Fei on equivariant homotopy II

Isotropy separation + Mackey functors

Need to define G-spectra briefly

Let V be a fin dim orth rep of a finite gp G.

Def An <u>orthogonal G-spectrum</u> X is a collection of pointed G-space X_V, indexed by reps with non-equvr action of $O(V)$. For orthogonal inclusion $A: V \to W$ (need not be equvr) we have structure map $S^{W-AV} \wedge X_V \to X_W$ compatible with G-action and orthogonal action. X is an <u>Ω-spectrum</u> if the adjoint map $X_V \to \Omega^{W-AV} X_W$ is homeo.

Let Sp^G denote the category of G-spectra and equvr maps

Def For $H \subseteq G$, $\pi_k^H X = \underset{V > -k}{\text{colim}} \; \pi_{V+k}^H X_V$.

Def A stable weak equiv is a map $X \to Y$ in Sp^G inducing isos in π_*^H for all $H \subseteq G$.

There is a homotopy category $Ho \, Sp^G$ in which weak equivs are isomorphisms.