

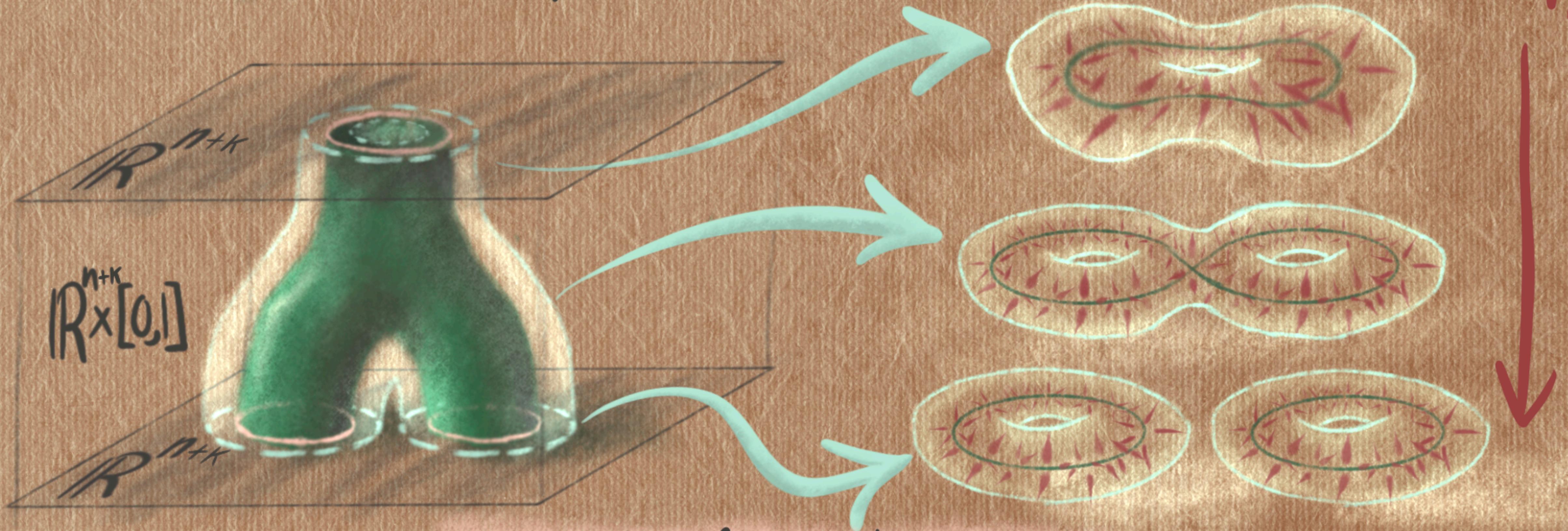
Cobordism.  
Invariant:

embed  $M^k \hookrightarrow \mathbb{R}^{n+k}$ : assign pt  $\rightarrow$  displace from  $M$

outside of small nbhd: say distance =  $\infty$

homotopy class is cobordism invariant!

homotopy



totally classifies cobordisms!!

# Differential topology

Whitney embedding Thm:

↪ all mflds embed in some  $\mathbb{R}^{n+k}$

all cobordisms can embed like

Tubular nbhd Thm:

$i$  extends to embedding

$$\mathcal{V} \hookrightarrow \mathbb{R}^{n+k}$$



$M \xrightarrow{i} \mathbb{R}^{n+k}$   
 $\mathcal{V} \rightarrow M$  Normal bundle  $\mathcal{V} = TM^\perp \subset T\mathbb{R}^{n+k}$

