


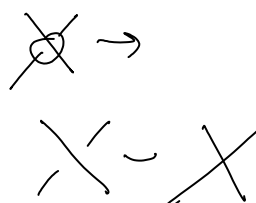
$$G \times G \longrightarrow G$$

$$\mathcal{O}(G \times G) \longleftarrow \mathcal{O}(G)$$

$$\begin{array}{ccc} & \cup & \\ \mathcal{O}(G) \otimes \mathcal{O}(G) & & \mathcal{O}(G)^G \\ \cup & \swarrow & \\ (\mathcal{O}(G) \otimes \mathcal{O}(G))^G & & \end{array}$$

$$\mathbb{C}[G]^G \otimes \mathbb{C}[G]^G \longrightarrow \mathbb{C}[G]^G$$

"overcrossing commute" 

"4-knots" 

$$\text{Diagram 1} = \text{Diagram 2}$$

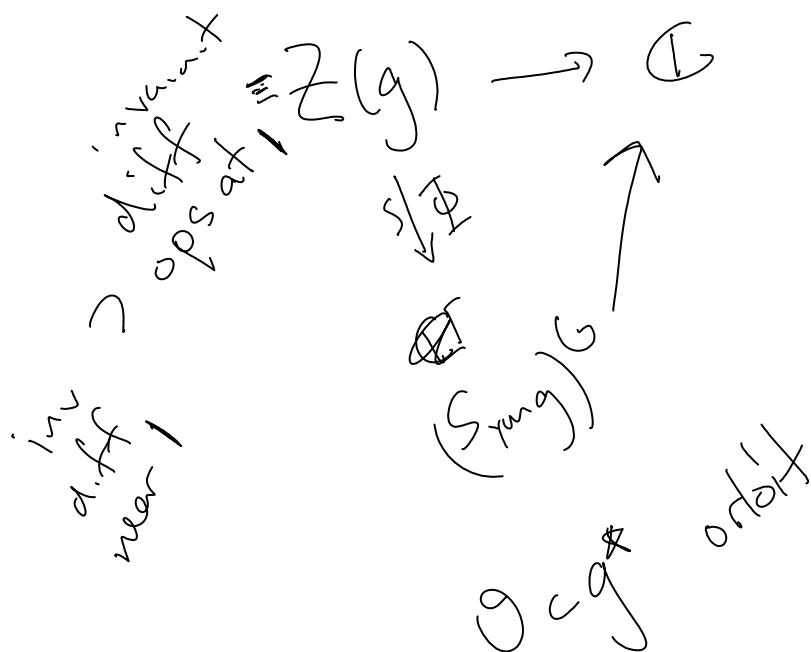
Diagram 1: Two strands crossing, with the top strand crossing over the bottom strand. There are small 'x' marks at the ends of the strands.

Diagram 2: Two strands crossing, with the bottom strand crossing over the top strand. There are small 'x' marks at the ends of the strands.

W irrep of G

$$\mathbb{Z}(g) \longrightarrow \mathbb{C}$$

(with handwritten notes and arrows)



$$g\theta = gg^{-1}\theta g = \theta g$$

The irreps of G are the algebra homomorphisms

$$\text{Conv}(G)^G \rightarrow \mathbb{C}$$

The co-adjoint orbits in \mathfrak{g}^* are the algebra homomorphisms

$$\text{Conv}(\mathfrak{g})^G \rightarrow \mathbb{C}$$