

Questions:

what are higher htpy gps?
& what higher invariants do they encode?

Def: SKK equivalence (controllable cut & paste)
we keep track of gluing diffeos.

$$[M, \cup_{\emptyset} M'] - [M, \cup_{\psi} M'] = [M_2, \cup_{\emptyset} M'_2] - [M_2, \cup_{\psi} M'_2] \\ = f(\emptyset, \psi)$$

$$SKK_n = \frac{Gr(d_n)}{\approx SKK} = \pi, BCob_n.$$

"Thm" (M. - Raptis - Semikha)

Let M be a $2k+1$ -dim, f orientation
rev. diffeo.

$$K_1^D(\text{Mnfd}) \longrightarrow \mathbb{Z}/2\mathbb{Z}$$

$$[M, f]$$

$$\longmapsto \kappa(M) = \text{Kervaire
semi char.}$$

SKK $\nwarrow$ invariant

