

Paradigm Comparison: Architecture vs Algebra

ENN Paradigm

Rotation symmetry:
Design SE(3)-equivariant layers



Permutation symmetry:
Design set-equivariant layers



Both symmetries:
Redesign architecture from scratch ???

Each symmetry = new architecture

Star-G Paradigm

Star-G Algebra
(SVD, Ridge, features)

Rotation  $G = Z_{12}$

Permutation: $G = S_n$

Both: $G = Z_{12} \times S_n$

Same algebra, just specify the group