

$$\mathbb{R}^n \supset \mathfrak{h} \xrightarrow[\text{stet diffeo}]{\mathfrak{v}} \mathfrak{h}' \subset \mathbb{R}^n \Rightarrow \bigwedge_{\gamma}^{\mathfrak{h}} \int_{dy}^{\mathfrak{h}'} y \gamma = \int_{dx}^{\mathfrak{h}} \overline{\det^x \mathfrak{v}}^{x \mathfrak{v}} \gamma$$

$$\bigvee \mathbb{R}^n \supset U \supset \text{Trg } \mathfrak{v} \gamma$$

$$\mathfrak{v} \text{ u-stet on } \hat{U} \text{ cpt} \Rightarrow \bigwedge_{\varepsilon > 0} \bigvee_{\delta > 0} \bigwedge_{x \in U} \overline{x - \acute{x}} \leq \delta \curvearrowright \overline{\acute{x} \mathfrak{v} - x \mathfrak{v}} \leq \varepsilon \quad \forall_{o \in \hat{U}} \overline{o \mathfrak{v}^{-1}} \Rightarrow \overline{\acute{x} \mathfrak{v} - x \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} \leq \varepsilon$$

$$\begin{aligned} \acute{x} \mathfrak{v} - x \mathfrak{v} &= \acute{x} - x \int_{dt}^H x+t(\acute{x}-x) \mathfrak{v} - x \mathfrak{v} = \acute{x} - x \overline{o \mathfrak{v} + \underbrace{x \mathfrak{v} - o \mathfrak{v}} + \int_{dt}^H x+t(\acute{x}-x) \mathfrak{v} - x \mathfrak{v}} \\ \Rightarrow \overline{\acute{x} \mathfrak{v} - x \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} &\leq \overline{\acute{x} - x} \overline{I + \underbrace{x \mathfrak{v} - o \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} + \int_{dt}^H x+t(\acute{x}-x) \mathfrak{v} - x \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} \leq \overline{\acute{x} - x} \overline{1 + 2\varepsilon} \end{aligned}$$

$$\bigvee U = \bigcup_i \square_i \text{ a-disj box}$$

$$\text{diam } \square_i \leq \delta \Rightarrow |(\square_i \mathfrak{v}) \overline{o \mathfrak{v}^{-1}}| \leq |\square_i| \overline{1 + 2\varepsilon}^n$$

$$\square_i \mathfrak{v} \overset{\text{EWS}}{=} \overline{o \mathfrak{v}^{-1}} \Rightarrow \int_{\square_i \mathfrak{v}} \gamma \leq |\square_i \mathfrak{v}| |\square_i \mathfrak{v} \dot{\gamma}| = |(\square_i \mathfrak{v}) \overline{o \mathfrak{v}^{-1}}| \overline{\det^{o \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} \overline{o \mathfrak{v}^{-1}} \dot{\gamma}} \leq |\square_i| \overline{1 + 2\varepsilon}^n \overline{\det^{o \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} \overline{o \mathfrak{v}^{-1}} \dot{\gamma}}$$

$$\begin{aligned} \Rightarrow \int_{\mathfrak{h}} \gamma &= \int_U \gamma \leq \sum_i \int_{\square_i \mathfrak{v}} \gamma \leq \overline{1 + 2\varepsilon}^n \sum_i |\square_i| \overline{\det^{o \mathfrak{v}} \overline{o \mathfrak{v}^{-1}} \overline{o \mathfrak{v}^{-1}} \dot{\gamma}} \rightsquigarrow \int_{dx}^U \overline{\det^x \mathfrak{v}}^{x \mathfrak{v}} \gamma = \int_{dx}^{\mathfrak{h}} \overline{\det^x \mathfrak{v}}^{x \mathfrak{v}} \gamma \\ \Rightarrow \int_{dy}^{\mathfrak{h}'} y \gamma &\leq \int_{dx}^{\mathfrak{h}} \overline{\det^x \mathfrak{v}}^{x \mathfrak{v}} \gamma \leq \int_{dy}^{\mathfrak{h}'} \overline{\det^y \mathfrak{v}^{-1}} \overline{\det^{y \mathfrak{v}^{-1}} \mathfrak{v}}^{y \mathfrak{v}^{-1}} \mathfrak{v} \gamma = \int_{dy}^{\mathfrak{h}'} y \gamma \end{aligned}$$