7. If X is a smooth manifold

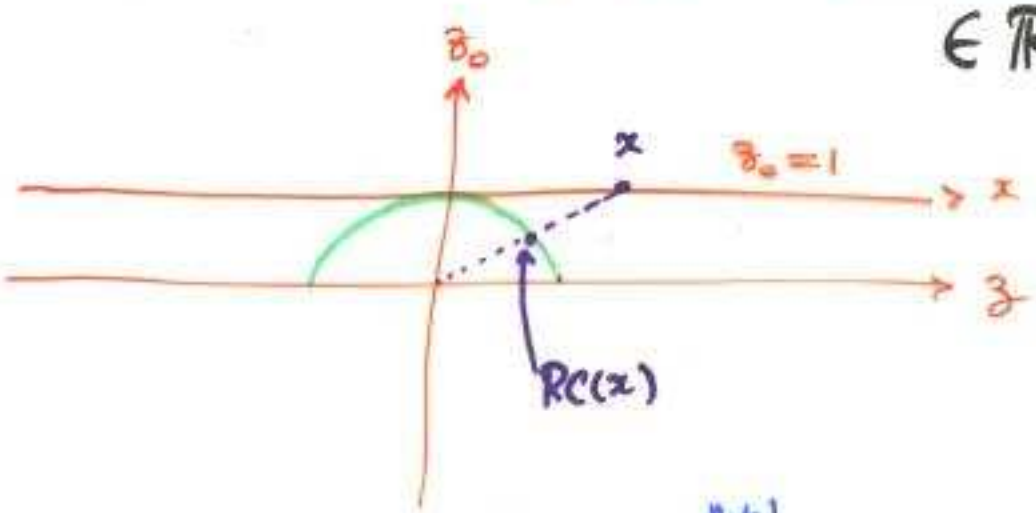
$$K^{-1}(X) = [X; G_{U(\infty)}]$$

Smooth homotopy classes of smooth maps

Smoothness $f: X \longrightarrow \mathcal{S}(\mathbb{R}^{2n})$ smooth?

$\hookleftarrow f \in C^\infty(X \times S^n_+)$, $f = 0$ at boundary

$$\mathbb{R}^n \ni x \xmapsto{RC} \left(\frac{1}{\sqrt{1+|x|^2}}, \frac{x}{\sqrt{1+|x|^2}} \right) \in \mathbb{R}^{n+1}$$



$$RC: \mathbb{R}^n \hookrightarrow \dot{S}^n_+ \subset \mathbb{R}^{n+1}$$

$$\mathcal{S}(\mathbb{R}^n) \longleftrightarrow \dot{C}^\infty(S^n_+)$$