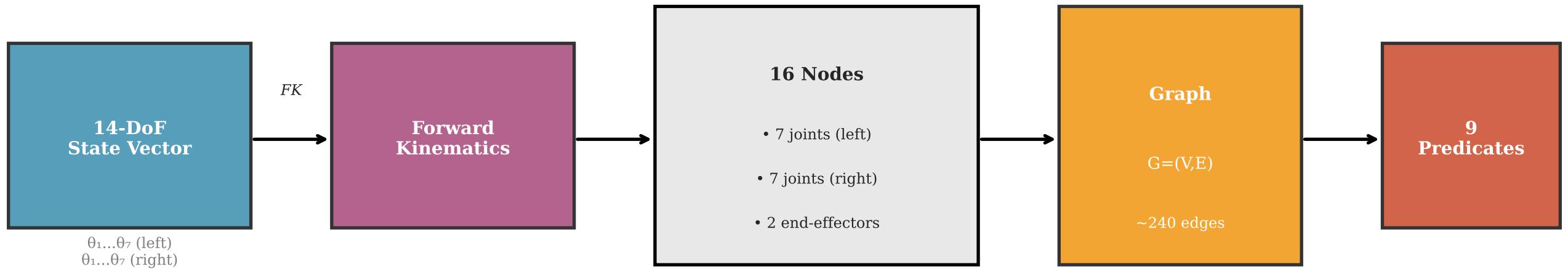


## RelationalGNN Data Flow: From 14-DoF to Spatial Predicates



**Node Features:**  $x_i = [x, y, z, \theta, \text{type}]$

**Edge Features:**  $e_{ij} = [\text{distance}, \Delta x, \Delta y, \Delta z]$