A}''}}{1} \cdot \frac{v_{\mathcal{A}''}}{p} \cdot \frac{v_{\mathcal{A}''}}{x_{\mathcal{A}''}}}{x_{\mathcal{A}''}} = \underline{\gamma}^1 \ddot{\times} \underline{\gamma}^q \det {}^x T_v$$

$$v_{\mathcal{A}''} = x_j^v \mathcal{A}'' = x_j \mathbb{E}_{\mathcal{A}''}^v$$

$$\text{LHS} = \underline{\gamma}^1 \ddot{\times} \underline{\gamma}^q \det \frac{\frac{v_{\mathcal{A}''}}{1} \cdot \frac{v_{\mathcal{A}''}}{p} \cdot \frac{v_{\mathcal{A}''}}{x_1 \mathcal{A}''}}{x_q \mathcal{A}''}} = \underline{\gamma}^1 \ddot{\times} \underline{\gamma}^q \det \frac{\frac{1 \mathbb{E}_{\mathcal{A}''}^v}{1} \cdot \frac{p \mathbb{E}_{\mathcal{A}''}^v}{x_1 \mathbb{E}_{\mathcal{A}''}^v} \cdot \frac{v_{\mathcal{A}''}}{x_q \mathbb{E}_{\mathcal{A}''}^v}}{x_q \mathbb{E}_{\mathcal{A}''}^v}} = \text{RHS}$$