Let $\mathcal{A}$ be a unital C^*-algebra. Given a faithful representation $\mathcal{A} \subset \mathcal{B}(\mathcal{L})$ in a Hilbert space $\mathcal{L}$, the set $G^+ \subset \mathcal{A}$ of positive invertible elements can be thought of as the set of inner products in $\mathcal{L}$, related to $\mathcal{A}$, which are equivalent to the original inner product. The set G^+ has a rich geometry: it is a homogeneous space of the invertible group G of $\mathcal{A}$, with an invariant Finsler metric. In the present talk I will describe the tangent bundle TG^+ of G^+, as a homogenous Finsler space of a natural group of invertible matrices in $M_2(\mathcal{A})$, identifying TG^+ with the *Poincaré half space* $\mathcal{H}$ of $\mathcal{A}$,

$$\mathcal{H} = \{h \in \mathcal{A} : Im\,(h) \geqq 0, Im\,(h)\, invertible\}$$

I will show that $\mathcal{H} \simeq TG^+$ has properties similar to those of a space of non-positive constant curvature.

If time allows, I will define in $\mathcal{H}$ *natural invariant non commutative Kähler structure* on $\mathcal{H}$ and compute its moment map.