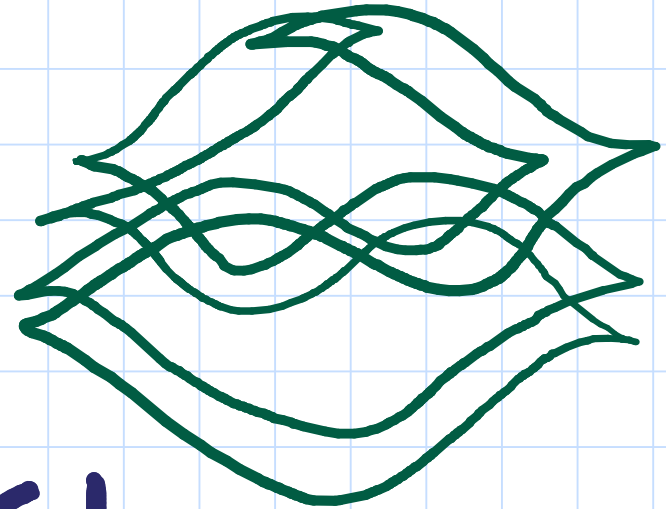


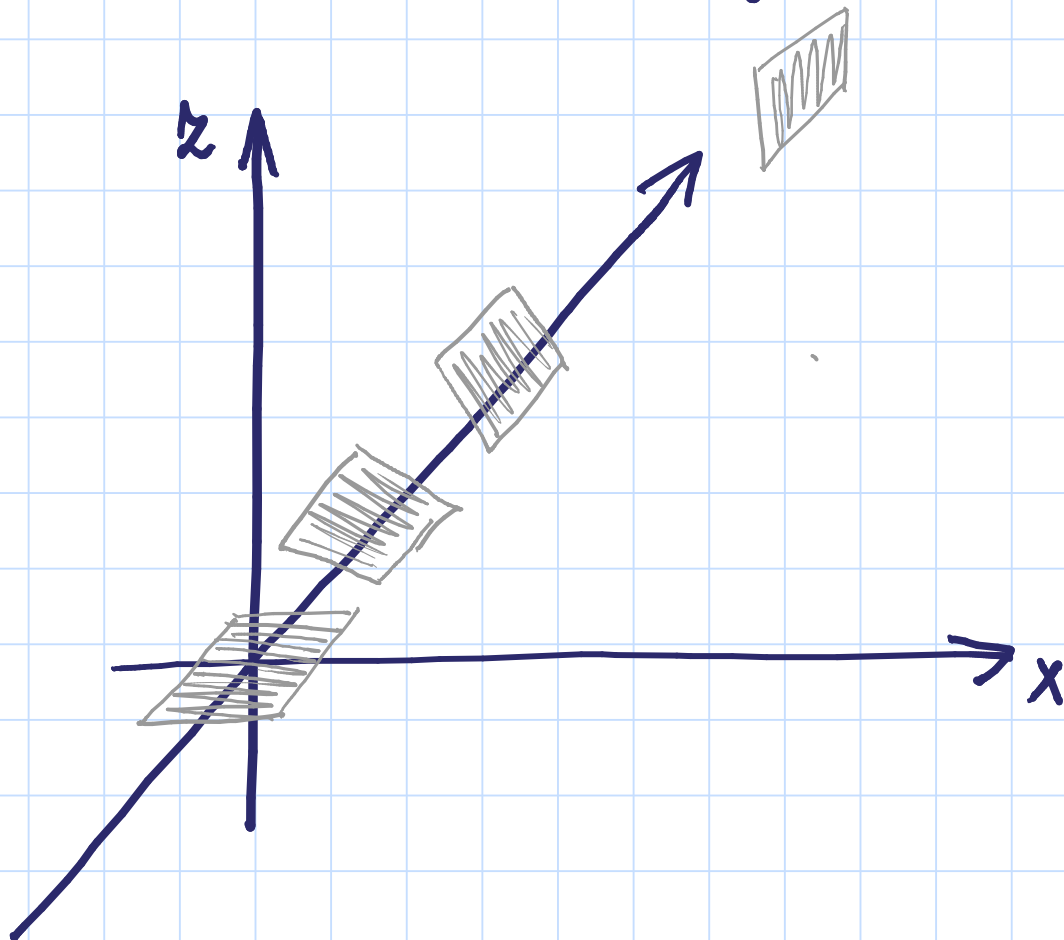
CLASSIFICATION
LEGENDRIENNE
DES NOEUDS
SATELLITES
VERA VÉRTESI
(AVEC J. ETNYRE)



NOEUDS LEGENDRIENNES DANS

L'ESPACE DE CONTACT STANDARD

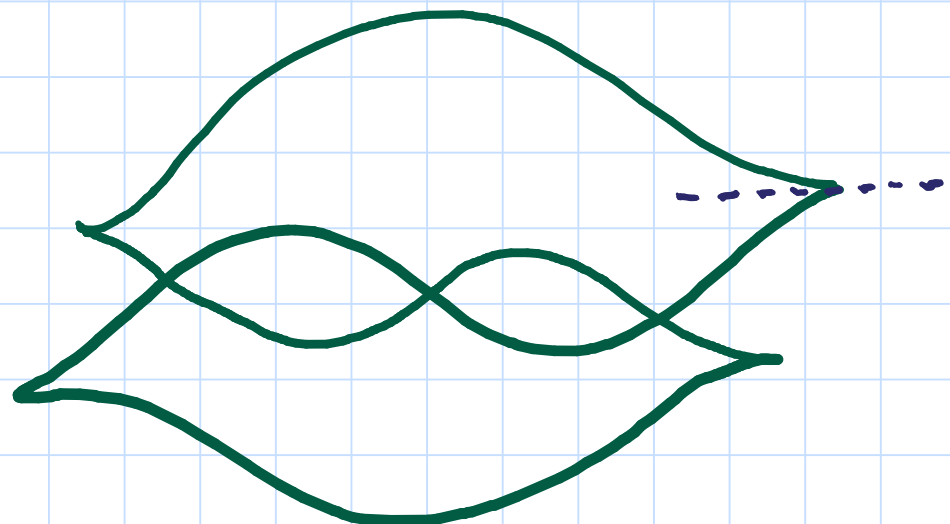
$$\mathbb{R}^3, \mathfrak{z} = \ker(dz - ydx) = \langle \partial_z, y\partial_z + x\partial_y \rangle$$



$$L \hookrightarrow \mathbb{R} \mathfrak{z}$$

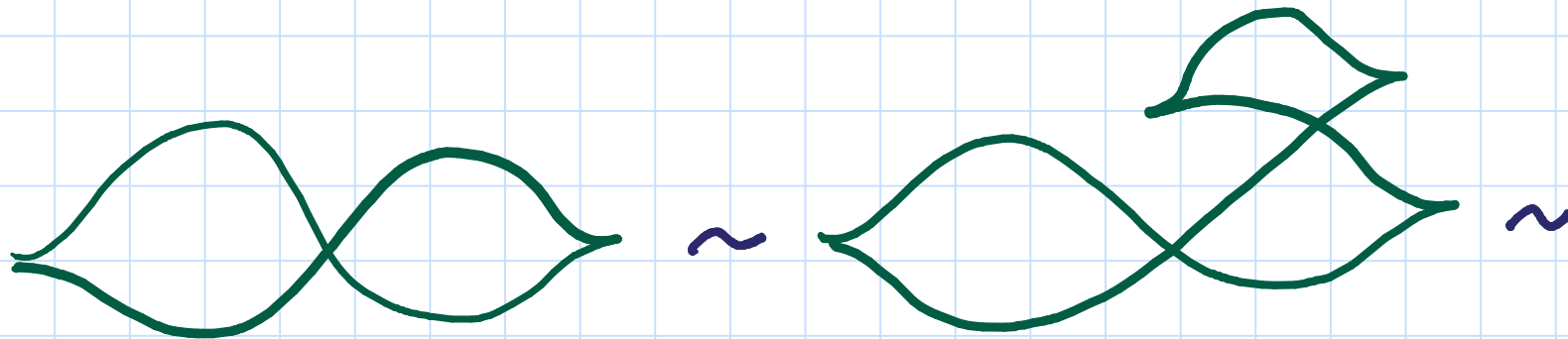
$$TL \subset \mathfrak{z} \rightarrow$$

$\frac{1}{dx}$

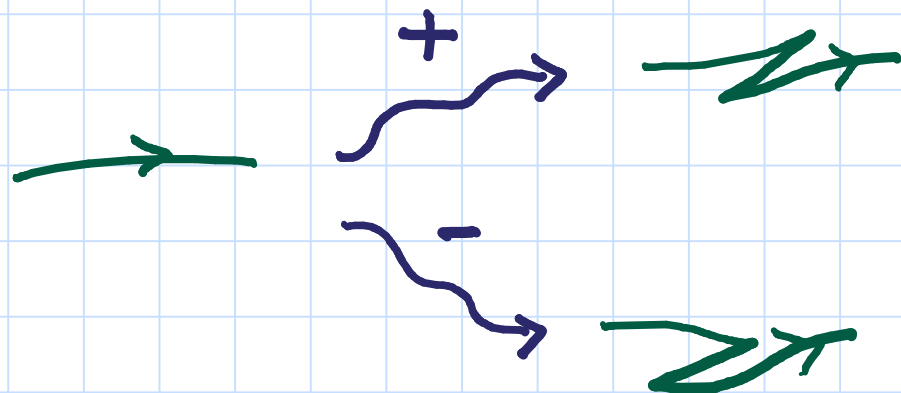


ISOTOPIE LEGENDRIENNE

$L_1 \sim L_2$: isotopie envoi L_1 sur un noeud
legendrienne pour tout le temps



rk : different d'une isotopie



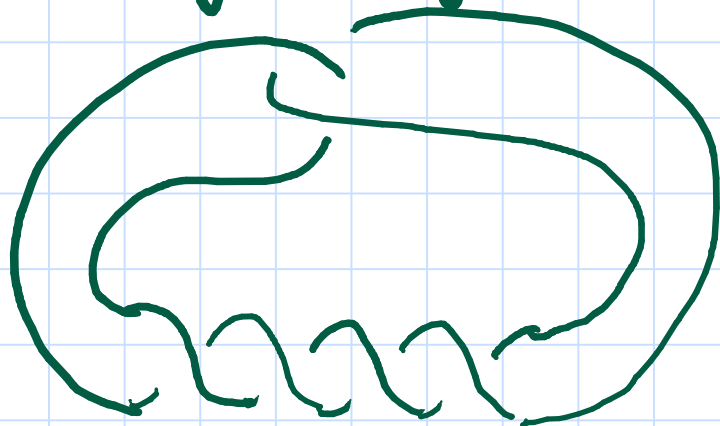
stabilisation

CLASSIFICATION LEGENDRIENNE

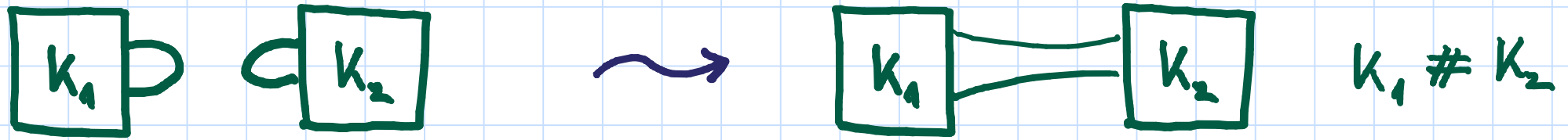
Classifier les representants legendriens d'un noeud

lisse K : $Leg(K)$

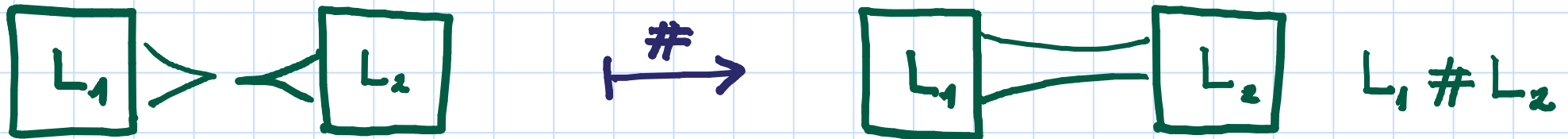
- 1995 Eliashberg - Fraser : noeud trivial
- 2001 Etnyre - Honda : noeud en huit
noeuds tonique
- 2010 Etnyre - Ng - V : noeuds de "twist"



RESULTATS STRUCTURAL - SOMME CONNEXE

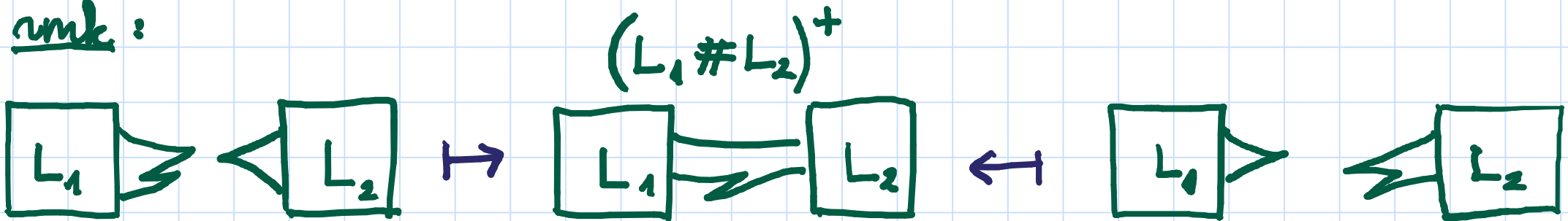


somme connexe legendrienne



$$\text{Leg}(K_1) \times \text{Leg}(K_2) \xrightarrow{\#} \text{Leg}(K_1 \# K_2)$$

unk:



$$\Rightarrow (L_1^{\pm}, L_2) \sim (L_1, L_2^{\pm}) \in \ker \#$$

RESULTATS STRUCTURAL - SOMME CONNEXE

$$\text{Leg}(K_1) \times \text{Leg}(K_2) \xrightarrow{\#} \text{Leg}(K_1 \# K_2)$$



Thm (Etnyre - Honda, 2002) Si $K_1 \# K_2$ n'a pas des symétrie (par exemple $K_1 \neq K_2$) donc

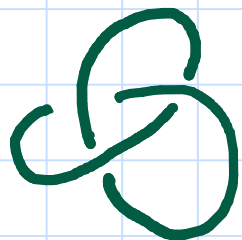
- $\#$ est surjective

- $\ker \#$ est engendré par $(L_1^+, L_2) \sim (L_1, L_2^+)$

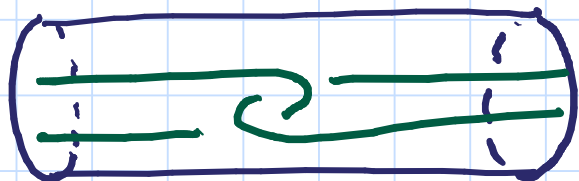
RESULTATS STRUCTURAL - SATELLITES

noeuds satellites

- noeud K

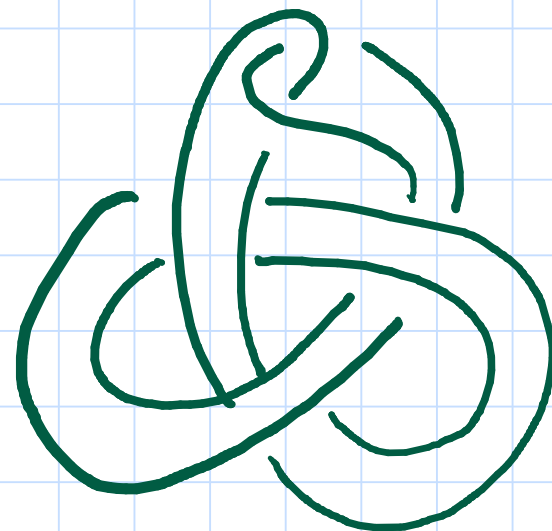


- modèle P dans $S^1 \times D^2$



$$\psi(P) = P_3(K)$$

- diffeomorphism $\psi: S^1 \times D^2 \rightarrow N(K)$

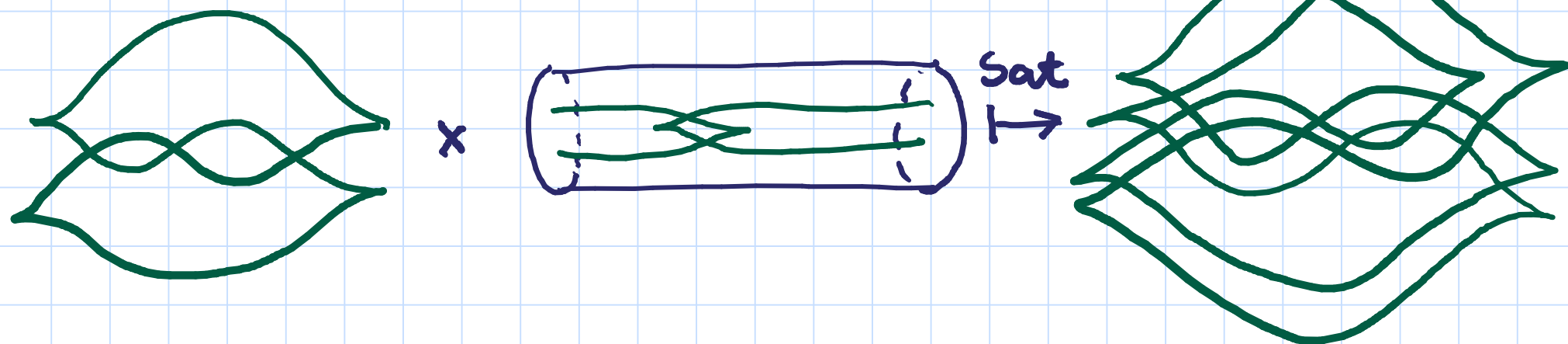


RESULTATS STRUCTURAL - SATELLITES

satellites legendriennes

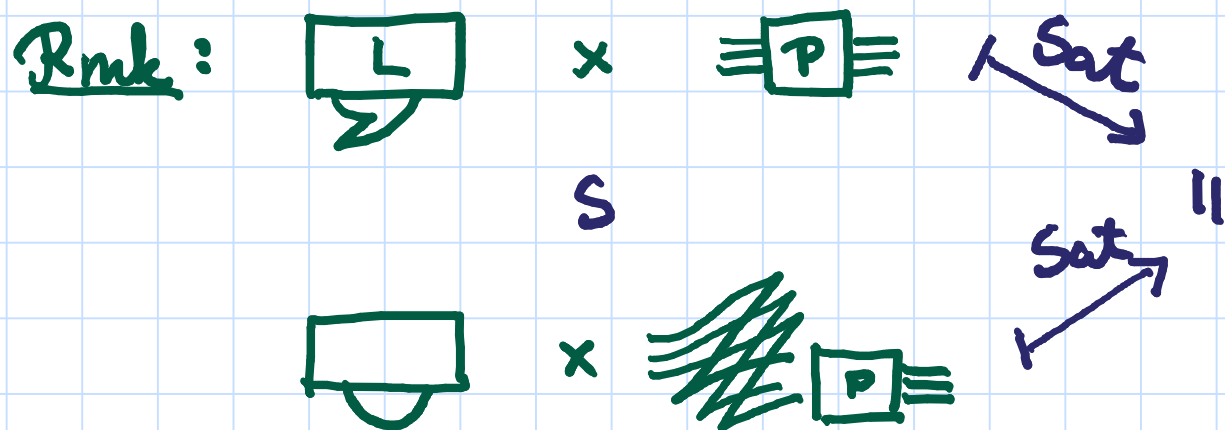
Rmk: φ est implicitement donné par le

voisinage legendrien standard $\cong \gamma^1(S^1)$



$$\text{Leg}(K, t) \times \text{Leg}(\Delta^{-t}P) \rightarrow \text{Leg}(P_0(K))$$

RESULTATS STRUCTURAL - SATELLITES



Thm (Etnyre - V) Pour certains noeuds (par exemple les noeuds toriques négatifs)

- Sat est surjective
- $\ker(\text{Sat})$ est généré par \sim

MERCI POUR VOTRE
ATTENTION!



