

⑤ X top discreta $\Rightarrow \pi_1(X, x) = \{1\}, \forall x \in X$

$$\tau(X) = \mathcal{P}(X) \quad (\text{top discreta})$$

$$X \text{ } \tau \text{ cpa} \Rightarrow \pi_1(X, x) \text{ dipende da } x \in X$$

Siano $\varepsilon_x: I \rightarrow X$ e $f: I \rightarrow X, f \in C^1(I, X), f(0) = f(1) = x$ laccio
 $t \mapsto x$

$$f \equiv \varepsilon_x, \forall f \in C^1(I, X) \Rightarrow f(t) = x, \forall t \in I$$

$$\Rightarrow \pi_1(X, x) = \{[\varepsilon_x], x \in X\} = \{1\}$$