

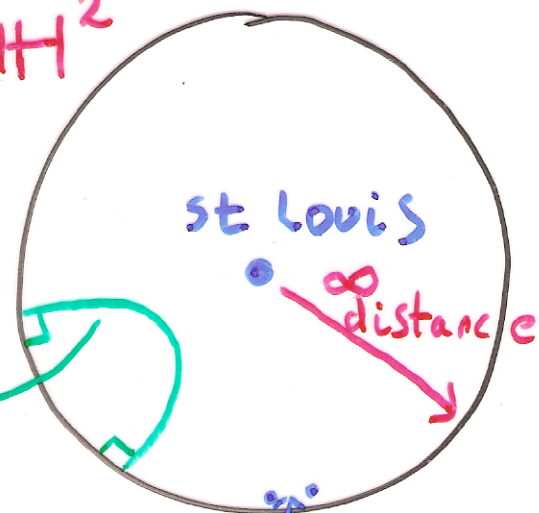
The Hyperbolic Plane

unit disk

$$\{z \in \mathbb{C} : |z| < 1\}$$

+ metric

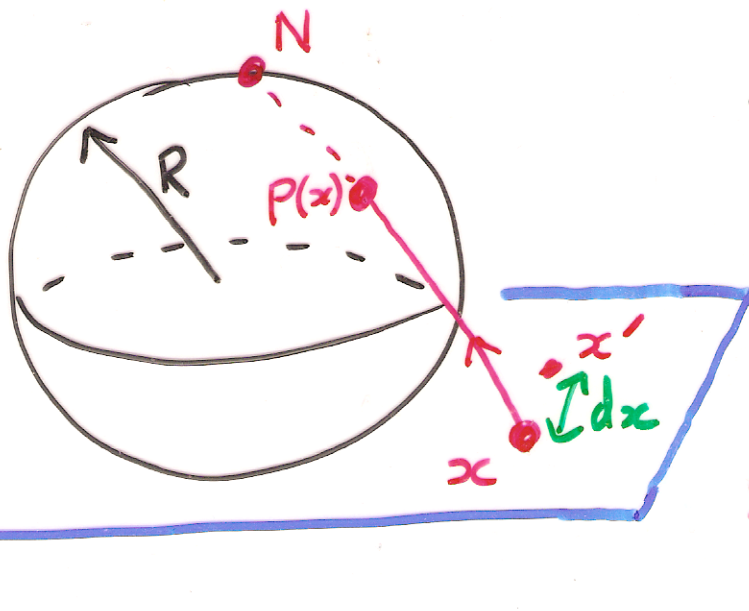
\mathbb{H}^2



"The TWA Space"

"The sphere" of radius $\sqrt{-1}$

BIG hyperbolic distance



Transport metric on sphere of radius R onto the plane by Stereographic proj.

$ds =$ distance on sphere between $p(x)$ & $p(x')$

$$= dx / (1 + \lambda \|x\|^2)$$

Gaussian curvature $\lambda = 1/R^2$

$\lambda = -1$ gives hyperbolic plane