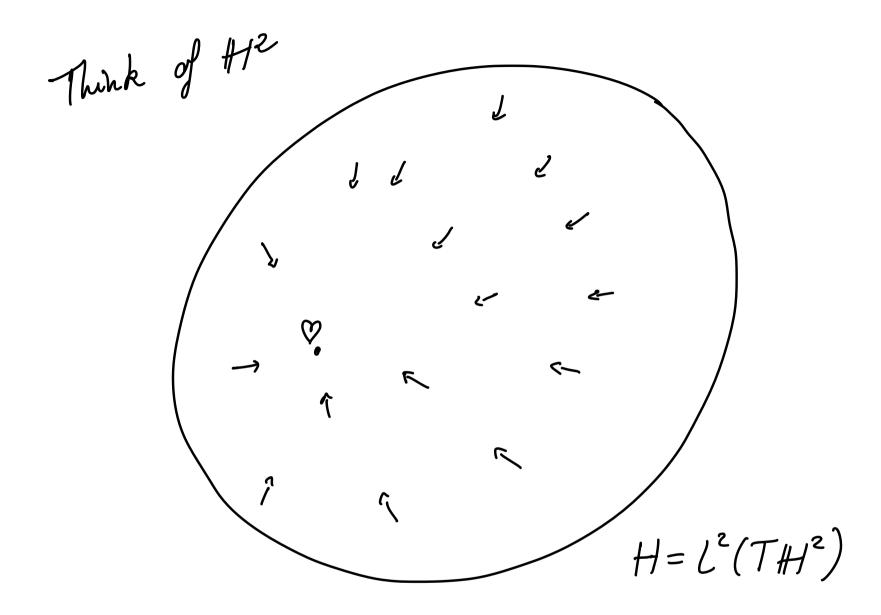
Plan for the talk:

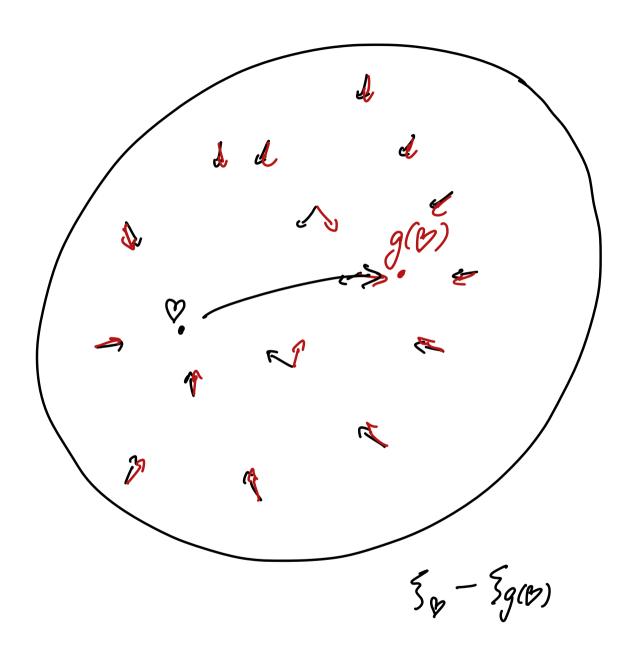
-8-wedian spaces: définitions & examples

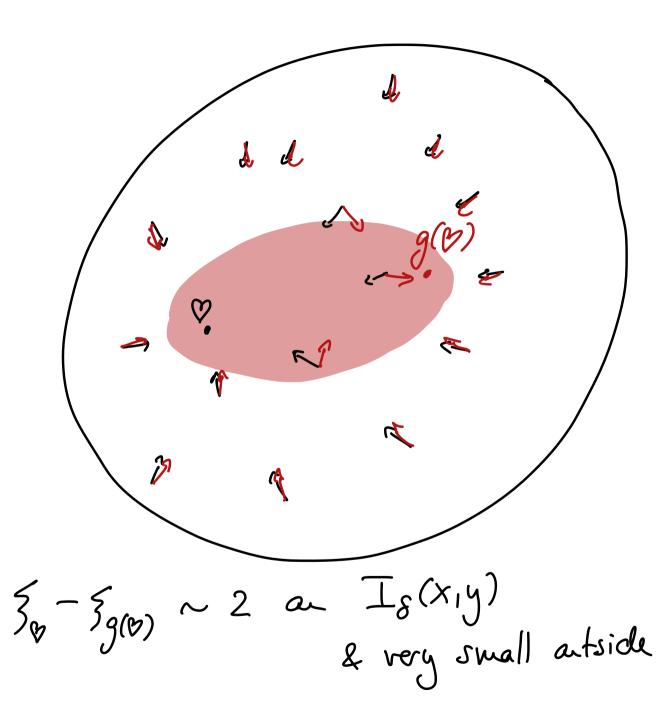
- a conjecture & evidences

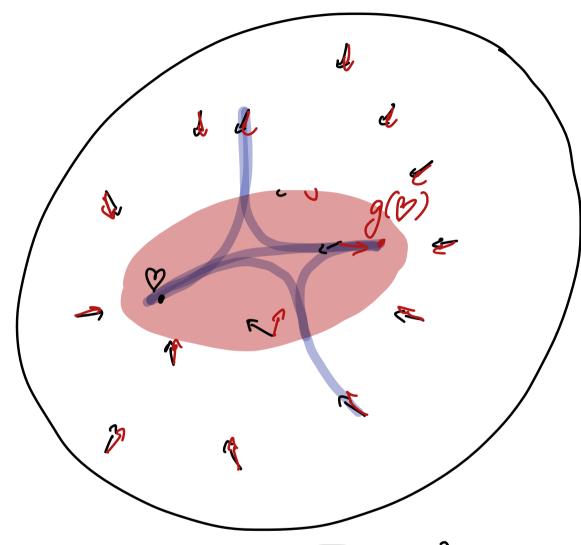
- some known cases

Rank ave & product of rank are lie groups } act properly on a Hilbert space & on a median space f have properly (T), so any action on a Sp(1,1) median space has a bounded orbit. 74(-20) But act nicely on a 5-median space even 8-hyperbolic. Similar proof as for the tree will work!

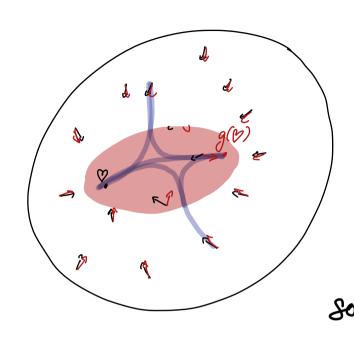








 $\frac{3}{6} - \frac{3}{9}$ $\frac{3}{6}$ $\frac{3}$



30-39(0) ~ 2 an Is(x1y)

& very small artside
because of thin briangles

that

 $113_{8}-3_{9(8)}1_{p}$ < ∞ for p large enough and $13_{8}-3_{9(8)}1_{p}$ \sim $d(8,9(8)) <math>\frac{1}{9-38}$

Alvarez-loffague: construct some kind of tangent vector using a flow on a uniformly locally fruite hyperbolic graph.

Chatterji - Dahmani - Haetlel - Lecureux: rephrase everything in torns of taugent bundles as a webic space. Chatterji - Dahmani - Haetlel - Lecureux: rephrase everything in torms of tangent bundles as a metric space -

Definition: For (X,d) a metric space with a nice enough measure, a tangent space on X is a Polish space TX, with:

- (a) T: TX X a Borel way
- (b) Th(a) is a Banach space fac X
- (c) $\exists X \times X \longrightarrow TX$ $(a,x) \longmapsto ax \in TaX$ we aswable with $aa = 0 \in TaX$

Definition: For (X,d) a metric space with a nice enough measure, a tangent space an X is a Polish Space TX, with: (a) $\pi: TX \longrightarrow X$ a Borel way (b) Th(a) is a Banach space fax X (c) I XxX -, TX (a,x) + ax e Ta X weaswable with $\overrightarrow{aa} = \overrightarrow{o} \in TaX$ The tangent space is negatively curved if $||ax - ay|| \le Ce^{-cd(a,x)}$ C = C(d(x,y))Proper if $\int \|ax - ay\| dx \ge K d(x,y)$

Definition: For (X,d) a metric space with a nice enough measure, a tangent space an X is a Polish Space TX, with:

Borel wap

Borel wap

A Banach space ax e Ta X

(b) Ti(a) is a TX

(c) T X X X Z = 0 e Ta X

with

The faugust space is negatively curved if $\| \vec{ax} - \vec{ay} \| \le C e^{-cd(a_i x)} \qquad C = C(d(x_i y))$ Proper if $\int \| \vec{ax} - \vec{ay} \| dx \ge K d(x_i y)$

Definition: For (X,d) a metric space with a nice enaigh measure, a tangent space an X is a Polish JXXX Da = O E TaX
with The tangent space is negatively curved if C = C(d(x,y))The tangent C = C(d(x,y)) C = C(d(x,y))Slax-aglox > Kd(x,y)

Definition: For (X,d) a metric space with a nice euorgh measure, a tangent space an X is a Polish JXXX Da = O E TaX
with The tangent space is negatively curved if C = C(d(x,y))The tangent C = C(d(x,y)) C = C(d(x,y))Proper if $\int_{X} \|\tilde{ax} - \tilde{ay}\| dx > Kd(x,y)$

Vuniformly locally finite important in general: Minasyan-Osin produce groups that have fix points au any isometric action an an e space, but admit an effective action on a quasi-hee.

THANK YOU

FOR YOUR

ATTENTION!