8. So $G_{ISO}^{-\infty}(n)$ <u>classifies</u> K^{-1}

Why?

<u>Bott</u>. $\pi_j\left(G_{ISO}^{-\infty}(n)\right) = \begin{cases} \{0\} & j \text{ even} \\ \mathbb{Z} & j \text{ odd} \end{cases}$

Follows from stabilization of $GL(N)$.

<u>Smoothness matters</u>

$$c_1 : K^{-1}(X) \longrightarrow H^1(X; \mathbb{Z})$$

1st odd Chern class.

$$c_1(f) = \frac{1}{2\pi i} d \log \det(f) = \frac{1}{2\pi i} \mathrm{Tr}(f^{-1} df).$$

– Explicit forms from trace.